

PROFESSIONAL LEARNING IN EDUCATION
Challenges for teacher educators, teachers
and student teachers



PROFESSIONAL LEARNING IN EDUCATION

**CHALLENGES FOR TEACHER EDUCATORS,
TEACHERS AND STUDENT TEACHERS**

Bram De Wever, Ruben Vanderlinde, Melissa Tuytens,
and Antonia Aelterman (eds.)



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The building on the picture on the front cover is the University Forum – also known as Ufo – of Ghent University. The name refers to its central position in the streets of Ghent. The dominant building materials are glass and concrete. The Ufo was inaugurated in 2009 and contains the largest auditorium (1000 seats) of the university. The official opening reception of the ISATT 2013 conference took place in this building.

The picture is taken by Frederik Vercruyse – www.frederikvercruyse.com

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Contents

PREFACE	5
<i>A WORD FROM THE ISATT 2013 CONFERENCE CHAIR</i>	
EDITORIAL NOTE	7
CHAPTER 1.	
PROFESSIONAL LEARNING OF TEACHER EDUCATORS, TEACHERS, AND STUDENT TEACHERS	9
<i>AN INTRODUCTION</i>	
Ruben Vanderlinde, Melissa Tuytens, Bram De Wever, and Antonia Aelterman	
Introduction: Excellence in education	9
Model for professional development	11
Book overview	12
Conclusion	18
References	19
 Section 1. PROFESSIONALISM OF TEACHER EDUCATORS	
CHAPTER 2.	
POLICY DRIVEN REFORMS AND THE ROLE OF TEACHER EDUCATORS IN PROFESSIONALISING TEACHER EDUCATION	23
Diane Mayer	
Introduction: Teacher education as a ‘policy problem’	23
Sustaining the professionalism of teacher education	25
Professional standards for beginning teaching	26
Assessing beginning teaching	27
Researching the effectiveness of teacher education	29
Concluding Comments	33
References	34
CHAPTER 3.	
TEACHER EDUCATORS’ PROFESSIONAL LEARNING	39
<i>A NECESSARY CASE OF ‘ON YOUR OWN’?</i>	
Amanda Berry	
Introduction	40
Distinctive nature of teacher educators’ work	41
Consequences for teacher educators’ learning	42
Calls to change	43
Some responses and some risks	43

Professionalisation and academisation	45
Summary	46
Reframing teacher educator learning	47
Mapping my learning onto the reports of other teacher educators	49
Learning as transformation <i>not</i> accumulation	50
Too important to be left to chance, but important to be left alone	51
Conclusion	52
References	53
Notes	56

CHAPTER 4.

PROFESSIONAL DEVELOPMENT FOR TEACHER EDUCATORS IN

THE COMMUNAL CONTEXT	57
--------------------------------	----

FACTORS WHICH PROMOTE AND HINDER LEARNING

Linor L. Hadar and David L. Brody

Introduction	58
The professional development context and setting	61
Essential features of professional development in community	65
Implications for professional learning of teacher educators	75
References	78

Section 2. PROFESSIONAL DEVELOPMENT OF (STUDENT) TEACHERS

CHAPTER 5.

COMMITMENT CRISIS: VOICES OF SECONDARY TEACHERS	87
-----------------------------------------------------------	----

Odile de Comarmond, Jane Abbiss, and Susan Lovett

Introduction	87
Theoretical background	89
Methodology	92
Data collection and analysis	93
Discussion, implications and conclusion	105
References	108

CHAPTER 6.

CONDITIONS FOR TEACHER LEADERSHIP AND PROFESSIONAL DEVELOPMENT IN

CHALLENGING CIRCUMSTANCES	113
-------------------------------------	-----

Maria Assunção Flores, Eva Fernandes, Manuel Flores, and Ana Forte

Introduction	113
Teacher leadership: Defining the concept	114
Teacher leadership and professional development:	
Exploring the connections	115
Methods	117
Findings	121

Discussion and conclusion	129
Acknowledgements	131
References	131
 CHAPTER 7.	
AN EMPIRICAL TYPOLOGY OF STUDENT TEACHERS AND ITS RELATION WITH MOTIVATION FOR TEACHING	135
Isabel Rots and Antonia Aelterman	
Introduction	135
Theoretical frame	137
Method	140
Results	142
Discussion	147
Conclusions	150
References	151
 CHAPTER 8.	
ANALYSING PLOTS OF STUDENT TEACHERS' NARRATIVES TO IDENTIFY TEACHER IDENTITY	155
<i>A RHETORICAL APPROACH</i>	
Ietje Pauw, Wenckje Jongstra, and Peter van Lint	
Introduction	156
Theoretical framework	161
Method	163
Results	166
Conclusion and Discussion	169
References	172
 Section 3. (STUDENT) TEACHER PRACTICES	
 CHAPTER 9.	
INCLUSIVE CLASSROOM PRACTICES IN SECONDARY SCHOOLS	179
<i>TOWARDS A UNIVERSAL TEACHING APPROACH</i>	
Annet De Vroey, Katrien Roelandts, Elke Struyf, and Katja Petry	
Introduction	179
Theoretical framework	180
Method	182
Results	185
Conclusions	193
Discussion	194
Limitations	196
Acknowledgements	197
References	197

Annex 1	200
Annex 2	200
Annex 3	202
CHAPTER 10.	
EFFECTS OF THE STRUCTURAL AND CURRICULAR CHANGES FOLLOWING THE BOLOGNA PROCESS IN GERMANY ON THE CONTENT KNOWLEDGE AND PEDAGOGICAL CONTENT KNOWLEDGE OF STUDENT TEACHERS OF BUSINESS AND ECONOMICS	203
Roland Happ, Christiane Kuhn, and Olga Zlatkin-Troitschanskaia	
Introduction	204
Theoretical conceptualization and design of the study	206
Research questions	212
Results	213
Conclusion	216
Acknowledgments	217
References	217
Notes	221
EPILOGUE	225
Ruben Vanderlinde, Melissa Tuytens, Bram De Wever, and Antonia Aelterman	
LIST OF REVIEWERS	229

Preface

A word from the ISATT 2013 conference chair

The 16th edition of the ISATT biannual Conference on Teachers and Teaching, organized at the Department of Educational Studies of Ghent University during the first week of July 2013, was a special edition as ISATT celebrated its 30th anniversary. ISATT is the International Study Association of Teachers and Teaching. The association's aim is to increase insights into the identity, role, contexts and work of teachers, and the process of teaching. Therefore, the key goals of ISATT are to enhance the quality of teaching at all levels of education and to act as a forum to promote, present, discuss, and disseminate research findings contributing to the knowledge base and the formation of theory in the field.

The theme of the 16th ISATT conference was *Excellence of Teachers? Practice, Policy and Research*, as the excellence of teachers and the quality of teacher education is at the forefront of current policy and practice related discussions all over the world. Indeed, many countries face a number of problems in relation to recruiting and retaining teachers in the teaching profession.

The ISATT 2013 Conference was an excellent platform for generating new perspectives and insights related to practice, policy and research on teachers and teacher education. The conference theme was especially substantiated by five keynotes: Amanda Berry, Leiden University, The Netherlands; Sara Dexter, University of Virginia, USA; Diane Mayer, Victoria University Australia; Michael Schratz, University of Innsbruck, Austria; and Ronald Soetaert & Kris Rutten, Ghent University, Belgium.

The ISATT 2013 Conference Team can look back on an inspiring and successful conference. In total, 375 participants from 38 different countries and from all continents attended the main conference and participated in the discussions during symposia, paper sessions, and round tables. No less than 53 participants from 17 different countries have registered for the ISATT preconference. The main goal of this preconference was to develop research skills, and to stimulate dialogue between junior researchers and experienced researchers about doing research and current issues in research on teachers and teaching.

Many participants have appreciated the high academic level of the conference and the social events. The Ghent ISATT 2013 Conference Team experienced a warm atmosphere and hopes that ISATT 2013 is a memorable event for every participant. Therefore, I want to thank the members of the organizing committee and the scientific committee for their support in the organization of the conference, and for thinking with us about the conference theme, the subthemes and – of course – for their thorough reviews. However, I would

like to extend some special words of thanks to all members of the Department of Educational Studies at Ghent University. They all contributed to the success of this conference.

“Excellence of teachers?” as the central theme of the ISATT 2013 conference builds on urgent issues that address practitioners, teacher educators, and researchers. In these discussions researchers, practitioners, and policy makers can become a partner when we have consistent answers and pathways available. Because of the importance of the “excellence in education” debate for the whole teacher education community, this book was compiled, aiming to contribute to the field of knowledge in this area and to further support the debate of the central conference theme. As chair of the ISATT 2013 conference, I am very proud to present this book.

Antonia AELTERMAN
Conference Chair

Editorial note

This book is the result of an open call launched at the ISATT 2013 conference. All participants were invited to submit the paper they presented for a chapter in this edited book. As such, this is not a collection of all papers submitted for ISATT, but rather a selection of papers submitted for publication in this book “Professional learning in education: Challenges for teacher educators, teachers and student teachers”. In total, 60 full papers were uploaded in the conference system or e-mailed to the editors. During the first phase, an editorial screening took place, checking whether the submitted papers were according to the formal expectations of the call (i.e. blinded manuscripts between 7000 and 10000 words). At the same time, the content of the manuscripts was checked with respect to their focus, i.e. was there a focus on the excellence of teachers, and with respect to their scientific quality, i.e. whether the manuscripts were reporting the full details of the studies, including theoretical framework, method, results, and discussion. In addition, all authors were e-mailed to confirm their submission to this book and to confirm that the manuscript was not submitted or considered for publication elsewhere.

After this first phase, 18 manuscripts were sent out for double blind review in a second phase. Each paper was reviewed by two independent reviewers. Based on these reviews, and the subsequent revisions of the authors, we made final decisions on the manuscripts to be selected. This resulted in eleven submitted chapters that were selected for the draft version of the full book. These chapters were placed in three sections: 1) professionalism of teacher educators, 2) professional development of (student) teachers, 3) (student) teacher practices. These sections are preceded by an introductory chapter that provides a framework to link the three sections. This full book was, in a third phase, submitted to Academia Press Gingko-Imprint and reviewed again as a whole, by independent reviewers. Based on these independent full-book reviews, this final book including ten chapters and an epilogue was compiled.

As editorial team, we want to thank all who participated to this book. In the first place, all authors. Secondly, all reviewers for the individual chapters as well as for the complete book. The list of reviewers is provided at the end of the book.

We hope you enjoy this selected work.

Ghent, November 1, 2015

Bram DE WEVER, Ruben VANDERLINDE,
Melissa TUYTENS, and Antonia AELTERMAN

Editors

Chapter 1

Professional learning of teacher educators, teachers, and student teachers

An introduction

Ruben Vanderlinde^a, Melissa Tuytens^a,
Bram De Wever^a, and Antonia Aelterman^a

Educational quality is at the center of debates worldwide. In all these debates, teachers are considered as the critical actor determining to a large extent the quality of our educational systems. At the same time, doubts are expressed related to teachers' quality as well as to the education or training of teachers. In this context, policy debates underline the need for "excellent" teachers and "excellent" teacher education. "Excellence" became the mantra in all educational policy debates. "Excellence of teachers?" as the central theme of the ISATT 2013 conference builds on urgent issues that address practitioners, teacher educators, and researchers. This introductory chapter briefly outlines the context of this book by referring to the debate of "excellence" in education. The chapter further presents a model for teachers' professional development together with the three central themes of the papers assembled in this book: (1) professionalism of teacher educators, (2) professional development of (student) teachers, and (3) (student) teacher practices. The chapter concludes by presenting some general research challenges for the ISATT community.

Introduction: Excellence in education

Teacher education is worldwide in crisis (Vanderlinde, Rots, Tuytens, Rutten, Ruys, Soetaert, & Valcke, 2013) as numerous research (e.g. Cohran-Smith, 2005; TALIS, 2008) and policy papers (e.g. European Union, 2007) describe all kinds of difficulties, such as problems with the quantity and quality of candidates entering teacher education, problems with the extent to which student teachers attain critical competences put forward (Valcke, Struyven, & Rots, 2012), or problems with the preparation of teachers to enter and stay in the profession (Coburn & Russell, 2008; Rots, Kelchtermans & Aelterman, 2012). More concrete problems, for instance, discuss the "theory-practice gap" (Korthagen, Kessels,

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Koster, Lagerwerf, & Wubbels, 2001) referring to the discrepancy beginning teachers encounter between the nature of their teacher preparation program and their experiences as licensed professionals. Overall, it seems that beginning teachers are rather poorly prepared for the teaching job (Tait, 2008), and also experience tensions regarding their professional identity (Pillen, Beijaard, & den Brok, 2013). Therefore, and not surprisingly, several researchers plea to urgently reconsider teacher training models in such a way that they reflect a congruency with the way teachers are expected to teach (i.e. evidence-based) in their future practice (Valcke, 2013), that they underline the importance of authentic clinical practice (e.g. Darling-Hammond, 2006), that they take into account the professional identity of teachers (Beijaard, 2013), and the multiplicity of relations teachers have to establish with all kind of school actors (Vanderlinde & Kelchtermans, 2013). Also policy makers around the world plea to rethink teacher education in order to meet the needs and challenges of the 21st century (Darling-Hammond, 2006). In today's culture and society, teachers are increasingly confronted with the changing conditions under which learning, information transfer and interaction happen. Both teachers and pupils are living in an uncertain world and are confronted with a plurality of languages and cultures that ask for many different roles.

In all these debates, the quality of teachers and teacher education is at the forefront of policy and practice related discussions, and policy makers consider “excellence” in teaching and teacher education as a critical characteristic. At the same time, they put forward new requirements, new competency frameworks, new assessment criteria, and new quality indicators they require to be met. However, the theoretical or ideological frames of reference from which the standards are derived are not always clear or transparent.

One of the current burning questions is whether the field needs standards for excellence? Where does the urge for excellence in actual educational policy come from, what logic or agenda does it speak for, and what are the consequences for how teachers and teacher educators are supposed to think about themselves? Regulation is a commonly found concept in the fora about teacher quality and teacher education. The question is whether teachers and teacher educators have a “grounded” answer to these changing circumstances? Can we build on an evidence-base about our teacher quality, about the excellence in teacher educators, about the “quality” of our teacher education programs? How can school leaders enhance the professional development of teachers within the school? How do school leaders have an impact on teacher commitment and teachers' job satisfaction? Can we counter the debate about regulation of the teaching profession with ways that build on self-regulation? This implies that the teacher and teacher education community should address at least the question about “excellence” themselves. This was one of the many reasons to debate this topic at the ISATT 2013 conference organized in Ghent (Belgium) under the title “Excellence of teachers? Practice, policy, research”. Because of the importance of this debate for the whole teacher education community, a number of papers presented at the conference were selected for publication as chapter in the present book. In the following section we present a model for teachers' professional development, which we will use to outline and discuss the different chapters.

Model for professional development

The ISATT 2013 theme on “Excellence in education” is closely related to an important research area of the ISATT community: the study of the complex process of teacher learning and teacher professional development (Avalos, 2011). Teachers play a crucial role in education (Borko, 2004), and their learning and professional development improves the quality of schools (Thompson & Zeuli, 1999), as well as students’ learning and their achievement (Desimone, Smith, Hayes, & Frisvold, 2005). This crucial role is also evident from recent meta-analysis studies (e.g. Hattie, 2009). Therefore, discussing “excellence” or “quality” in education means at the same time discussing how to prepare the next generation of teachers, and how to efficiently support teachers in their induction phase and throughout their whole career. Professional learning and professional development is thus inherently linked with the debate on “excellence” and refers to initial teacher training, induction of beginning teachers, as well as in-service teacher learning.

The literature presents many definitions of teachers’ professional development. These definitions are for instance referring to specific activities, content, dimensions, or to specific distinctions such as formal versus informal or individual versus collective (van Veen, et al., 2010). In this wide pallet of definitions, the conceptual framework of Desimone (2009) is an interesting model to both conceptualise and to study teachers’ professional development. Desimone’s model presents an operational theory of how professional development influences both teacher and student outcomes. It further encompasses variables or features that mediate or moderate professional development in education. Desimone (2009) underlines that her model represents interactive relationships between the critical elements or features of professional development, teacher knowledge and beliefs, classroom practice, and student outcomes. Figure 1 (p. 12) presents an adaptation of Desimone’s conceptual framework and illustrates that professional development comprises a number of consecutive steps:

1. Teachers experience effective professional development through interventions.
2. The professional development increases teachers’ knowledge and skills and/or changes their attitudes and beliefs.
3. Teachers use their new knowledge and skills, attitudes, and beliefs to improve the content of their instruction or their approach to pedagogy, or both.
4. The instructional changes foster increased student learning.

Figure 1 is the model of Desimone (2009) slightly adapted by van Veen et al. (2010) in the context of a review study on effective characteristics of teachers’ professional development initiatives, and extended for this chapter. “Teacher identity” was added as an extra teacher feature as “teacher identity” plays an important role in professional development activities (Johannes & Seidel, 2012), and also forms an important research area in the ISATT community (Beijaard, Meijer, & Verloop, 2013).

Desimone (2009) argues that her model implies research questions that can be understood as testing a “theory of change” or a “theory of instruction”. The “*theory of change*” refers to the relations between characteristics of professional development activities and

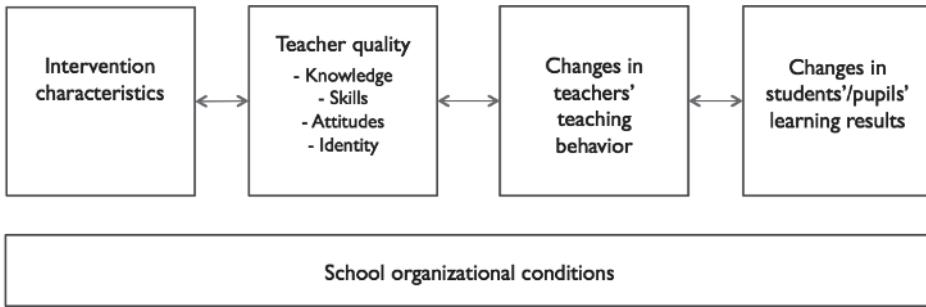


Figure 1: Teachers' Professional Development framework (based on Desimone, 2009; Van Veen, et al., 2010).

teachers knowledge, beliefs, identity, and practice. The “*theory of instruction*” refers to the influences of changed teacher practices on students’ learning and achievement. Van Veen et al. (2010) adds to those two areas of research questions, the “*theory of improvement*” referring to the influence of school organizational conditions on successful learning of teachers.

The model is interesting to conceptualize and study professional development activities as it presents a set of core features. To put differently, the model gives insight in how to best shape and implement teacher learning opportunities for the maximum benefit of both teachers and students. As such, the model is also interesting for the context of the “*excellence in education*” theme as it illustrates that “excellence” is much more complex than commonly assumed by policy makers. Questions raised by policy makers on “excellence”, “evidence”, and “quality” need to take into account the different relations presented by Desimone (2009), and the underlying “theory of change”, “theory of instruction”, and “theory of improvement” (Van Veen, et al., 2010). For the debate on “excellence” and its translation in requirements, competency frameworks, quality indicators or standards this means that (1) “excellent” teachers need to be studied from a holistic perspective while paying attention to the relation between professional development activities and teachers’ thinking and instructional practices, (2) “excellent” teachers have an impact on students’ learning, and (3) “excellent” teachers are always situated in (excellent?) school organizational contexts.

Book overview

This book brings together some of the best research papers presented at the ISATT 2013 meeting. It is focusing on the professional learning of teacher educators, teachers, and student teachers and is organized in three sections: professionalism of teacher educators, professional development of (student) teachers, and (student) teacher practices. All chapters can be – some very clear, other more implicit – related to the presented model above. A critical reflection on the relation between the different chapters and the presented model is provided in the epilogue of the book.

Section 1: Professionalism of Teacher Educators

The first section has a specific focus on professionalism and professional development of teacher educators. Although everyone agrees that teacher educators have a crucial role to fulfill in the preparation of the next generation of teachers, it is surprising to observe that from a policy and research perspective, teacher educators have been neglected for a long time (Lunenberg, Dengerink, & Korthagen, 2014). Only recently, the specific profession of teacher educators (Smith, 2003) has received some attention. Research on teacher educators emerged in the late nineties, and currently studies are conducted on, for instance, teacher educators' professional development, identity building, or professional roles. This attention for the work of teacher educators is also noticeable from a policy perspective. Some countries, for instance, developed standards or frameworks for teacher educators. These standards or frameworks represent the ideal image of the competencies teacher educators need to possess in order to function effectively. Both in research and policy literature, authors agree on why teacher educators have such a unique profession by underlying that teacher educators are in the first place "teachers of teachers" (Murray, Swennen, & Shagrir, 2008). In this section, three chapters are presented that handle the complexity of teacher educators' professionalism.

The first section begins with Chapter 2 "*Policy driven reforms and the role of teacher educators in professionalising teacher education*" of Diane Mayer from The University of Sydney (Australia) which has a direct link with the overall theme of "excellence" as this paper focuses on teacher quality reforms that are debated and enacted as a response to the political positioning of teacher, teaching and teacher educators as a policy problem. Mayer's paper, more specifically, interrogates current policy movements that question the value of teacher education. She warns for a potential deprofessionalization of teacher education practitioners and researchers when teacher education is considered from an "entrepreneurial" or "market-oriented" perspective. Mayer argues that teacher educator practitioners and researchers must address and take control of the quality assurance agenda. She pleads for research-informed and validated professional standards for beginning teachers that capture the complexity and content specific dimensions of quality teaching including professional judgement to provide appropriate learning opportunities for every student in every setting. She further argues that teacher educators must frame their own accountability by developing authentic assessments of beginning teachers to demonstrate their professional knowledge, judgment and practice in diverse authentic school contexts. Mayer ends her paper with clear suggestions for teacher educator researchers in general and the ISATT community in particular. In her opinion, teacher education research must directly respond to the challenges of "effectiveness", and researchers should study the value of teacher education and lead national policy discussions about the quality of teaching.

Chapter 3 of Amanda Berry from Leiden University (The Netherlands) has a specific focus on teacher educators' professional learning. In her chapter "*Teacher educators' professional learning: A necessary case of 'on your own'*", Berry argues that teacher educators' professional preparation is typically characterized by experiences of isolation,

loneliness, and neglect. She illustrates that these feelings represent a strange discrepancy. She sees, on the one hand, a pressing need to prepare high-quality teachers, and on the other hand, she observes a relative lack of organized preparation for those responsible to prepare these future teachers. In the context of this discrepancy, Berry addresses the need of teacher educators' professional learning. She argues that answers to this need could be divided into two types: systemic responses and local responses. She draws on her own experiences as a teacher educator to present an alternate framing of teacher educators' professional preparation and growth. Her main argument is that an essential professional task of teacher educators is in learning how to draw from and restructure their existing knowledge in ways that enable them to facilitate the learning about teaching of others, and to be able to articulate this knowledge and its process of development. This is necessary so it can be made clear to themselves, other teacher educators, the public and, most importantly, to the prospective teachers with whom they work. She concludes her paper by going back to her main starting point when describing teacher educators professional learning as an "isolated or lonely enterprise". She re-frames the notions of "isolation and disempowerment" to "autonomy with agency", and asserts that being "left alone" is a necessary condition for promoting teacher educators' professional learning.

In the last chapter of this section, Linor Hador from the University of Haifa and David Brody from the Efrata College of Education (Israel) present research on a professional development community for teacher educators. Their chapter "*Professional development for teacher educators in the communal context: Factors which promote and hinder learning*" aims to understand factors that influence learning among teacher educators in the communal context. Hador and Brody present five years of research on professional learning in a community for teacher educators to offer an overview of how their professionalism develops in community, described as a broad range of collaborative professional development models. They examined individual and group learning and development processes using a variety of data collection methods. In their data analysis, Hador and Brody identified important factors, which enable teacher educators to grow professionally on the one hand, and those that hold back such growth on the other hand. In their professional development community the main features supporting teaching development included "creating safe environments for learning", "talk about student learning", "group reflection and feedback", "engaging teachers in research", and "continuity". A main factor preventing professional growth is receding from the project's goals, a phenomenon which Hador and Brody termed as "withdrawal". "Breaking of isolation" was identified as a factor that can either promote or hinder development. By identifying enabling and hindering factors, Hador and Brody provide insight in how communities work to promote professional growth and change, and how new professional development initiatives can be designed and initiated.

Section 2: Professional Development of (Student) Teachers

This section focuses on professional development. Although it is generally accepted by researchers, policy makers, and practitioners that professional development is essential to improve our schools, the same actors also report a lot of dissatisfaction with professional

development (e.g. Desimone, Smith & Ueno, 2006; Odden, Archibald, Fermanich & Gallagher, 2002). The main issues reported are that professional development is not always aligned with the needs of teachers and the transfer from professional development activities to teachers' practices is proven to be difficult (Guskey, 2002). In this regard, more research in the field of professional development of teachers should provide us with insights to resolve the current problems. Teachers themselves should not be forgotten during this endeavor. If we want professional development to be effective, individual characteristics of teachers, such as their affective reactions (e.g. commitment, motivation), their beliefs and their biographies, and organizational characteristics of schools (e.g. leadership) should be taken into account. In this section on "professional development of (student) teachers", an overview is provided of several studies which offer us insights in the essential characteristics for teachers' professional development that works.

The section on *professional development of (student) teachers* begins with Chapter 5 "*Commitment crisis: voices of secondary teachers*" in which Odile de Comarmond, Jane Abbiss, and Susan Lovett of the University of Canterbury (New Zealand) provide an exploration of teacher commitment as perceived by secondary school teachers. De Comarmond et al. explain the importance of teacher commitment for teacher retention in schools and argue how important it is to study teacher commitment during the different career stages which teachers evolve in. By utilizing phenomenography and multiple case studies, the authors give insight in the perceptions of teachers regarding their own commitment. Three cases are described, namely newly qualified, mid-career, and experienced teachers. Four categories of teacher commitment were identified in the study, namely teacher commitment as altruism, as personal attributes, as pedagogical content knowledge and as connectedness. The first category emerged the most in all stages of teachers' careers. However, this study also points out that teacher commitment is not a stable characteristic of a teacher during the career. In the discussion, the authors hence emphasize the importance of taking into account contextual and personal factors that influence teacher commitment. More specifically, they found it to be crucial to shift focus to beginning teachers in order to better understand how these teachers can be stimulated to stay in the teaching profession, as the drop-out of these teachers has been identified as an international problem.

In Chapter 6 "*Conditions for teacher leadership and professional development in challenging circumstances*" by Maria Assunção Flores, Eva Fernandes (both University of Minho, Portugal), Manuel Flores and Ana Forte (both practitioners in Portuguese education), a large scale study on teacher leadership is presented. Flores et al. point at the important role of teacher leaders in promoting teachers' professional development. The authors perceive teacher leadership as grounded in interaction and influence, rather than in power and authority, hence taking into account informal ways in which teachers can make a difference in their school. Their uptake of professional development similarly also includes both formal as informal professional development activities. By linking teacher leadership and professional development, the authors wish to explore how teacher leadership is developed and practiced within schools and how it may be influenced by the professional development within schools. They also pay attention to the challenging

circumstances teachers are experiencing. Utilizing a national teacher survey combined with teacher focus groups, Flores et al. found that the job motivation of teachers decreased due to challenging circumstances such as salary cuts and increase of workload. However, their commitment did not decrease. The authors refer to teachers' sense of professionalism and resilience to explain this. These findings are relevant to explain the perceptions of professional development and teacher leadership which teachers demonstrate in this study. Teachers do value the opportunities to develop themselves professionally, but identify contextual conditions that enable or constrain this professional development. In this regard, the authors provide implications to enhance professional development and teacher leadership.

In Chapter 7, Isabel Rots (Christian Teachers' Union and formerly Ghent University, Belgium) and Antonia Aelterman (Ghent University, Belgium) provide insight in "*An empirical typology of student teachers and its relation with motivation for teaching*". Based on the FIT (factors influencing teaching)-choice theory, the authors of this study provide arguments for the importance of teacher motivation, especially in a context of teacher shortage. By using cluster analysis, this study wants to gain insights in the different types of student teachers according to their professional engagement at the beginning of their study, consisting of their planned effort during teacher education and their planned entry in the teaching profession. A second research question focuses on the difference in motivation for teaching among these types of student teachers. Five profiles of teacher students were identified based on their professional engagement: namely (1) highly engaged persisters (high planned effort and high planned entry), (2) highly engaged switchers (high planned effort and medium planned entry), (3) lower engaged persisters (medium planned effort and high planned entry), (4) low engaged switchers (low planned effort and low planned entry), and (5) disengaged desisters (very low planned effort and very low planned entry). The findings show a difference between all profiles for several motivational factors (e.g. ability, job security and intrinsic career value). The authors elaborate on the importance of their findings for further research and for practice, especially in a context where many governments struggle to solve teacher shortage and where teacher education is challenged to provide high quality professional development to student teachers.

The final chapter of this section is Chapter 8 "*Analysing Plots of Student Teachers' Narratives to Identify Teacher Identity. A rhetorical approach*" by Ietje Pauw, Wenckje Jongstra (both KPZ University of Applied Sciences, Zwolle, the Netherlands) and Peter van Lint (University of Groningen, the Netherlands). In this chapter, Pauw et al. use narratives to provide insights into the image that the student teacher creates of himself in his story, by linking the plot of a student's story to one of seven basic literary plots of Booker (2004): (1) Overcoming the Monster; (2) Rags to Riches; (3) The Quest; (4) Voyage and Return; (5) Comedy; (6) Tragedy; (7) Rebirth. In this study, 47 pre-service first year students enrolled in primary teacher education participate. The authors assume that the narration of the students must lead to reflection on self and situation and the reflection must lead to awareness and growth of personal and professional identity. Hence, students write a narrative reflection report that contains the following: (1) Story; (2) Comment; (3)

Scenario; (4) New practice. The plot patterns that emerged in the study include “Overcoming the Monster”, “The Quest”, “Voyage and Return” and “Rebirth”. “Overcoming the Monster” is the most frequent occurring narrative motive. The authors found that first year student teachers often take up the role of heroes struggling with uncooperative pupils, unfamiliar school subjects and students, classroom expectations and rules. They provide arguments about how relating student teachers plots to the archetypes of Booker can help to discover general patterns in one’s identity at a certain point in the teacher’s development. The authors also provide practical implications of their study for teacher education.

Section 3: (Student) teacher practices

This section focuses on specific practices that address (student) teachers’ learning. Although the main aim of individual papers may be to show how specific approaches or practices were organized and have led to specific results, it is also interesting to relate these practices and their specific approaches to the “excellence in education” theme of the conference book. Studying such practices is important in view of building an evidence-based collection of researched approaches (National Research Council, 2010). This is not only important for researchers, but also for practitioners and policy makers. It provides them concrete descriptions of how to design and implement, for instance, specific support (chapter 9) and curriculum changes (chapter 10).

In Chapter 9 “*Inclusive classroom practices in secondary education*”, Annet De Vroey and Katrien Roelandts from Leuven University College (Belgium), together with Elke Struyf from the University of Antwerp (Belgium) and Katja Petry from the University of Leuven (Belgium), focus on teachers’ practices in inclusive settings. They conducted 55 classroom observations as part of a multiple case study, in order to identify best classroom practices when dealing with students with specific demands or needs. The study aimed to identify the main strategies and interactions in inclusive classroom practice in secondary schools. Both actions and interactions of teachers and students in inclusive secondary classrooms that support student learning at the group level were focused on, as well as actions and interactions of teachers and students that allow students with special educational needs to participate in learning activities in secondary classrooms. Based on these observations of best practices, the authors designed a framework for inclusive classroom practices in secondary education. This framework is focusing on three dimensions: (1) emotional climate, (2) accessibility and classroom organization, and (3) quality of instruction. Moreover, it is distinguishing between (a) strategies at the group level on the one hand, and (b) strategies at the individual level on the other hand. The authors furthermore emphasize in their conclusions that this framework of strategies and interactions that are effective in diverse groups, can be used to support teaching education practices. In this way, the framework can serve as an instrument for student teacher practice in inclusive classrooms.

In the last chapter, Roland Happ, Christiane Kuhn and Olga Zlatkin-Troitschanskaia from Johannes Gutenberg University Mainz (Germany) studied the “*Effects of the Structural*

and Curricular Changes Following the Bologna Reform in Germany on the Content Knowledge and Pedagogical Content Knowledge of Student Teachers of Business and Economics". They focus both on the content knowledge and, given the importance for the teaching profession, on the pedagogical content knowledge of students when comparing students from the old to-be-discontinued Diplom study model with students from the newly implemented bachelor/master (BA/MA) study model. With respect to content knowledge, the authors describe the objectives of the BA/MA reform and conclude that in the new study programmes, the focus has shifted from teaching to learning, indicating an orientation towards competence development during university studies. They were however not able to find empirical evidence that students' level of content knowledge of business and economics differed according to the study model. With respect to the pedagogical content knowledge, the effect of the structural and curricular changes, consisting of the introduction of an additional module on teaching methodology and an increase of the number of practical teaching phases within the new BA/MA study model, was studied. In this case, the authors were able to conclude that these changes can enhance the acquisition of pedagogical content knowledge. The authors conclude that empirical evaluation of reform processes such as the Bologna reform, can help to qualify effects of associated structural and curricular changes on the competence development of future teachers.

Conclusion

When comparing all the chapters of this book with the presented model on professional development, it is clear that almost all chapters have a focus on teachers' and teacher educators' quality. All authors of this book stress the importance of looking at teachers' and teacher educators' knowledge, skills, attitudes, and identity in research studies. Furthermore, teacher quality should be at the heart of policy reforms and policy initiatives, especially in the context of the debate on "excellence" in education. Excellence cannot be conceived in a vacuum without paying attention to the voices of teachers and teacher educators situated in concrete schools and institutions. All authors in this book stress this idea and underline the importance of teachers and teacher educators as key players in our educational system as a whole. Through the different chapters presented in this book, the authors make clear that teachers' and teacher educators' quality is a complex phenomenon related to other conditions and elements. The presented model (Desimone, 2009; van Veen, et al., 2010) is in this context helpful and useful for policy, research and practice. The model also makes clear that within the papers presented at the ISATT conference and selected for this book, little attention is paid to research studies that focus on the impact of concrete professionalization interventions on teachers; and to research studies that look for relations between teacher quality and behavior on the one hand, and learning results on the other hand. To put differently, first, when it comes to the "theory of change", relationships between characteristics of professional development activities and teachers knowledge, beliefs, identity, and practice can be made more explicit. This is a clear challenge for the research community and further nourished by the fact that research on teacher education seldom uses intervention studies on the effects of specific instructional strategies on teachers' behavior and their professional development

(Cochran-Smith, 2003; National Research Council, 2010). In other words, teacher education research needs also quantitative research in general and intervention studies in particular (Lunenberg et al., 2014). Secondly, when it comes to the “*theory of instruction*”, or the study on the influences of changed teacher practices on students’ learning and achievement, little studies that tackle these questions are presented at conferences. Answering these questions can strengthen the research community on teaching and teacher education. The ISATT community can take the lead in this context given its long-standing history. As such, ISATT as a research community would be able to present all broad elements – and their mutual interrelationships – of teachers’ professional development. The epilogue of this book further explores these ideas.

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SECTION 1

**PROFESSIONALISM OF
TEACHER EDUCATORS**

Chapter 2

Policy driven reforms and the role of teacher educators in professionalising teacher education

Diane Mayer^a

Abstract

In many countries, the current policy moment for teacher education is calling into question the value of teacher education as it is currently practiced, proposing alternative pathways into teaching, tightening outcomes with standards for graduating teachers as well as regulating who enters teacher education and what they will study during their preparation. In this paper, I interrogate the current policy moment and suggest ways in which teacher educators might shape current and future agendas to challenge the increasing regulation and prescription that is steadily narrowing the autonomy and professionalism of our work as teacher education practitioners and teacher education researchers. I argue for research informed and validated professional standards for teaching at various junctures in a teaching career that capture the complexity and context-specific dimensions of quality teaching and teacher professional judgement. In addition, I argue for careful consideration of the ways in which teacher educators can provide evidence of the quality of the teachers being prepared with authentic assessment of beginning teaching that captures teaching in all its complexity. Finally, I discuss teacher education research that I believe is needed to inform policy and practice.

Introduction: Teacher education as a ‘policy problem’

In many countries, teacher education is being positioned as ‘a problem’. In Australia, there have been more than 100 various types of government inquiries into teacher education since 1979 resulting in ‘101 damnations of teacher education’ (Louden, 2008, p.366). Claims about the ‘problem’ of teacher education are bolstered by surveys of first year teachers by employers and teacher regulatory authorities where they highlight the ‘reality shock’ of beginning teaching and attribute this to poor teacher preparation that is not practical (with calls for more time in schools and less ‘theory’) rather than the demands of the teaching job (Louden, 2008). In addition, teacher educator providers are often positioned as trying to consolidate their power and monopoly and as being resistant and unresponsive to the needs of the market (Simons & Kelchtermans, 2008).

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Within this context, teaching and teacher education are being framed as economic issues, with ‘evidence’ and the role of ‘the consumer’ as key deciders for policy. Entrepreneurial or market-oriented virtues such as competency, effectiveness, responsiveness and flexibility are taking the place of profession oriented virtues like expertise, responsibility and autonomy (e.g. Ball, 2003). As Connell (2009) reminds us, ‘market-oriented neoliberalism is profoundly suspicious of professionalism; it regards professions as anti-competitive monopolies. Specifically, neoliberalism distrusts teachers’ (p.217) and I would argue, teacher educators. Fuelled by global competitiveness (and the preoccupation with PISA scores and the like), decontextualized educational policy borrowing is rife (Philips & Ochs, 2004). For example, the influential McKinsey Report (McKinsey & Company, 2007) analysed data from 25 systems worldwide and identified three factors that in their view were common to ten of the world’s highest performing school systems, including: (i) getting the right people to become teachers; (ii) developing them into effective instructors; and (iii) ensuring the system is able to deliver the best possible instruction for every child. Moreover, the report claims that ‘These systems demonstrate that the best practice for achieving these three things work irrespective of the culture in which they are applied’ (p.5).

Thus, teacher education becomes a ‘policy problem’ as Marilyn Cochran-Smith explains:

When teacher education is defined as a policy problem, the goal is to determine which of the broad parameters that can be controlled by policy-makers (e.g. teacher testing, subject matter requirements, alternate entry pathways) is most likely to enhance teacher quality (Cochran-Smith, 2008, p.273).

As the widely cited OECD ‘Teachers Matter’ report suggests, the most important influence on student learning ‘potentially open to policy influence’ is ‘teacher quality’ (Organization for Economic Cooperation & Development (OECD), 2005). Many of the policies being developed to address teacher quality and ‘the problem’ of teacher education involve a challenge to the ways in which teacher education has traditionally been offered, asking questions about whether it actually adds value to teacher quality and student learning. For example, the 2003 US Secretary of Education’s Annual Report suggested controversially that colleges and schools of education simply get in the way of good people becoming teachers and argued for ways to reduce the barriers to becoming a teacher among otherwise highly qualified individuals (US Department of Education, 2003). In this context, ‘highly qualified’ meant having appropriate discipline or content knowledge, with the assumption that other aspects of the job of teaching can be learnt on the job. Similarly, in 2010, the UK Secretary of State for Education, Michael Gove, announced his intention to move preservice teacher education out of higher education and back into schools because of his belief that ‘Teaching is a craft and it is best learnt as an apprentice, observing a master craftsman or woman’.

Given this positioning of teacher education, I argue there is important work for us to do in our teacher education research and practice to ensure a professionalised teacher education system into the future; one in which we must take a significant leadership role. To do

this, I will use examples from the Australian context and draw parallels to teacher education in other countries.

Traditionally, initial teacher education has been offered in 35 universities across Australia. Like all higher education, fees are funded by the Commonwealth Government and a student contribution component which can be deferred until graduation and employment. The Government's higher education policies direct university operations. Schooling on the other hand had traditionally been the jurisdiction of the states and territories. In recent years however, Australia has seen increasing influence by the Commonwealth government over schooling and teachers' work accompanied by the increasing positioning of teacher education as a policy problem. For example, the recently concluded Commonwealth's *Smarter Schools – Improving Teacher Quality National Partnership* (TQNP) program provided \$550 million over five years to drive a broad range of agendas at a national level, including:

- Attracting the best graduates to teaching through additional pathways into teaching.
- Improving the quality and consistency of teacher training in partnership with universities.
- Developing the Australian Professional Standards for Teachers.
- National consistency in the registration of teachers.

The NTQP reform agenda has resulted in the introduction of alternative or employment based pathways into teaching such as *Teach for Australia* and *Teach Next*, programs underpinned by a belief that 'the route to improving the quality of teaching lies in recruitment, not in specific courses that will prepare people for this work' (Kennedy, Ahn, & Choi, 2008, p.1250). It has also seen the establishment School Centres for Teaching Excellence (SCTE), a program which funds schools directly to improve the practicum. In addition, the Australian Institute for Teaching and School Leadership (AITSL) has been established as a national agency with responsibility for developing and implementing national professional standards for teachers (Australian Institute of Teaching and School Leadership, 2011c) and school leaders (Australian Institute of Teaching and School Leadership, 2011b), and for regulating national accreditation of teacher education programs and teacher registration (Australian Institute of Teaching and School Leadership, 2011a).

Sustaining the professionalism of teacher education

These features of the current policy moment in Australia and elsewhere have the potential to deprofessionalize the work of teacher education practitioners and researchers. Teacher education is increasingly bypassing traditional academic routes often neglecting relevant peer reviewed research on teaching and learning to teach. The ascendance of a view of teaching as skilled and somewhat technical work and learning to teach as somewhat unproblematic mostly happening on-the-job, often through trial and error, is evident in government policies in many countries. Moreover, the new market-oriented problematization of teacher education, also evident in Belgium (Simons & Kelchtermans, 2008) and many other OECD countries (McKenzie, Emery, Santiago, & Sliwka, 2004), though

politically expedient and perhaps popularly attractive, is I believe, a misguided attempt at quality assurance for teacher education and beginning teaching.

In this paper, I argue that university based teacher educator practitioners and researchers must address and take control of the quality assurance agenda whether we are thinking of teacher education occurring in the higher education institutions or it is incorporated into employment based pathways. I suggest that accountability must be at the point of graduation from a teacher preparation program with a focus on the quality of beginning teachers. To do that, I first argue for research informed and validated professional standards for beginning teaching that capture the complexity and context specific dimensions of quality teaching including the professional judgement required to provide appropriate learning opportunities for every student in every setting. Second, I argue that teacher educators must frame our own accountability by developing authentic assessments of beginning teaching that provide opportunities for graduating teachers to demonstrate their professional knowledge, judgment and practice in diverse school contexts. Finally, I argue that our research in and on teacher education must respond directly to the challenges being put to us about the effectiveness of teacher education.

Professional standards for beginning teaching

Increasingly, the construction of ‘standards’ for both students and teachers, accompanied by notions of ‘control’ through various policy and implementation procedures, are seen as offering quality assurance. A standard set by some central agency or bureaucracy, to which others must aspire, is seen as the accountability mechanism for ensuring a good return on investment. The push for the installation and promulgation of teacher standards has been a worldwide phenomenon and ‘the thrust of central policy-making has resulted in the reduced professional autonomy of teachers through prescription, target-setting and evaluation techniques that strip away the subtleties and complexities of the teaching role’ (Storey, 2006, p.218).

However, I argue that many of the current statements of professional standards portray teaching and teachers’ work as little more than a technical activity. In this way, they don’t look much different from the competency statements of the 1960s and 1970s. However, the development of professional standards for teaching may, as Connell (2009) suggests, ‘help protect education against abuses of the ‘charismatic’ image of the good teacher, where politicians in search of publicity throw untrained youngsters into very difficult teaching situations on the Hollywood principle that natural talent will triumph in the last reel’ (p.220). Indeed, Linda Darling Hammond and her colleagues have argued for some time that framing teachers’ work in terms of what they should know and be able to do is a valid way of capturing the complexity of teachers’ work (e.g. Darling-Hammond & Bransford, 2005). But standards frameworks often embed a neoliberal distrust of teachers’ professional judgment and thus reflect an assumed ‘best practice for all’ not mediated and moderated according to the professional judgment required for student learning in a range of educational settings. In addition, the language of marketization has crept into standards

statements. For example, Connell (2009) highlights this in relation to the development of national standards for teachers in Australia.

... the Standards documents reveal something new. They include some reflective-practitioner terms, indicating the range of outlooks within the committees drawing them up. But their language is much more strongly influenced by corporate managerialism. The texts are heavy with ‘challenges’, ‘goals’, ‘stakeholders’, ‘partnerships’, ‘strategies’, ‘commitment’, ‘capacity’, ‘achievable’, ‘effective’, ‘flexible’, and ‘opportunities’. These terms have a powerful rhetorical effect. They construct the good teacher as an entrepreneurial self, forging a path of personal advancement through the formless landscape of market society with its shadowy stakeholders and its endless challenges and opportunities. (p.219-220)

So, rather than getting caught up in this agenda of individualism, with the notion of teacher as an entrepreneurial individual constantly rising to ‘the challenge’, professional standards for teaching must be based on a close examination of the work of teachers, their professional judgments, and the practice of teaching in relation to student learning (cf. Darling-Hammond, 2013). The challenge is how to ensure that any statements of professional standards for teaching reflect teaching as deliberative intellectual work, as social, collaborative and collegial work, and as emotional work. It is important that teacher educators interrogate through various research agendas the validity of the standards statements as accurate descriptors of what effective teachers know and can do at various points in their careers. As Connell (2009) points out, the lists of current standards do not appear to come from any systematic view of Education as a field of knowledge, nor a reflection of ‘teaching’s daily reality [as] an improvised assemblage of a very wide range of activities’ (p.219). In my experience, many statements of professional standards seem to simply reflect the collective wisdom of whoever is invited to develop and then comment on them at a particular point in time. There is sometimes reference to research on effective teaching, but rarely are the standards subjected to rigorous research interrogation over time. Moreover, a market-oriented problematisation of teacher education which defines ‘effective’ as what the school systems need or want at this particular point in time means that ‘What was ‘working’ yesterday is the guiding principle for what ‘shall be working’ tomorrow, and hence, the past practice of teaching orients and determines the future generation of teachers’ (Simons & Kelchtermans, 2008, p. 289). This approach needs to be challenged.

Assessing beginning teaching

As Ken Zeichner (2012) suggests, ‘once the activities of teachers are identified, the curriculum of teacher education programs should focus on preparing teacher candidates to know and do these things. Teachers should be evaluated on how well they know and do them rather than on the completion of certain required courses’ (p.377). This means

providing opportunities for preservice teachers, at point of graduation, to provide evidence of their effectiveness as beginning teachers.

One way of doing this is to include authentic capstone assessments of the actual professional practice of graduating teachers in the workplace and their influence on student learning (as measured locally at the classroom and/or school level). This is one way in which teacher education programs can provide evidence of the quality of graduating teachers to the profession, regulatory authorities, governments and the community. By assuring accountability at point of graduation, teacher educators will be able to make decisions about the most appropriate teacher education curriculum to achieve their goals and not have the structures, content, and processes dictated in policy regulations. One example of a capstone teacher assessment that aims to ‘measure and promote candidates’ abilities to integrate their knowledge of content, students and instructional context in making instructional decisions’ (Pecheone & Chung, 2006, p.24) is the Performance Assessment for California Teachers (PACT). PACT is designed to collect evidence of preservice teachers’ content and pedagogical knowledge as well as higher-order thinking skills (Pecheone & Chung, 2006) and assesses ‘the planning, instruction, assessment, and reflection skills of student teachers against professional standards of practice’ (Darling-Hammond, 2006, p.121).

In Australia, Deakin University drew on the PACT work to design, implement and evaluate what is now known as the Deakin Authentic Teacher Assessment (ATA). In the ATA, preservice teachers demonstrate their professional decision making and impact on student learning over an extended period of time in schools involving a series of lessons working towards a particular objective or set of objectives. Like PACT, the ATA requires candidates to submit a structured portfolio including teaching plans, teaching artefacts, student work samples, video clips of teaching, and personal reflections as well as commentaries in relation to decisions they make about planning, teaching, and assessment over time.

While modification and refinement are ongoing, an evaluation of the ATA (Dixon, Mayer, Gallant, & Allard, 2011) found that the preservice teachers, the classroom teachers who supervised them and the university academics involved in its implementation all agreed that the ATA provided valid evidence of preservice teachers actually doing the complex work of teachers. However, some challenges were highlighted associated with being a ‘visitor’ in someone else’s classroom, as preservice teachers invariably are. The evaluation also found that much work needed to be done in defining and clarifying the role of the cooperating or supervising teachers as well as the university academics in the process of developing, implementing and grading the ATA. It also highlighted where programmatic improvements were needed in the teacher education program, specifically in developing, implementing and then using assessment to validly gauge student learning and subsequently modify teaching practice, and also in establishing a useful framework to guide the preservice teachers’ critical reflection. Like Linda Darling Hammond and her colleagues (Darling-Hammond, Newton, & Chung Wei, 2012), the evaluation found that the preservice teachers’ professional learning was positively impacted as a result of

participating in the ATA, with preservice teachers reporting a deeper understanding of teachers' work and the relevant professional standards, and to learning quite a lot about assessment, particularly the use of assessment as a diagnostic tool. Moreover, all respondents agreed that completing the ATA helped the preservice teachers to move their focus from classroom management and organisational matters to important professional decisions about student as learners.

However, while the ATA is a comprehensive capstone assessment incorporating multiple measures, like PACT it does not and cannot capture all dimensions of teachers' work. Essentially, it only captures teachers' individual activity in the classroom as s/he works to enhance the learning of their students, but teachers' work is always part of a larger system and workforce. As Connell (2009) reminds us, 'whether an individual teacher appears to be performing well depends a great deal on what *other* people are doing. ... It is often the group of teachers, and the institution they work in, that are effective or not effective' (p.222). Thus, the challenge is to capture the collaborative and collegial dimensions of teachers' work in any system of teacher evaluation (Darling-Hammond, 2013).

Work on providing opportunities for graduating teachers to demonstrate their professional knowledge and professional practice in real teaching contexts and the impact of their work on student learning can form the basis of an accountability system that teacher educators lead and manage and that governments and teacher regulatory authorities accept as evidence of the quality of the teacher education program and of the graduating teachers. I am not arguing here for a PACT or ATA for all. Rather, I am suggesting that as teacher educators we must find authentic ways to provide opportunities for graduating teachers to demonstrate their professional knowledge and practice in authentic ways reflecting the actual work of teachers as they make professional decisions to best meet the learning needs of their students. PACT and the ATA are but two examples. As Pecheone and Chung suggest 'A well conceptualized teacher assessment system that incorporates multiple sources of data, including an assessment of teaching performance, has the potential to provide the evidence needed to demonstrate the significant contribution of teacher education on teaching performance and ultimately on student learning (Pecheone & Chung, 2006, p.34). Moreover, this work has potential for more authentic partnerships occurring, as it does, in newly created hybrid spaces 'that bring together school and university-based teacher educators and practitioner and academic knowledge in new ways to enhance the learning of prospective teachers' (K. Zeichner, 2010, p.92).

Researching the effectiveness of teacher education

Finally, I consider ways in which teacher education research might enhance the professionalism of teacher education. Everyone has an opinion about what effective teacher education looks like, often anecdotally informed or politically motivated. As people like Pam Grossman have suggested, 'as researchers and practitioners in the field of teacher education, we seem ill prepared to respond to critics who question the value of professional education for teachers with evidence of our effectiveness' (Grossman, 2008, p.13). So, the challenge is to provide evidence of our effectiveness. One way is via the authentic

assessments noted above, but another is by directing our research to questions about the value of teacher education.

In Australia, successive government inquiries into teacher education have recommended large-scale research projects investigating the value of teacher education. For example, the recent Productivity Commission (2012) recommended that the Australian Government support a study to:

- follow graduate teachers for at least five years;
- track more than one cohort of graduate teachers to enable analysis of any future experimentation in preservice training, induction and professional development;
- include additional measures of teacher effectiveness;
- gather detailed information on the induction and mentoring arrangements that graduate teachers undertake;
- collect information on what factors influence where graduate teachers seek initial employment, and why early-career teachers leave their initial place of employment. (p. 29).

It seems that these are the types of studies – large-scale, longitudinal, mixed methods – that policy makers are seeking. However, few such studies have been conducted. Of course, there are many reasons for this. Major grants are rare in the field of teacher education and consequently teacher educators study their own programs, producing many small-scale but often unconnected studies of teacher education practice. The findings from these studies do not produce convergent findings; indeed they never set out to do so. And, it must be said that teacher education practice has benefited greatly from this research; teacher educators have learned a lot about how to design and implement effective teacher education programs.

Indeed, ISATT members have undertaken this type of valuable research. For example, Fred Korthagen and his colleagues have investigated the ‘reality shock’ of beginning teaching (Korthagen, Loughran, & Russell, 2006) and the so-called theory-practice gap where teacher education is blamed for insufficiently preparing teachers for the harsh and complex realities of daily teaching practice. Likewise, notions of congruent teaching (Ruys, Defruyt, Rots, & Aelterman, 2013) and the large corpus of knowledge that has been developed from the self study of teacher education (e.g. Loughran, 2007; Loughran, Hamilton, LaBoskey, & Russell, 2004; Loughran & Russell, 2002) have contributed to our collective knowledge base on learning to teach and thus impacted our practice.

Unfortunately, policy makers haven’t always taken note of such research and regularly highlight what they see as a lack of evidence of the impact of teacher education on student learning. I don’t disagree that impact on student learning is an important outcome for teacher education; what I disagree with are the ways in which this is often determined, involving judgements about the value of teacher education as result of simplistic connections between the teacher preparation program of a teacher and the test scores of the students s/he now teaches. And, I do not support the increasing privileging of large-scale studies using quantitative, experimental and causal approaches, as the only legitimate

educational research. But the reality is that we need to ensure our teacher education research informs the policy reform agendas that are working towards de-professionalizing teacher education work and the work of teachers. This research needs to investigate the effectiveness and value of teacher education.

There are some examples. In Australia, one empirical investigation of the effectiveness of teacher education was attempted (Louden, Heldsinger, House, Humphry, & Darryl Fitzgerald, 2010), but due to very low response rates had to be abandoned. In the US, the Teacher Pathways Project in New York City (see <http://cepa.stanford.edu/tpr/teacher-pathway-project>) involves a team of researchers including Susanna Loeb, Donald Boyd and Pam Grossman who are examining a number of different pathways into teaching, the characteristics of those programs and the impact of those characteristics on a range of things, including student achievement in reading and mathematics. In the Netherlands, Brouwer and Korthagen (2005) conducted a 4.5 year longitudinal study using quantitative survey data as well as in-depth qualitative data designed to evaluate effects of a program intended to improve the integration of theoretical and practical learning. In the UK, the six-year longitudinal *Becoming a Teacher (BaT)* study (Hobson et al., 2009), set out to explore beginner teachers' experiences of initial teacher training (ITT), induction and early professional development in England, including: (1) the reasons that some did not complete their ITT, others completed ITT but did not take up a teaching post, and others took up a teaching post but subsequently left the profession; and (2) the extent to which beginner teachers' experiences of ITT, induction and early career progression, and their retention or attrition, were subject to variation relating to the ITT route that they followed. And while not explicitly focussing on the effect of initial teacher education, Chris Day lead 'Variations in Teachers' Work, Lives and Effectiveness' (VITAE) project, a four-year mixed methods research project designed to explore the work and lives of a purposive sample of 300 Key Stage 1, 2 and 3 (English and maths) teachers at different phases of their careers in 100 primary and secondary schools in different socioeconomic contexts, drawn from seven local authorities in England. Its focus was upon identifying variations in different aspects of teachers' lives and work and examining possible connections between these and their effects on pupils as perceived by the teachers themselves and as measured by value-added national test scores (Day, Kingston, Stobart, & Sammons, 2006; Day, Stobart, Sammons, & Kingston, 2006).

In Australia, a four-year longitudinal project (2011-2014), 'Studying the Effectiveness of Teacher Education' (SETE), is currently investigating the effectiveness of teacher education in preparing graduates for the variety of school settings in which they begin their teaching careers (Mayer et al., 2015; Rowan et al., 2015). The project is funded by the Australian Research Council and a number of industry partners including state departments of education and state teacher regulatory authorities. It is targeting all 2010 and 2011 teacher education graduates in two Australian states, Queensland and Victoria, (target population approximately 15,000 graduate teachers) and investigating their perceptions of the effectiveness of their teacher education programs for their current teaching positions, as well as aiming to understand their early career decisions and pathways. In addition, it is investigating principals' perceptions of the graduate teachers'

preparedness. SETE is using an iterative mixed-methods approach, including a quantitative component tracking the teacher education graduates through a series of surveys over a three-year period. The surveys are collecting data on perceived preparedness and effectiveness in relation ten key areas: relationships with students; collegiality; design and implementation of curriculum; demonstrating an understanding of professional ethics; engagement with ongoing professional learning; assessment and the provision of feedback and reporting on student learning; classroom management; professional engagement with parents/ carers and the community; teaching culturally, linguistically and socio-economically diverse learners; and, pedagogy. In-depth qualitative case studies are also being conducted in 30 strategically selected schools involving more than 170 early career teachers. To date, three surveys have been implemented: Round 1 in March 2012, Round 2 in October 2012 and Round 3 in March 2013. The final Round 4 survey will be undertaken in March 2014. The following diagram illustrates how the longitudinal data set is being developed and also the response rates for Rounds 1, 2 and 3.

Analysis is ongoing and full longitudinal analysis will be completed after Round 4 survey in 2014. However, the point in time analysis for each Round is highlighting how early career teachers and their principals think about the usefulness of teacher education programs and how graduates negotiate their first years of teaching. These findings are also informed by the case studies. For example, over 75 per cent of the new graduates who had gained employment as a teacher said they would recommend their teacher education program to someone else, while two-thirds of new graduates who had not been successful in gaining employment as a teacher would recommend their teacher education program. In all three survey rounds to date, graduate teachers with a teaching position were more positive about their initial teacher education than those without a teaching position. This is also reflected in the case study data.

Graduates indicated feeling well prepared by their teacher education programs in pedagogy, understanding professional ethics and the ability to engage in ongoing professional learning, while preparedness in the areas of collegiality, curriculum, classroom management, community engagement and teaching culturally, linguistically and socio-economically diverse learners were lower than the overall mean. An average of responses to all three surveys reveals that over 90 per cent of graduate teachers agreed or strongly agreed that they had been successful in influencing students' learning, a perception which their principals consistently endorsed. When asked about key challenges faced in their first year of teaching, the graduate teachers and the principals both identified classroom management and catering for diverse learners as the most challenging.

Overall, the SETE findings support the established view that learning to teach is a continuum involving preservice teacher education, induction into the profession and then ongoing professional learning and development (e.g. Ball & Cohen, 1999; Conway, Murphy, Rath, & Hall, 2009; Feiman-Nemser, 2001; Putnam & Borko, 2000). Teacher education programs prepare graduate teachers for effective beginning teaching but also provide the foundation for further professional learning and growth. In SETE, the graduate teachers displayed an understanding of the importance of initial teacher education in providing them with the necessary knowledge and skills to enter the profession as effec-

tive beginning teachers, but they also acknowledged that their professional learning and growth continued during their first years of teaching. Moreover, not unlike Brouwer and Korthagen (2005), SETE is finding that the type of employment (for example, contract or permanent) and the school context including various levels of formal and informal support for the graduate teachers, is having a large impact on how graduates perceive their teacher education program over time.

While SETE is providing evidence to further understand the value and effectiveness of teacher education in Australia and the career pathways of early career teachers, there is scope for more work. It is generally agreed that impact on student learning is an important outcome for teacher education, and there are a range of ways this can be measured. Value-added models have been used in some countries and interrogated by researchers (see for example, Cochran-Smith et al., 2012; Darling-Hammond & Youngs, 2002; Kennedy et al., 2008). SETE has addressed questions of effectiveness and impact on student learning by drawing on perceptions – perceptions of the graduate teachers about their effectiveness and influence on students’ learning as well as the perceptions of their principals. However, it is clear that further work is needed to fully understand ‘effectiveness’ and ‘impact on student learning’ in the range of diverse contexts in which new teachers commence their teaching career.

So, while such large-scale empirical studies employing mixed-methods approaches will go a long way to helping us respond to teacher education critics with evidence of our effectiveness, there are other measures teacher educator researchers can take with the case study and ethnographic work that typifies a lot of our research. As Ken Zeichner (2005) has reminded us, we must systematically connect with other studies that have asked similar questions and conduct research which builds on its own findings and where possible use common instruments and outcome measures that make it possible to aggregate findings.

Concluding Comments

This paper has focussed on the teacher quality reforms currently being debated and enacted in Australia as responses to the political positioning of teachers and teaching and teacher education as a policy problem. Like other parts of the world, Australia is experiencing a ‘national solution’ with policy and resources directed to initiatives that by-pass traditional teacher education, tighter regulation of inputs measures like entry into teacher education and more control over the content and site of delivery of teacher preparation. I have suggested how teacher educators might engage the current and future agendas in order to sustain the professionalism of teacher education and shape the teacher education system in the 21st century by focussing on (1) professional standards for graduate teachers, (2) the ways in which teacher educators provide opportunities for graduating teachers to demonstrate their capabilities as beginning teachers, and (3) ways in which teacher education research can counter the anecdotally informed ‘teacher education is failing us’ headlines and the naïve view of teacher quality which assumes a linear relationship between policy and educational outcomes without accounting for school culture,

resources, and communities and without adequate attention to variations in district and state accountability contexts (e.g. see Cochran-Smith, 2008).

As Donna Wiseman reminds us:

The ideal is that newly established policies will emerge out of research results and findings. Currently, that is not the way it happens. Policy is more likely to emerge from public perceptions, based on isolated anecdotes or support for recent educational fads or initiatives. In more cases than not, policy emerges quickly and without the benefit of research before or after mandated innovations are implemented. Policy development will be more supportive toward teacher education when we are able to study changes and the impact of these changes on the preparation of high-quality teachers and the achievement of schoolchildren. We are not able to present the needed data at this point. The current context offers a rich environment for policy-related research and the opportunity for researchers to analyze data collected at the state and national level. Such research should become an important focus of our scholarship as we measure the effectiveness of teacher education.

... The public and political rhetoric will continue, and it is safe to say that during the coming years, teacher educators must be prepared to participate in the debates in an informed and reasoned manner. It will be up to us to contribute scholarly solutions to the policy questions and issues. (Wiseman, 2012, p.90)

We must direct our research and professional activity to issues that speak directly to the questions being asked of teaching and teacher education; that or risk marginalisation as national funding and political energy are directed towards agendas bypassing the teacher education in which we are involved and increasing bureaucratic control of the teaching profession. It is important that teacher educators direct their research to studies examining the value of teacher education and lead national policy discussions about quality teaching. It is important that our research is relevant to and continues to inform the construction and reconstruction of national statements of quality teaching as well as the processes of initial teacher education accreditation. Moreover, it is critical that our work informs the mechanisms by which new teachers are judged as eligible for entry into the profession and the ways in which they are recognised and rewarded for reaching significant professional milestones throughout their teaching career.

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Chapter 3

Teacher educators' professional learning

A necessary case of 'on your own'?

Amanda Berry^a

Abstract

Teacher educators' reports of their professional preparation as *teachers of teachers* are typically characterized by experiences of isolation, loneliness, and neglect. These feelings of aloneness have been longstanding and the current situation for teacher educators seems unchanged. At the same time, an accumulating body of international research highlights both the complex nature of teaching, and an urgent need to improve the quality of teachers and teaching, worldwide. This sets up a strange discrepancy between on the one hand, a pressing need to prepare high-quality teachers, and on the other, a relative lack of organized preparation for those whose responsibility it is to prepare these future teachers. This chapter addresses the issue of teacher educators' professional learning. First, I present some of the issues related to the professional situation of teacher educators and explain how these notions of aloneness may have arisen. Then, I put forward an argument about the nature of teacher educators' professional learning and how it might be better understood and promoted based on an analysis of teacher educators' accounts of their work, including my own. I draw on Mezirow's (1991, 1995), theory of transformative learning in interpreting these accounts. Finally, I re-frame notions of teacher educator aloneness from that of 'isolation and disempowerment' to 'autonomy with agency', and assert that being 'left alone' is a necessary condition for promoting teacher educators' professional learning.

"I was on my own from the start..." (Davey, 2013, p.61)

"It was painful because...I did not really want to isolate. I just did not know how to fit in with the crowd." (Guilfoyle et al, 1998, p.175)

Teacher educators' reports of their professional preparation as *teachers of teachers* are typically characterized by experiences of isolation, loneliness, and neglect (Berry, 2004a; Cole; Elijah, & Knowles, 1998; Loughran, 2006; Murray, 2005; Martinez, 2008). The opening quotes, taken from different texts about teacher educators and their work, published in different countries, 15 years apart; suggest that these feelings of aloneness have been longstanding and that the current situation for teacher educators remains

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unchanged. At the same time, an accumulating body of international research highlights both the complex nature of teaching, and an urgent need to improve the quality of teachers and teaching, worldwide (see for example, OECD, 2005; Cochran-Smith & Zeichner, 2005). So, there seems a strange discrepancy between, on the one hand, a pressing need to prepare high-quality teachers, and on the other, a relative lack of organized preparation for those whose responsibility it is to prepare these future teachers. This chapter addresses the issue of teacher educators' professional learning. To begin, I present an overview of some of the issues related to the professional situation of teacher educators and explain how these notions of aloneness may have arisen. Then, I elaborate an argument about the nature of teacher educators' professional learning and how it might be better understood and promoted, based on an analysis of teacher educators' accounts of their work, including my own.

Introduction

Research into who teacher educators are and their entryways into teacher education reveals the label of teacher educator as somewhat fuzzy and applied to "an ill-defined & heterogeneous occupational group" (Murray, 2012, n.p.). Teacher educators include those who teach pre- and in-service teachers in higher education settings, those who act as mentors of teachers in schools (both pre- and in-service) and professional development providers working in government or private organizations. This chapter focuses on teacher educators working in graduate teacher education programmes in universities/higher education, whose main task is the preparation of new teachers. Yet, even within this group, there is considerable diversity in terms of their background, role expectations and specific tasks.

In terms of background, typical entryways into the role of university based teacher educator are via primary/secondary schools, (as a former or current teacher, mentor, and/or school leader), or via research/graduate study (e.g., as a researcher or graduate student in education or a related field). Research pathway entrants typically have little prior teaching experience, particularly in school settings, while school teaching entrants typically have limited experience of conducting or using academic research (Berry & van Driel, 2013). This creates some interesting tensions in terms of both the content and conduct of teacher education (Mayer et al, 2011). Notwithstanding their prior backgrounds, becoming a teacher educator seems a situation of "serendipity" (Wimmer, 2003), with more individuals "drifting" (Zeichner, 2005) into the role, than deliberately "shifting" (Acker, 1997) into it. Many find themselves "thrown in at the deep end" (Wilson, 2006) in an "overnight transition" (Dinkelman, Margolis & Sikkenga, 2006), without appropriate support or preparation (Zeichner, 2005). In terms of their professional knowledge, there is a relative lack of consensus about the nature and worth of what teacher educators do (Korthagen, 2001; van Veen, 2005). Within the university organization, teacher educators tend to occupy a lower status than their academic colleagues in other fields (Ducharne, 1993) related both to the lower status of faculties of education in general within universities, and because the appointment of many teacher educators is

primarily connected to a teaching position, without a formal research component. One consequence of this situation is that there is often no clear career trajectory for teacher educators connected to their main task of teaching.

A popular assumption underlying the work of teacher educators is that it is a relatively straightforward task, particularly for those with a teaching background, since “a good teacher will automatically make a good teacher educator” (Celik, 2011, p.79) and that what teacher educators do is to provide information about teaching that will help prospective teachers to perform well in schools. Consequently, teacher educators tend to be ‘left alone’ in terms of their professional preparation for their task, since it is assumed that they already know how to teach, and ‘left-alone’ within the university environment, because their primary function as teachers leads them to be viewed as “semi-academics” (Murray, 2005) operating outside of regular university academic culture. In short, teacher educators’ narratives of loneliness and isolation come from a combination of factors including lack of a clear pathway in, lack of professional preparation, lack of shared curriculum or knowledge base, undervalued in terms of the nature of their work and status within the university, and lack of formal career trajectory.

Distinctive nature of teacher educators’ work

While we know a considerable amount about the background and demographics of teacher educators, research on what teacher educators know and how they develop their knowledge of teaching teachers is relatively rare, both in terms of their teaching practices and problems, and their professional development needs and practices (Cochran-Smith, 2003; Martinez, 2008). Cochran-Smith (2003) identified a contrast between the “enormous attention” paid over the past two decades to “what K-12 teachers need to know and be able to do in order to be effective with their students” and the relative silence about “what teachers of teachers need to know” (p.6). Yet there are distinctive aspects about the nature of teacher educators’ work compared with other teaching or academic work. First, a majority of teacher educators consider teaching as the main priority of their work. This makes their work fundamentally performative that is unusual in a university environment where the focus is typically on the production of academic knowledge. Second, the nature of what teacher educators teach is also distinctive. Teacher educators teach the practice of learning about teaching, so that for them, ‘the medium is the message’. This makes their teaching work unlike that of teachers in schools or most other academics in universities because they must function on multiple levels, simultaneously paying attention to what is being taught, (i.e., the subject matter of teaching) and how it is being taught (the pedagogical approach). Teacher educators must deal with “a complex dual role” (Ducharme, 1993), as “[t]hey seek not just to teach content in meaningful ways but also to find ways to teach about teaching content *while* and *by* teaching content and process” (Davey, 2013, p. 170, author emphasis). The teacher educator herself becomes an “an embodied amalgam of theory and practice” (Davey, 2013, p. 170) practising what s/he preaches through modelling and making these tacit aspects of practice explicit for student teachers (Loughran & Berry, 2005). Third, teacher educators must serve many, often contradic-

tory, demands from diverse groups including educational policy makers, research communities, subject discipline associations, the teaching profession, teachers and students in schools, and their pre-service teachers. Attending to these various demands has been described as learning to balance one's "street credibility" with school communities at the same time as positioning oneself strategically in the institution and teacher education fields and their communities (Davey, 2013). Hence, many teacher educators live within an epistemological dilemma of "the high hard ground" of the academy and "the indeterminate swampy zone" of practice (Schön, 1987), with the demands of each sometimes dovetailed, and sometimes competing, but typically without full membership in any of these worlds. This also means teacher educators' work tends to have a greater variety of competing demands than that of a regular teacher in a school or an academic researcher. Finally, teacher education itself is a multifaceted, complex and ill-structured domain (Smith, 2011) where "there are few clear right or wrong courses of action" (McRobbie & Shulman, 1991, p. 1). This means that teacher educators need sophisticated approaches to facilitating the development of knowledge about teaching so that it can be usefully interpreted in the varied, often unique situations in which prospective teachers work. Given their diverse background experiences and the distinctive and specialised knowledge required from teacher educators, it is therefore surprising that their professional learning tends to be "undervalued or overlooked" (Murray, 2012).

Consequences for teacher educators' learning

In practical terms, within their workplace, Smith (2010) reported that teacher educator learning and development is largely ignored, mostly a matter of chance and inefficient. Some consequences of this situation include: teacher educators can have different aims, purposes and approaches to what they are doing even within the same institution, which can lead to an even greater culture of isolation as different sub-groups and sub-cultures are formed, and that what teacher educators know about what they do remains tacit, largely individualised and mostly underdeveloped (Loughran, 2006). Research by Berry and Van Driel (2013) with a small sample of science teacher educators from Australia and the Netherlands reported substantial differences between these teacher educators, in terms of their the aims and approaches to teaching about teaching science, even within the same institution. Differences in expertise and approach seemed to be related to the ad hoc ways in which they entered the profession, and the professional communities with which they most closely associated (for example, school teaching, subject disciplinary, research communities), particularly given the absence of any common institutional view or policy with respect to teaching about teaching (secondary science), or organised professional learning related to their tasks, in their institutions. Almost all had to invent their own curriculum, leading to rather different and highly personal approaches. It seems that when teacher educators 'go it alone', they are more likely to draw from familiar knowledge sources that in turn, shapes (and potentially limits) their thinking about, and approach to, educating new teachers (Berry & van Driel, 2012; Hadar & Brody, 2010). This leads to re-enactment and reinforcement of past (familiar) practices, and maintaining loyalty with

particular communities, rather than becoming part of a new community of *teacher educators* with a distinct focus on teaching about teaching.

Whilst teacher educators share a common broad purpose, to teach prospective teachers about teaching, they are typically not well structured or well established as a group in terms of their shared knowledge and there are typically few structures to bring them together around their knowledge (Korthagen 2001; Loughran, 2006). Within their own institutions, “members of a faculty of education rarely agree on fundamental premises of preservice teacher education, and this lack of consensus can create fragmentation, bitterness, and in-fighting” (Russell & McPherson, 2001, p.7). Within this environment it is not surprising that faculties of education do not reflect the most healthy social organizations for teachers whereby feelings of isolation, defensiveness, and total self-reliance are virtually inevitable (Kagan, 1990). In sum, becoming a teacher educator is a challenging task because there is no specific preparation for the role and the job itself is vaguely conceptualised in terms of tasks and responsibilities and operates within complex, multiple settings. In other complex professions (e.g., law, medicine, nursing), there is specific professional preparation that draws from an established knowledge base, cultivates particular capacities and dispositions and functions via specific communities of practice.

Calls to change

Not surprisingly, there have been various calls to change this situation so that the preparation and ongoing learning needs of teacher educators can be better addressed, so as to respond appropriately to the demands of their professional tasks to support the development of competent new teachers. As Zeichner (2005, p.123) observed, “...if teacher education is to be taken more seriously...then the preparation of ...teacher educators needs to be taken more seriously as well”. These calls to change include:

- specifying particular entry requirements for teacher educators, for example prior classroom teaching experience, and/or higher academic qualifications (for example, a PhD), and/or be active researchers;
- identifying particular competencies for teacher educators, (for example, proficiency in coaching and feedback conversations);
- developing more and better formalised induction procedures for beginning teacher educators;
- developing a curriculum for educating teacher educators, at the local or national level;
- developing and communicating a shared knowledge base of teacher education;
- making explicit a pedagogy of teacher education.

Some responses and some risks

Internationally, different kinds of responses have been developed to address the above calls. These responses can be roughly divided into two types – *systemic* responses, i.e.,

those operating at the more formal, organisational level; and *local* responses that operate within an organisation or institution, that are typically less formal and may involve individuals or groups (Smith, 2012). Systemic responses include such things as the introduction of professional standards for teacher educators (e.g., Association of Teacher Educators; USA); professional accreditation for teacher educators (e.g., The Dutch National Teacher Education Association (VELON) has developed an accreditation process via professional portfolio and interview), the establishment of a national centre for teacher educator learning and development (e.g., MOFET institute in Israel offers different kinds of courses focussing on teacher educators' needs, and organises national and national conferences relevant to teacher educator learning, which is linked to increase in teacher educator salary when a certain number of hours is collected), and the specification of particular academic requirements (e.g., to have earned a doctorate, preferably in education, as an entry level qualification to teacher education). Local responses include such things as specific courses for prospective teacher educators within PhD programmes (e.g., University of Missouri, USA offers courses within their doctoral program for prospective science teacher educators); the development of Professional Learning Communities of teacher educators, whereby teacher educators come together to learn about teaching in teacher education, either formally organised by the institution or informal, initiated by teacher educators themselves (for example through reading groups, research groups, taking place at various universities around the world); as well as co-teaching or mentoring of teacher education faculty within an institution. These can be spontaneous, informal arrangements of mentoring between colleagues, or more organised collaborations (for example, at ICLON teacher education institution in the Netherlands each teacher educator is 'paired' with another teacher educator to collaboratively plan and teach a full year foundation subject, 'Learning and Instruction').

An interesting example of a local initiative that became systemic is that of the Self-study of Teaching and Teacher Education Practices (S-STEP) group that began from the concerns of teacher educators working in different parts of the world about the lack of attention paid to teaching in teacher education and who came together via meetings at conferences to form an international group researching teacher education practices, leading to the development of a new, formal international community, now with its own Handbook, scholarly journal and bi-annual conference (see <http://sstep.blogs.uoit.ca/>).

The development of all of these approaches offers promising opportunities to formalising the knowledge required by teacher educators, creating specific trajectories for teacher educators' learning and creating communities that can help to overcome the isolation and loneliness experienced by many teacher educators. Bromme and Tillema (1995) distinguish between professionalisation, related to the development and sharing of domain specific knowledge, for example in developing a shared knowledge base, and academisation, related to increasing the level of professional accreditation or academic status required for entry into a profession, for example, requiring a research degree. The concepts of academisation and professionalization offer promise in developing teacher education as a professional field, although several authors have pointed to potential risks associated with these processes, also.

Professionalisation and academisation

In many professions, professional accreditation and development relies on the availability of a standard that specifies a common outcome in terms of what the profession expects its members to know and be able to do. Specifying such a standard helps to clarify characteristics of the profession, including its specific knowledge base and to define and regulate the practices and behaviours of its members. Given the longstanding vagueness around the professional position of teacher educators, professionalization would seem an important task for raising their status and position as a professional group, elaborating a career structure and enhancing the quality of teacher educators' work (Lunenbergh, Dengerink & Korthagen, 2014). At the same time, Celik (2011) identifies various critiques of professionalization in teacher education, in particular related to the ways that the standards have been developed (Zuzovsky & Libman, 2003), the groups charged with the responsibility of developing and imposing professional standards (i.e., those outside the profession) (Smith, 2003), that standards typically do not take into account the complexity and unpredictability of teaching (Korthagen, 2004); that a regulated professional community ensures improved performance and normative practices but, normative assessments can lead to deprofessionalisation (Cochran-Smith, 2001; Valli & Rennert-Ariev, 2002) and that the "validity, reliability and practical feasibility of assessment of teacher educators based on competences" (Celik, 2011, p.74) is "questionable" (Zeichner, 2005). In short, it appears that standards for teacher educators that are externally developed and regulated can work against learning, promoting instead an "authoritarian assessment system" (Ingvarson 1998, in Celik, 2011) that "constrains professional autonomy, inhibits professional creativity and development and eventually erects a barrier to the quality of teacher educators and teacher education" (Celik, 2011, p.74) rather than helping to establish a shared knowledge base of practice, to "make public the characteristics of teacher education for people both within and outside of the profession" (p.74). While professionalisation may function to reduce loneliness, since all members would be required to conform to a particular set of standards, it is also potentially limiting because the uniformity that is imposed may not be appropriate or relevant to the different tasks, contexts, and needs of different teacher educators.

Improving the status of teacher educators and their work through academisation of the role is an important goal, yet at the same time, there is a risk of losing an emphasis on teaching if teacher educators are pressed to conform to demands of academic productivity, particularly if they are novice researchers. This situation raises something of a dilemma in terms of the much needed recognition for teacher educators as legitimately placed within the university context and the difficulties of maintaining a focus on teaching and research when for many, their teaching load is relatively high compared with other academics, and experience as researchers relatively low. A further complicating issue associated with academisation is that those who prepare teachers for teaching would be required to have the same preparation as those who are being prepared to be researchers in education. Some practical issues related to academisation include teacher educators having sufficient time for participation in academic activities, financial costs and the availability of suitable programs.

Taken together these requirements of professionalization and academisation create a career entry requirement that appear to go beyond that which is required of teachers and that which is required of researchers – that is, high levels of professional practice and the ability to articulate that practice in a way that it can be learned by novice members of the profession, along with high levels of educational scholarship in order to conduct research activities consistent with being in a higher education research environment.

Summary

Looking across all of these different approaches and initiatives, it seems that around the world there is a growing array of, and considerable diversity amongst, what is offered, expected and available for the professional learning of teacher educators. There appear to be few systematic routes for teacher educators' ongoing learning and little research documentation of these routes (Smith, 2012). Further, there is thus far no research that tells us whether specific kinds of backgrounds or experiences are predictors of success as a teacher educator, or that that preservice teachers learn better with or without teacher educators having participated in organised programs. So what does that mean for teacher educator's professional learning? Should it remain with all of its diversity, as "a field where we let a thousand flowers bloom" (Shulman, 2006)? Or, should there be some more systematic way of preparing teacher educators that is nationally, or even internationally consistent? In the case of pre-service teacher preparation, Shulman (in Falk, 2006) argues strongly that in pre-service teacher preparation there is already a shared set of ideas about the field so the variation in approaches to preparation in different locations and contexts should be minimal. In the case of the preparation of teacher educators however, there does not yet appear to be a 'shared set of ideas' about what comprises the field. Elaborating these will be an important task for the immediate future. At the same time, there is a pressing need for more teacher educators to recognise and come to grips with the idea that a unique body of knowledge comprises their work and that this knowledge is not necessarily something that previous work experience or study can prepare them for, but must be somehow learned on the job. In the next part of this chapter, I will argue that the essential professional task of teacher educators is in learning how to draw from and restructure their existing knowledge in ways that enable them to facilitate the learning about teaching of others, and to be able to articulate this knowledge and its process of development, so that it can be made clear to themselves, other teacher educators, the public and, most importantly, to the prospective teachers with whom they work. In order to build my argument, I will draw on my own experiences as a teacher educator as a case for such an alternate framing of teacher educators' professional preparation and growth.

Reframing teacher educator learning

Finding my own professional trajectory as a teacher educator

Through analysis of my accumulated experiences as a teacher educator I have come to recognise particular aspects that have supported and enhanced the processes of my own professional learning. These aspects can be broadly categorised as: Experiences, Processes and Conditions.

Experiences

My own pathway as a teacher educator closely parallels the experiences of many other teacher educators reported in the literature. As a former high school biology and science teacher, I began employment as university biology teacher educator with little formal preparation for my new role. On the other hand, I brought many years of teaching experience, a large repertoire of successful teaching approaches, experiences as a school based mentor of student teachers and many ideas about what I wanted new biology teachers to know about in order to teach Biology well. My approach to teaching teachers relied on sharing my practical wisdom of 'what worked' in my high school classroom. However, I soon realised that such an approach was neither viable (student teachers could not simply reproduce what I did), nor desirable (student teachers should not be expected to take on my values as their own). This situation created a sense of dissonance in me. It seemed that my professional experiences and knowledge of teaching high school students had limited usefulness in successfully enacting my new role. Feeling deskilled and disoriented in this new context was precipitative in leading me to become a learner about teaching again, this time with a focus on understanding teaching about teaching. I participated in a range of types of experiences including, an individual experience of research training and formal study through completing a doctorate in the field of teacher education, (a study of my developing pedagogy, Berry, 2004b); co-teaching several teacher education courses with colleagues at different stages of their teacher education career that enabled me to see other teacher educators teach and to learn from and with each other; and involvement in a range of faculty based research projects (funded and unfunded) with outcomes of academic publications and conference presentations that led me to connect with new international colleagues and better understand the process of developing and disseminating research ideas. Taken together, these experiences have comprised the basis of my professional learning, although at the time they were not organised as a coherent, planned set. My experiences of participation in a range of different academic activities also enabled me to become acquainted with the kinds of tasks, language and organizing principles of the academic environment and gradually develop legitimate membership in the different communities of practice functioning in the university environment. These different experiences were an important form of "situated learning" (Lave & Wenger, 1991) that included *individual and collaborative, formal and informal, planned and unplanned experiences*. Each of these was instructive in different ways in my learning as a teacher educator.

(Interestingly, having recently moved to a new teacher education institution in a new country, I find myself once again moving through this same cycle of experiences and the above-described framework has been productive in helping me interpret the processes of my professional learning.)

Processes

The experiences of teaching pre-service teachers, researching teaching, studying literature about teaching and teacher education and discussing teaching and research with colleagues provided an important basis from which I became more consciously aware of my knowledge and actions as a teacher educator; including the particular dilemmas I faced in teaching about teaching. I began to question some of the assumptions guiding my thinking and approach and to locate my ideas within broader theoretical frameworks from the literature. Through articulating and organising my experiences through the lens of different theoretical perspectives (for example, Brookfield's (1995) categories of assumptions), I began to reframe my understanding of my practice and to develop the conceptual framework of 'tensions' (Berry, 2008) for interpreting the dilemmas that I encountered in teaching about teaching. Testing the idea of 'tensions' through conference presentations and publications led to their more robust conceptualisation and validation that these were not only unique to my practice, but resonated with many other teacher educators, also. In sum, the processes associated with my experiences involved becoming more *conscious of my teacher education practice, working towards developing a coherent pedagogy of teacher education leading to professional self-understanding*. I was able to develop my voice as a teacher educator along with a growing sense of agency in the role.

Conditions

While experiences and their accompanying processes are two aspects of the professional learning I experienced, a third and equally important aspect relates to the conditions, or environment, under which these functioned. Under the heading of 'Conditions', I include both the structural working conditions of the teacher education job, as well as my own personal dispositions. The working conditions of my job included formal requirements of participation in Faculty activities, such as research and administration, as well as more informal aspects including mentoring and support from senior colleagues that aimed to promote learning and development of staff through providing choice and opportunities, compared with 'meeting the requirements of the job'. Collegial support was also related to particular personal professional qualities of individuals such as knowledge of pedagogical approaches in teacher education, knowledge of subject matter of teaching teachers and mentoring skills in encouraging critical reflection. My own disposition has been equally important in terms of the professional 'stance' I have taken, including my willingness and openness to scrutinise my beliefs and practices and to learn and change that reflects, at least to some extent, Dewey's (1933) characteristics of a reflective learner.

The three aspects of experiences, process and conditions that I have described were, of course, operating simultaneously throughout my induction and ongoing work as a teacher

educator. Sometimes they sat comfortably within, and at other times uncomfortably beyond, my “zone of proximal development” (Vygotsky, 1978) as a new teacher educator. Importantly, I began to gradually recognise myself as a participating member of the research and teaching communities of practice within my institution. The combined effect of these aspects was in stimulating new forms of practice, developing my professional self-image as a teacher educator (as compared with a teacher in a school), and building my understanding of the specialised knowledge underpinning the role of teacher educator. Overall, there was an important perspective shift for me in terms of how I framed my knowledge and practice for teaching teachers, and how I thought about myself, and was recognised, as a member of the university community.

Mapping my learning onto the reports of other teacher educators

Looking across the (albeit limited) reports of other university based teacher educators regarding their induction and ongoing learning, it seems that the aspects that I have described from my own experience are not unique. The literature provides support for the particular kinds of processes, conditions and experiences that I experienced, as typical at least for those entering the teacher educator role from a classroom teaching background (See for example, Brandenburg, 2008; Bullock, 2009; Dinkelman, Margolis & Sikkenga, 2006; Kane, 2007; Nicol, 1997; Ritter, 2007; Russell, 1995; Williams, Ritter & Bullock, 2013)¹. Taken together, these experiences, processes and conditions can be conceived of in terms of specific ‘phases’ that teacher educators move through as they learn and grow as professionals. These phases include:

- *A disorienting experience*: through this (usually unexpected) experience or critical incident, the teacher educator starts to question taken-for granted assumptions about the nature of teaching and learning, and his/her own role in the process. This may occur in the form of a spontaneous and high impact experience (e.g., Dinkelman, 2003); it can also be something gradually unfolding over time.
- *Becoming conscious of practice*: The disequilibrium created results in a search for new understandings of knowledge of teaching and an enhanced awareness of how one functions as a teacher/teacher educator (e.g., Grierson, 2010).
- *Framing practice and making the tacit explicit*: This involves recognising the organising frames (Barnes, 1975) that locate practice; seeing the ‘bigger picture’ of one’s understanding of teaching through different theoretical perspectives, and beginning to explicate these practices and frames (e.g., Bullock, 2009).
- *Challenging assumptions and frames*: This occurs with renewed questioning of taken-for-granted assumptions, critical interrogation of practice and reframing (Barnes, 1975) understandings of teacher education (e.g., Brandenburg, 2004).
- *Acting on and communicating new understandings of practice*: This involves taking new understandings into, and changing, practice, and communicating new knowledge of practice to others, e.g., colleagues, students, and educational communities (e.g., Nicol, 1997; Ritter, 2007).

Naturally, these phases are not necessarily experienced in a linear fashion, nor are they all present in every teacher educator's accounts of their learning. Also, it is clear from the literature about teacher educators' learning (including my own), that teacher educator learning and development involves a complex dynamic that occurs not only in terms of particular knowledge and skills, but also in terms of their dispositional orientations, that is, the attitudes, values and beliefs that lead teacher educators to think and act in certain ways. Through their changing participation, teacher educators begin to take up ideas about teaching and learning and themselves differently as they re-create their perspectives from a new position, for example, moving from the perspective of a history teacher with a focus on subject matter and learners in schools, to the perspective of a history teacher educator with a focus on how one learns about teaching and learning the subject matter of history for school students. Importantly, the phases described above represent the nature of teacher educator professional learning not simply as a process of accumulating particular knowledge, skills, or dispositions, but rather, as a process of deep change, or *transformation*, on both a personal and professional level. This change process involves a re-organisation of the way in an individual perceives and acts upon situations encountered in the teacher educator role. At a general level, the description of these phases would seem applicable not only to the experiences of teacher educators, but also to professionals in many different fields; undergoing particular experiences of growth and change which trigger new understanding of one's professional role. However, a distinctive feature of this process for teacher educators is that, unlike other professional groups, there is no formal, codified knowledge base for individuals to draw on in making sense of their experiences. Nor is there a clear pathway in terms of institutional expectations, structures or practices for supporting social and intellectual transformation.

Learning as transformation *not* accumulation

The notion of learning as transformation holds a central place in (western) adult learning traditions although definitions vary according to different researchers (see, McEwan, Strachan & Lynch, 2011, for an overview). Underlying these different definitions, however, is a common core notion of transformation as a deep, structural shift in how a person thinks about, perceives and acts in the world. Mezirow (1991), whose work is foundational in this field, described the process of "perspective transformation" as comprising three dimensions: Psychological (understanding of one's self), convictional (revision of belief systems) and behavioural (changes in one's actions). Transformative change may result from dramatic or sudden insight, or may be the product of a more gradual process. A fundamental shift in one's world view or "meaning perspective" (Mezirow, 1995) emerges from intense critical reflection that challenges previously held beliefs and assumptions and "entail[s] a fundamental reordering of social relations and practices" (Brookfield, 2003, p. 142). A core tenet of transformative learning theory is that while it focuses on processes occurring within the individual, it necessarily involves *both* individual efforts *and* social interaction: "[l]earners are not transformed in isolation" (Servage, 2008, p. 67), "change emerges from dialectic engagement among a group of learners with diverse perspectives (Mezirow, 1995)." Further, since transformative

learning includes the assessment of one's beliefs, feelings and values, it can pose "a psychic risk" (Servage, 2008, p.70) as individuals must identify, and ultimately renegotiate, deeply-held ideas to work towards new ways of knowing and understanding. The process of transformative learning therefore requires particular attitudes, such as those described by Dewey (1933) of open-mindedness, responsibility and wholeheartedness. Finally, an important outcome of transformative learning is that it gives adult learners the ability to think and act as autonomous individuals, to develop their own sense of meaning and to use the contexts of their formal learning experiences to construct and re-construct personal meaning (Dirkx, 2006).

Returning to my own experiences, the concept of transformational learning theory offers a useful framework for conceptualising my own professional growth experiences as I have transitioned into, and developed as a university based teacher educator. My disorienting experiences emerged as pre-service teachers in my Biology methods classes were not 'taking on board' what I was seeking to communicate to them about how to teach; this motivated me to begin to study my teaching and their learning, that included a critical examination of my educational beliefs, values and experiences, both alone and in collaboration with others. Through the process of studying both my own and others' teaching, I was able to develop a heightened critical awareness of my own practice and began to reconstruct my knowledge using a new conceptual frame, and sought to put this new knowledge into practice. Reconceptualising practice has helped me to formalise the experience of being a teacher educator and in the process has provided a language for articulating personally meaningful knowledge of teaching about teaching that can be shared and re-negotiated with others.

Too important to be left to chance, but important to be left alone

The main issue proposed in this chapter is that the professional learning of teacher educators has for too long been neglected and is too important a matter to be left up to individual chance and circumstance. I have argued that there is something distinctive about the nature of teacher educators' knowledge that typically, is not known before a person enters the role. Further, the different kinds of backgrounds of those entering the role mean that teacher educators will hold different perceptions of their task and its requirements as well as different orientations in terms of how they think about educating new teachers and how they engage in teacher education practices.

Teacher educators working in university contexts frequently report their experiences of learning about their role as inadequate and lonely. A diverse range of responses has begun to grow to address this situation that tend to be associated with issues of professionalization (e.g., accreditation), and academisation (e.g., requiring higher level academic qualifications). I assert while that teacher educator learning needs to occur within some kind of framework, we need to be mindful of specific frameworks or approaches to their implementation that encourage compliance or restrict the professional growth opportunities for teacher educators. Instead, teacher educators need the opportunity to develop themselves according to their own needs, concerns and particular contexts. Teacher educators should

be able to access different kinds of formal (e.g., undertaking a doctoral degree) and informal (e.g., team teaching, collaborative research groups) activities that operate either externally (for example, through a network or organisation) or internally within the teacher education institution. Choosing the shape of one's own learning trajectory should be a matter that is negotiated between the individual teacher educator and their institution, so that different individuals and institutions would develop different kinds of activities based on situation and need, and that would reflect the range of contextual differences and institutional identities. However, for such an approach to be successful, each teacher education institution must be committed to stimulating, supporting and valuing the ongoing learning of all teacher educators as an integral part of their everyday work. This includes allocating adequate resources in terms of time, funds and the availability of experienced personnel who can work as supportive colleagues with less experienced staff. When undertaken in this more personally relevant and flexible way, the learning of teacher educators becomes intentional and purposeful, rather than specified and controlled.

Importantly, I believe that while teacher educators' professional learning is something that happens alone, it should not be a lonely enterprise. Alone-ness then, comprises two contrasting aspects; that of isolation and deprivation of power, and that related to autonomy and the situated nature of learning. There is a need to shift from conceptions of professional learning as something you do *only* by yourself, to something that you do by yourself, with others. It is a personal professional process of transformation undertaken in community. It involves a process of sense-making by the individual learner at the same time that the learning is situated, relational and participatory. Sense-making by the individual is invoked and developed as one goes through the process of reconciling oneself to particular social contexts, and occurs as a continuous process of re-forming autonomy through social exchange. This idea encapsulates the apparent paradox that frames this chapter, that the professional learning of teacher educators is *an autonomous journey of interdependence*. And, paradoxically, individual autonomy is enhanced when participation in a community is available. However, the reverse is not true, participation in a community does not ensure autonomy.

Conclusion

Policy makers and researchers in teacher education have been critical of the ways in which teacher educators have been neglected as a professional group (Snoek, Swennen & van der Klink, 2011). Also, teacher educators themselves have for a long time been critical of being left on their own. Yet, in this chapter I have argued that they almost have to be left on own to construct their own personally meaningful professional knowledge of practice. At the same time, this does not mean that every teacher educator needs to 'start from scratch', but it does require them to transform their perspectives. Following this way of thinking, aspects of a shared knowledge base of a pedagogy of teacher education are important to develop, but the nature of the knowledge needs to be fluid and flexible enough to respond to change, embrace complexity, and teacher educators' different

contexts and tasks. Hence, an important challenge for the teacher education community lies in finding ways to capture and communicate their professional knowledge so that it can be both personally meaningful as well as collectively accessible, useful and able to be further built upon. Encouraging communities of teacher educators to share and critique the knowledge they develop, to look for common understandings and to link their work with that produced by others offers promising future possibilities in this regard. In any case, there should be space for individual choice for professional growth in order to achieve the kind of transformational learning that underpins what it means to learn the role of teacher educator. Thus, rather than formalising and ritualising teacher educators' professional learning, through for example, mandated one-size-fits-all professional accreditation programmes, it can be cultivated in ways that encourage rather than stifle, individual learning and growth.

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Notes

1. The literature is very limited about those who do not enter from a classroom teaching background.

Chapter 4

Professional development for teacher educators in the communal context

Factors which promote and hinder learning

Linor L. Hadar^a and David L. Brody^b

Abstract

Professional development of teacher educators is increasingly important in promoting and advancing educational practice; however, scant research attention about this group has been found. The benefits of professional development in community among teachers have been well documented, suggesting that this approach should be explored in depth for teacher educators. The literature on the communal model as a professional development intervention presents a partial picture of how learning occurs in these contexts. This study sheds light on the essential features that constitute the workings of a community of learners for teacher educators. As such this paper relates teacher educators' professional development by looking closely at intervention characteristics of a communal model of professional development. This model was repeated annually in a project aimed at achieving change in practice by infusing thinking into college courses, providing a rich base for analyzing the characteristics of a professional development community intervention for teacher educators. A fine grained analysis extrapolates from our data the important factors of this intervention which enable the teacher educators to change their teaching behaviors through professional growth and which inhibit such growth. In our professional development community the main features supporting teacher educators' development included: creating safe environments for learning, talk about student learning, group reflection and feedback, engaging teachers in research, and continuity. A factor that prevents professional growth is detachment from the project's goals, a phenomenon which we termed *withdrawal*. Breaking of isolation was identified as a factor that can either promote development through a sense of belonging or hinder development through formation of resistant alliances within the group. As teacher educators shift their role from teacher to learner, the supportive environment of the community promotes risk taking that can lead to change in practice. Those who continued more than two years revealed commitment to the learning process and were more likely to change their practice. The factors leading to change help teacher educators through the ambivalent feeling experienced in this role change. The importance of our analysis lies in the clear delineation of how the community works to promote or hinder professional growth and change.

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Introduction

The teacher educators' role in preparing the next generation of teachers is at the crux of educational innovation and effective schooling. Their professional development is a necessity rather than an option. This insight has led to the call for their engagement in ongoing learning in addition to their everyday teaching activities (Hutchinson & Hadjiannou, 2011; Jones, Stanley, McNamar & Murray, 2011; Kabakci, Odabasi, & Kilicer, 2011). In spite of their central role in the education hierarchy, teacher educators' continued learning has received inadequate attention in the research literature. Furthermore, there is limited knowledge about the varied circumstances and frameworks for teacher educators' professional development and how learning occurs in these contexts (Murray, 2008; Edwards & Protheroe, 2003). The aim of this paper is to understand factors that influence learning among teacher educators in one such context. This paper distills five years of research on professional learning in a community for teacher educators to offer an overview of how their professionalism develops.

Professional development of teacher educators

Professional development of teacher educators is increasingly important in promoting and advancing educational practice, and is seen as a crucial component of curricular change in many countries such as China (Hong, 2010), Greece-Cyprus (Karagiorgi & Nicolaidou, 2013), the Netherlands (Koster, Dengerink, Korthagen, & Lunenberg, 2008), and Israel (Zohar, 2008). The responsibility for preparing qualified and competent teachers rests primarily with teacher education programs, thus positioning teacher educators as "the linchpins in educational reforms of all kinds" (Cochran-Smith, 2003, p.5). To ensure the quality of teacher education and thus the advancement of the educational field, teacher educators need to update their practice and expertise with the most relevant knowledge in their field (Smith, 2003). Moreover, the requirements of preparing future teachers for the 21st century heighten the need for teacher educators to be involved in continuous learning through ongoing effective professional development.

In spite of the critical role ascribed to teacher educators, their need for adequate professional development is not addressed systematically (Cochran-Smith, 2003). Teacher educators have been considered in the professional literature as a "neglected group" (Korthagen, 2000). Research interest in professional development of teacher educators as a distinct group has recently come to light, and may be a response to international awareness of the importance of teacher educators' role and initiation of programs for their professional development in different countries. These programs include for example the MOFET Institute in Tel Aviv (Ben-Peretz, Silberstein, & Ziv, 2001), in which teacher educators come together to create a learning and teaching community. In addition, "centers for pedagogy" have been established at Montclair State University to support the ongoing learning of teacher educators (Villegas & Lucas, 2002). Moreover, the Association of Teacher Educators in Europe has established forums for collegial discourse (Smith, 2003) and initiated research and development communities to promote professional development of teacher educators (ATEE, n.d.).

Much of the research work in this area has emphasized professional development through self-study (Hamilton, 1998; LaBoskey, 2001) or relates to teacher educators as researchers who take their own professional context as research sites in order to examine a variety of topics (Cochran-Smith, 2003). Examples of self-study show how such endeavors promote professional development. In one project pre-tenured faculty researched their own practice, forming a community of scholars to advance themselves professionally (Gallagher, Griffin, Ciuffetelli Parker, Kitchen, & Figg, 2011). Williams & Ritter (2011) in their self-study found this form of professional development essential for establishing their professional identity. Jasman (2011, p. 305) reports on five different self-study projects in which she was involved as a teacher educator and explains the importance of “professional learning journeys”.

Other research related to specific projects and methods. For example, Kabakci, Ferhan Odabasi, & Kilicer (2011) assessed a mentoring method of professional development for ICT teacher educators. Another evaluative study examined group reflection as a means of language teacher educators to improve their skills in preparing future teachers for culturally and linguistically diverse schools (Jacobs, Assaf, & Lee, 2011). The growing research interest in professional development of teacher educators coupled with the lack of a comprehensive approach has also led to the recent call (October 2013) from the *Journal of Teacher Education* for a special issue on this topic.

This paper addresses this need for further research on teacher educators’ professional development. We specifically examine professional development in community, situated within the institutional contexts in which teacher educators work. This focus enables us to examine the different influences on professional learning that occur in a communal endeavor.

Professional learning in community

Studies examining conditions that promote or hinder professional learning have noted the crucial role played by collaboration in affecting significant change among educators (see for example Avalos, 2011; Stes, Min-Leliveld, Gijbels, & Van Petegem., 2010; Prebble, Hargraves, Leach, Naidoo, Suddaby, & Zepke, 2004; Gallos, van den Berg, & Tregust, 2005; Taylor & Rege Colet, 2009). Learning in groups has proved to be a major avenue for supporting this development and change (Lohman, 2005). Collaboration has been found to encourage development through exchanging ideas and experiences, discussion, feedback, and moral support (Butler, Novak Lauscher, Jarvis-Selinger & Beckingham, 2004; Meirink, Meijer, & Verloop, 2007). This perspective derives from research showing that one cannot learn in a vacuum, and an expert in isolation has limited capacities (Brown, Bransford, Ferrara, & Campione, 1983; Brown, 1997). This approach views professional learning as socially and culturally situated. Instead of focusing on the solitary practitioner whose professional learning is segmented from colleagues, the collaboration context emphasizes the shared work setting. In these contexts new information and ideas emanate from interaction with others, creating a culture in which further learning is stimulated (Jurasaitė-Harbison & Rex, 2010).

One model of learning in community is the community of practice (COP) (Lave, 1993; Lave and Wenger, 1991), in which a group of practitioners share common concerns, sets of problems, or passions about a topic. They deepen their knowledge and expertise by ongoing interaction towards a common goal such as professional problem solving and improvement of practice (Wenger, McDermott, & Snyder, 2002). This model, although developed in the context of business organization, has been widely applied in educational settings, where it has been characterized by teacher involvement, collaborative problem solving, continuity, and support (Opfer & Pedder, 2011; Borko, 2004).

A second model of learning in community is the popular community of learners (COL). Recent international focus on instructional development efforts in achieving pedagogic change (e.g. Avalos, 2011; Stes et al., 2010; Prebble et al., 2004; Gallos et al., 2005; Taylor & Rege Colet, 2009) has emphasized the utility of COL as a preferred means of achieving significant professional development. Shulman and Sherin (2004) focused their use of the term COL on the jigsaw model, which involves interlocking domains of inquiry among the learners. This idea has been further developed in a model emphasizing interdependency. In this view, collaboration implies that teachers share responsibility and authority for making decisions about common practices (Meirink, Imants, Meijer, & Verloop, 2010). The COL model generally denotes a group of practitioners who convene in order to learn together with the aim of deepening knowledge and understanding through joint reflection and problem solving (Nash, 2008). The COL is distinguished from the COP in that it does not necessarily involve a common domain, and the focus need not be on practice itself.

Despite differences in focus and aims, the COP and the COL share the premise that educators can learn as well as teach in their work setting (Borko & Putnam, 1996; Hargreaves, 1994; Smylie, 1995). Theories of organizational development link this kind of professional learning with participation in institutional activities while stressing integration of work and learning as a necessary condition for development at individual and organizational levels (Hargreaves, 1997; King & Newmann, 2000; Livneh & Livneh, 1999; Watkins & Marsick 1999; Moore & Shaw, 2005). Thus becoming a member of a community supports socio-cultural learning (ten Dam & Blom, 2006) and promotes individual professional growth as well as institutional growth and change.

The communal learning model is also well suited for the professional development of teacher educators, a major component of whom, have themselves been classroom teachers (Smith, 2003). Their teaching goals are practical in the sense that they are teaching subject matter for the purposes of transmitting it further or teaching pedagogy to provide tools for use in the classroom. Their students, as future teachers, are active learners whose primary goal is to translate what they learn into classroom practice. This dynamic stance towards knowledge transfer and knowledge creation supports learning in community not only for their students but also for the teacher educators themselves. The utility of this approach is strengthened in a self-study by Barak, Gidron, & Turniansky (2011), who explored their own collaborative learning as teacher educators and concluded that “our professional development ... does not mean learning to ‘teach teaching’ better; it means finding ways

of being and learning with our student-teachers and with each other” (ibid, p. 285). The ability of the community to stimulate learning (Jurasaitė-Harbison & Rex, 2010) is also relevant for teacher educators as an opportunity to break out of professional isolation (Hadar & Brody, 2010) or to provide opportunities to nurture their collective and individual thinking (Dye et al., 2011).

The professional development context and setting

The proven benefits of professional development in the communal context in schools and the application of this model to the college setting framed our college’s response to an initiative by the Israeli Ministry of Education to infuse thinking into teacher training courses at the college level. In 2008, as part of the reform agenda in schools, the Pedagogic Secretariat offered grants to colleges and universities to further this goal. Teaching practices that support higher order thinking require serious attention among teacher educators (Stes et al., 2010; Mergler et al., 2009) and include two major components that Costa (2001) refers to as teaching *for* thinking and teaching *of* thinking. Teaching *for* thinking means that teachers create conditions that are conducive to students’ thinking. Adapting Costa’s ideas to college environment involves several factors including posing challenging dilemmas, enabling small group collaborations, valuing thinking as a goal, creating a climate of risk taking and modelling thinking behaviors. Teaching *of* thinking means instructing students directly in thinking skills such as making inferences from data and considering different perspectives. Teaching of thinking includes habituation of attitudes and dispositions which characterize effective skilful thinkers. This entails adaptation of new methods in college courses which promote those skills (Martin & Michelli, 2001).

To meet this challenge we established a communal model for teacher educators to share their thoughts, knowledge, and practice as they learned new teaching methods in order to bring about changes in their practice. Our community provided the participating teacher educators a legitimate space for professional learning which is deemed essential for professional growth to occur (Murray, 2012). In such a community the relationship between what teachers learn and what students learn is important, while the community builds outward from this essential connection (Curry, 2008; Shulman & Shulman, 2004). With the goal of improving instruction, enhancing faculty expertise and diminishing isolation, we focused the learning on the domain of thinking education, while maintaining a high level of group identity which Lave and Wenger (1991) define as community. In addition, we developed the practice of teaching for thinking and teaching of thinking through shared readings, reflections, and classroom methodologies based on specific classroom contexts. While participants from many disciplines focused on infusing thinking into their college teaching, they also studied together academic and case material previously unknown to them.

Our in-house learning community nurtured the implementation of innovative practices within the institutional culture which is undergoing change through the influence of the group on the college. Moreover, our communal emphasis aligns with research showing

that professional collaboration is a necessary element for significant change at both individual and organizational levels (King & Newmann, 2000; Livneh & Livneh, 1999; Moore & Shaw, 2005). Rooted in the workplace, the learning community grew within the college and strengthened faculty connections for mutual support in professional learning both within and outside of the group activities. This communal culture of professional development enabled implementation of school-wide innovation, such as the national thinking agenda suggested by the Pedagogic Secretariat (Zohar, 2008).

Both researchers took part in the community, the group leader being an outside expert in thinking education, and the other a college faculty member who initiated the project and participated in the context of his own professional development and served as an “in house” moderator. While relying on an external expert to lead the group at the initial stages, the local moderator acted as a leader on a daily basis. Although a participant of equal status in the community, he was also perceived as a mentor for consultation and support. The project plan was to transfer the leadership role from the outside expert to the in-house moderator. The group members agreed to all research procedures, and some read the research findings and our data interpretation. The positioning of the two researchers created an insider and outsider view on both community and individual processes.

We established five separate yearlong learning communities for teacher educators to infuse thinking into college level teaching. The first phase of each year’s project consisted of exposure to aspects of teaching thinking (Ritchhart, Church, & Morrison, 2011). Initially participants explored current theories in thinking education, read research and case material, and explored possible implementations. In the second phase participants were expected to change their college teaching by including thinking skills (Presseisen, 2001), thinking frames (Perkins, 1986), thinking routines, and the language of thinking (Ritchhart, 2002). Participants documented these teaching experiences as a basis for analysis and collegial discourse. The process encouraged applications of new pedagogy and nurtured interactive feedback. The final phase involved joint investigation of pedagogy and practice through group reflection.

Each of these yearlong projects met monthly for a total of ten sessions of two and a half hours duration at the end of the teaching day. Voluntary participants were recruited from a variety of academic departments and varied from year to year (see Table 1). Each group was unique in its composition, though some teacher educators joined the project for more than one year. Out of a total of 40 participating faculty over the five years, 45% participated for one year and 55% participated for more than one year. Over the three years there was a 16% dropout rate.

Goals of this study

Educators use the term ‘community’ to describe a broad range of collaborative professional development models, yet the literature on professional communities presents a partial picture of the learning process (Murray, 2008; Edwards & Protheroe, 2003). The lack of clarity of the communal model is reflected in the inadequate conceptualization of how learning occurs in these contexts (DuFour, 2004). Carol Little addresses this lack of

Table 1: Academic department of participation teacher educators by year

Year	Academic Departments Represented*
Year 1	Bible Early Childhood Education Educational Foundations (Research, Assessment, Sociology, Psychology, Internship Supervision) Mathematics
Year 2	Early Childhood Education Special Education Educational Foundations Linguistics English
Year 3	History Bible Educational Foundations Mathematics Computer Science English
Year 4	History Bible Educational Foundations Mathematics Computer Science English Early childhood education
Year 5	Early childhood education English History Bible Special Education

Note. In order to maintain anonymity, we are unable to list the number of participants from each department or their seniority because of the small size of the college faculty (130).

clarity by stating: “If we are to theorize about the significance of a professional community, we must be able to demonstrate how communities achieve their effect” (Little, 2002, p. 937).

In this study we aim to understand the factors that influence learning among teacher educators in a communal context. By outlining essential processes that promote or hinder learning and implementation we can better understand how such communities achieve their effect. In addition, relating to the distinct population of teacher educators provides insight into the professional development of this crucial but neglected population (Korthagen, 2000).

Modes of data collection

Data was collected from five yearlong communities, each functioning over a one year period. These groups will be referred to by year: groups 1-5. Individual and group imple-

mentation processes were monitored each year, using a variety of data collection methods. These data are used throughout the research project and served to address several research questions. Data collection methods included:

- Interviews with three teacher educators in the first four year-long groups resulting in 12 subjects interviewed over the four year span. Each teacher educator was interviewed at the beginning, middle and end of the year to track changes over time. Teachers were interviewed again one year after the project's conclusion. Throughout these interviews teacher educators were asked specifically to reflect on the influence of the communal experience on their conceptions of teaching and on their actual practice.
- At each project's final meeting, we conducted a group interview for all participants in which teacher educators were asked to speak about the community's influence on their conceptions of teaching, actual practice, and development as teacher educators.
- In each project teacher educators wrote reflectively throughout and at the end of the project documenting how participation in the community affected their thinking and practice. They also related to their conceptions of thinking education in theory and practice.
- All sessions were recorded and transcribed.
- Attendance records and researcher field notes about each session and development within the project were prepared.
- Upon consent, participants' lessons were occasionally video recorded for direct evidence of implementation.
- Teaching and student learning artefacts were regularly collected.

Data analysis methods

In our previous studies (see Hadar & Brody, 2010; 2013; Brody & Hadar, 2011; 2015) data were analyzed qualitatively, identifying professional development processes and individual changes relating to thinking education. We used the form based mode of analysis, which looks at the structure of the narrative material as described by Lieblich, Tuval-Mashiach, & Zilber (2004). This method investigates narrative meaning by tracking its development over time rather than focusing on content analysis. In our case, we investigated teachers' professional development processes, including awareness of changes and steps taken toward adapting new methods rather than looking at how they actually infused thinking into their teaching, which is the content of the community learning. Concentration on aspects of form enables monitoring of development and change in professional development (Gergen & Gergen, 2000). In the initial studies, grounded theory analysis (Strauss & Corbin, 2008) was used for open coding of interview data, generating preliminary categories. After abstracting these categories from the interviews, other data sources were analyzed using these same criteria. The final scheme for categorizing the data in each of these different studies was abstracted at a second phase and presented in the results section of each study. (For a detailed description and overview of the main categories in each study see Hadar & Brody, 2010; 2013; Brody & Hadar 2011, 2015).

In this paper we present an integration of findings from our separate studies that explore different aspects of learning and non-learning within a community. Those aspects relate to stages of professional development of teacher educators and critical moments in their development, group formation processes, novice and experienced teacher educators' professional development processes, and contextual perspectives. Our integration process included the following steps:

1. We reexamined our major findings in the four previous studies regarding learning and non-learning in the communal context.
2. We reorganized the findings into categories based on their contribution to the current research question. In this phase we created three overarching categories: factors promoting learning and implementation; factors promoting and preventing learning and implementation; and factors preventing learning implementation
3. With these categories in mind, we returned to the initial interviews, reflective writings, and meeting transcript data in order to identify the activities, events, occurrences, interactions, responses, and processes which resulted in these factors. In one case we used basic statistics to identify trends over the years. This revisiting of the data enabled us to reach new insights about how these factors promote and hinder learning in the communal context and to emphasis essential characteristics of each factor.

These steps enabled the integration of the findings from our five years of research into a comprehensive presentation of professional learning among teacher educators in community. We have chosen not to overload this comprehensive presentation of the workings of the community with multiple examples for each factor. We bring in this chapter key evidence of the general trends that we found in the data. Additional supporting data can be found in the separate articles cited above. The following section is organized according to those factors which promote learning, to those which both promote and hinder development, and to those which detract from such development.

Essential features of professional development in community

Factors promoting learning and implementation

Several factors were found to be critical in promoting change in practice.

Creating a safe environment for learning. Scaffolding the child's first attempts to ride a bicycle provides a suitable allegory for professionals learning innovative methods which may seem ominously unattainable. Initially, we might run after the child in his first trials, providing a path, direction and some pointers to get started on the dangerous journey. Likewise, we scaffold the experience with encouragement, support and coaching. The process is repeated as the child builds her own confidence and begins to ride independently.

For change to happen, teacher educators need to feel safe, seeing a manageable path, realizing the possibility of new habits, while garnering support for their fledgling endeavors. They also need assurance that taking chances will not jeopardize their current sense of identity and wholeness. True communities provide peer support and motivation for pushing forward. As Knowles, Holton, and Swanson (1998) suggested, a key requirement for effective adult learning is the creation of a nonthreatening learning environment in which participants feel psychologically safe to express themselves openly. In our community we found that ensuring a safe environment is crucial in promoting change in practice. Acquiring positive attitudes towards thinking education was predicated on teacher educators expressing themselves openly, sharing opinions freely and reflecting on their role in a team of equals. Teacher educators described their need for community which is both safe and values risk-taking. Our community provided a venue for talking about mistakes while attempting new teaching methods. Fear of experimenting was effectively addressed by members speaking openly about their attempting new methods, successfully or not, and receiving informative and supportive feedback. The importance of safe environment for teacher educators' learning can be seen in the quote below, in which one teacher educator explains:

I feel comfortable experimenting. And it didn't matter if you are doing wrong, because you try, and you will do better next time. I remember the first time that Dov and Hannah presented, they first filmed themselves. And they showed what they did, and they were so honest about it. Like, this worked and this didn't. And it made me feel like ok, go for it. And then I think I saw you the morning before I was going to do this and you said, "Just try it. See what happens." And I did it... I felt more confident in doing things. ... I am not alone here, I am not doing this on my own. Other people are trying it out, and go for it. Go, and then tell us what happened – we will learn from it.

Looking at, commenting on, or questioning personal practice can be a difficult and uncomfortable position for teachers (Snow-Greeno, 2005), but in the community teacher educators showed empathy and support for one another, making implementation an attainable goal.

A safe professional development environment enables teachers not only to explore new ideas but also to challenge their own assumptions. This process includes openly sharing thoughts, and questioning conclusion about partially formulated ideas. Open collective reflection scaffolds building on the ideas of colleagues, which deepens and enriches both thinking and insights.

The essential elements of a safe environment for teacher educators learning include:

- institutional support and equal status of participants
- opportunities for training and non-threatening classroom practice
- support to overcome fear of "unsuccessful" implementation
- peer and professional coaching aimed at implementation
- group norms legitimizing daring in pedagogic implementation

- group rewards for innovative thinking and experimentation
- empathy and understanding of differences among pedagogic approaches

Talk about student learning. Teacher educators typically work in conjunction with others on a departmental level, but they rarely speak about actual student learning with their colleagues. Instead they tend to focus on teaching practices in isolation from student learning. Our community's participants mentioned this deficit as a motive for joining the group.

Ample research attests to the value of having teachers come together to talk about their teaching (Scheerens, 2010). In their review of research on professional learning communities, Stoll, Bolam, McMahon, Wallace, & Thomas (2006) claim that focus on student learning is a common dimension found in a variety of communal professional development practices. Two exemplary models of using talk about student learning to promote teachers' professional development are the Visible Thinking Project and the Cultures of Thinking Project at Project Zero, Harvard graduate school of education (Ritchhart et al., 2011) and the early childhood centers in Reggio Emilia, Italy (Rinaldi, 2006). In both contexts, a rich culture of discourse about student learning informs daily practice. In our community, talk about student learning stimulates teacher educators to analyze students' oral and written responses in order to understand consequences for their teaching practice. This shift from a focus on teaching to a focus on learning had profound implications for teacher educators' learning process.

In our studies we found that teacher educators often complain about student non learning, rather than examining with their colleagues how students actually learn. The community gave our participants the ability to go beyond these usual complaints by engaging in meaningful discussions about teaching and learning processes. The opportunity for such talk and its importance for teacher educators' learning can be seen in the quote below, in which one teacher educator explains her problem while valuing the opportunity provided in the community to talk about it:

I would bring it up at a teachers meeting, complain about it, but try to solve it on my own... Usually the head of the department would gather everybody together at the end of the year and say: 'What are you teaching?' This is about where it ends. So people try to make an impression about how things had happened and that's about it. So I thought this (community) is different. We had meaningful discussions about teaching and learning.

Improving teaching among teacher educators in our community was driven by talk about student learning, a discourse which binds collaboration with instructional improvement. Talk about student learning enabled teacher educators to assess their pedagogies of thinking education by understanding students' progress in learning how to think on higher levels. The discussion included examples of students' actual thinking processes and activities in class and their difficulties with higher order thinking. In addition, teacher educators shared their views about the meaning of engaging students in thinking activities. In

some cases talk about a particular student's learning pushed forward the discussion by heightening awareness of how a thinking routine could have been used more effectively in diverse learning situations. In our studies we found this discourse to play a critical role in the transformational learning of teacher educators. Specifically we found that talk about student learning promoted an inquiry and research orientation, awareness of the connection between teaching and learning, and awareness of teacher educators own learning process (Brody & Hadar, 2015).

Essential elements of talk about student learning include:

- focus on student thinking instead of their “non learning”
- use of student generated artefacts or other evidence
- meaningful discussion about the learning process
- honest assessment of pedagogies in light of student learning

Group reflection and feedback. As teacher educators worked on infusing thinking into their courses, the community provided varied opportunities to deepen and share thoughts through written and oral reflection. Each meeting began with reflection on recent experiences with thinking education, using both structured routines and open formats. This group reflection provided a dynamic source of learning for individuals as they reached new understandings about their own teaching. The following example is taken from a reflection activity in one meeting. In this quote we can see how reflection became a source for understanding ones' own professional learning needs.

Today in class, students had to give three characteristics of what was new about agricultural Zionist settlements. One student was saying something about the pogroms in Russia, and nationalistic ideals and she couldn't see that she made no connection between the two... And I said, so where's the connection? But I couldn't, except for giving her questions to think about...she wasn't able to verbalize what her problem was and I couldn't deal with her problem because I didn't know what it was, so maybe what I am saying is that I don't have the foggiest idea about assessment.

Reflective discourse also engendered group feedback, promoting a deeper understanding of what it means to engage college students in higher order thinking. As each participant reflected on their practice, they stimulated their colleagues to respond expansively, thereby enhancing communicative dialogue. This type of reflection is called “a snapshot of current thinking and progress” (Ritchart, et al. 2011, p.231). Reflection in the community invites feedback and helps others explore new ideas about teaching and moves thinking forward. One teacher educator emphasizes the importance of reflective conversations in this interview excerpt:

I have a partner with me ... so we both talk about what we heard and we can think of what we [will do to implement these ideas in our course]. ... You brought a film [and] we right away started to talk, and ... after that we filmed. We filmed something [we did in our course] and then my partner presented it

in a meeting ... It [people's reflective contribution to the group meeting] helps to generate thinking ... and excitement in the group. That is good.

A third benefit of group reflection is scaffolding new practice. Teacher educators who openly reflect on implementing innovative practice provide for their colleagues a model of daring in teaching. By speaking honestly and thoughtfully about practice, we found that participants created mutual expectations of commitment to implementation. Beyond this dispositional challenge supporting change on a general level, we found that feedback also spurs innovative pedagogic decisions. This process builds foundations for action plans for future implementation as group members visualize how they can strengthen their practice to support student learning. As suggested by York-Barr, Sommers, Ghere, & Montie (2001), reflection creates an opportunity for teacher educators to consider both dilemmas and successes in teaching and to engage in peer coaching by suggesting instructional possibilities. A culture of mutual reflection is essential not only for learning but also for action in a community.

Essential elements of group reflection include:

- enhancing individual learning
- inviting communication by giving feedback
- providing foundations for and scaffolding action among other group members

Engaging in teacher research. Integrating teaching with research on practice is considered by some researchers to be an essential element in improving teacher education (Cochran-Smith, 2005). Others claim that teacher research is necessary to enrich the knowledge base of teaching and teacher education (Lunenberg et al., 2007). Teacher educators who continually study their own actions, reflect on them, collect data that documents students' responses create and recreate teacher education as a living theory (Russell & Loughran, 2007; Hamilton & Pinnegar, 2000). In addition engaging in research in a micro community enhances teacher educators' research capacity (Murray et al., 2009). Involvement in both research and practice enables teacher educators to take on dual roles in the college. The first is helping degree candidates become teachers and the second is enhancing their professional work by investigating their own practice (Cochran-Smith, 2005; Murray et al, 2009). This trend reflects a reconceptualization of the role of teacher educator and the kinds of knowledge and skills they ought to have.

Our community defined participants as research practitioners with an emphasis on connecting action and analysis, inquiry and experience, and theorizing and teaching. Participants in our community were encouraged to engage in action research, self-study, and other forms of practitioner inquiry. In order for this process to flourish, we created conditions for mutual supported by helping participants collect and code data, and deduce practical and theoretical implications. We found that communal conversations promoted a research disposition among teacher educators. The following quote is taken from one such conversation, providing insight into how interest in research stemmed from interaction:

TE1: So we started to talk about models, and they did not know what the hell I am talking about. So I thought it might be my problem. Could it be my language? So I checked the books I checked with my colleagues and I was using the correct term. So I taught them for two lessons the meaning of the concept “math model”.

TE2: But the implementation of the abstract term is so hard for them. Also in their history course.

TE1: This is something I want to look at in depth. I don’t understand it yet but it is an issue I want to explore. So based on their responses and their lack of ability to understand implementation I want to explore what is their concept of knowing math?

Collaboration in inquiry enhanced teacher educators’ learning by shared reflection on individual research projects which helped practitioners broaden perspectives on their own teaching. Insights from this process lead to reframing conceptual foundations, which is in itself a transformational process (See for example teacher research such as Dusting, 2002; Senese, 2002, 2004; Austin & Senese, 2004).

Both professional and financial support for these research projects was provided, thus emphasizing the activity’s importance. Involvement in research as well as the community is not an easy task. Only teacher educators who participated in the community for more than one year were able to incorporate these components into their teaching. For veteran members, the research endeavor promoted professional growth by enhancing personal as well as student learning. This commitment to the inquiry process helped participants improve practice and in some cases lead to innovations useful beyond their own courses.

Essential elements of engaging in teacher research include:

- improvement through empirically based insights
- reframing the role of teacher educator
- mutual support through collaboration and reflection
- commitment to the research process

Continuity. While our learning community was initially planned for a one year period, many participants sought continued communal support by remaining in the group year after year. Pedagogical change takes time, suggesting that an initial period is needed to establish trust and shared meaning with other group participants. In our studies we found that for teacher educators who achieved change in practice, ongoing support was especially critical in the first two years. Only after beginning implementation, participants developed a sense of the types of support they needed. We also found that implementation begins after a long learning period (Brody & Hadar, 2011), and failure to receive crucial support may result in dropping out or extended withdrawal or stasis. In the following example one teacher educator talked about her experience in the community, highlighting the importance of the lengthy duration of the communal endeavour. The teacher educator describes the first month in the community as a silent period:

I decided that I would sit quietly and listen, and I will learn the language and learn the people and learn the group. It took me time to learn my milieu.

The need for continuity relates to individuals sharing with peers their commitment to the goals of the community. Although breaking of isolation occurs within the community, it is an on-going process. By the fourth year, our learning community began to exhibit features of an organizational culture, with behavioral norms and group identity. As relationships between participants deepened, the community extended beyond the monthly meetings to the teachers’ room, email communications, and other informal networking. In the quote below, one teacher educator (in her third year of participation) reports to the group about a problem that she solved with another colleague. In this example we see how the community extends beyond the boundary of the monthly meetings. In our community, this only happened in the third year.

You all remember the exercise I did to help my students generate categories for comparison. And I began with a simplistic exercise of comparing a decision to go swimming in the pool or beach. And you all told me that I should rethink this. So I sat with M (a colleague from the group). and she helped me design a feedback sheet on this...

Maintaining membership in the community is not only about reading one more article together or engaging in another session of peer reflection. It is about confirming on-going pedagogic change despite its risks and hazards. A statistical analysis of the attendance records compared with teacher educators’ reports of implementation show that only 13.6% of the teacher educators who participated in the community implemented changes in their practice during the first year of participation, 63% of the teacher educators who participated in our community implemented changes in the second year of participation. All teacher educators who participated in our community for three years or more implemented changes in their practice. These changes are significant $\chi^2 (2) = 27.419, P = .000$ while CREMER’S V correlation show very strong association ($V = 0.756$) between duration and implementation. See table 1 below.

Table 1: Year of attendance and implementation

			Record of implementation		Total
			No record of implementation	Implemented changes	
Years	One year	Count	19	3	22
		% within years	86.4%	13.6%	100.0%
	Two years	Count	4	7	11
		% within years	36.4%	63.6%	100.0%
	Three years and above	Count	0	15	15
		% within years	0.0%	100.0%	100.0%
Total		Count	23	25	48
		% within years	47.9%	52.1%	100.0%

Part time college teaching can be a lonely endeavor, and engaging in pedagogic innovation can be even more isolating. Continuity of community overcomes this isolation, enabling individuals to try out new ideas knowing that peers will provide necessary emotional, social and intellectual scaffolds.

Essential elements of continuity include

- extended time for professional growth
- correlation between seeking continuity and pedagogic change
- developing organizational culture
- scaffolding innovation

Factors promoting and/or preventing learning and implementation

Breaking of isolation. Breaking of isolation was valued by all participants as a crucial feature of the community. This phenomenon in some cases supported and in other cases obstructed professional learning and pedagogic change. Isolation was found to be a major motive for joining the community. Our data clearly reveals the feeling of extreme isolation among teacher educators. Small teachers colleges in Israel are characterized by a high percentage of part time faculty members who teach one day a week at different institutions. Academic departments are limited to a few instructors, with little professional interaction. Teachers hold masters or doctoral degrees, and many have qualified for their position by years of teaching in the schools (Alon & Lifschitz, 2003). This factor leads to a compromised professional identity which hovers between the school classroom and the halls of academia (Poyas & Smith, 2007). Such uncertainty strengthens both personal and professional isolation in the workplace. Expressions of isolation were common not only in the teachers' room but also in departmental meetings. The following quote provides an example of such expression of isolation:

Because I am here so little, I don't really know them [the other teachers in the course]. I know "S" ... from town where we both live. We used to come on the same day. So to be perfectly honest, with the others I didn't really have a chance to talk ... I would be interested to see... how they do this [infuse thinking into their courses]. I really don't know them well enough to really know... I really didn't speak to anybody.

Our community provided teacher educators an opportunity for breaking personal isolation. Joining the group was a way to get acquainted with other faculty and to enhance a sense of belonging to the college. The community enabled the participants to deepen their acquaintance over an extended period of time with a focus on common goals. Some participants reported a sense of commitment first to the process and then to other group members. As personal relationships were formed, participants spoke of closer connections which included consulting with each other as a team. The social benefit of the community was obtained through joint exploration of the common topic. Personal friendships carried over to the social realm as signified by meaningful interaction in the teachers' room. In the following quote, one teacher educator reflects about how the

communal experience enhanced her sense of belonging to the college. In this quote we can also see how the common interest of the group extended beyond the meetings to personal interactions among teacher educators:

You feel good, so I see someone who I have a lot of connection to ... because we are peers in this group ... It is nice. Honestly, I don't remember talking to anyone out of the group about teaching ... Because I see them I have a broader relationship with them. So it feels better when I go into the teachers' room and I have something in common with these people that I had nothing in common before. I feel that I have something to talk to them about, to share. I feel I belong more.

Breaking professional isolation was also an achievement of the community. Although teacher educators typically work in conjunction with others on a departmental level, they rarely talk about actual teaching or student learning with colleagues. The departmental organization of higher education discourages interdisciplinary discourse. Further, within the departments of small teacher colleges only one to two experts for each subject are hired (Trower & Gallagher, 2008), resulting in limited opportunities to discuss student learning and share work related problems, successes, and dilemmas. Typically, college teachers take sole responsibility for course content. Interaction among faculty is often limited to cordial everyday talk instead of issues related to student learning. Even when collaboration is promoted within the institutional culture, collegial interchange frequently stops at the classroom door. Teacher educators expressed a need to break their professional isolation when seeking solutions to pedagogic problems which arise in their work. Thus they looked to the community to address this reality though collaboration on teaching thinking, a shared topic which they genuinely cared about. They expected the group to provide collegial support not found elsewhere.

The theme of isolation was also at center stage when the teacher educators described the community's outcomes. Initially, discourse on a topic of mutual interest was the major component of breaking isolation. As the program developed, the participants emphasized practice, including trying out new methods and discussing failures and successes in an effort to involve others in their own learning. In this regard, the breaking of isolation enhanced teacher learning which was the goal of the project.

However, the breaking of isolation did not always enhance teacher learning. In some instances it was found to obstruct development and growth. This deleterious effect was the result of some teachers forming alliances with colleagues who chose not to implement changes in their courses. These alliances were strengthened by a shared belief that they are already "teaching thinking," thus obviating the need to change their practice. For these individuals, breaking isolation prevented transformational learning. These participants shielded themselves from change, as these colleagues reinforced each other's current practice. The following quote is taken from a group meeting. In this conversation one teacher educator initiates a discussion about students complaining when they are asked to think. Her observation triggers the formation of a coalition with others in the group who

rebel against suggestions to change their practice. Interestingly, these teacher educators participating in this discussion had not rejected implementation up to this point. Upon forming this coalition they stopped implementation altogether and dropped out of the community later in the year.

TE1: The students really complain. Why do we all have to do this together?

TE2: You are right, it actually seems funny that we all come to our courses at the same time and we all say... I think that we have to think of different techniques.

TE1: I think that this is unprofessional.

TE2: Right, each time we have to incorporate something else.

TE3: You are right, maybe if we are trying to achieve something we should implement in a more subtle way. This [implementation] should not be so evident, maybe it can be more obscure, then we might have less issues with the students.

TE2: The methods that we worked on might not work in our context.

TE1: Yes, It can be that these methods are better for younger students.

TE2: Here I have a feeling that we are dressing up the students in clothes that don't fit them. You know what; I am actually contemplating because I have been working with my students on methods for the development of thinking for a long time. I cannot tell you exactly how I do it, I am not sure that I can. But I do it. If you have asked me before, sure I was happy to acquire more tools to do this, but now I think that I really identify with what TE1 says, these tools don't fit what I am doing.

Breaking of isolation and sharing ideas openly can also prevent development, and should be thus considered as a promoter as well as possible preventer of implementation and change.

Elements of breaking isolation include

- salient motivator for joining
- address personal and professional issues
- significant collegial interaction
- alliances as a factor in opposing change

Factors preventing learning and implementation

Withdrawal. Communities which are organized for the purposes of professional development most often have an agenda of change according to parameters determined by the initiators of the project. While initially participants identified with the explicit goals of the project and voluntarily joined, we found a tendency to withdraw from these goals as suggested changes were raised in the community (Brody & Hadar, 2011). We found

different motivations for withdrawal as well as varied levels of intensity of this distancing from the project goals. Some participants chose to continue with their current practice based on their sense of professional competence. As one teacher educator stated: *“From the assignments that the students hand in to me I can see that the students understood that they have to think.”* These teacher educators initially joined the community out of genuine interest in a topic which they felt that they were trying to address. Another form of withdrawal involved relabelling current practice with terminology used in the group. As suggested by another participant: *“The meeting confirmed many things that I have been doing intuitively in my courses. It gave me definitions, a framework, something more accurate”*. These teacher educators were pleased with their new knowledge, which gave them a sense of being up to date by using current professional language to describe their practice. Another facet of withdrawal was teacher educators’ focusing on roadblocks to implementation. Some felt that incorporating thinking education was not feasible because of circumstances beyond their control. As suggested by another participant: *“The structure of the courses here prevents me from developing thinking. There is not enough time”*. Yet another form of withdrawal was found among teacher educators who chose to enter a moratorium from action. As reported by a teacher educator: *“While everything else was happening, I felt that I am quietly learning the group and also I felt that I am learning”*. This stance involved quiet learning about innovative practice in the community, postponing implementation to a later time. These four versions of withdrawal illustrate the utility of this stage for the teacher educators in the face of the community’s agenda. Thus teacher educators became non-learners for the short or long term. Emerging from withdrawal led to significant professional growth.

When viewed as a necessary stage in the professional development of teacher educators in a community, the phenomenon of withdrawal served as both a stepping stone and a roadblock. In some cases it signaled the individual’s choosing to leave the group and in other cases overcoming the withdrawal pushed forward the community’s goals. For the group leader, this stage is an important hurdle to overcome in order to support members in their effort to try out and implement changes in their practice.

Identifying withdrawal:

- continuing to use current practices
- relabeling current practice with new terminology
- focuses on roadblocks to implementation

Essential elements of dealing with withdrawal:

- consistently following initial enthusiasm for the project
- awareness that withdrawal is an expected stage in professional development
- overcoming withdrawal as promoting professional learning

Implications for professional learning of teacher educators

In light of the growing interest in teacher educators as responsible for preparing future teachers, a number of important questions concerning their professionalism have begun to emerge. One major question deals with “what support is necessary for the professional

development of teacher educators?’’ (editorial, TATE, 2005. p.109), a question that has not yet been sufficiently addressed in the research literature. This study’s importance lies in its two pronged approach that include insight into the professional development of teacher educators as a distinct vocation and understanding how such learning can be achieved in community.

Our systematic examination of the workings of the community as a framework for professional development has put forward several elements which can explain its effectiveness and its limitations. Isolation is a major issue for teacher educators. While this phenomenon has long been clearly identified as problem for teachers (Davis, 1986), its prevalence among teacher educators is even more pronounced because of the part-time nature of their work. Our findings show the important influence of the community on breaking isolation, a process which can be viewed as an important basis for learning and growth. Interestingly, we also showed how breaking isolation can lead to strengthening of current practice and reluctance to change. This demonstrates how the community can also obstruct development for teacher educators under particular circumstances.

As professionals who deal daily with the domain of pedagogy, it is natural for teacher educators to be interested in student learning. In their daily lives, they are afforded few opportunities to talk about how their own students learn; rather they talk about how children learn in school settings. The communal framework can provide a safe environment for these important discussions to take place, allowing teacher educators to engage in a topic that touches on the essence of their professionalism. As such the community addresses a critical need for the teacher educator to apply what they know about school learning to their own practice regarding how their students construct understanding, attitudes, and skills.

A critical element in professional development of teacher educators is their role shift from being a teacher to becoming a learner. This shift challenges their identity as a teacher of teachers. In order for this transition to take place, the teacher educator requires a safe environment to risk trying out new didactic techniques and new pedagogies. The community in which teacher educators find themselves on equal standing can provide this type of support, presuming that it has been designed with such a goal. For example, Smith (2003, p.207) notes that group learning allows “teacher educators (to) feel confident to open up and to jointly learn from positive as well as from negative experiences”.

This safe environment includes not only a stage for daring and bold adaptation of new ideas, but it can also support withdrawal from the goals of the community by allowing non-adaptation as a legitimate response. Adult learning has been characterized by the unique qualities of readiness coupled with taking responsibility for the learning process (Knowles, Holton, & Swanson, 1998). The community allows for both to occur, as the participants can freely choose to adopt new practices and not, knowing that they will maintain the support of colleagues.

The process by which teacher educators withdraw from the goal of the community sheds light on various strategies adult learners develop to deal with contradictions encountered in the learning situation (Illeris, 2003). As basic characteristics of adult learning, with-

drawal strategies reflect the ambivalence that is fundamental to participants' approaches to professional development. This perspective on adult learning sheds light on professional development endeavors that are voluntary in nature. Adult learners often emphasize that they have chosen to participate in professional development activities because they want to advance themselves personally and professionally (ibid). However, even in a voluntary situation the teacher educators consistently experienced a stage of withdrawing from the goals of the course in which they have freely chosen to participate. In the context of adult learning theory, communal based learning can be seen as a continuous process of invention and exploration supported by a safe environment and linked to ambivalence.

The contribution of this paper to the professional development of teacher educators lies in our analysis of the community as a potentially powerful tool for promoting growth and change. By identifying the factors which promote as well as hinder growth, this analysis enables initiators of professional development endeavors to better understand their own projects in light of these salient factors.

In designing opportunities for teacher educators to grow professionally, planners might want to consider those factors that promote growth and become aware of others that may interfere with achieving professional development goals. This means nurturing a safe environment by ensuring a noncritical and supportive framework for sharing one's teaching practice. Planners might also want to legitimize talk about student learning as a crucial aspect of professional change in practice. For teacher educators, such a discourse focuses their teaching practice on how their students learn and consequently on how to foster this learning.

Our findings suggest the utility of a long range plan for professional development by including teacher research as well as continuity among the goals. Moreover, scaffolding teacher research is worthwhile because it encourages teachers to examine innovations and invest themselves in pedagogic change. Continuity of participation is also related to breaking of isolation and to teacher investment in their own professional development. As teacher educators choose to deepen their involvement in the community, they enhance their own professional abilities. Professional development planners need to recognize that professional growth is an extended process involving complex personal trajectories which may move forward as well as backward in order to achieve growth (Brody & Hadar, 2011).

Examining the culture of isolation in the institution could be an important first step in planning the professional development community. To the extent that professional isolation permeates the institutional framework, the community endeavor can be enlisted to address this issue either tacitly or in a direct manner. As the community process unfolds over time, the leaders can expect the challenges resulting from participants' withdrawal from the goals of the project. An effective antidote to this deterrence is talk about student learning, which motivates many participants to move beyond their withdrawal into awareness and change. Paying attention to these essential features may not only help planners avoid pitfalls, but could also strengthen the notion of community as a crucial vehicle for the professional development of teacher educators.

On a critical note, it is important to assess the limitations of this study. Although our research was methodologically rigorous and extended over five years, the communal process was limited to one teacher education college and consisted of 32 teacher educators. Furthermore it is not known if the salient factors in professional development found in the research are unique to communal learning, because no comparison was made to similar endeavors organized in other contexts. Further research should relate to multiple frameworks which are focused on the professional development of teacher educators and to the presence or absence of these factors in these contexts.

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SECTION 2

**PROFESSIONAL DEVELOPMENT OF
(STUDENT) TEACHERS**

Chapter 5

Commitment crisis: voices of secondary teachers

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Abstract

The aim of this paper is to explore the conceptions of teacher commitment from the experiences of secondary teachers in Seychelles in order to obtain a better understanding of what keeps teachers in their roles or why they leave teaching. The issues being addressed are of particular relevance for Seychelles where there is a shortage of young people joining secondary teaching and concerns about teacher quality and retention, and of potential interest more broadly as concerns about teacher commitment and retention are international. Data reported offer the voices of teachers who have continued in the profession and are in different career stages. The study adopts a qualitative design to focus on the lived experiences of participants in a specific environment. It utilizes phenomenographic and multiple case study approaches. The findings show that participants in this study have different but connected and overlapping perceptions of teacher commitment. Ideas about commitment are ascribed to four main categories: (1) altruism; (2) personal attributes; (3) pedagogical content knowledge; and (4) connectedness. Although there are subtleties in levels of commitment for the three different groups of teachers, the findings show that commitment levels wax and wane across teachers' careers. Teachers' commitment levels are closely related to their initial motivations to teach and their experiences of teaching in schools. The analysis shows teacher commitment to be a complex phenomenon that is best understood within the particular context of the individuals and their employing schools.

Introduction

Issues of teacher commitment and the impact on teacher quality, recruitment and retention are topics of rigorous research in many developed countries (Day & Gu, 2010; Goodson, 2008; Hargreaves, 2005). There is, though, little research on teacher commitment in developing nations. The research project reported in this study focuses on teacher commitment in Seychelles, a developing nation, and contributes to knowledge and understanding of teacher commitment internationally and in the context of a particular developing nation. This is of particular relevance also to Small Island States that share similar

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concerns and challenges (Mayo, 2013), relating in this instance to broad concerns about educational quality and more specific concerns about preparation and retention of the teacher workforce.

Teacher commitment has been identified in international research as one of the most important elements of performance contributing to quality and success in education (Crosswell, 2006; Day, Sammons, Stobart, Kington, & Gu, 2007; Nias, 1981). In Seychelles, as in other countries, there are political, social and economic imperatives that focus attention on issues of educational quality, and particularly on the roles of schools and teacher education in improving educational quality. To date, particular attention has been paid to secondary teacher education and secondary teaching. Large numbers of secondary teachers are leaving the profession within a short time of being qualified, as well as there being an observable loss to the profession of those who are more experienced (Nolan, 2008). This is seen as a risk for educational quality. Questions are raised, then, about the nature and level of teacher commitment in Seychelles and how this may intersect with concerns about teacher retention and teacher quality. A study on teacher commitment in Seychelles is therefore relevant at this point in time in the current Seychelles educational reform agenda. A series of reforms have been implemented in attempts to encourage more teachers to join teaching and to enhance the working conditions with the likelihood of improving teacher commitment and retention. For example, a new Teachers' Scheme of Service (Government of Seychelles, 2010) became effective at the beginning of 2010. A new Code of Conduct for Seychelles schools was introduced in 2010 to assist in handling students' misbehaviour and comportment (Department of Education, 2010). Nevertheless, there is still an insufficient number of teachers in the system and a problem relating to the preparation, support and retention of teachers at different stages of the profession. For the first time in the history of Seychelles a university was established (UniSey) in 2010, and this has taken on responsibility for the training of teachers. However, this transfer of mandate has not been without challenges. The change to six year degree courses instead of Diplomas in Education as was previously the case meant that there would be no teachers graduating for six years. As Hughes-d'Aeth (2011), noted in his report, "The planning of this change-over ... seems to have been inadequately conceptualised and the system is now left with a possible disjuncture in the supply of newly trained teachers entering the education sector over the next 2-4 years" (p. 21). This situation therefore exacerbates the issue of teacher shortage. These issues, along with the concerns about the number of expatriate teachers that are recruited every year, point to a need for empirical research in order to understand the complexity of the difficulties being experienced.

Thus the purpose of this study is to investigate perceptions of teacher commitment, which is one aspect of the perceived 'problem', through the following research questions: How do teachers perceive teacher commitment? Which factors influence commitment of secondary teachers at the different stages of the profession? What are the implications of these factors on teachers' career trajectories? This is done by exploring the views of secondary teachers in Seychelles in order to identify the factors that influence their commitment, from their initial motivations to teach and following through to their expe-

riences of teaching and their commitment to teaching at different stages of their professional careers.

Theoretical background

International literature suggests that teacher commitment is closely related to or influenced by such constructs as career choice, retention, and career stages, which connect the personal and professional identities of teachers (Crosswell, 2006). In this section we have drawn on and articulate the selected theories in literature that underpin this study. These theoretical frameworks are drawn from research in the interconnected literature relating to teacher commitment, teachers' career stages, teacher recruitment, retention and attrition. Different studies take as starting points different theoretical understandings and concepts of teacher commitment. We begin by exploring and overviewing the ways in which teacher commitment has been defined and explored in existing studies.

Teacher commitment

Commitment has been widely studied in organisational literature, particularly for its strength in improving the retention of employees and also because a committed workforce is generally associated with higher levels of productivity (Becker, 1960; Cohen, 2007; Meyer & Allen, 1991; Mowday, Porter, & Steers, 1982). These studies have given impetus for research into commitment within education. In explaining why teacher commitment should be emphasised, Park (2005) noted that teacher commitment is seen as:

... an internal force coming from teachers themselves who have needs for greater responsibility, variety, and challenge in their work as their educational levels have grown. Second, it is an external force coming from the reform movement seeking high standards and accountability, which are dependent upon teachers' voluntary commitment (pp. 461-462).

This view of commitment emphasises workforce needs and workforce planning.

This workforce view of commitment has been served by some research in the field of educational psychology that focuses on teacher commitment to educational institutions, in the service of institutions. Focusing on psychological dimensions, for example, Firestone and Pennell (1993) in their review of literature relating to teacher commitment, working conditions and policies highlighted the importance of the concept of teacher commitment, particularly because committed teachers were believed to be those with strong psychological ties to their schools, to their students and to their subject areas.

Other studies of teacher commitment have largely focused similarly on organisational commitment. These studies have been mainly quantitative using different organisational commitment scales to measure teacher commitment (see for example, Chan, Lau, Nie, Lim, & Hogan, 2008; Joolideh & Yeshodhara, 2009; Reyes, 1990). Teacher commitment, therefore, is seen as something to be quantified in relation to qualities that are deemed to be desirable and needed by organisations.

A common thread across a range of research is a focus on the personal dimensions of teacher commitment, for example Crosswell, (2006), Day et al. (2007) and Nias (1981). By way of illustration, from a study conducted among primary teachers in the UK, Nias (1989) noted that the concept of commitment was used by teachers to distinguish teachers who were ‘caring and ‘dedicated’ from those who put their own interests first. Teacher commitment is therefore found to be a matter of personal qualities and attitudes. Understanding teacher commitment from the perspectives of teachers themselves represents an experiential view of research on teacher commitment, where notions of commitment are explored in relation to teachers’ ideas and experiences rather than institutional needs.

The range of ideas about what constitutes teacher commitment in research highlights a need to consider the multidimensional nature of teacher commitment and the range of theoretical positions and assumptions that underpin studies of teacher commitment. However, studies focusing on the multifaceted aspects of teacher commitment are limited (Crosswell, 2006; Tyree Jr, 1996). In view of the different motives for studies of teacher commitment, the findings from these studies are far from consistent. Some researchers have offered explanations for these discrepancies in findings suggesting they may be partly due to a lack of input generated by those experiencing commitment (Joffres & Haughey, 2001; Larkey & Morrill, 1995). Others, such as Joolideh and Yeshodhara (2009) argue that studies focusing on teacher commitment have been strongly focused on developed nations, but there are very limited data on such studies in developing countries.

Teacher commitment has emerged as a problematic concept that requires further exploration, particularly from the perspectives of teachers themselves and assuming an experiential approach to exploring the notion of teacher commitment. This concern with the problematic nature of teacher commitment is the central focus of this paper. Commitment issues are understood to pertain to the entire career span and trajectory. An experiential view of research into teacher commitment is favoured, for the insight it might provide from the perspectives of teachers themselves.

Teachers’ career stages and career trajectories

Researchers and theorists have explored notions of a career according to stage theory. The notion of career stages is based on the assumption that there are distinct periods in one’s work life. These phases or stages are characterised by the changing activities and differences in work attitudes and behaviours as well as the types of relationships that the individuals value (Aryee, Chay, & Chew, 1994; Super, 1957).

Teacher commitment is connected to the work experiences of teachers, thus it is also closely linked to career stages. Perspectives of career stages were used in early studies on the work of teachers (see for example, Fessler & Christensen, 1992; Huberman, 1993; Sikes, 1985). Studying teachers’ career trajectories is a useful way of exploring what happens to teachers in their time in the teaching profession, how they develop their professional identities as teachers, and what influences their decisions to stay or leave. It has been acknowledged that, “...teachers experience many shifts in stages throughout their careers, often meandering back and forth between periods of growth and frustration in

response to factors in their personal and organizational lives” (Fessler, 1995, p. 171). This particular view of career stages indicates that there is no smooth career trajectory despite the passage of time. It also signals that there may be no simple way of understanding teacher commitment, as the nature and level of teacher commitment may shift with different stages and periods of growth and frustration in teachers’ personal career trajectories.

Patterns of fluctuations in teacher commitment have been identified and described by some researchers. For example, Alutto et al., (1973) found that from the teacher samples in their study, the older they were, the more committed they became to the organisation. In contrast, other researchers showed that early in their career teachers are very committed, but this commitment declines as teachers become older (Fraser, Draper, & Taylor, 1998; Huberman, 1989). In a more recent study on teachers’ professional lives, Day et al. (2007) reported that teachers’ commitment can fluctuate during the course of their careers depending on their personal beliefs and values, and based on events happening in their lives. These authors also noted the importance of contextual factors as influential on changes in teachers’ levels of commitment. Research studies have also focussed on motivation to join teaching, teacher retention and attrition as a way of making sense of teacher commitment throughout a career.

Theoretical understandings around the fluctuating nature of professional growth and career trajectories and the complex relationship between teacher commitment and career stages underpin this research study.

Recruitment, retention and attrition

Teacher commitment has been closely associated with concepts like teacher recruitment, teacher retention and teacher attrition. Research indicates that teachers’ levels of commitment are influenced by the individual’s decision to enter teaching, which in turn has an impact on the teacher’s decision to remain in the profession (Rots & Aelterman, 2008). The issue of retention of teachers continues to be a major concern for many countries (Boe, Cook, & Sunderland, 2008; Chapman, 1984; OECD, 2005). Studies exploring retention of teachers often investigate people’s decisions to choose teaching as a career in view of concerns about recruitment of teachers and in order to find out who remains in teaching and why (Barmby, 2006; Beng Huat, Gorard, & White, 2004).

Concerns have been raised about the high percentage of teachers approaching retirement age in some countries, mainly developed countries (OECD, 2005). Research on recruitment and retention in these contexts has tended to focus not on issues of recruitment but rather on how to retain teachers once they have been recruited (Cochran-Smith, 2004; Darling-Hammond, 2003; Ingersoll & Smith, 2003). Issues of recruitment (getting suitable people into the profession), though, are of potentially greater importance in developing countries, including Seychelles, where there are shortages and challenges in getting people with appropriate levels of academic qualifications into the profession. Understanding issues of retention and attrition in developing countries is potentially more complex than in developed countries, in view of the discrepancies between the levels of

development compounded by an acknowledged lack of empirical data about teacher recruitment and attrition (Chapman, 1984; Cooper & Alvarado, 2006; Obanya, 2010).

Understandings of these ideas are complex and factors relating to teacher commitment are intertwined. As already indicated, much of the literature relating to teacher commitment, career stages and retention is grounded in the education systems of developed countries. There is though, very little that specifically addresses the issues from the perspective of developing countries. The next section provides details about the design of my study to address the vexed question of teacher commitment in Seychelles, a developing country.

Methodology

Broadly positioned within an interpretive research paradigm, two approaches were used to frame the research, namely phenomenography and multiple case studies. Merriam (2002), has noted the importance of a researcher investigating interactions in the social world in order to understand the multiple constructions and interpretations of reality at a particular point in time and in a particular context. The two approaches adopted in the research help to make visible and explore teachers' multiple constructions of their experiences and understandings of teacher commitment.

Phenomenography and case study

The choice of phenomenography as a research approach was particularly suited to this study, because it seeks to identify the different ways the phenomenon of teacher commitment is experienced in a specific context (Bowden, 2000). As Marton (1986) noted, "...phenomenography is a research method adapted for mapping the qualitatively different ways in which people experience, conceptualise, perceive, and understand various aspects of, and phenomena in, the world around them" (p. 31). Because phenomenography aims at description, analysis of experiences, its strength as an approach lies in its ability to understand phenomena through categorisation and description, while recognising the importance of context.

Likewise a case study methodology was chosen because it suited the exploratory nature of the study which aimed at deep probing of interactions between factors that explain present status or that influence change (Stake, 2006; Yin, 2009). A case study structure allowed exploration and probing of participants' ideas about teacher commitment and the experiences that lay behind these understandings and helped make sense of teachers' positions.

Selection of participants and structure of cases

Purposive sampling was used to select participants for the study. Participants in this study included secondary teachers at different stages of the profession. The selection of a sample of teachers for each case was based on the specific career stage and with consideration given to gender balance and the variety of subject backgrounds. The teachers came from different state secondary schools in the country, including representatives from one

island school. Selection of teacher participants was done in collaboration with the Schools Division of the Ministry of Education in Seychelles. The list of teachers was provided and their appointment dates from which a selection was made. Expatriate teachers and supply teachers (teachers without teaching qualification) were not selected. Apart from the geographical factors in terms of different school location, there were other factors that were considered in the selection of teacher participants, including their gender, the subject area of specialisation and whether people entered teaching as a first career or as a second career. The intention of the purposive sampling strategy was to ensure that a diverse range of teachers, at different stages in their careers, were included as participants in the study. The composition of the cases is described below.

Case 1. This comprised five teachers in the first four years of teaching as Newly Qualified Teachers. The group is mainly made up of teachers who have completed their training at the National Institute of Education, or they completed a Bachelor of Education degree in their subjects from an overseas institution. They are all bonded to the Ministry of Education for five years.

Case 2. This is a group of five teachers with between five and ten years of teaching. They all hold a Bachelor of Education qualification in the different subjects of specialisation, or they hold a Diploma of Secondary Education in their respective subject. They were either in their final year of their bond with the Ministry of education, or they have fulfilled their agreement.

Case 3. The group comprises six teachers with more than eleven years of teaching experience. One additional teacher volunteered to participate, resulting in a total of six participants instead of five. They are all qualified teachers although their qualifications range from Teacher's Certificate to Bachelor of Education.

The composition of each case is illustrated in Table 1, p. 94. The names of the teachers are pseudonyms, to protect their identities.

Data collection and analysis

Data were collected from July 2010 to January 2011. Semi-structured interviews were selected as the primary form of data collection because of their potential to provide in-depth understanding of teachers' perceptions of teacher commitment and their lived experiences (Kvale, 2007). Interview guides were used to structure the interviews, while at the same time leaving scope for probing questions and new directions to be taken in response to participants' comments. The questions used related to the main research questions and were open-ended to allow responses with sufficient depth, while also ensuring that they were easy to understand in order to maintain a good conversation flow. Individual interviews which lasted between 1 to 2 hours were conducted. Teachers were asked about their motivation to teach, their perceptions of a committed teacher, their perceived level of commitment, the factors influencing their commitment and the intentions to stay in teaching or leave.

Table 1: Profile of participants for each case

Case	Name/Pseudonym	Subject	Experience
Case 1: Newly qualified teachers (0-5 years of experience)	1. Lise	1. Science	1. 9 months (Diploma)
	2. Mandy	2. Social Science	2. 2 nd yr (Diploma)
	3. John	3. Mathematics	3. 2 nd yr (Diploma)
	4. Marcus	4. Social Science	4. 2 nd yr (BEd)
	5. Teddy	5. Technology and Enterprise	5. 9 months (Diploma)
Case 2: Mid-career teachers (6-10 years of experience)	1. Elai	1. Social Science	1. 6 th yr (BEd)
	2. Steve	2. Art	2. 6 th yr (BEd)
	3. Jennifer	3. ICT	3. 7 th yr (Diploma)
	4. Elaine	4. English	4. 6 th yr (BEd)
	5. Rene	5. Art	5. 9 th yr (Diploma)
Case 3: Experienced teachers (11+years of experience)	1. Neil	1. French	1. 24 years (Licence)
	2. Eva	2. Science	2. 13 years (BEd)
	3. Henry	3. ICT	3. 20 years (BEd)
	4. Sam	4. Mathematics	4. 12 years (BA)
	5. Clement	5. Science	5. 17 years (BEd)
	6. May	6. Personal and Social Education	6. 21 years (Diploma)

The forms of analysis adopted in this study were directed by the research questions and the selected research approaches. First the general principles of phenomenographic analysis were applied. These include immersing into the transcripts looking for meaning, discovering and constructing categories of description, developing the structure of awareness and developing the outcome space. The reiterative nature of phenomenographic analysis required the researcher to re-visit the transcripts throughout the phases to allow the sorting and resorting of results. Through this iterative process the range of conceptions in the data are uncovered on the qualitatively different ways of experiencing and conceptualising the phenomenon of teacher commitment. Key utterances relevant to the phenomenon of teacher commitment were selected from the transcripts and coded. These selected utterances or conceptions illustrate the different conceptions of the phenomenon of teacher commitment as described by participants.

The case studies interview transcripts were coded to reveal how teachers' perceived the factors that influenced their decisions to join teaching, the factors that are influencing their levels of commitment at the different stages of their career and their intentions in terms of career plans and trajectories. Through reading and re-reading of interview transcripts these different units of meaning were rigorously examined in order to elicit the essence of the meaning. Then common units of meanings were clustered together to form themes based on lived experiences of participants. This process is also a way of applying bracketing as far as possible; the suspension of the researchers' own presuppositions and giving careful attention to the meanings inscribed by the participants (Creswell, 1998; Moustakas, 1994).

Findings presented were supported by evidence from the interviews confirming the groundedness of the data and truthfulness of findings drawn from the data. In applying data triangulation, information was obtained from three different groups of teachers from

three different career stages. The application of methodological triangulation was achieved through adoption of two research approaches, phenomenography and multiple case studies. Cross-case analysis was another means of triangulation that was used, helping to increase the credibility of the research findings. Although the findings of this study relate to a particular context and cases, the broad themes and understandings that are reported in this study may be seen by readers to be relevant to other similar educational contexts.

Understandings of teacher commitment

Through phenomenographic analysis, four categories of descriptions were identified, representing the different ways that teachers perceive, understand and conceptualise teacher commitment. Each category of description is made up of different conceptions. These different conceptions are organised under each category of description into two aspects: the referential aspect which denotes the general meaning of the category and the structural aspects, which show the discernment within the category (Marton, 2000).

Table 2 (below) shows the four categories indicating the referential and structural aspects for each category.

Table 2: Categories of descriptions with the referential and structural aspects

Category of description	Referential aspect	Structural aspects Dimensions of variations			
Category 1: Teacher commitment as altruism	Teaching as a moral obligation	Pastoral care/ obligation towards the holistic development of students	Care for students' learning	Concern for fairness/equity	
Category 2: Teacher commitment as personal attributes	Personal qualities, values and attitude	Having resilience and perseverance	Being humble and patient	Passion for the profession	
Category 3: Teacher commitment as pedagogical content knowledge	Focus on content knowledge and teaching competencies	Subject knowledge	Planning for instruction	Pedagogical skills	Professional development
Category 4: Teacher commitment as connectedness	Sense of belonging to the school	Professional responsibility	Participation in school life		

Category One: Teacher commitment as altruism.

The first category connects teacher commitment with altruism, which applies to the caring nature of teachers towards the well-being and growth of their students. Participants for this category linked teaching with a moral purpose that emphasised their role in making a difference in the lives and achievements of students. Three different sub-categories or variations have been identified in the data for this category: (1) commitment as pastoral

caring for students, (2) commitment as the passion for the profession and (3) concern for equity.

Pastoral caring for students. Most participants expressed their commitment through their moral obligation towards the students they were teaching. Teachers were of the view that commitment is principally seen through a caring attitude and concern for the welfare of the students, which relates to the notion of pastoral care. Teachers in particular described their role as multifaceted.

For example, the notion of care as being the principal aspect of the moral obligation of a committed teacher was emphasised by Mandy, who stated that, "...a committed teacher is someone who cares for the students, one of the principal things; truly care for the students," (Case 1). Elai referred to a committed teacher as one who is "representing the parent of the student, you have to love the students and care for them" (Case 2). Other teachers described their duty of care as having a purpose as role models for students, which goes beyond academic support.

Caring for students' learning. The moral obligation was also attributed teachers' responsibility towards students' learning and academic achievements. There is a perception that the moral obligation of teachers is to ensure that, in the word of one participant, they "... give their best to their students" (Case 1: Lise), which is reflected in particular practices. For example, "...someone who is really committed will be willing to take students after class hours for additional work," (Case 3: Neil), thereby showing that they care for students' learning. The altruistic element here is teachers taking pleasure in seeing others succeed and being willing to do more than the basics that are required of them as teachers, for the benefit of students.

Concern for fairness/equity. Another interesting finding and dimension of teacher altruism that emerged relates to concern for fairness and equity. Participants described a moral obligation of teachers to exert the principle of equity within the everyday practice of teachers. Committed teachers according to participants, should not discriminate students based on their socio-economic backgrounds or family statuses, or their academic abilities. The teachers feel that, as Eva elaborated "being committed is to love our students, not to discriminate" (Case 3).

Category two: Teacher commitment as personal attributes.

Within this category of description teacher commitment is identified with the personal attributes of the individuals who enter the teaching profession. They considered themselves to be passionate about the profession and proud to be in the role of teachers and they identified attributes in themselves and in others that they thought helped to make them committed teachers. Variations in dimensions within this category have been identified as: (1) resilience and perseverance, (2) the patient and humble teacher and (3) passion for the profession.

Resilience and perseverance. Within this sub-category teachers related their experience of commitment to their ability to handle difficult situations and deal with them as challenges to be overcome. Those teachers who emphasised the importance of personal attributes acknowledged that while teaching is a complex profession with a range of setbacks, committed teachers demonstrate resilience through their ability to remain calm and tackle problems head on, as noted with Marcus:

There are lots of challenges that we face, but to be committed is to persevere, and to have hope that we can influence the students, at least one of them at the end of the day. This is what I feel a committed teacher is (Case 1).

This idea was echoed by another, who claimed that a resilient teacher "...will not be discouraged, not give up but rather, that teacher would be resilient to obstacles, and find ways to turn them into opportunities" (Case 3: May). The notion of resilience and perseverance was also associated with the desire to succeed in overcoming challenges and in developing self belief and efficacy.

Being patient and humble. Patience and humility are particular attributes that, according to participants, committed teachers should possess. A patient teacher is seen as one who maintains self-control and will be able to listen to students, because according to them being patient helps teachers to understand their students better in all aspects. For these participants committed teachers show patience towards their students and this enables them to get closer to their students and to identify their personal problems and learning difficulties.

The notion of patience is also related to that of humility, another aspect that emerged from the data analysis within this sub-category. Teachers who spoke of the importance of being humble believed that committed teachers should be prepared to 'go down to the level of students', that teachers are approachable and construct positive teacher-student interactions – not haughty.

Passion for the profession. Some teachers perceive committed teachers to be those who are passionate about the teaching profession. Participants holding this view believe that to be highly committed one needs to have teaching as a profession at heart, because according to them it is their passion for the profession that sustains their enthusiasm and desire to become successful teachers. Elai said: "to be a committed teacher first of all you have to love your job. You cannot be here for the salary or the vacation, you have to really love your job" (Case 2: Elai).

The love for the job can be expressed in different ways. For some it was a demonstration of personal satisfaction. Teachers who were mainly specialised in subject areas like Arts and ICT in particular seemed to focus on passion for their subject in their talk about teacher commitment. These teachers explained that it was their passion for the subject that was helping them to sustain their commitment despite the various challenges of the task of teaching that they were encountering.

Category three: Teacher commitment as pedagogical content knowledge.

This category of description relates teacher commitment to pedagogical content knowledge. The notion of pedagogical content knowledge refers to the teachers' subject knowledge and the pedagogical skills which are in principle rooted in the everyday work of a teacher from the stage of planning and preparation to that of lesson delivery, taking into account the classroom and school context (Shulman, 1987). The concept is drawn on here to describe features of teacher commitment that relate to the knowledge and skills of teachers, as described by participants. Three structural aspects have been identified for this category: (1) subject content knowledge, (2) planning for instructions and (3) pedagogical skills.

Subject content knowledge. This sub-category describes a dimension of teacher commitment relating to the extent of teacher subject knowledge and confidence in presenting subject content. Teachers in the study are of the view that a committed teacher should know their subject well so that she/he delivers lessons with confidence. Knowing the subject well is considered an important aspect of a teacher's work, which would directly influence the success and self-efficacy of teachers, as intimated by the following participant: "[a committed teacher]...is someone who believes that he or she can succeed, can bring some positive changes, and for example by knowing well the subject" (Case 3: Neil). Strong content knowledge is understood to be a prerequisite for teachers to succeed and feel confident in the classroom, and through this to develop a sense of commitment. Also classroom success and confidence are seen as evidence of teacher commitment in the sense that teachers have invested in developing content knowledge that they need for the job.

Pedagogical skills. The dimension of pedagogical skills relates to beliefs that participating teachers hold about their ability to engage students in learning. Teachers who emphasise the importance of pedagogical skills view that teacher commitment is strongly associated with catering for the educational achievement of their students by responding to their individual learning needs. Teachers holding this perception imply that developing pedagogical skills means finding ways and means to sustain their students' learning interests, which requires the use of a variety of strategies. Ideas expressed by some participants about the importance of looking for new ways to engage and maintain student attention are extended to meeting the needs of diverse learners. The teacher participants holding this view believe that the commitment to cater for the individual learning needs of the students requires teachers to deliver their lessons in a way that caters for the different abilities in the classroom and not only for high achievers, as stated by Neil: "...delivers the lesson in such a way that most of the students benefit, not only the brighter ones" (Case 3).

Planning for instruction. Another variation within the category of 'teacher commitment as pedagogical content knowledge' is the notion that a committed teacher is one who is always well-prepared for all classes. The common view is that lesson planning and preparation is a significant element of the professional duties of a teacher, and participants who

talked about this believe that it is an important foundation for successful teaching and good classroom management.

Committed teachers are attributed to those who are well-prepared. The importance of good preparation relates to lesson content and organisation, delivery skills and knowledge of the students that those teachers are teaching. Good planning allows them to anticipate potential difficulties and to provide suitable adaptations to be applied within lessons. This is a commitment to good practice in support of student learning and recognising students different learning needs.

Category four: Teacher commitment as connectedness.

For this category of description, connectedness refers to the teachers' sense of belonging to the school. This sense of belonging can be seen in teachers' articulation of feelings of professional responsibility towards the school, through the relationships that are developed and through their participation in school activities. Teacher commitment as connectedness is therefore akin to the social bonding, suggesting that when teachers have this sense of connectedness they develop positive relationships with school staff their students and parents, and this fuels their commitment. The sub-categories or dimensional variations for the 'teacher commitment as connectedness' category are: (1) Professional responsibility towards the school as a workplace, (2) the relationships that they develop and (3) participation in school activities.

Professional responsibility towards the school as a workplace. Participants across the different cases associate teacher commitment with the professional responsibility to be present and punctual, and to be willing to dedicate extra time for the benefit of the school to which they belong. Participants who highlighted these aspects of teacher commitment argued that a committed teacher "... should try his or her best to be there for all the lessons... not be absent from school all the time" (Case 1: Lise). This sentiment was shared by most of the participants in the study. The participants who shared this view associated teachers who were absent all the time with a lack of commitment. The emphasis on the importance of being present for duty extended to the issues of punctuality.

Connectedness through positive relationships. Teacher commitment through the sense of connectedness and belonging to the school was also attributed to feelings of being supported by the school and community, a sense of being respected and the positive relationships that teachers developed in their schools and community. For example, Clement attributed committed teachers to those "who are willing to promote team work in the school and the community" (Case 3).

Participation in school activities. Some teachers related commitment to their involvement in the life of the school, with participation in school activities being an indicator of their feelings of belonging to the school and their commitment to the school as their workplace. For example, one teacher explains that a committed teacher is "... somebody who

feels part of the school” (Case 3: Clement). Another teacher participant talked about committed teachers as those who “...ensure for the well-being of the school in general by participating in activities organised by the school” (Case 3: May).

The above descriptions of the categories for teacher commitment and the varied dimensions within these categories highlight the phenomenographic findings. These categories have been based on the participants’ experiences and perceptions of the phenomenon in the context of secondary schools in Seychelles. Altruism emerged as the most prominent feature in the responses of participants across the different career stages. This shows that teachers place students at the core of their profession, particularly the idea of caring for students and displaying an emotional attachment with them. Such findings have been documented in previous studies (Day, 2004; Nias, 1981). This altruism is also displayed through caring for students’ learning and caring for students’ educational achievement. Considering teacher commitment as a focus on students’ achievement has also been discussed in literature (Tyree, 1996; Biklen, 1995), although with different focus. Participants in this study maintain the importance of “pedagogical content knowledge” as being the core professional preoccupation of a committed teacher, of which lesson planning and preparation have been given prominence. Pedagogical content knowledge is closely linked to the sense of belonging as both reflect the way participants view their professional responsibilities which lie at the heart of a committed teacher.

The next section presents the case studies showing the factors influencing commitment of teachers at different stages of the profession and how these factors influence the career trajectories.

Commitment trend and potential career pathways

Despite the enthusiasm to teach expressed by the majority of teachers in the study, there were a number of factors at play when it came to sustaining this enthusiasm over the years in teaching. The three cases represent (1) newly qualified teachers (during the first four years of teaching), (2) teachers with 5 to 10 years of experience and (3) teachers with more than 11 years of experience.

Case 1: Newly qualified teachers

The main factors for this case of teachers were the extent that they were supported by the school as their new working environment, their working conditions and the relationships that the tasks of teaching entailed, which influenced their thoughts about whether to stay or leave teaching. Only one of the five participants (John), expressed without any hesitation, a desire to remain in teaching. That decision was due in part to the high level of support that he was getting from his employing school. He enjoyed strong support from ‘the staff and the headteacher’ and he valued the autonomy he had in being able to ‘explore and do new things’. Therefore John’s sense of efficacy was strengthened by having a supportive and collaborative culture within the school and having the opportunity to find out what works so that he can build his teaching repertoire.

One of the teachers in this group, Teddy, expressed uncertainty when it came to his decision to stay or leave. He felt that he was still in the process of adaptation and learning the tasks of teaching. He considered that ‘teacher education only provides the basics’. He also noted his frustration with perceived student misbehaviour and inadequacy of resources. On the other hand, he was enjoying the challenge of the profession, particularly with an exciting area to teach in. He sees that with the developments in technology he felt privileged to be teaching this subject which, as he cited: “technology has taken control of the world and teenagers here in our country are moving with the pace and that’s why [I] as a teacher find it a challenge to cope with the pace”. The challenge which Teddy was enjoying with his subject and what the teaching profession presented along with the difficulties in terms of support may influence his decision to stay or leave.

Three of these newly qualified teachers (Mandy, Lise and Marcus) have been contemplating leaving teaching. A number of reasons were associated with their decisions, the main ones being students’ behaviour and attitudes, the level of support and workload among others. The two excerpts below from Mandy and Marcus respectively, illustrate the impact that the students’ misbehaviour and attitudes towards their education have on these teachers:

You really try as much as possible to get the students to settle down and to start working, to get them interested in what you’re doing. But sometimes it’s just impossible, even if you try and that kind of demoralizes you, because you want to help them, you feel the urge to help them, but they don’t want to be helped.

There are lots of sacrifices we have to put in the job, we have to work after hours. And when you come in the morning to deliver what you have worked so hard on to make learning more meaningful and more interesting, you find that students are not really interested. So this is a major challenge and disappointment.....Sometimes I think we are fighting a losing battle.

These perceived behaviour problems were jeopardising the pedagogical aspects of their work in terms of lesson planning, lesson delivery and variations of teaching strategies. Most of these teachers displayed a sense of disillusion and shock as they try to cope with the reality of schools.

Case 2: Mid-career teachers

In the context of our study this mid-career stage is characterised by teachers who are either striving as they have taken on new roles and responsibilities, or surviving as they think about their future career plans. It is also a stage where those teachers start having extra personal responsibilities mainly in terms of family commitment or involvement in activities outside the school. Three of the teachers in this group were thriving in different ways. For Elai, the thriving was evident in her work to support and lead others. As a teacher leader she could reflect on and anticipate changes that she thought could strengthen and improve the system. Therefore, for Elai, there was a combination of factors involved

when it came to her decision to stay in teaching, but central to that was her identity as a teacher. She elaborated:

I'm not intending to change my profession right now, because, like I'm telling you, I love teaching, despite all the problems, I still think I can ... I can cope ... I have this within me, I don't see myself doing something else, I see myself being a teacher.

This view also underpins Elai's realisation of the context within which she was working and all the challenges that the daily tasks of teaching presented.

Jennifer also wanted to remain teaching however, there was a subtle variation in the way she justified her intentions to stay as compared to Elai. She had taken a different path into teaching and felt she had now found her place in the teaching profession, so she was not planning to leave. She acknowledged:

I have been tempted to change profession. To remain in the IT section but doing another business also. I have thought about it a lot. I thought of going to University for a break. But now I have a child. She is still young and I don't want to go through that hassle. So I feel that teaching is what I do best ... I've been through jobs, and I think I've found what I want to do... So I don't think I would be leaving the teaching profession. Not yet anyway. I feel comfortable in teaching.

As she had a child, the time factor suited her family life. Therefore, her personal life stage revolving around her family circumstances had a likely impact on her decision to remain in teaching. Jennifer was thriving in her increasing professional knowledge of her new subject.

Steve and Elaine were equivocal about their dispositions to remain in teaching. They both felt that they have matured over the years. For Steve, it was the love for the subject of specialisation which sustained his motivation, while Elaine felt that she enjoyed 'passing on knowledge to the students and see them succeed'. Their ambivalence in whether to remain or leave teaching were expressed differently. Elaine described her sentiment as follows:

... you know, you will think, ok, I can teach, I love this job, but loving it these days is not enough. You can love something, but when there isn't anything to keep this love growing, you just grow out of love ... I don't want to stay in teaching for so many more years. I want to do something different, because of all the reasons that I mentioned, maybe it's triggering me to move into something else.

So, for Elaine, despite her acknowledged passion for the profession, the factors mentioned above were impacting on her professional life and are likely to influence her decision to stay or leave, but she indicates that she is more likely to leave.

On the other hand, Steve's uncertainty of his future career plans was described in his statement: "I'm not sure. Teaching was not my first choice... I'm doing some art things in my spare time and if I succeed I might leave". This shows that the decision to leave was not all about teaching, but what other opportunities might be presented – a degree of serendipity is thus reflected in Steve's situation. The love for the subject and the difficulties being encountered along with the likelihood of new business opening for Steve are the factors at play when it comes to his decision to stay in or leave teaching.

Only one participant in this cohort expressed an intention to leave in the next five years. Rene entered teaching through the 'long path' as referred to by Nieto (2005) and he had been teaching for nine years at the time of the interview. Similar to other participants in this group Rene enjoyed working with children and he was positive about his relationship with his colleagues. However, Rene was frustrated with a number of policy issues such as disciplinary and training policies, as well as some school related factors such as resources. Despite the number of years of experience, Rene had not been given an opportunity for further training or professional development in his subject area or pedagogical skills. He felt somewhat stagnant in relation to his professional growth and had the impression that his subject was considered inferior by the authorities because it was not an academic area. The following excerpt encapsulates Rene's sentiments:

... the lack of resources, the teaching environment, lack of firm disciplinary policy in schools which contributes to major disciplinary problems and also the lack of training, as well as some useless paper work or duplication of record keeping are the things that lower my commitment.

In commenting on his future career plan, Rene admitted that despite all the difficulties in teaching, there was some satisfaction deep down, particularly in terms of what he 'contribute[s] towards the lives of the students which have a lifetime impact on them'.

The mid-career teachers in this study have shown some specific characteristics for this stage of the profession in the context of Seychelles. Most of these teachers are striving as some have taken on new roles, either leadership roles or new assignments. They demonstrate deeper knowledge of the education system and they are in a position to reflect on policy issues which impact on the work of teachers in general. They are concerned about their professional identities as teachers and their sense of efficacy in their tasks, as they see themselves guiding others. However, some of them also feel the need for career advancement, which they feel the system is not providing.

Case 3: Experienced teachers

Four teachers in this case had no intentions to leave teaching for other jobs and the reasons that they provided were not always similar. Their sustained commitment was attributed to students' achievement as being their pride and sense of success, and these achievements were not entirely subject related. For example, May referred to the importance of the 'holistic development of the child[ren]' in her care to enable them to become responsible and successful citizens. Supporting this line of thought Clement added: "when your

students are doing well in school and later on in life, it makes you feel good”. Neil also made reference to the respect that he gets from past students who have done well, and the feeling that he had contributed towards their successes was a pride and joy. He maintained his belief that he can make a difference. On the other hand, Henry saw how teaching had helped him progress in his professional life, particularly now that he had changed from vocational teaching to ICT and he had been appointed HOD, so he feels that there are opportunities for continuous professional development with such a subject.

All four teachers, however, expressed worries with regards to the perceived and experienced degradation in students’ behaviour. In most cases these teachers compared the current situation to the time that they started teaching, where they ‘had the respect that teachers deserved’. Similar to participants in other cases, these four teachers felt very strongly about the impact of students’ behaviour on their sense of efficacy. Such emotions made them question their very roles as teachers ‘if [they] cannot achieve’ what they set out to do. However, they have also noted that these problems are sometimes beyond the control of schools, as Neil signalled in the following excerpt:

“...when I look at it, those students who are giving problems at school, they are not necessarily bad students; they have social problems at home most of the time. There are so many social ills in the country that when those students come to school they are disturbed maybe. They are thinking of the problem at home, maybe they misbehave; they try to get help, to get the teacher’s attention. And we do not have even a school counsellor to deal with these issues”.

Such sentiment was shared by others. This was made more complex with the perceived lack of parental support. Such concerns were similar to those espoused by teachers in case study two. Other sources of frustrations for those teachers were the number of absences of teachers, resulting in others covering. There was mention of the importance of school leadership that is more ‘humane’ towards teachers as it was felt that the ‘emotional support was not there’. Dissatisfaction with resources was noted by most teachers and this was both instructional and physical.

Two of the teachers in this case expressed uncertainty about their future career plans. Sam, who was occupying the post of HOD in his subject area, felt that he was being supported by the school leadership team, however, similar to other participants within this cohort, he was not happy with students’ behaviour, the provision of resources by the Ministry, and with the level of support from parents. These along with the shortage of teachers, which was creating excessive workload for himself and teachers within his department, were impacting negatively on his commitment. Similarly, Eva elucidated the problem of workload in relation to shortage of teachers or covering for absent teachers, concerns which were raised by mid-career teachers as well. Both Eva and Sam felt that if they had a better job offer they will leave teaching. For Eva there is a feeling of being trapped and she is of the view that other teachers with her level of experience feel the same, ‘they are just there because they don’t have anywhere else to go’. Eva also mentioned her deteriorating health condition as a result of chalk use.

Discussion, implications and conclusion

The findings have shown that participants describe teacher commitment in relation to personal traits and qualities and in relation to professional knowledge and sense of belonging. However, the findings have also identified that images of ‘a committed teacher’ held by the participants are influenced by contextual factors. Teachers live and work in social and organisational contexts. Contextual factors that influence teacher commitment, and teachers’ understandings of commitment, include the broad socio-cultural, economic and political influences that permeate the education system of Seychelles, and the structural and organisational arrangements of schools in which teachers work. These contexts shape teachers’ work experiences and influence their ideas of what constitutes a committed teacher and what factors influence teachers’ levels of commitment. The conceptualisation of teacher commitment by participants also reflects their initial motivation to enter teaching and their expectations of what teaching entails.

The trend which emerged from the findings shows a number of variations in the levels of commitment and trajectories of teachers at the different stages of their careers. Teachers in this study who were in the first few years of teaching appeared to be less committed, or more uncertain about their futures in teaching, and more likely to leave the profession than the mid-career and more experienced teachers. This first stage of a teacher’s career is commonly referred to in literature as being the most crucial particularly with the problem of retention of beginning teachers in the profession (Cochran-Smith, 2004; Feiman-Nemser, 2003; Ingersoll & Smith, 2003). This was also evident for the newly qualified teachers in the context of this study who presented the complexity of their challenges and satisfactions as they experienced the realities of the profession. The majority of these teachers were planning to leave and this reflects a disturbing trend. The small number of teacher participants in each case means that definitive claims cannot be made and larger samples might present variations on these findings. It is possible though to identify a sense of disillusionment and frustration in the newly qualified teachers that was leading several participants to seriously consider leaving teaching, which suggests that in the context of Seychelles this group of teachers is particularly vulnerable and struggling to reconcile their ideals about teaching with their day-to-day teaching practice and experiences. They appear to be particularly vulnerable as they struggle with the challenges of handling students’ behaviour and developing their sense of efficacy.

The experienced teachers in this study displayed different emphasis than in other studies. None of the participants made reference to their approaching retirement, which has been commonly referred to in previous research (Day, et al., 2007; Huberman, 1993; Sikes, et al., 1985). However, this might be a result of the small number of participants in this study as compared to other studies. It could also be due to the number of years of experience, which was different to those in previous studies. For example, veteran teachers in Day et al.’s., (2007) study had more than 31 years of experience. On the other hand it can also indicate a paucity of research on experienced teachers in general.

The findings support the view that teachers’ career stages are not static and should not be seen as a linear progression, but rather that career trajectories fluctuate depending on a

range of factors both in the personal and the professional lives of teachers, thus resonating with the findings of Day et al., (2007) in the VITAE study in the UK. However, although the findings may echo ideas in literature, different factors may be given different emphasis. For example, students' behaviour and lack of interest in their studies have been found to be the most prominent factors for declining commitment across the career stages. Whilst data from the VITAE project also indicated students' behaviour was an issue of concern, it was not portrayed as the main problem across the different career stages as in my study. Issues like professional development in Day et al.,'s (2007) study was positive across the different career stages as compared to our study where it came out as an issue of concern across the cases. Another comparison can be attributed to workload, which emerged as an issue of concern in both studies, however, from different perspectives. As a developing nation Seychelles has limited resources and is currently experiencing a shortage of teachers. Most participants remarked the increased workload attributed to covering for this shortage. This is different to studies reported in developed countries, where there is usually provision for relief teachers to cover for absent teachers or for shortage of teachers.

The findings have shown a greater tendency for newly qualified teachers in particular to leave the profession. A more focused study on beginning teachers is needed in order to obtain a better understanding of the reasons for the vulnerability of this group in terms of commitment and retention.

There is also scope for extension of the study to include a larger number and range of teachers, school leaders and policymakers, as well as inclusion of a range of other groups in subsequent research studies. The inclusion of the students' voice in such a study of teacher commitment would have allowed a better understanding of the complexity of commitment from the receiving end. It would, therefore, be advantageous if further studies were to be carried out among the secondary student population to gain insights into their perceptions of committed teachers. In addition, while this research has explored teacher commitment at this particular point in time, a longitudinal study would allow a more extensive examination of the trend of teacher commitment across teachers' career trajectories. Such a longitudinal study could also make use of other data gathering tools such as classroom observations and other statistical data which would provide richer data for explaining commitment trends.

As pedagogical content knowledge emerged as an issue of concern by teachers across the career stages, a future research could be conducted using Desimone's (2009) framework on effect of professional development on teachers and students' learning. This framework has been supported by both theoretical literature and empirical studies.

Implications

The findings of this study have implications for policy, schools, teacher education and teachers in the context of secondary education in Seychelles and more broadly. Exploring teachers' conceptions of teacher commitment, and the factors that influence their own teaching experiences and particular feelings of commitment, raise questions and issues for policy makers and educational leaders.

In relation to policy and the broad educational system in Seychelles, as the shortage of teachers persists, the system might have to make the most of who is willing and available to enter a teaching career. Increasing the support for newly qualified teachers, though, would likely help to create a teaching force that feels more valued and less disgruntled. While this would not stop teachers leaving the profession, it might encourage more to stay and more to enter.

Furthermore, although the strategies for recruitment are beyond the scope of this study, the data show a complexity in commitment and career trajectories that suggest a need to think of alternative training in order to attract more people in the profession. The variations in career trajectories displayed by participants, with newly qualified teachers representing teachers who undertook training straight from school and others who undertook a career change to enter teaching (and were therefore older or more mature entrants to the profession), suggest that the pool for teacher education and teaching is potentially a broad one. Thus, attention needs to be given to understanding different pathways to teaching and how people with different life experience might be supported into and through the profession.

One challenge for school leaders which emerged from the findings was that of retaining and supporting beginning teachers. Despite the lack of an established nationwide induction programme, schools need to put in place structured programmes to support new teachers. That new teachers are often thrown in the deep end after their initial training has been affirmed by this study.

Another aspect of teaching where support might be further developed relates to behaviour management. Issues of students' misbehaviour and lack of motivation to learn emerged as the dominant factor influencing a decline in commitment, and a low sense of efficacy, and is one of the main reasons for teacher attrition. Teachers from all cases commented on the new Code of Conduct which had been introduced in schools. The comments related to how the policy was not fulfilling its function of dealing with misbehaviour and how it was putting additional pressure on teachers. Studies conducted in western nations have also identified students' misbehaviour as a main concern for teachers and schools, particularly at secondary level (including, Blase, 1986; Day et al., 2007; Hall & Langton, 2006). The difference between these contexts and the context of our study (a developing nation) is the highly centralised system of education as compared to decentralised systems – that is, in western nations schools have the authority to develop their own school-wide behaviour policies (Axup & Gersch, 2008; George, White, & Schlaffer, 2007). In Seychelles the policy is developed centrally in a 'one size fits all' manner. Henceforth, a potential strategy to address the problem in Seychelles could be to empower schools to design their own behaviour policy, which might prove to be more successful, as these policies will be responding to that particular school community and environment.

The findings show that the realities of practice are different to expectations – newly qualified teachers in particular seem to experience a form of reality shock, thus point to likely discrepancies in teacher education programmes. The view of teacher commitment which emerged from our study could provide a valuable platform on which to build teacher

education programmes, particularly in relation to such dimensions like teacher identities, efficacy, resilience and trajectories. Covering these notions in the teacher education programmes would potentially provide student teachers with opportunities to explore how their experiences are shaped by what happens in classrooms and by their own beliefs (an approach that is supported by Borman, Mueninghoff, & Cotner, 2009; Bullough, 1997; Danielewicz, 2001; Day & Gu, 2010; Patterson & Purkey, 1993). It will theoretically allow reflections about the discontinuities and tensions this may create for them, which they need to negotiate in their professional lives. Such concepts are not currently part of the teacher education programme in Seychelles.

Conclusion

The issues raised by teachers in this study point to a commitment crisis among secondary teachers in Seychelles. It is argued that understanding teacher commitment means taking into account the personal and professional spectra of teacher commitment, and not assuming that these teachers possess all the faculties required for commitment without having the structure and environment necessary to help teachers sustain this commitment and to retain them in the profession. Although the study focused on Seychelles the issues being addressed are of worldwide relevance. For example, the findings show that addressing issues of teacher retention presupposes an understanding of the complexity of teacher commitment. Such understandings can help to honour teachers and their fundamental roles in any education system, and show how teachers' commitment develops and is influenced in particular educational contexts.

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Chapter 6

Conditions for teacher leadership and professional development in challenging circumstances

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Abstract

This chapter draws upon data from a wider 3-year funded research project aimed at examining opportunities and conditions for teacher leadership and professional development in challenging circumstances. A mixed-method research design was devised. This chapter reports on findings from phase I, which included a national survey to teachers in mainland Portugal (n=2702 teachers) and data from phase II (focus group with 99 teachers from 11 schools). Data were collected between February and May 2012 (phase I) and between November 2012 and April 2013 (phase II). Findings suggest that teachers do value opportunities to develop professionally in the workplace but they recognise the increasing limitations and difficulties such as increase of bureaucracy, greater control over teachers' work, lack of time, an increase of number of pupils per class, amongst other policy initiatives. Issues of school culture and leadership as well as the sense of professionalism and professional values explain these findings.

Introduction

Teacher leadership has been seen as a key variable in school reform and improvement (Danielson, 2006). The literature has highlighted its potential for teacher and school development. It also suggests a number of key ingredients for sustaining school improvement through teacher leadership, such as: clarity of focus, evidence, collaboration, trust, dialogue, planning and leadership (Durrant, 2004).

More recently, the literature has pointed out the key role of teachers (both as formal and informal leaders) in fostering opportunities for professional development and for shared

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building of professional knowledge (Frost, 2012). For instance, Katzenmeyer and Moller (2001, p. 5) define teacher leaders as those who “lead within and beyond the classroom, identify with and contribute to a community of teacher learners and leaders, and influence others towards improved educational practice”.

The ways in which teachers learn and develop have been analysed taking into account the contexts in which these processes occur as well as teachers’ preferences, dispositions, and the variables that might hinder or facilitate them (Lieberman, 1996; Day, 2001; Flores, Rajala, Simão, Tornberg, Petrovic & Jerkovic, 2007; Collinson, et al., 2009). Teacher development implies some kind of learning and change (Forte & Flores, 2014) and these may be better explored if we look at the ways in which teachers understand teachers’ views and experiences as well as the complexity and variety of factors that influence them. Issues such as personal biography, career phase, preferences of learning, relevant professional development opportunities, support in and out of school, self-efficacy, working conditions, school cultures, leadership and external influences may be identified in the literature (Day, 2001).

Frost (2012) suggests a broader perspective that goes beyond the fragmented and traditional view of professional development that encompasses the investment in teachers’ quality professional growth which may be enhanced through teacher leadership and the valorisation of the context and of the different views and experiences of the stakeholders. This chapter presents findings arising from a broader piece of research aimed at investigating the ways in which teachers look at their professional development and the conditions for them to exercise leadership in their schools in challenging times.

Teacher leadership: Defining the concept

Teacher leadership has gained increasing attention in recent years, particularly in the United States and in the UK (Stevenson, 2012). Existing literature points, however, to different perspectives and understandings (Davis & Leon, 2009; Yow, 2010; Ross, et al., 2011; Alexandrou & Swaffield, 2012; Bangs & MacBeth, 2012). In contrast to a rather limited organisation-focused approach to teacher leadership, the literature over the last decade or so tends to emphasise the informal kind of leadership in which teachers engage in order to enhance their professionalism and to make a difference in the schools in which they operate (Frost, 2004; Frost & Durrant, 2003; Spillane, 2006). Similarly, Taylor, Yates, Meyer and Kinsella (2011) argue that teacher leadership may be associated with authority and as a result of a selection process to undertake formal roles such as leaders of curriculum areas or heads of department. But the authors also draw attention to the informal nature of teacher leadership through “the influence that does not involve designated authority over peers, such as coaching colleagues” (2011, p. 86).

In this context, Frost (2012) argues for a non-positional view of teacher leadership, one which “does not assume leadership is automatically linked with positions in the organisational hierarchy of the school” (Frost, 2012, p. 210). As such, and within the view of schools as learning communities (Forte & Flores, 2011), teachers are encouraged to exer-

cise leadership and to engage in improvement efforts in the settings in which they work by leading projects, influencing and mobilising others inside and beyond their classrooms and schools. Poekert (2012, p. 171) highlights the importance of this definition as it draws attention to the centrality of leadership that is built “on influence and interaction, rather than power and authority”. Also, York-Barr and Duke (2004, p. 288) stress that teacher leadership is “the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement”. As such, “there are many informal ways in which teachers exert influence and make a positive difference in their schools” (Hanuscin, Rebello, & Sinha, 2012, p. 17). It is within this perspective that teacher leadership is associated with the concept of (informal) teacher professional development in context.

Teacher leadership and professional development: Exploring the connections

While professional development may assume a wide array of different forms, existing research points to its association with teacher learning and the transformation of knowledge into practice for the benefit of students’ growth (Avalos, 2011). Ritcher et al. (2011, p. 116), for instance, define professional development as “uptake of *formal* and *informal learning opportunities* that deepen and extend teachers’ professional competence” (original emphasis). The former include structured learning environments such as courses, workshops and other in-service training activities that are usually mandatory. The latter include a wide variety of activities both individual and collective such as reading books, classroom observations, conversations with colleagues, networking, collaborative projects with colleagues, etc. These forms usually stem from teachers’ initiative and are often embedded in the classroom and school contexts (Ritcher, et al., 2011). In this regard, Estrela (2003) suggests that it is necessary to invest in voluntary training activities oriented towards school and its problems. Therefore, time, support, willingness to learn, leadership and relevant opportunities are key factors in promoting teacher professional development (Day, 2001; Flores, Rajala, Simão, Tornberg, Petrovic & Jerkovic, 2007; Forte & Flores, 2012, 2014).

Teacher professional development, teacher learning, workplace learning are terms that are not always used in the same way in existing literature. For instance, Jurasaitė-Harbisson and Rex (2010, p. 267) distinguish “formal, often called professional development, and informal professional learning in the workplace”. A deep analysis of the ways in which the terms are used in the literature is beyond the scope of this chapter. However, based upon existing research literature we identify the operational definition that underpins the study reported in this chapter.

Thus, we draw upon the definitions by Day (2001) and Marcelo (2009) which emphasise the broad, complex and dynamic nature of the process. As such, professional development include all formal and informal learning experiences and planned and unplanned activities in which teachers, individually or collectively, engage in order to develop their profes-

sional knowledge, competencies, perspectives and attitudes. Thus, it includes the formal in-service activities provided to teachers in many contexts that are usually mandatory or prescribed (Flores, et al., 2007; Forte & Flores, 2014) and, in many cases, linked to the introduction of educational innovations (Jurasaitė-Harbison & Rex, 2010) but goes beyond that. It also entails the more informal, spontaneous and varied activities in which teachers are involved (Forte & Flores, 2012) through interactions and reflections on their practice within a framework of collaborative continuing professional development, one which values the informal element of working and learning (Kennedy, 2011). It is within this perspective that teacher leadership (both formal but mainly informal) may be helpful in understanding the ways in which teachers engage in collaborative projects and innovations in their workplace.

Recent literature has examined the link between teacher leadership and professional development (Alexandrou & Swaffield, 2012; Poekert, 2012). Teachers engage in a wide variety of activities and learning experiences (Meirink, et al., 2009) which may be of relevance for their professional development. While it is important to understand its nature, process and content, attention also needs to be paid to the factors that may facilitate or hinder teacher development in the workplace. For instance, why do teachers engage in collaborative learning activities in a given context and period of time? Who are the teachers that make a difference in their workplace and beyond by mobilising and influencing others and leading innovations at school that might be crucial for their professional development and student learning? What are the conditions that might enhance this kind of leadership? For instance, Collinson (2012) highlights the key role of learning in the development of teachers as leaders. The author reports on a study of 81 exemplary secondary school teachers across the United States and how they have become leaders whose influence and partnership extended well beyond their classrooms and schools. Collinson (2012) argues that their leadership occurs as a by-product of their learning.

In this context, Poekert (2012, p. 185) draws attention to teacher leadership as “a form of job-embedded professional development”. In a similar vein, Hunzicker (2012, p. 286) states that “teacher leaders are best prepared through a combination of job-embedded professional development and collaborative experiences.” Issues of collaboration and strategic teacher leadership have also been identified in the literature (Frost & Roberts, 2004) which may facilitate teacher professional development in the workplace.

In Portugal, teacher development has been a key element in policy reforms since 1992 when a national and compulsory in-service training system for all teachers was put into place. Overall, it has assumed a more formal and bureaucratic nature. Empirical work carried out in the Portuguese context has demonstrated the weak impact of the in-service training activities in fostering teacher professional development and educational innovations in schools (Ruela, 1999; Barroso & Canário, 1999). However, existing literature has also pointed out the emergence of a “culture of training” (Estrela, 2003), the valorisation of training and education as part of the teaching profession (Veiga Simão, et al., 2005) and the growing emphasis on more contextualised training opportunities as positive issues related to the system of in-service training of teachers. These are also to be related to

issues of school culture and leadership in influencing teachers' learning in the workplace (Flores, et al., 2007; Forte & Flores, 2012).

Existing literature identifies the need for further research in order to examine the ways in which teacher leadership is developed and practiced in schools as well as its influence and impact on teacher professional development, on teaching and learning (see, for instance, Poekert, 2012). It is within this framework that the research described in this chapter was carried out.

Methods

The context and design of the study

The data reported in this chapter draws from a broader 3-year piece of research (January 2011-December 2013) funded by *Fundação para a Ciência e a Tecnologia* (National Foundation for Science and Technology) (PTDC/CPE-CED/112164/2009) aimed at examining existing conditions for teacher leadership and professional development in challenging circumstances. A mixed-method research design was devised. The project included three phases of data collection, including a national survey in which 2702 teachers participated (phase I); semi-structured interviews to principals in 11 schools located in different regions of the country; focus group to 99 teachers and focus group to 108 students (phase II) and a professional development programme in 5 schools located in northern Portugal, in which 66 teachers participated (phase III). In this case, data were collected through questionnaires with open-ended questions, portfolios, and reflective tools. The goal was to develop and evaluate teacher leadership strategies in order to reflect on and to promote conditions for teachers to exercise leadership in schools in order to foster their professional development in context. In this paper only phase I will be reported with data also drawn from the focus group with the teachers (phase II). Phase I was carried out between February and April 2012 and phase II was conducted between November 2012 and April 2013.

The economic and financial crisis that has been affecting several sectors in Portugal has led to increases in unemployment, salary cuts, and higher taxes. These have impacted upon teachers and the teaching profession. Along with these are also changes at a policy level amongst which are new mechanisms for teacher evaluation; new protocols for school governance; reduction in the school curriculum; introduction of national exams from the primary school upward, etc. In general, more pressure is placed on schools and teachers to increase teaching standards and student achievement. In addition, changes in teachers' workload and working conditions have been implemented. Thus, schools' and teachers' work has been affected in many ways in recent years with implications for teaching, learning and leadership.

Drawing from the major research project, this chapter addresses the following research questions:

1. How do Portuguese teachers view their experience as teachers in current challenging circumstances?

2. What are the main motivations for teachers to engage in in-service education and professional development opportunities?
3. How do they look at the opportunities at the workplace for them to exercise leadership taking into account issues of school culture?
4. How do they value the opportunities for developing leadership in their workplace as part as their professional development in their school context?

Data collection and analysis

A nationwide survey was conducted through an online questionnaire (using the survey-monkey device) which was sent to the principals of elementary and secondary schools in mainland Portugal. The questionnaire was then distributed to the teachers in each school. Permission for administering the questionnaire in public schools was previously obtained from the Ministry of Education. The questionnaire included both closed and open-ended questions according to two main dimensions: i) motivation and job satisfaction (including questions about current motivation, areas in which teachers experienced the greatest increase in satisfaction and the most dissatisfaction, etc.); and ii) leadership, autonomy and school culture (factors that hinder or promote teacher leadership, opportunities and motives for engaging in professional development opportunities, etc.). In order to analyse further issues of teacher professionalism associated with the effects of policy initiatives on teachers' work and conditions for exercising leadership arising from the quantitative data, focus group were carried out with 99 teachers in 11 schools throughout the country. Each focus group comprised 3 to 7 participants. The focus group protocol aimed at analysing in a deeper way preliminary findings arising from the survey data but it also aimed at understanding and giving voice to teachers to talk about their experience as teachers in challenging circumstances especially as far as the conditions for them to exercise leadership and to develop professionally are concerned. The focus group protocol included questions related to perceptions of school culture and leadership, changes in teachers' work, and issues related to being a teacher and teaching as a profession.

Quantitative data were analysed statistically with the use of SPSS (version 20). The process of qualitative data analysis was undertaken according to two phases: an analysis of data gathered in each school through the voices of teachers, students and the principal. A second phase was then carried out according to a comparative or horizontal analysis (cross-case analysis) (Miles & Huberman, 1994). In this phase, it was possible to look for common patterns as well as differences. This chapter presents the main findings from phase I and data from the focus group with teachers (phase II) in order to illustrate and frame the quantitative data. Three main themes will be addressed in this chapter: i) being a teacher in challenging circumstances; ii) conditions for teachers to exercise leadership at school; iii) teacher leadership and professional development: motivations and opportunities.

Participants

In total, in phase I, 2702 teachers from mainland Portugal responded to the questionnaire which was administered online: 78.5% were female. Also, 42.8% of the participants were between 40-49 years old and 28.6% were between 50-59 years old (see Table 1).

Table 1: Age of the participants

Age	Frequency	%
20-29	29	1.7
30-39	441	25.5
40-49	740	42.8
50-59	495	28.6
Over 60	24	1.4
Total	1729	100

As far as their qualifications are concerned (see Table 2), the majority of the participants hold a Licenciatura degree (59.3%) and 21.4% hold a master's degree (21.4%).

Table 2: Academic qualifications

Academic degree	Frequency	%
Bachelor	36	2.1
Licenciatura	1027	59.3
Postgraduate Course	270	15.6
Master's Degree	370	21.4
PhD	30	1.7
Total	1733	100

The majority of the participants have between 11 and 20 years of experience (37.6%) and between 21 and 30 years (34.9%) (see Table 3).

Table 3: Years of experience

Years of experience	Frequency	%
[0-10]	264	15.4
[11-20]	639	37.6
[21-30]	594	34.9
[31-40]	204	12
[+ 41[1	0.1
Total	1702	100

Most of the participants have between 1-10 years of experience in their present school (65.8%) (see Table 4). Also, the vast majority of the participants have a permanent post at school (83.3%).

Table 4: Years of experience at the present school

Years of experience	Frequency	%
[0-10]	1110	65.8
[11-20]	419	24.8
[21-30]	147	8.7
[31-40]	12	0.7
Total	1688	100

In addition to teaching, 1046 (38.7) of the participants reported that they also play other roles at school: 33.9% are pedagogical coordinators, 33.3% hold middle management positions, 16.8% perform administration positions, and 12.4% hold both middle management and pedagogical coordination roles.

The majority of the participants taught in urban schools (51.1%) (see Table 5).

Table 5: Type of School

Type of school	Frequency	%
Urban	885	51.1
Suburban	469	27.1
Rural	377	21.8
Total	1731	100

The participating teachers taught in all levels of teaching (from pre-school to secondary school: 3 to 18 year-old students) (see Table 6). Most teachers taught in the 3rd cycle (41.9%) (students aged 12-15) and in the secondary education (33.2%) (students aged 16-18).

Table 6: Levels of teaching in which teachers taught

Teaching levels	Frequency	%
1 st Cycle	327	18.9
2 nd Cycle	418	24.1
3 rd Cycle	725	41.9
Preschool	148	8.5
Secondary	574	33.2

Note: Some teachers listed more than one option.

As far as the 99 teachers participating in the focus group are concerned, the vast majority of them were female teachers (76.8%). As for their age, 31.3% were between 51 and 60 years old and 27.3% between 41 and 50 years old. The participating teachers came from all levels of teaching, from pre-school to secondary school, and from various subject matters. In regard to their experience as teachers, 36.4% have between 21 and 30 years of service, 26.3% between 31 and 40, and 22.2% between 11 and 20 years of experience.

Findings

In this chapter key findings are presented according to three main themes: i) being a teacher in challenging circumstances; ii) conditions for teachers to exercise leadership at school; iii) teacher leadership and professional development: motivations and opportunities.

Being a teacher in challenging circumstances

Teachers were asked about their current levels of motivation. They reported that their current motivation (in 2012) was moderate (45.5%), although 27.4% admit that their motivation was high and for 17.4% of the participants was low (see Table 7).

Table 7: Teachers' current motivation

	Frequency	%
Very Low	155	5.9
Low	458	17.4
Moderate	1194	45.5
High	719	27.4
Very High	99	3.8
Total	2625	100

Interestingly, when asked about their job satisfaction and motivation over the last three years (during which major reforms in Education and in teaching have been put into place in schools), the majority of the participants reported that their motivation and their job satisfaction decreased (61.6% and 44.5%, respectively). Issues related to salary cuts, increase of bureaucracy, the deterioration of the social image of teaching, the lack of motivation from the part of students, the distance and the lack of valorisation of school from the part of parents, the lack of career prospects, along with massive legislation that has been published and recent policy initiatives such as teacher evaluation, new system for school governance (the merging of schools in big clusters of schools), increase of number of pupils per class and of classes per teacher, the increase of workload, etc. are amongst the reasons identified by the participants. The following quotes from teachers' accounts during the focus group are illustrative of this:

My motivation, my willingness and my joy have been lost. I don't come to school with the same joy anymore. Why is that? For instance, my salary has decreased; I am stuck in my career since 2005... (Elementary school female teacher, 22 years of experience)

Teachers have lost their status, they have lost rights and the only things they get are demands... As a teacher you have to work harder, your workload has increased, bureaucracy has increased, paperwork has increased, etc. (Secondary school female teacher, 28 years of experience)

The most problematic factor is the news, the lack of safety and instability in economic terms, the reduction of the salary (...) you never know what

tomorrow will bring (Secondary school female teacher, 21 years of experience)

Year after year I see the reduction of my salary. And, of course this affects you as a teacher... (Male teacher, 22 years of experience)

Over the last years, there has been a negative image of teachers in the media and in the society in general... (Secondary school female teacher, 35 years of experience)

However, the teachers participating in the survey also claim that their commitment stayed the same (66.8%) and increased (23.8%) over the last three years (see Table 8). The same feeling is expressed when they refer to their professional competence. They stated that their competence increased (49.4%) and stayed the same (47.8%) over the last three years. Most participants state that their confidence as teachers stayed the same (54%) and 26.8% claim that it increased over the last few years. As far as teachers' self-esteem is concerned, although 46.9% state that it stayed the same, 39.1% acknowledge that it decreased. The participants also claim that the recognition of their work stayed the same (46.9%) and decreased (37.6%) over the last three years.

These findings are to be related to teachers' sense of professionalism and their capacity for resilience, which they relate to their professional values as teachers and to their beliefs and sense of identity (Day & Gu, 2014). The following quotes illustrate teachers' reasons for their commitment despite everything:

As a teacher you may lack motivation in regard to everything, to salary cuts, to what has been taken away from you, but as far as your work with the students is concerned and your family you do everything you can. You do your best. (Elementary school female teacher, 17 years of experience)

All this [massive changes in legislation] leads to the lack of motivation. I don't feel that this has an impact on my work. It is a great concern but it doesn't affect my work as a teacher. (Secondary school female teacher, 21 years of experience)

I think teachers lack motivation but they are working despite everything... (Secondary school male teacher, 23 years of experience)

I really enjoy being with the kids. Coming to school is not a pleasure to me anymore, but I still enjoy being with my students. (Female pre-school teacher, 33 years of experience) (see Table 8)

Teachers participating in the survey were also asked about their confidence in their ability to influence student learning and achievement. Most of the participants state that it stayed the same (57.7%) over the last three years. This is also the case of their responsibility for the success of their students (60.5%) and their involvement in the school life (48.5%), although in this case 35.9% of the teachers also claim that their involvement at school increased over the last three years. Interestingly, the participants recognise that their sense

Table 8: Teachers’ perceptions over the last three years

	Decreased	Stayed the same	Increased
... my motivation	61.6% (1623)	29.8% (784)	8.6% (227)
... job satisfaction	44.5% (1160)	41.7% (1087)	13.8% (360)
...my commitment	9.3% (243)	66.8% (1737)	23.8% (620)
... my professional competence	2.8% (74)	47.8% (1245)	49.4% (1287)
... my confidence as a teacher	19.2% (497)	54.0% (1400)	26.8% (696)
... my self-esteem	39.1% (1015)	43.6% (1134)	17.3% (450)
... the recognition of my work	37.6% (969)	46.9% (1209)	15.5% (401)
... the confidence in my ability to influence student learning and achievement	19.2% (500)	57.7% (1500)	23.1% (601)
... my involvement in the school life	15.6% (405)	48.5% (1258)	35.9% (930)
... my responsibility for the success of my students	3.8% (99)	60.5% (1565)	35.6% (921)
... my motivation to undertake new roles related to school projects	37.1% (962)	40.2% (1042)	22.7% (589)
... my sense of belonging to my school	36.7% (951)	45.2% (1172)	18.2% (471)

of belonging to the school and their motivation to undertake new roles related to the school projects stayed the same (45.2% and 40.2%, respectively) and decreased over time (36.7% and 37.1%, respectively).

Conditions for teachers to exercise leadership at school

Issues of school culture and working relationships in context were also included in the questionnaire. When asked about the ways in which teachers work in their schools, in general, a collaborative perspective emerges. The participants agree and strongly agree that they work collaboratively at the department level (66.4%), as well as at the subject matter level (76.8%) and at school level (60.3%). They also agree and strongly agree that they work together in planning activities at school (73.5%), they share ideas and materials (67.4%) and they reflect on their practice (67.3%). They also state that in general teachers are informed about the policies, projects and activities at school (20.5% strongly agree and 57.1% agree). However, 50.3% agree and strongly agree that over the last three years there was an increase in teacher individualism, 25.5% do not agree nor disagree and 24.1% disagree and strongly disagree (see Table 9).

Interestingly, when asked about encouragement to make decisions and involvement in school projects, although the participants tend to agree, ambiguity emerges from the data. For instance, teachers agree and strongly agree that they feel encouraged to make decisions about how to assess (47.3%), 28.9% state they do not agree nor disagree and 23.9% disagree and strongly disagree. Similarly, teachers feel they are encouraged to make decisions about how to teach (40.4% agree and strongly agree), but others do not agree nor disagree (33.2%) and disagree and strongly disagree (25.4%). In regard to the encouragement to participate in projects at school and in in-service training activities, although the majority agrees (53.1%), others do not agree nor disagree (27.4%) and disagree (19.6%), respectively. In addition, in relation to the item “In my department I am encouraged to exercise leadership”, most teachers state that they do not agree nor disagree (36%).

Table 9: Teachers' work and working relationships in context

	Strongly agree	Agree	I do not agree nor disagree	Disagree	Strongly disagree
In my department teachers work collaboratively.	21.2% (391)	45.2% (832)	17% (314)	13.2% (243)	3.4% (62)
In my department teachers reflect on their practice.	17.9% (328)	49.4% (906)	16.6% (304)	12.6% (232)	3.5% (64)
Teachers work together in planning activities at the school level.	21.7% (401)	51.8% (957)	14.4% (266)	10.1% (186)	2% (36)
In general, teachers work collaboratively in my school.	12.2% (224)	48.1% (884)	23.2% (427)	14% (257)	2.4% (45)
In general, teachers work collaboratively in my subject group.	31.7% (579)	44.8% (819)	12.1% (222)	9.1% (166)	2.4% (43)
In my school teachers share ideas and materials.	12.5% (230)	54.9% (1007)	20.4% (375)	10.5% (192)	1.7% (31)
In my department I am encouraged to make decisions about how to assess.	6.6% (121)	40.7% (747)	28.9% (530)	17.0% (312)	6.9% (126)
In my department I am encouraged to make decisions how to teach.	5.6% (103)	34.8% (639)	33.2% (608)	18.5% (340)	7.9% (144)
In my department I am encouraged to develop projects.	7.5% (137)	45.6% (834)	27.4% (501)	14% (256)	5.6% (102)
In my department I am encouraged to participate in in-service training activities.	9.3% (169)	44.8% (815)	30.6% (557)	10.7% (195)	4.7% (85)
In general, teachers are informed about the policies, projects and activities in my school.	20.5% (378)	57.1% (1052)	13.3% (245)	7.4% (137)	1.6% (30)
Over the last three years there was an increase in individualism in teachers' work.	22.8% (415)	27.5% (501)	25.5% (464)	20.3% (370)	3.8% (69)
In my department I am encouraged to exercise leadership.	5.8% (106)	20.0% (513)	36.0% (661)	20.5% (376)	9.8% (179)

Teachers participating in the focus group also spoke of teacher leadership. Although they recognise that as teachers they are be able to exercise leadership without the need to play a formal designated role in the structures of the school, they tend to value formal leadership such as the principal, the head of department, the curriculum leader, and the tutor. Some of them, however, do recognise themselves as informal leaders inside and beyond their classrooms:

You see your colleague as a leader when she says to you “Look, what if we do this and this...? She doesn’t impose anything but it’s the way she leads you...
(Elementary school female teacher, 16 years of experience)

I think that school dynamic has to do also with people, not only with the principal and his team. People do make a difference in the school... (Secondary school female teacher 33 years of experience)

I see myself as a leader in the classroom. (Elementary school female teacher, 27 years of experience)

Teachers are leaders in the ways in which they motivate and lead students. As a teacher you need to be a leader... (Secondary school teacher, 33 years of experience)

Despite this, the participants in the focus group identify a number of constraints for them to exercise leadership, namely lack of motivation and lack of support. They also stress that their leadership in the classroom is under attack due to the changes in teachers' work over the last years which have been exacerbated in the context of the economic and financial crisis:

Do I feel encouraged to exercise leadership? I agree with my colleague. No way, even though you have to do it especially inside the classroom. (Elementary school female teacher, 14 years of experience)

I think that the last bit of leadership that you had has been taken away from you. Every hour there is a new legal text with new regulations (...) and this doesn't contribute to the credibility of teachers' work. (Secondary school female teacher, 26 years of experience)

I don't feel encouraged to exercise leadership, because the Central Administration doesn't allow you to exercise leadership. (...) You feel that you are not able to develop your abilities and capacities because of the factors that hinder the development of leadership that come from the outside. So, I don't feel encouraged to exercise leadership at all. (Elementary school male teacher, 27 years of experience)

Interestingly, when asked about the most important dimensions of their work, teachers refer to collaborating with colleagues (63.4%); supporting students (58.7%); reflecting on one's own work (51.1%); planning teaching (49.1%) and continuous professional learning (45.1%) (see Table 10). The least valued dimensions are: performing administrative tasks (7.5%); involvement with the local community (14.5%); developing teamwork (18.7%), using ICT (19.7%) and participating in decision-making process (19.7%).

Table 10: Dimensions of teachers' work

	Frequency	%
Collaborating with colleagues	1140	63.4
Supporting students	1056	58.7
Reflecting on one's own work	919	51.1
Planning teaching	882	49.1
Continuous professional learning	810	45.1
Developing innovative practices	801	44.5
Monitoring student behaviour	801	44.5
Accessing educational resources	497	27.7
Communicating with parents	463	25.8
Participating in decision-making process	355	19.7
Using ICT	354	19.7
Developing team work	337	18.7
Involvement with the local community	260	14.5
Performing administrative tasks	134	7.5

The participating teachers were also asked about their involvement in projects at school. The vast majority of the participants stated that they are involved in projects at school (74.5%). Most of them are team members (55.6%), others perform coordination roles (48.2%) and occasional collaboration (23.9%) (see Table 11).

Table 11: Level of involvement in school projects at school

	Frequency	%
Occasional collaboration	313	23.9
Team member	729	55.6
Coordination role	632	48.2

Note: Some teachers listed more than one option

Regarding the kinds of projects in which teachers are involved (see Table 12), they mentioned the involvement in extra-curricular projects (44.1%), in international projects (13.7%) and in curriculum projects (13.3%). Teachers also refer to projects organised by both teachers and students (10.6%) and projects driven from the Ministry of Education (12.1%).

Table 12: Kinds of projects teachers are involved in

Kinds of projects	Frequency	%
Extra-curricular projects	496	44.1
Curriculum projects	150	13.3
International projects	154	13.7
Projects organised by both teachers and students	119	10.6
Projects devised by the Ministry of Education	136	12.1

Leadership and professional development: motivations and opportunities

In regard to teachers' motivations for attending in-service training and professional development activities, teachers tend to value emancipatory and pedagogical motivations such as improving practice (83.1%), increasing professional knowledge (81.1%), and developing innovative teaching strategies (60.5%). Also valued are collaborative motivations such as sharing ideas and experiences among colleagues (52.4%). However, instrumental reasons associated with career progression were also identified (47.4%) (see Table 13).

Teachers participating in the focus group also explained their views of in-service training and professional development opportunities. They stress the importance of collaboration and sharing amongst colleagues but they also emphasise the formal activities in which they have been involved:

Sharing and collaborating with colleagues was the best thing in terms of my professional growth. Of course classroom experience is also important but the opportunity to share with colleagues is the most significant one. (Secondary school female teacher, 23 years of experience)

I think the experience is important for your professional development and of course formal in-service training activities too. I think that you have to do the mandatory in-service training, but then as a teacher you also search for what is best for your professional development. (Secondary school male teacher, 23 years of experience)

Other participants highlight the importance of informal activities and professional development opportunities at school. They also stress the variety of roles and activities as a key element in their professional growth:

In my case, the greatest contribution to my professional development was of course the in-service activities I have been involved in and also the diversity of roles that I have been doing. If I was only a teacher or only a coordinator I would be different in professional terms. So what makes a difference for me really is the diversity of roles and activities I have been involved in throughout my career. (Primary school male teacher, 26 years of experience)

I think training, experience, collaboration and sharing are important for your professional development (...) Training is also important because you want to know new stuff and as a teacher you also want to share experiences with your colleagues, but there are also important things beyond formal training at school. (Elementary school female teacher, 38 years of experience)

Maybe you learn more when you have a chat with a colleague in the staffroom having a cup of tea or coffee rather than in those compulsory in-service activities that you have to do in order to get credits... but your day-to-day experience is important... trying to figure out what and why you are doing so and so. This is very important for your professional growth as a teacher as well as sharing materials with colleagues and working closely with them. (Secondary school female teacher, 33 years of experience)

For me what is important is the relationship with colleagues... working together. Then you also have those training activities, but in my view what promotes professional development is really the relationship and interaction with colleagues, working together, sharing, etc. (Secondary school female teacher, 33 years of experience)

The least valued motivations related to policy implementation such as implementing policies and initiatives from Central Administration (4.8%), developing leadership skills (6.3%) and undertaking roles or functions at school (6.8%). Reflecting on the values underlying school's role in society (13.2%) and increasing self-esteem (14.1%) were also amongst the least valued motives to undertake in-service training activities.

Table 13: Motivations to participate in in-service training activities

	Frequency	%
To improve my practice	1462	83.1
To increase my professional knowledge	1427	81.1
To develop innovative teaching strategies	1065	60.5
To share ideas and experiences with my colleagues	922	52.4
For career progression purposes	834	47.4
To reflect on my practice	774	44
To develop pedagogical resources with my colleagues	459	26.1
To increase my professional opportunities	370	21
To develop projects in collaboration with my colleagues	286	16.3
To participate in research projects	248	14.1
To increase my self-esteem	248	14.1
To reflect on the values underlying the school role	232	13.2
To undertake roles or functions at school	119	6.8
To develop leadership skills	111	6.3
To implement policies/initiatives arising from central administration	84	4.8

These findings lend support to earlier research which point to the valorisation of emancipatory and practical motivations (Flores et al., 2007; Forte & Flores, 2014). The teachers participating in the focus group corroborate this view but they also stress the difficulties they face in investing in their professional development. They highlight the key role of school culture and opportunities for leadership as well as issues of professionalism which makes them investing in their professional growth despite everything:

This school invests in teacher in-service education. One of my colleagues went out for a training activity outside the school and then she came back to develop the same activity here with her colleagues. (Primary school female teacher, 35 years of experience)

I think participatory leadership is the key issue for teachers to feel that they are part of something at school... (Secondary school female teacher, 27 years of experience)

In terms of professional development I would like to stress the opportunities to develop leadership roles at school and this has been important for my professional growth. (Secondary school male teacher, 32 years of experience)

It is professionalism that makes you do what do and leading... nobody is able to deal with so much work... it is because teachers are professionals that they do what they do. (Elementary school male teacher, 33 years of experience)

Discussion and conclusion

Findings from this study point to a number of issues that are worth exploring in order to understanding better teachers' views of their work in challenging circumstances and the conditions for them to exercise leadership and to develop professionally.

Firstly, the issue of teacher motivation becomes crucial as the participants state that it decreased over the last few years. This might be explained by a number of factors amongst which are policy initiatives mainly those related to teacher evaluation, changes in school curriculum and in school governance, and the non-existence of career progression, amongst others, and, more generally, those related to the current economic crisis in Portugal which has led to unemployment, salary cuts, higher taxes, and an increase in workload, etc.

Interestingly, teachers also reported that their commitment, professional competence and confidence as teachers stayed the same or, in some cases, even increased. These findings might be related to issues of professionalism and their images as teachers as, despite their lack of motivation, they remain committed to their students and to their work particularly at the classroom level. These were corroborated by the teachers participating in the focus group in the phase II. Most of them remain committed to their students and their learning against the odds. Issues of care, dedication and commitment are key elements in their view of professionalism, one in which having strong beliefs about being a teacher as well as the ethical and affective dimensions of teaching are of paramount importance (Estrela, 2010). Alongside this is their capacity for resilience which is linked to their professional values as teachers and their sense of professionalism and identity as well as to contextual factors such as leadership and school culture, including colleagues and pupils (Day & Gu, 2014).

These are relevant to understand the participants' views of their professional development and opportunities to exercise leadership in the workplace. As Day and Gu (2014, p. 11) state, "the social dimension of teacher resilience recognises the interactive impact of personal, professional and situated factors on teachers' work and lives and contextualises teachers' endeavours to sustain their professional commitment".

In adverse conditions, the participants continue to value their professional development, including both formal and informal activities, but particularly sharing and collaborating with colleagues in the workplace. In fact, teachers participating in the survey tend to value more emancipatory and pedagogical motivations such as improving practice, increasing professional knowledge, and developing innovative teaching strategies rather than issues related to policy implementation. In this case, motivations such as implementing policies and initiatives from Central Administration, developing leadership skills and undertaking roles or functions at school were amongst the least valued motivations. This lends support to previous empirical work (Flores, et al., 2007; Forte & Flores, 2014). But teachers participating in the research project do also recognise constraints and difficulties in their professional development in the workplace due to an increase of bureaucracy, greater control over teachers' work, lack of time and support, an increase of number of pupils per class, the legislative "tsunami" and recent policy initiatives.

Another interesting finding is associated with the conditions for teachers to exercise leadership, and in particular to issues related to school culture and opportunities for teacher development in the workplace. School culture determines positive or negative support for teacher learning in so far as the perceptions and experiences of teachers in regard to their working conditions affect their ways of seeing their teaching practices and learning (Day, 2001, 2004). For instance, collaboration is seen as an indicator of informal learning within the professional community in schools and classrooms (Ritcher, et al., 2011). This also might be associated with the influences on teacher learning, particularly the individual teacher, the support from the school and the activities in which teachers participate (Opfer & Pedder, 2011).

Most of the participants state that there is collaboration amongst teachers at school, at the department level and at subject matter level. Teachers also claim that they are involved in projects at school and that in general they share ideas and materials and reflect on their practice. Also, they identify “collaborating with colleagues” as the most important dimension of their work. However, and interestingly, they also agree that over the last three years there was an increase in teacher individualism. In addition, “developing teamwork” and “participating in the decision making process” are amongst the least valued dimensions of teachers’ work. Also, ambiguity emerged from the data when teachers talk about the encouragement they get to make decisions and to be involved in projects at school as well as to exercise leadership at the department level. These findings suggest the need to explore further teachers’ conceptions and experiences of collaboration at school. Issues of structural and comfortable collaboration (in many cases drawn from top down initiatives) and authentic collaboration (initiated and fostered by teachers themselves at school) might explain some of the findings (Hargreaves, 1998; Williams, Prestage, & Bedward, 2001). Similarly, the association of leadership with designated roles and responsibilities within the structures existing at school might also explain the ambiguity and, in some way, contradictory views of the participating teachers.

Thus, ambiguity and ambivalence in teachers’ views and perceptions of leadership emerged from the data. One might ask therefore about the effective existing conditions for a culture of leadership to be developed, which is to be related to teachers’ own understandings of leadership and their professional values. These findings lend support to earlier work as stated by Fairman and Mackenzie (2012, p. 244): “Labelling the work teachers do as ‘leadership’ may, in fact, discourage teacher involvement in leadership activity because teachers’ conception of leadership comes from a more traditional model of formally designated roles and specific responsibilities and because of the persistence of egalitarian norms in teaching”.

Indeed, existing literature highlights the dynamic and context-dependent nature of teacher leadership (Fairman & Mackenzie, 2012) and a number of conditions for teacher leadership to be successful: culture of trust and support, structures that support teacher leadership, clear and transparent, strong leadership head and engagement in innovative forms of professional development (Muijs & Harris, 2006). Also, according to Durrant (2004, p. 27), it is important that “teachers’ vision and values are articulated and then that they are involved both in setting the agenda for change and in exercising leadership to make it happen”.

The findings of this study point to the need to take into account the current conditions of the teaching profession in Portugal and the complex and multifaceted factors that shape schools and teachers' work with implications for their views of leadership and professional development. However, it is also important to help teachers to deconstruct the concept of teacher leadership which they tend to associate with formal roles and responsibilities within existing school structures. It is with this purpose that the project described in this paper includes the phase 3 which entails the development and evaluation of a professional development course in 5 schools. The aim is to develop and reflect upon strategies and materials for teachers to exercise leadership in context within a perspective that combines the work of both academics and teachers in which the notions of professional learning communities and networking are of paramount importance. Drawing upon existing research Jurasaitė-Harbisson and Rex (2010, p. 267) make the point that "teachers co-construct their understandings of innovations by informally collaborating and learning from each other and through reflection on their experience".

Overall, this study provided empirical evidence of the complexity of teacher leadership and its potential for teacher professional development in context and it highlighted the need to support and sustain teachers' continuing professional development in the workplace within a view of teachers as lifelong learners and of schools as professional learning communities.

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Chapter 7

An empirical typology of student teachers and its relation with motivation for teaching

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Abstract

Building on the Factors Influencing Teaching Choice (FIT-choice) theory, this study applies a typological approach to examine teacher education entrants' motivations for teaching. Two major research questions are addressed: (1) Are there identifiable types of student teachers having distinct profiles of professional engagement at the outset of their teacher education programme? (2) Do distinct types of student teachers show different motivations for teaching at the outset of teacher education?

Using cluster analysis, evidence was obtained for five profiles of students ($N = 715$) at the outset of teacher education, based on their planned effort in teacher education and planned entry in the teaching profession: (1) highly engaged persisters (high planned effort and high planned entry), (2) highly engaged switchers (high planned effort and medium planned entry), (3) lower engaged persisters (medium planned effort and high planned entry), (4) low engaged switchers (low planned effort and low planned entry), and (5) disengaged desisters (very low planned effort and very low planned entry). Results of (M)ANOVA revealed differences in motivations for teaching for these five clusters of student teachers. The effect sizes (η^2) ranged from .02 to .34. Between-cluster differences in each of the motivation factors were further examined using Tukey HSD tests.

This study adds to previous research on (student) teacher motivation since it offers evidence that there are empirically identifiable types among student teachers at the outset of teacher education, based on their professional engagement. Moreover, these different types of students show varying motivations for teaching.

Introduction

In a climate of recurring worldwide teacher shortages, attracting motivated people into the teaching profession is an international concern for policy makers and researchers (Organisation for Economic Co-operation and Development [OECD], 2011). Many advanced economies already face teacher shortages that will grow in the near future as large numbers of teachers reach retirement age. Education systems face a demanding challenge in recruiting high-quality graduates as teachers. Even where general teacher supply and

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demand are in balance, many countries face shortages of specialist teachers and shortages in schools serving disadvantaged or isolated communities (OECD, 2011).

In Flanders (Belgium), the country of research of this study, there is an increasing shortage of teachers with a master's degree, that is, teachers qualified for teaching in the second and the third grade of secondary education (pupils aged 14-18). Shortages are especially acute in subjects like mathematics, science and French as a foreign language. Moreover, the most recent labour market report of the Ministry of the Flemish Community (2011) prognoses that by 2020 Flanders will need to hire or retain about 20.000 teachers to meet the demands of a rising number of pupils of school-going age and to replace an aging teaching force.

As in the other OECD countries, the major concern is how to attract and retain high-quality candidates into teacher education and into the teaching profession. Particularly in a country like Flanders with low entry selection into teacher education programmes, it is crucial to have accurate information about the reasons why student teachers enrol in teacher education. The motivation for becoming a teacher is important because it determines how committed student teachers are to their teacher education and to the teaching profession, as well as how much effort they put into their initial training and continuing professional development (Fokkens-Bruinsma & Canrinus, 2012). Moreover, motivation for teaching matters for student teachers' professional development because if student teachers are not able to realize their motivations in particular school contexts, it is likely that their professional satisfaction and fulfilment will deteriorate (Rots, Kelchtermans, & Aelterman, 2012).

Yet, there is a lack of systematically collected and analysed data on what motivates people to choose a career in teaching. Although a substantial amount of research has investigated teachers' motivations, beliefs, and early career development (see Brookhart & Freeman, 1992; Cochran-Smith & Zeichner, 2005; OECD, 2005; Spear, Gold, & Lee, 2000), research has tended to be empirically rather than theoretically driven, lacking a comprehensive and integrative framework (Retelsdorf & Günther, 2011; Richardson & Watt, 2010). In reporting of results there has been an overreliance on single-item indicators, raw frequency counts, and the ranking of identified themes. Several scholars (e.g., Richardson & Watt, 2010; Thomson, Turner, & Nietfeld, 2012) claim there is a need for research adopting more sophisticated and robust methods of analysis, particularly studies applying a typological approach to examine whether and how distinct types of (student) teachers adapt differently to their professional contexts and show varying patterns of development in their motivation for teaching

The present study reports on the first phase of an on-going longitudinal study that investigates the development in student teachers' motivation for teaching during the course of their teacher education programme for upper secondary school, resulting in a particular decision on job entry upon graduation.

Theoretical frame

The “Factors Influencing Teaching Choice” framework (FIT-Choice, Watt & Richardson, 2007) is adopted to examine student teachers’ motivation for teaching. Building on the expectancy-value motivational theory (Eccles et al., 1983; Eccles, 2005), Watt and Richardson (2007) have developed the FIT-choice framework as a comprehensive and integrated theoretical model to the study of teacher motivations. This FIT-choice model draws together the recurring themes from the teacher education literature concerning motivation and career choice, and locates these themes within the expectancy-value theory. The expectancy-value theory of achievement motivation, a social cognitive theory of motivation, states that motivation and effort are the combined result of people’s expectations of success (Can I do this?) and the value they attach to that success (Do I want to do this?). Watt and Richardson (2007) propose that beliefs about expectancy/ability, perceptions of task value, and perceived task difficulty influence the career choices of (student) teachers. Their FIT-choice framework contains 12 factors that comprise motivations for teaching, with five stand-alone factors, and two composite themes consisting of respectively three and four factors (see Table 1, p. 138). See Watt and Richardson (2007, 2008) for a review of how the FIT-Choice factors map onto expectancy-value theory and to key findings within the existing teacher education literature. A recent cross-cultural study provides support for the FIT-choice conceptualisation of teacher motivations, particularly in Western settings (Klassen, Al-Dhafri, Hannok, & Betts, 2011).

The first motivation factor encompasses self-perceptions, which refers to perceived teaching ability. The career choice literature suggests that these perceptions are fundamental to motivation to teach since people tend to choose occupations for which they think they are suited by their abilities, and steer away from occupations not fitting their abilities (Brown & Associates, 2002).

Grounded in the expectancy-value theory (Eccles et al., 1983; Eccles, 2005), the value constructs in the FIT-Choice framework include intrinsic value, personal utility value, and social utility value. Intrinsic career value concerns interest for the occupation. This construct of intrinsic value is emphasised as a major influence in several motivational frameworks (e.g., Deci and Ryan, 1985), including the expectancy-value model. The personal utility value composite theme is represented by three motivation factors: job security, time for family, and job transferability. Regarding the expectancy-value model, these aspects indicate the value the teaching profession will have in the future for students’ personal goals, such as having enough time for their family. The social utility value composite theme includes four motivation factors: shape future of children/adolescents, enhance social equity, make social contribution, and work with children/adolescents. The social utility value factors resemble altruistic’ reasons for becoming a teacher as variously described in teacher motivation research (see Brookhart & Freeman, 1992; Richardson & Watt, 2010; Spear et al., 2000).

Table 1: Overview of the scales: number of items, reliability and example item

	Number of items	α	Example item
Professional engagement ^a :			
planned effort in teacher education	4	.86	
planned entry into teaching upon graduation	4	.95	How much effort will you put into your teaching? How sure are you that you will enter the teaching profession?
FIT-choice motivation factors ^b :			
ability	3	.86	Teaching is a career suited to my abilities.
intrinsic career value	3	.72	I am interested in teaching.
personal utility value:			
job security	3	.85	Teaching will be a secure job.
time for family	5	.82	Teaching hours will fit with the responsibilities of having a family.
job transferability	3	.56	A teaching qualification is recognized everywhere.
social utility value			
shape future of children/adolescents	3	.83	Teaching will allow me to have an impact on children/adolescents.
enhance social equity	3	.85	Teaching will allow me to work against social disadvantage.
make social contribution	3	.82	Teachers make a worthwhile social contribution.
work with children/adolescents	3	.92	I like working with children/adolescents.
fall-back career	3	.56	I chose teaching as a last-resort career.
prior teaching and learning experiences	3	.87	I have had inspirational teachers.
social influences	3	.82	My family thinks I should become a teacher.

^a Possible responses ranged from 1 (not at all) to 7 (extremely).

^b Possible responses ranged from 1 (not at all important) to 7 (extremely important).

Next, Watt and Richardson (2007) have added the perception of teaching as a fall-back career, which implies that teaching is not a deliberate choice but rather a ‘default’ option. This motive may stem from uncertainty about career plans or the impossibility to pursue a first-choice career.

Finally, in line with findings in teacher motivation research (see Brookhart & Freeman, 1992; Richardson & Watt, 2010; Spear et al., 2000), the FIT-Choice framework consists of motivation factors referring to antecedent socialization constructs. These comprise prior teaching and learning experiences, such as having good teachers as role models. They also include social influences, i.e. the influences of significant others who may persuade or dissuade students from becoming teachers.

Several scholars have used the FIT-choice framework to examine teacher motivations. Some have focused on differences in pre-service teachers’ motivations, e.g., related to their subject specialisms (Kılınç, Watt, & Richardson, 2012) or difference between commencing versus completing pre-service teachers (Fokkens-Bruinsma & Canrinus,

2012). Others have explored the interrelationships of teaching motivations with other key constructs such as personality dimensions (Jugović, Marušić, Ivanec, & Vidović, 2012), general pedagogical knowledge (König & Rothland, 2012) and commitment to teaching (Fokkens-Bruinsma & Canrinus, 2012). Furthermore, using the FIT-Choice framework, Canrinus and Fokkens-Bruinsma (2013) have performed a small-scale but pioneering study about changes in student teachers' motivations during teacher education.

However, an important contribution to previous research based on the FIT-choice framework is that the present study is among the first to apply a typological approach to the analysis of student teachers' professional engagement at the beginning of teacher education. Watt and Richardson (2008; 2011) have identified profiles of qualifying teachers in Australia and the US, based on their exit levels of planned effort and persistence within the teaching profession. Yet, given the diversity among entrants to teacher education for secondary school (Roness & Smith, 2010; Rots, Aelterman, Devos, & Vlerick, 2010), it is likely that student teachers not only have different levels of professional engagement at the time of graduation (see Watt and Richardson, 2008; 2011) but already at the very start of teacher education. We can assume that when starting the teacher education programme, students differ in the effort they intend to invest in becoming a teacher. The 'new generation' of student teachers see themselves as having the option not to enter teaching upon graduation (Cochran-Smith et al., 2012; Johnson and Birkeland, 2003). Although most students start teacher education with a more or less explicit ambition to become teachers, some primarily regard teacher education as a way to earn a degree that offers a wide variety of job opportunities, including those outside teaching (Roness & Smith, 2010; Rots et al., 2010). Therefore, extending the research of Watt & Richardson (2008; 2011), we examine whether there are empirically identifiable types among student teachers at the outset of teacher education. We develop profiles based on their professional engagement, that is, their planned effort in teacher education and their planned entry into teaching upon graduation. Moreover, we compare teaching motivations for different profiles (types) of entrants to teacher education.

By identifying and incorporating profiles, we adopt a so-called typological or person-oriented approach (Bergman & Trost, 2006). We assume that the population of student teachers may be quite heterogeneous and thus consist of several groups of individuals who differ in their professional engagement. Assuming this diversity, it is necessary to use a person-oriented approach which allows focusing on typologies of student teachers rather than on the relationships between variables at the sample level. As Watt and Richardson (2008, p 411) argue, such a person-oriented approach "derives from a system perspective on human development and moves beyond normative trends to focus on substantively interesting subgroups whose functioning may not be represented at all by the average". In sum, adopting a person-oriented approach, the current study tackles the following research questions:

1. Are there identifiable types of student teachers having distinct profiles of professional engagement at the outset of teacher education?
2. Do distinct types of student teachers show different motivations for teaching at the outset of teacher education?

Method

Sample

The research context is the academic teacher education programme organized by universities and university colleges in Flanders (Belgium). This programme (60 ECTS) prepares teachers for the second (students aged 14 to 16) and the third (students aged 16 to 18) grade of secondary school. The teacher education courses are taken during or after a subject-oriented study (master degree). Data for this study were collected from student teachers in a university and a university college. In both institutes the teacher education curriculum contains three broad parts: (1) general educational courses (e.g., learning and instruction), (2) internships in different schools (18 ECTS), and (3) subject-specific courses (e.g., subject-specific teaching methodology). In both institutes the theoretical (30 ECTS) and the practical component (30 ECTS) are spread over these three parts. The main difference between the programmes of the two institutes has to do with the subject disciplines. The university college offers a teacher education programme in arts (visual arts, music, drama, and audio-visual arts), in commercial sciences and in business management. The university offers a teacher education programme in 25 different subject disciplines (i.e., subjects related to STEM fields, social sciences, health sciences, humanities, and languages).

A total of 715 students (response rate of 79.89%) enrolled in academic teacher education in these two institutes completed a pen-and-paper questionnaire at the very beginning of the first semester of teacher education. The questionnaire was handed out and collected in the lecture hall and the students responded immediately. The questionnaire took about 30 minutes to complete. Respondents were informed about the purpose of the research and were asked to give their ‘informed consent’ to participating in the study.

The sample consisted of 715 student teachers with an average age of 23.7 years ($SD = 3.78$), however 87.4% of the respondents was 25 years of age or younger. Females made up 70.8% percent of the respondents. They are all subject-matter specialists in different disciplines: STEM fields (20.6% of the respondents), social sciences (26.3%), health sciences (6.7%), humanities (14.9%), languages (22.7%), and arts (8.8%).

Measures

Next to student teachers’ gender, age, and subject discipline, the questionnaire assessed (see the research questions) respondents’ professional engagement, and motivation for teaching. Sample items and the reliability of the scales are shown in Table 1.

Subject discipline (cf. their master degree) was grouped as follows: STEM fields (science, technology, engineering, and mathematics), social sciences (e.g., psychology, economics), health sciences (e.g., biomedical sciences), humanities (e.g., history), languages, and arts.

Professional engagement. Building on Watt & Richardson (2008), in this study student teachers’ professional engagement comprises their planned effort in teacher education as

well as their planned entry into teaching upon graduation. To assess these variables, we used two four-item scales, both adapted from Watt & Richardson (2008). The items were scored on a seven-point Likert scale ranging from 1 (not at all) to 7 (extremely).

Motivation for teaching was assessed using the 12 motivation factors of the FIT-choice scale (Watt & Richardson, 2007). Reliability and validity of this instrument have been demonstrated across international samples: with the omission of two subscales (job transferability and fall-back career) due to inadequate subscale reliabilities, strong factorial invariance of this instrument was established (Watt et al., 2012). Following the original format of the scale, in the present study all motivation items were prefaced by “I chose to become a teacher because...” Possible responses ranged from 1 (not at all important) to 7 (extremely important). Corroborating the findings of Watt et al. (2012), the motivation factors “fall-back career” and “job transferability” had unacceptable Cronbach alpha measures of internal consistency ($\alpha = .56$, see Table 1). Therefore, as in Watt et al. (2012), these two motivation factors were not included in further analyses or discussion.

Analyses

Novel to the research field is the utilization of cluster analysis to identify typologies of student teachers based upon their self-reported professional engagement at the outset of teacher education. More specific, to tackle the first research question, cluster analysis was conducted to classify types of student teachers based on their scores for the professional engagement variables (“planned effort in teacher education” and “planned entry into teaching upon graduation”). Based on Gore (2000), cluster analysis was performed in two steps in order to obtain a stable and highly interpretable cluster solution with maximum interpretable discrimination between the clusters. In a first step, the “planned effort” and “planned entry” scores were entered in a hierarchical cluster analysis using Ward’s method on squared Euclidean distances which minimizes within-cluster variance. To determine the optimal number of clusters it is essential to meet a balance between two criteria. The group size should be sufficiently large so as to prevent individuals from having too much effect on the group division. A reasonable guideline used in this study requires that every cluster must represent at least ten percent of the sample. At the same time, the percentage of variance explained should be as high as possible: when the percentage no longer substantially increases, the limit for the number of clusters is reached. In a second step, the cluster centres from this hierarchical analysis were used as non-random starting points in a non-hierarchical (iterative k-means) clustering procedure. Cluster cross-validation (Beckenridge, 2000) was used as an additional test of stability.

To tackle the second research question, MANOVA and ANOVA tested for differences among the distinct types (clusters) of student teachers with respect to their motivations for teaching.

Results

Cluster analysis

Two-step cluster procedure. In Step 1, we estimated cluster solutions with two to six clusters. In each solution we inspected the percentage of explained variance in planned effort as well as in planned entry. Since a two-cluster solution explained less than 50% of the variance in each of the defining variables, this solution was not further considered. Further, the proportion of explained variance increased by 7% when moving from three to four clusters, by 5% when moving from four to five clusters and by 4% when moving from five to six clusters. However, one of the clusters in the six-cluster solution represented not even 5% of the sample and was very similar to another cluster. The addition of a sixth cluster did not appear to provide much new information.

Thus, Step 2 was applied to the three-, the four- and the five-cluster solution. A cluster solution can be taken as stable when it is repeatedly found. Therefore, to examine the stability of the three-, the four- and the five-cluster solution we used the double-split cross-validation procedure outlined by Breckenridge (2000). The sample was randomly divided into two subsamples. The full two-step procedure was applied to each half and these two solutions were then compared for agreement by means of a Cohen's kappa. An agreement of at least .60 is considered acceptable. The cluster solution with the highest kappa is preferred because this solution is more stable and replicable.

The kappa value ($\kappa = .45$) for the four cluster solution suggests low stability across the two subsamples. However, both the three- and the five-cluster solution had good agreement ($\kappa = .95$ and $\kappa = .96$, respectively), suggesting that these both solutions are highly stable. Yet, we preferred the five-cluster solution because of the higher percentage of explained variance and its better interpretability. With this five cluster subdivision the explained variance of both professional engagement variables is high: planned effort in teacher education (Eta squared = 0.78) and planned entry into teaching upon graduation (Eta squared = 0.80). Moreover, the five-cluster solution yielded five clearly distinct and interpretable clusters.

Description of the five clusters of student teachers. Table 2 presents a detailed description of the five identified clusters of student teachers, based on their professional engagement at the outset of teacher education.

Cluster 1 consisted of 148 (20.7%) student teachers scoring very high on both planned effort ($M = 1.10$, $SD = .31$) and planned entry ($M = 1.14$, $SD = .32$). Based on Watt and Richardson (2008) this group is referred to as the 'highly engaged persisters'.

Cluster 2 consisted of 104 (14.5%) student teachers scoring high on planned effort ($M = .86$, $SD = .41$) and medium on planned entry ($M = -.20$, $SD = .50$). In line with Watt & Richardson (2008), we refer to this group as the "highly engaged switchers". Highly engaged switchers were more likely to indicate they did not intend to enter teaching upon graduation (and thus might "switch" to another job), despite their high planned effort in teacher education.

Table 2. Five-cluster solution: standardized mean scores and standard deviations.

	Cluster 1 (n = 148) highly engaged persisters		Cluster 2 (n = 104) highly engaged switchers		Cluster 3 (n = 157) lower engaged persisters		Cluster 4 (n = 207) low engaged switchers		Cluster 5 (n = 99) disengaged desisters		F (4, 723) p < .001	η^2
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Planned effort in teacher education	1.10	.31	.86	.41	.03	.34	-.46	.46	-1.46	.74	632.37	.78
Planned entry into teaching	1.14	.32	-.20	.50	.72	.32	-.47	.44	-1.51	.66	709.93	.80

Cluster 3 consisted of 157 (22.0%) student teachers scoring medium on planned effort ($M = .03$, $SD = .34$) and high on planned entry ($M = .72$, $SD = .32$). This cluster is referred to as the “lower engaged persisters”. Notwithstanding their high planned entry into teaching upon graduation, the lower engaged persisters were less likely to put much effort in teacher education.

Cluster 4 consisted of 207 (29.0%) student teachers scoring relatively low on both planned effort ($M = -.46$, $SD = .46$) and planned entry ($M = -.47$, $SD = .44$). This cluster is referred to as the “low engaged switchers”. Generally, these student teachers do not intend to put much effort in teacher education. Furthermore, they were more likely to indicate they did not intend to enter teaching upon graduation (and thus might “switch” to another job).

Cluster 5 consisted of 99 (13.8%) student teachers scoring very low on both planned effort ($M = -1.46$, $SD = .74$) and planned entry ($M = -1.51$, $SD = .66$). This cluster is referred to as the “disengaged desisters”. The student teachers in this cluster were the least likely to plan to enter teaching upon graduation and accordingly, the least likely to invest effort in teacher education.

No significant gender differences were found in the distribution across clusters, $\chi^2(4) = 9.20$, $p = .56$. Besides, student teachers in these five clusters were not different from each other in terms of their age, $F(4, 719) = 1.24$, $p = .292$. However, a Chi-square test confirmed that these clusters differed on subject discipline, $\chi^2(20) = 39.39$, $p = .006$. Cluster 3 (lower engaged persisters) encompassed significantly more students in the discipline of arts compared to students in the subject disciplines social sciences, humanities, and languages. A possible explanation is that art students perceive less (full-time) job opportunities outside teaching.

Between-clusters differences in motivation for teaching

To examine differences between the five clusters in terms of motivations for teaching, a MANOVA was conducted. Results of preliminary assumption testing indicated that linearity, normality, and singularity were acceptable. Yet, the assumption of homogeneity of variance-covariance matrices was not met (Box' $M = 341.00$, $p < .001$). Consequently, the Pillai's criterion was used to evaluate multivariate significance because of its robustness to violations of this assumption (Tabachnick & Fidell, 2007). The MANOVA (with the FIT-choice scales as dependent variables) revealed an overall significant effect of cluster membership, Pillai's Trace = .45, $F(40, 2816) = 8.82$, $p < 0.001$, with a medium-to-large effect size ($\eta^2 = .11$). Separate univariate ANOVAs revealed a significant relation of cluster membership with all motivation factors, except “time for family”. The effect sizes (η^2) of cluster membership ranged from .02 (“job security”) to .34 (“intrinsic career value”). Between-cluster differences in each of the motivation factors were further examined using Tukey HSD tests (see Table 3).

Table 3: Mean, standard deviation and results of the ANOVAs

	Cluster 1 (n = 148) highly engaged persisters	Cluster 2 (n = 104) highly engaged switchers	Cluster 3 (n = 157) lower engaged persisters	Cluster 4 (n = 207) low engaged switchers	Cluster 5 (n = 99) disengaged desisters	F-value & cluster differences ^b F(4,710)	Eta ² (η ²)
Fit-choice motivation factor ^a							
Ability	5.47 (.93)	4.96 (1.45)	5.00 (.98)	4.50 (.87)	4.06 (1.04)	40.41*** 1 > 2 & 3 > 4 > 5	.19
intrinsic career value	5.82 (.93)	4.85 (1.02)	5.13 (.89)	4.39 (.95)	3.62 (1.10)	92.79*** 1 > 2 & 3 > 4 > 5	.34
job security	4.80 (1.45)	4.54 (1.58)	4.78 (1.18)	4.51 (1.26)	4.26 (1.28)	3.32** 1 & 3 > 5	.02
time for family	3.99 (1.37)	3.82 (1.50)	3.89 (1.35)	4.12 (1.27)	3.81 (1.47)	1.45	.01
shape future of children	5.17 (1.22)	4.89 (1.12)	4.61 (.99)	4.41 (1.1)	3.85 (1.26)	23.53*** 1 > 3 & 4 > 5 2 > 4 & 5	.12
enhance social equity	4.08 (1.52)	3.83 (1.38)	3.67 (1.19)	3.69 (1.30)	3.17 (1.31)	7.09*** 1, 2, 3 & 4 > 5	.04
make social contribution	5.02 (1.27)	4.52 (1.33)	4.53 (1.23)	4.24 (1.20)	3.81 (1.31)	15.94*** 1 > 2, 3 & 4 > 5	.08
work with children	5.60 (1.20)	4.96 (1.41)	4.91 (1.08)	4.62 (1.19)	3.90 (1.35)	30.71*** 1 > 2, 3 & 4 > 5	.15
prior teaching and learning experiences	5.25 (1.52)	4.90 (1.32)	4.89 (1.35)	4.51 (1.31)	3.92 (1.36)	16.23*** 1 > 4 > 5 2 & 3 > 5	.08
social influences	3.30 (1.66)	2.59 (1.41)	2.73 (1.43)	2.68 (1.29)	2.29 (1.27)	4.83*** 1 > 5	.02

^a Mean on a seven-point scale. ^b As indicated by Tukey posthoc contrasts (p < .05).
*p < .05. **p < .01. ***p < .001.

Table 3 shows the between-clusters differences in motivation for teaching. Apart from the motivation factor “time for family”, the five profiles of student teachers significantly differed from each other in terms of their motivation for teaching. The most pronounced differences were found for self-perceived teaching ability as well as for the intrinsic career value and the social utility value motivations for teaching.

Not surprisingly, students scoring very high on both planned effort in teacher education and planned entry into teaching upon graduation, were also likely to be intrinsically motivated for teaching. Accordingly, compared to all other clusters of students at the beginning of teacher education, the highly engaged persisters (Cluster 1) clearly indicated a higher intrinsic career value (referring to interest in teaching and always having wanted to become a teacher).

Furthermore, the highly engaged persisters were more highly motivated to teach on the basis of their perceived teaching abilities than either of the other clusters. Also, compared to the other groups, their motivation for teaching stemmed significantly more from the desire to make a social contribution and to work with children.

In contrast, compared to student teachers in all other clusters, the disengaged desisters (Cluster 5) reported the least self-perceived teaching ability and intrinsic career value (interest in teaching). Besides, of all clusters, the disengaged desisters were the least motivated for teaching by positive prior teaching and learning experiences. Moreover, disengaged desisters scored significantly lower on all four social utility value motivations for teaching (shape future of children/adolescents, enhance social equity, make social contribution, and work with children/adolescents).

Next, the highly engaged switchers (Cluster 2) and the lower engaged persisters (Cluster 3) did not significantly differ with respect to any of motivation for teaching factors (see Table 3). Highly engaged switchers and lower engaged persisters scored in between Cluster 1 (highly engaged persisters) and Cluster 5 (disengaged desisters) for self-perceived teaching ability and intrinsic career value as well as for the social utility value teaching motivations “make social contribution” and “work with children”. Furthermore, for the teaching motivations “job security”, “enhance social equity” and “prior teaching/learning experiences”, the highly engaged switchers and the lower engaged persisters do not significantly differ from the highly engaged persisters (Cluster 1).

For most motivation factors the low engaged switchers (Cluster 4) scored rather low, although significantly higher than the disengaged desisters (Cluster 5). In particular, the low engaged switchers scored in between Cluster 2/3 and Cluster 5 for self-perceived teaching ability and intrinsic career value. Furthermore, the low engaged switcher group scored in between Cluster 1/2 and Cluster 5 for the motivation factor “shape future of children” and in between Cluster 1 and Cluster 5 for “make social contribution”, “work with children” and “prior teaching/learning experiences”. For the motivation factor “job security” and “enhance social equity” the low engaged switchers scored similarly high to the highly engaged persisters.

Concluding, the different types of students at the beginning of teacher education particularly varied in their self-perceived teaching ability as well as in their intrinsic and social

utility value motivations for teaching. The highly engaged persisters scored significantly the highest on these factors, while the disengaged desisters scored significantly the lowest (see Table 3).

Regarding the personal utility value motivation factors, cluster differences were only observed for “job security” but not for “time for family”. Compared to the disengaged desisters, student teachers in both clusters characterized by high planned entry (i.e., highly engaged persisters and lower engaged persisters) were more highly motivated to teach on the basis of their desire for job security. Yet, the effect size is small ($\eta^2 = .02$).

Next, cluster differences in terms of motivation factors referring to antecedent socialization constructs were more ambiguous. Disengaged desisters were significantly less motivated to teach on the basis of previous positive teaching and learning experiences than either of the other clusters. Furthermore, compared to disengaged desisters, highly engaged persisters’ reported higher motivations from social influences, that is, of others’ encouragement to pursue a teaching career. Yet, for all clusters, the motivation factor “social influences” was rated below the sale midpoint, implying that for all groups of students the choice to enter teacher education was more likely the result of an individual decision than of others’ social persuasion.

Discussion

Grounded in a comprehensive and integrative theoretical framework (FIT-Choice theory, Watt & Richardson, 2007), the present study contributes to the need for more theory-based research on teacher education students’ motivations for teaching. Understanding influential motivations of students who choose to enter teacher education has important implications to enhance the effectiveness of recruitment and retention efforts. Furthermore, such insights are crucial for teacher education. As Meijer, Korthagen, and Vasalos (2009) argue, in order to improve professional preparation and teaching practices, teacher educators cannot neglect the role of teaching motivations and need to develop specific strategies and approaches to support student teachers in developing the necessary teaching competencies in line with who they are and what motivates them to become a teacher. If teacher educators do not take their students’ motivations into account in instruction and activities, student teachers may suffer interest losses and reconsider their choice for a career in teaching (Watt et al., 2012). Student teachers who find themselves in settings which do not allow them to realize their motivations are likely to feel less efficacious, less satisfied with their career choice, and consequently are at risk for leaving the profession (Rots et al., 2012).

The innovative element in the present study especially builds on the person-oriented or typological approach which allows focusing on substantively interesting subgroups instead of variables (Bergman & Trost, 2006). This is fairly new for the field of teacher motivation research and has been identified as a necessary research challenge (Richardson & Watt, 2010; Thomson et al., 2012). A key contribution to previous research based on the FIT-Choice theory is that the current study is among the first studying student

teachers' motivation for teaching from the perspective of their professional engagement at the outset of teacher education.

By adopting a person-oriented approach, the aim of the present study was to investigate (1) whether there are identifiable types of student teachers having distinct profiles of professional engagement at the outset of teacher education, and (2) whether distinct types of student teachers show different motivations for teaching at the outset of teacher education.

A two-step cluster analysis (Gore, 2000) with double-split cross-validation (Beckenridge, 2000) in a sample of 715 students, revealed five groups of student teachers with different profiles of professional engagement at the outset of academic teacher education in Flanders (Belgium). The person-oriented approach thus showed heterogeneity in the professional engagement of students who *enter* teacher education. Based on their planned effort in teacher education and planned entry in the teaching profession, five robust and distinct profiles were supported: (1) highly engaged persisters (high planned effort and high planned entry), (2) highly engaged switchers (high planned effort and medium planned entry), (3) lower engaged persisters (medium planned effort and high planned entry), (4) low engaged switchers (low planned effort and low planned entry), and (5) disengaged desisters (very low planned effort and very low planned entry). These results extend the findings of Watt and Richardson (2008) who identified three profiles of qualifying teachers based on their *exit levels* of planned effort and persistence within the teaching profession. As in the present study, Watt and Richardson (2008) distinguished highly engaged persisters as well as highly engaged switchers. Moreover, their third cluster of qualifying teachers (labelled "lower engaged desisters") was highly comparable with the low engaged switchers identified in the present study. Thus, the three profiles of professional engagement that Watt and Richardson (2008) observed were also found in the present study. Yet, Watt and Richardson (2008) focused on the professional engagement of graduating teachers (just prior to qualification). A key contribution of the present study is that it provides evidence that student teachers already have different levels of professional engagement at the very start of teacher education. Moreover, two profiles of professional engagement identified in our study (lower engaged persisters and disengaged desisters) were not found by Watt & Richardson (2008). A possible explanation is that these groups of student teachers are more likely to drop out of teacher education (considering their low planned effort into their training) and therefore are less identifiable in graduating teachers. Particularly, it seems odd to find this category of disengaged desisters at the outset of a teacher education programme. However, previous research shows that a number of students primarily regard teacher education as a stepping stone to another profession (Jarvis and Woodrow, 2005; Roness and Smith, 2009; Rots et al., 2010). It will be of interest in future research to examine longitudinal relationships among student teachers' initial profiles of professional engagement, initial motivations for teaching, study progress and performance in teacher education, and motivation profiles on the conclusion of teacher education as well as in the (teaching) profession.

The second research question inquired whether the five identified profiles of student teachers' professional engagement at the outset of teacher education differed with respect

to motivations for teaching. Results of MANOVA and ANOVA revealed a significant relation of cluster membership with all but one motivation factors (all except “time for family”). Differences of medium to very large effect sizes were found in self-perceived teaching ability as well as in intrinsic career value (i.e., interest in teaching) and social utility value motivations for teaching (i.e., shape future of children/adolescents, enhance social equity, make social contribution, and work with children/adolescents). These constructs had the least importance for the disengaged desisters and the most influence for highly engaged persisters; the other profiles felt in-between. These findings are in line with previous research based on the FIT-choice framework. Recent variable-oriented research found positive relationships between the effort student teachers’ plan to exert as a teacher and the motivation for teaching factors “teaching abilities”, “intrinsic career value”, “shape future of children/adolescents”, “enhance social equity”, “make social contribution”, and “work with children/adolescents” (Fokkens-Bruinsma & Canrinus, 2012). Furthermore, Fokkens-Bruinsma and Canrinus (2012) also observed positive relationships between student teachers’ certainty to stay in the profession and the motives of “intrinsic career value”, “shape future of children/adolescents”, and “teaching ability”. Moreover, consistent with the current study, in their person-oriented research with graduating teachers, Watt and Richardson (2008) found that the different types of beginning teachers mainly differed in terms of self-perceived teaching ability as well as intrinsic career value and social utility value motivations for teaching. The current study extends these findings to student teachers at the outset of teacher education.

Several limitations need to be taken into consideration when interpreting the findings of the current study.

First, the study is part of an on-going longitudinal study that aims to advance the research field by adopting a theoretically strong framework to examine student teachers’ motivations for teaching and their correlates over time. The innovative element especially builds on the typological approach. However, the results presented here are based on the data of one measurement. The cross-sectional design limits inferences about causality and restricts the interpretation, notably regarding the predictors of motivations for teaching. In accordance with our research aim and building on the theoretical and empirical work of Watt and Richardson (2008; 2011), the motivation factors were used as the dependent variables in our MANOVA. Addressing the research questions, the current study provides evidence that there are empirically identifiable types among student teachers at the outset of teacher education (based on their professional engagement) and that these different types of students show varying motivations for teaching. Additional information about how motivations for teaching and planned entry into the teaching profession develop during the course of teacher education is needed to strengthen the implications that can be drawn from the cluster analysis. In particular, there is a need for longitudinal data in order to examine how the identified types of student teachers adapt differently to their professional contexts and show varying patterns of development in their motivations for teaching. In a future study we plan a second time point of data collection, just prior to graduation. As suggested by Canrinus and Fokkens-Bruinsma (2013), we intend to investigate how changes in student teachers’ motivations for teaching and planned entry into

teaching are affected by the professional contexts in teacher education (constituted by the teacher education institute with its staff, students, curriculum, etc. as well as the schools in which student teachers perform internships).

Second, the findings are limited to students in the so-called academic teacher education programme in Flanders. This programme prepares teachers for the second and the third grade of secondary school (pupils aged 14-18). The courses are taken during or after a subject-oriented study (master degree). Comparing the results presented with the data of students in other teacher education programmes (e.g., preparing for teaching in primary education, or in the first grade of secondary education) will add understanding of what motivates teacher education entrants and how their motivation is related to their professional engagement.

Third, this study was based on quantitative data. An elaboration of these quantitative findings with more qualitative types of measures, such as in-depth interviews, reflective journals, observations, ... of individual participants in each of the clusters, is recommended. This would allow for a richer view of the thinking and beliefs of individuals who fall into these categories in order to elaborate in greater detail how configurations of student teachers' professional engagement relate to indicators of teacher quality such as career motivations, perceptions and aspirations.

Conclusions

Despite these limitations, the present study adds to theory and previous research on (student) teacher motivation. Using a person-centred approach, it offers evidence that there are five empirically identifiable and meaningful profiles of student teachers at the outset of teacher education, showing considerable variation in their planned effort in teacher education and their planned entry in the profession. Moreover, these different types of student teachers show varying motivations for teaching.

Our study is timely as governments around the world are developing policies to improve teacher recruitment and retention, to reform initial teacher education and professional development and to redefine teachers' work and career. Teacher education and governmental authorities need to take seriously these different types of entrants to teacher education having different profiles of professional engagement and different kinds of motivations for teaching, which likely will lead to different pathways of professional development and retention in the profession. The most prominent and recurrent contrast was found between the highly engaged persisters and the disengaged desisters. Highly engaged persisters clearly exhibited the profile of student teachers who are highly committed to a career in teaching, who will exert high levels of effort in teacher education, and hold strong "adaptive" (beneficial, see Fokkens-Bruinsma and Canrinus, 2012) motives for becoming a teacher. Obviously, the majority of teacher education programmes would hope for this profile in their entrants. However, whether they perform well in teacher education and provide good quality teaching has to be investigated in further research. Conversely, disengaged desisters, by no means a small or marginal

group, had a profile that would not be embraced by most teacher educators. This category of student teachers seems to be difficult to motivate and satisfy. Yet, further research should consequently look at the predictive power of teacher education entrants' professional engagement and teaching motivations on their professional development during their training. Professional engagement and teaching motivations may predict the extent to which student teachers will learn from their training and modify their pedagogical beliefs and practice (Berger and D'Ascoli, 2012). Then again, Rots et al. (2012) revealed that professional engagement and motivations are further shaped or modified in teacher education (e.g., by classroom experiences, school culture, faculty support, mentor support, and the like). Experiences in teacher education can both destroy or arouse student teachers' motivation for teaching and commitment to teaching. Using the taxonomy developed in the present research, it will be of interest in our on-going research to investigate whether and how distinct types of student teachers adapt differently to their professional contexts and show varying patterns of development in their motivations for teaching and commitment to teaching.

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Chapter 8

Analysing plots of student teachers' narratives to identify teacher identity

A rhetorical approach

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Abstract

Stories can be helpful in examining teachers' lives and learning (Kelchtermans, 2002; Pauw & Van Lint, 2014; Porter Abbott, 2002). This way of examining one's profession, a so called narrative reflection, contributes to the development of a teacher's professional identity (Bruner, 2004; Pauw, 2007). The complete narrative reflection accumulates in three stadia, first, story writing about something that occurred in the classroom, then gaining insights in the heart of the matter by providing answers to self formulated questions referring to relevant literature, and finally developing a 'scenario' for future behavior.

This paper concentrates on the first stadium, the story part. It explores how teacher identity emerges through the stories of student teachers, focusing on the plots of their stories. Relying on Goffman's (1959) concept of identity, we will define 'professional identity' as "the whole of opinions, knowledge, skills and attitudes identifying you as a competent professional, for example as a competent primary teacher" (Pauw & Van Lint, 2014, p. 10). The content of the opinions, knowledge, skills and attitudes may vary according to circumstances, and will have to be reconsidered constantly (see also Desimone, 2009; Van Veen et al., 2010). The stories student teachers tell (the 'narratives') mirror their professional identity. Therefore we call that narrative professional identity.

According to Ricoeur (1991) the plot generates the characters and their identity. The main goal of the study is to provide insights into the image that the student teacher creates of himself in his story, by linking the plot of a student's story to one of the basic literary plots of Booker (2004). By using a literary/rhetorical approach (Frenzel, 1963; Glintz, 1973; Riessman, 1993; Seigneuret, Aldridge, Arnold & Lee, 1988), the stories of 47 first year teacher students in a BA program for primary teacher education in the Netherlands were analysed. It was found that the emerging plot patterns include 'Overcoming the Monster', 'The Quest', 'Voyage and Return' and 'Rebirth', whereas it appeared that 'Overcoming the Monster' is the most frequent occurring narrative plot. First year student teachers often take the role of heroes struggling with uncooperative pupils, unfamiliar school subjects and students, classroom expectations and rules. We argue that relating student teachers plots to the archetypes of Booker helps to discover general patterns in one's identity at a certain point in the teacher's development. This mythic dimension approach fits in with the concept of the teacher with a strong narrative identity.

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Introduction

Scope

This paper explores the role of plot as an element of narrative in student teachers reflection reports in developing a professional teacher identity. Teachers communicate through story on a daily basis. They relate short stories as they rush between classes and sit in lunchrooms. Stories are the way teachers make sense of and come to understand their teaching (Pauw & Van Lint, 2014).

According to Beijaard, Meijer en Verloop (2004) more light should be shed on the role of the context in which teachers work:

In our opinion, the professional landscape metaphor (Connelly & Clandinin, 1999) may offer a perspective for this: teachers are part of the landscape, as are “relevant others” (researchers, policy makers, school administrators, teacher educators, etc.) who represents different aspects of the landscape. We believe that a permanent dialogue between these actors in the professional landscape may lead to a better insight into what counts as professional in teachers’ professional identity.” (p. 126)

Narratives thus consist of the school-based experiences since in the act of creating the narrative, they employ ‘double reflection’: that is, they reflect while writing (in the story) as well as after constructing the story, on the story.

Putting the story that central in teacher education is not a new phenomenon. Schön (1988) already wrote about the value of written stories for reflection. Kelchtermans (1994, 2002) researched ‘the career stories of teachers’, and showed that “teachers think in a narrative way” (2002, p. 89).

A story is very appropriate as starting point for reflection, because it exists of a combination of feeling and knowledge, or, as Porter Abbott (2002) said: “It has to do with all those elements of the text that produce the many strong or subtle combinations of feeling and thought” (p. 37). According to Porter Abott (2002), people keep looking for the source of what happened, and the stories help them finding answers.

Writing a story about classroom experiences includes narrative elements such as selecting the event and involving such features as characters, problems, settings, and plot. Students generate their narratives to both uncover their thinking and to dialogically share and construct new insights with others (see van Veen et al. (2010) for a discussion on the influence of the school organisation on the professional development of teachers). This capitalises on the rich context in which teachers work and brings them into the larger and social educational landscape in which they live (Connelly & Clandinin, 1999).

The story forms the heart of the narrative reflection report. The plot forms the heart of the story. It is the nucleus, or if you wish, the embryo of the story. According to Ricoeur (1991) the plot generates the characters and their identity. As part of a further reaching project of analysing student stories in the light of their development in this study we focus on an analysis of the plot, that is to say: the identity of the actors in the plot (Slay & Smith,

2011; Freeman 2013) as it emerges in the story and the nature of their endeavours. The main question stated in this article is: what does the way in which student teachers write about themselves and their relevant others and the actions they took, reveal about identifying their teacher identity?

The structure of the article is as follows: in “prolegomena” we define the concepts of *rhetoric*, *narrative*, *narrative element*, *professional identity*, *narrative identity*, *reflection* and *reflection report*. We then discuss the importance of real-life stories in teacher education and the use of such stories as a mirror. We focus on plots as the core of the story, and rely on a categorization by Booker. We will subsequently shortly discuss our methodology (with a wink at Descartes), describing the context and the process of our study, coming to “wisdom”, explain our data and how we used them, and observe that “overcoming the monster” is the most frequently occurring narrative motive. We then present a few plots, and compare those with a development over the years. We conclude with a discussion and state that the mythic dimension approach fits the idea of the teacher with a strong narrative identity.

Prolegomena

We first consider the concepts rhetoric, narrative and narrative elements, professional identity, narrative identity, reflection, narrative reflection report.

The concept of *rhetoric*. The concept of *rhetoric* is often narrowed down to a system of persuasion, which is certainly rooted in classical rhetorical theory. However, the rhetoric system consist of features of style, structure and grammar as well. In the work of Quintilianus as in that of Aristotle and Plato an outline of communication theory, literary theory and psychology can be found. Quintilianus wrote his *Institutio Oratoria* as a coursebook for his students and is thereby also the founding father of all educational theory afterwards. The stories our students have written, are part of a reflection report, which is built on the same structural principles as found in ancient rhetoric but also in modern forms as ‘rhetorical communication’. A part of that structure is the ‘narratio’, the story, used to inform, to explain but also to entertain. To what extent and in what way persuasion plays a role is not relevant in the context of this article. In our view ‘rhetoric’ is the study of all forms of communication (which does not imply that all studies of communication are rhetorical). (McGee, 1986, Pauw, 2007; Van Lint, 1980).

The concept of *narrative* and *narrative elements*. Acknowledging different uses of the concept *narrative*, glued to different disciplines (Hyvärinen, 2013), we wholeheartedly agree with Hyvärinen paraphrasing Ryan (2005): “it is not helpful to refer to all the phenomena that have a narrative aspect as narratives” (p. 30) and “Every single use of the term narrative as a noun, should be tested by the question: “But where’s the narrative text (semiotic object)?” (p. 30).

Then what is a “text”? Without referring to the lengthy discussions about that topic we just adopt Halliday’s (1978) down to earth description:

The text is the unit of the semantic process. It is the text, and not the sentence, which displays patterns of relationship with the situation. These patterns, the characteristic semantic trends and configurations that place the text in its environment, constitute the 'register'; each text can thus be treated as an instance of a class of texts that is defined by the register in quest. (p. 150)

We try to work in a rhetorical discipline: narratology, which we define as the science and knowledge of stories and storytelling, stories being a branch of texts. A story is any account of events connected in time, with a change or transformation as result, compared with the original situation, and presented to a reader or listener in a sequence of written or spoken words.

Barry (2009) thinks of narratology as "the study of how narratives make meaning, which we can define more closely as the study of how narratives make meaning and what the basic mechanisms and procedures are which are common to all acts of story-telling" (pp. 214-215). He gives an adequate impression of 'what narratologists do' (Barry, 2009):

1. They look at individual narratives seeking out the recurrent structures which are found within all narratives.
2. They switch much of their critical attention away from the mere 'content' of the tale, often focusing instead on the teller and the telling.
3. They take categories derived mainly from the analysis of short narratives and expand and refine them so that they are able to account for the complexities of novel-length narratives.
4. They counteract the tendency of conventional criticism to foreground character and motive by foregrounding instead action and structure.
5. They derive much of their reading pleasure and interest from the affinities between all narratives, rather than from the uniqueness and originality of a small number of highly-regarded examples. (p. 233)

Nevertheless, narratological findings, in our view, are not an aim in itself, the findings are always a means and serve an educational purpose: solidifying students personal and professional identity. Therefore we stay highly interested "in the uniqueness and originality of a small number of highly-regarded examples" being the small number of stories written by our students.

A 'narrative' in our view is thus any kind of story. We do not differentiate between narration or story. A story can be shorter, very short or longer, even as long as a novel, but however short, it must contain an event, an action, that is something that happened and has at least one actor, and takes place at some time and in some environment. Expressive utterances like: "I gave a fine lesson", "Children were so happy", that sometimes are called 'narrative snippets' (Riessman, 1993), are in our view not narratives, but of course could be part of a narration. "All the kids were waiting for the bell to ring" is one, though one could ask what the action is in "waiting", but the sentence in all its shortness gives an image, a surrounding, even implies a time". And we are not surprised if the story goes on: "When they hear it ringing they all jump in line, walking to the classroom feeling mighty fine".

A complete story is determined by *narrative elements* (Bal, 2009): event, actor, time, space, suspension, language use, confrontation between actors, worldview. Each of these elements can be studied separately, as is done in literary and rhetorical research, but never isolated from other elements.

Stories in this study are real-life stories, stories about what really happened in the classroom, accounts of real personal experiences. As such they are different from the fictional stories also used in educational environments as in Dalton (2009) or Mottart, Vanhooren, Rutten and Soetaert (2009).

The concept of (professional) identity. The concept of *identity* is used in many different ways (Wilshire, 1991). In 2004, Beijaard, Meijer en Verloop conducted a review of the literature on teachers' professional identity. They found that in some studies the concept was defined diversely, in varied ways or not at all in some studies. Evidently for their interpretation relying on, or at least echoing, Goffman (1959), they (Beijaard, Meijer & Verloop, 2004) conclude that:

in future research on teacher's professional identity, more attention needs to be paid to the relationship between relevant concepts like 'self' and 'identity,' the role of the context in professional identity formation, what counts as "professional" in professional identity, and research perspectives other than the cognitive one that may also play a role in designing research on teachers' professional identity. (p. 107)

Does a country have an identity, and if so, do I have part in that identity or does it show in my neighbour? Does a race have an identity? A social class? And wherein does it show? (Wittig, Anderson, Smith, Bordo, Rubin, Hooks, all in Leitch, 2010).

And what about professional identity, in particular professional teacher identity? What does this concept contain? Many authors have tried to describe the features of teacher identity (see among others Desimone, 2009; Van Veen, et al., 2010). Some try to solve the problem by enumerating qualities. Claassen (2013) relates it to traditional virtues, like empathy, attention, equilibrium, careful judgement and more. Others use lists of qualities (Aldenmyr, 2013), without agreement on how to measure those qualities (e.g. 'passion', 'genuine', 'vulnerable', 'certain expectations'). In this study, also relying on Goffman's (1959) concept of identity, we will define 'professional identity' as "the whole of opinions, knowledge, skills and attitudes identifying you as a competent professional, for example as a competent primary teacher" (Pauw & Van Lint, 2014, p. 10). The content of the opinions, knowledge, skills and attitudes may vary according to circumstances, and will have to be reconsidered constantly. The professional identity of a teacher is both a product and a process: someone can judge the completeness of the identity of a teacher and you yourself can develop the identity of a teacher. Both aspects are important during teacher training.

The concept of narrative identity. We refer to the concept of *narrative identity*, that is the identity as it reveals itself in the narrative. We assume that this narrative identity

mirrors the identity of the student as described before. Bamberg (2009) defines the relation:

Narrating, a speech activity that involves ordering characters in space and time, is a privileged genre for identity construction because it requires situating characters in time and space through gesture, posture, facial cues, and gaze in coordination with speech. In addition, narrating, whether in the form of fictional or factual narration, tends toward “human life”—something more than what is reportable or tellable (tellability), something that is life- and live-worthy (Taylor 1989). Thus, narrating enables speakers/writers to disassociate the speaking/writing self from the act of speaking, to take a reflective position vis-à-vis self as character. (p. 132)

The concept of reflection. With respect to the concept of *reflection*: in our view reflection is defined as: thinking about what one has done in which way in educational learning practices and why one has done that in this way, with the intention of gaining new insights; insights into/about oneself and one’s own way of learning and development, in relation to the society in which one lives; insights into/about one’s pupils and their way of learning and development in relation to the society in which one lives; insights which offer starting-points for improvement (Pauw, 2007). Reflection is an important skill to develop the professional identity of a student teacher, and telling (writing) about what occurred in the classroom is a very powerful means for reflection. That links the concepts of reflection, narration and identity together. By telling stories, people can describe and thus structure their world, and try to get control over their world. Bruner (2004) sees life as a story: “The story of one’s own life is, of course, a privileged but troubled narrative in the sense that it is reflexive: the narrator and the central figure in the narrative are the same.” (p. 708). According to Bruner, that is not a problem: “I believe that the ways of telling and the ways of conceptualising that go with them become so habitual that they finally become recipes for structuring experience itself for laying down routes into memory, for not only guiding the life narrative up to the present but directing it into the future.” This last remark matches our intention that reflection should contribute to understanding in order to improve. Bruner (2004) ends his article with the sentence: “The only life worth living is the well-examined one” (p. 709). Stories can be very helpful in examining life, also teachers’ lives and learning, and can develop their professional identity.

The concept of narrative reflection report. Because the story plays a central part in the way our students learn to reflect, we call this form of reflection narrative reflection. A particular way to demonstrate reflection is the (written) *narrative reflection report*. In our practice it consists of three main parts: the story of something that happened in the classroom, the commentary on what happened, the scenario, that is a blueprint for future action. For more advanced students there is a fourth part: the report of the execution of the scenario. Later in the curriculum the scope is broadened; the narrative reflection report becomes a narrative essay, first with focus on educational and pedagogical themes, in the last year of the curriculum with focus on the relation between society, worldview and education, but with the emphasis on personal insights. Our use of the word “essay” refers

to the concept of 'essay' as introduced by Montaigne: a subjective contemplation regarding rendition, vision and language use, of an (in our case) educational or education related societal problem. The essay shows erudition and argumentative skills. Such an essay is clearly distinct from the thesis with its scientific implications.

Theoretical framework

The importance of real-life stories

It is far from uncommon to use literary methods and literature by famous storytellers for analysing human behavior. Lévi-Strauss (1963) adapted in his *The Structural Study of Myth* the linguistic method of De Saussure (1916) for his analysis of Myth to find common traits in human thinking. We all are familiar with the concept of the Oedipus complex, or for that matter, the Eurydice- or the Medea-complex, derived from the plays of classical Greek authors, to describe and understand what some people do. Maguire (2007) relates daily personal problems, like family, friends, anger, jealousy, forgiveness to characters from the plays of Shakespeare. She compares the problems people encounter in their lives with the problems the characters encounter, Hamlet, Lear, Portia, Shylock, and what can be learned from the solutions the characters find. She shows how our lives develop with what she calls 'labels', and how we identify with the label of our profession: architect, teacher, housewife, and combine those labels with attributes like 'sweet', 'competent', 'accomplished'. In the same way we demonstrate our religion, politics, education, moral and much more. And we show that in our stories. Watzlawick e.a. (2011), uses motifs from Lewis Carroll's *Alice in Wonderland* and extensively Edward Albee's *Who is afraid of Virginia Woolf* to demonstrate patterns in human behavior. And of course we all know the biblical parables that show how to behave or not to behave.

Plots in stories

The plot of a story is according to Booker (2004, p. 18): "that which leads its hero or heroine either to a 'catastrophe' or an 'unknotting'; either to frustration or to liberation; either to death or to a renewal of life". Booker believes that there are almost as many ways of describing these downward and upward paths as there are individual stories, but there are certain continually recurring general shapes to stories (for a critical review of the ideas of Booker, in comparison with other classifications of plots: Vandendorre, 2009). He called these underlying shapes 'basic plots' and he distinguishes seven of these basic plots:

1. Overcoming the Monster;
2. Rags to Riches;
3. The Quest;
4. Voyage and Return;
5. Comedy;
6. Tragedy;
7. Rebirth.

These types represent distinct archetypes. White (2010) paraphrases Frye's *Anatomy of Criticism* (1957) saying that

Frye conceives fictions to consist in part of sublimates of archetypal myth-structures. These structures have been displaced to the interior of verbal artefacts in such a way as to serve as their latent meanings. The fundamental meanings of all fictions, their thematic content, consist, in Frye's view, of the "pre-generic plot-structures" or mythoi derived from the corpora of Classical and Judaeo-Christian religious literature. According to this theory, we understand why a particular story has "turned out" as it has when we have identified the archetypal myth, or pre-generic plot structure of which the story is an exemplification. And we see the "point" of a story when we have identified its theme. (p. 1538)

Evidently the same applies to real-life stories, as written by student teachers about their experiences in the classroom.

In this study, we categorise the stories of 47 students, compressed to the plots, in one of Bookers categories. Teachers need a model, an ideal image of the kind of teacher they want to become. Of course, we can point our students at famous teachers: Montessori, Decroly, Parkhurst, Lighthart, Boeke (Onderwijsraad, 2011; Yazici & Aslan, 2011). But at the onset of the student teacher training, there might be too much of a gap between dream and deed. Preferably, teachers of student-teachers start by analysing which concept of self is predominant in the story of the student and help him find another, braver or more accomplished image, or for that matter, stick to the original if it is challenging already. By this approach, we see the development of the self in language use, images of society, ideas about education, morals, school systems, all as they become manifest in the stories.

Many attempts have been made to classify stories. Moretti (2010) shows a classification based on content, like nursery stories, school stories, sporting novel, military novel. The problem of course is that then there are as many categories as there are contents and such a classification won't be helpful to discover underlying patterns and structures. Of course the classification of Booker (2004) can be discussed, and it is, but it also offers interesting points. In the narratives of the first year students they are the hero or heroine who struggles with unwilling pupils, with unknown subjects, with unfamiliar classroom rules, even with specific words that do not yet belong to his vocabulary, but are used by teachers. Which of these basics plots occur in their stories? We focus on the plots: 'Overcoming the Monster', 'The Quest', 'Voyage and Return' and 'Rebirth'. The plot 'Overcoming the Monster' seems quite likely to appear. 'Comedy and Tragedy' presumably are too broad for our purpose and they can be used for the other plots as well: 'Overcoming the Monster' can also become a 'Comedy'. The plot 'Rags to Riches' will be left out of account because every student starts as an unskilled teacher with only little knowledge, skills and experience, and will become after several years a capable teacher.

The essence of the 'Overcoming the Monster'-story is simple: the hero comes aware of the existence of some superhuman embodiment of evil power.

This monster may take human form (e.g. a giant of a witch); the form of an animal (a wolf, a dragon, a shark); or a combination of both (the Minotaur, the Sphinx). It is always deadly, threatening destruction to those who cross its path or fall into its clutches. (p. 23)

Examples for Overcoming the Monster are the stories of *Little Red Riding Hood*, *Dracula*, *James Bond* and *Jurassic Park*.

According to Booker (2004) no type of story is more instantly recognisable to us than a 'Quest'. "There is some priceless goal, worth any effort to achieve; a treasure; a promised land; something of infinite value." (p. 69). *Divine Comedy*, *The Lord of the Rings* and *The Wizard of Oz* are examples of 'The Quest'.

The essence of the plot of 'Voyage and Return'-story is: that its hero or heroine (or the central group of characters) travel out of their familiar, everyday 'normal' surroundings into another world completely cut off from the first.... At first the strangeness of this new world may seem diverting. But gradually a shadow intrudes. The hero or heroine feels increasingly threatened, until eventually they are released from the abnormal world and can return to the safety of the familiar world where they began. (p. 87)

Examples are *Alice in Wonderland*, *Odyssey* and *The Time Machine*.

The 'Rebirth'-plot tells the story of change, renewal and transformation.

A hero or heroine falls under a dark spell, which eventually traps them in some wintry state: physical or spiritual imprisonment, sleep, sickness or another form of enchantment. For a long time they languish in this frozen conditions until an act of redemption take place. From the depth of darkness the hero or heroine is brought up into glorious light. (p. 194)

Examples of stories with this 'Rebirth'-plot are *Snow White*, *Sleeping Beauty* and *A Christmas Carol*.

Method

We apply a method of literary/rhetorical research (Frenzel, 1963; Glintz, 1973; Riessman, 1993; Todorov, 2010), analysing the stories, finding the nucleus by paraphrasing and summarising, rewording them to more general abstracts and comparing the results with the concepts of Booker. In other words we try to find the genotext behind the phenotext (Kristeva, 2010). Other concepts will be tried in a later stadium; we confine ourselves to Booker (2004) in this study.

In scheme: Story reading → paraphrasing and excerpting to concrete plot → reformulating the concrete plot in more general terms → comparing the more general plot with the categories of Booker → choosing which category of Booker fits best → counting the scores of found categories → concluding which archetypes prevail.

The Study

Context. The Netherlands knows three different traditions of teacher education, for primary education (4-12), lower secondary and vocational education (12-15/16) and upper secondary (15-17/18). In this contribution we focus on the primary teacher education. This is a four-year Bachelor of Education program at ‘higher vocational education’ (Hoger Beroeps Onderwijs, often referred to as ‘university colleges’, or ‘universities of applied sciences’). Pre-service teachers are introduced to all school curricula, educational and pedagogical theory and to general teaching skills. Pre-service teachers are also introduced into the daily education practice, making their observations, becoming acquainted with schools, teachers and pupils, and taking over lessons and other teaching activities. The amount of this practice part in teacher education varies, but must grow over the next years from .25 to at least .4 of the curriculum. More emphasis on practice thus stresses the need for reflection on practice, using theory in order to critically analyse practice and developing alternative action.

Participants. We focus on primary teacher education for entry into the K-Grade 6 levels of elementary schools. The four-year Bachelor of Education program includes introductions to curricula, educational and pedagogical theory and general teaching skills as well as school-based practice to observe, becoming familiar with schools, teachers and pupils, and eventually, independently teaching lessons. The population is rather homogenous, mainly white, predominantly female, mostly with a Christian background, mostly from low or low middle-class, rural families.

All students of our institute write stories about something that occurred in the classroom as part of a reflection report in order to meet the requirements for passing the reflection class, in other words: their assessment papers were subjects for investigation. The reflection report consists mainly of three parts: the (written) story of something that happened in the classroom, the comment on that story and on what happened and a scenario for future behavior. We stress that comment and story are different stages, notwithstanding the fact that the storytelling itself always contains a degree of commenting. In this study we follow 47 pre-service first year students.

Process of the study. In 2007, we began using a narrative reflection approach at a Catholic Teacher College in the Netherlands. The pre-service teachers narratives became both the object and instrument of reflection (Pauw & Van Lint, 2014). The narration must lead to reflection on self and situation and the reflection must lead to awareness and growth of personal and professional identity.

Narrative writing to locate the professional identity of the student teachers transpires in two phases: A series of lessons on narrative writing and the writing of narratives. To prepare, we teach narrative constructions (10 lessons in Year 1 and 5 lessons in Year 2) for writing the teaching story, the dialogue and reflections on the story and revising the narratives. During the lessons, we focus on story elements such as characters, time, place, plots, descriptions, introductions and character dialogues.

The narratives the student teachers write include three specific 'moments:' student teachers write a story about their teaching-learning experiences. This is followed by analytically reflecting on the story through intra- and interpersonal dialogues, and subsequently using their new knowledge and insights, revise their narratives.

The student writes the report not just for himself, it is not a diary, but to share his new insights with others. First, because of the rich context in which a teacher works; therefore, students need to learn to make their choices transparent. Second, since the identity of a teacher is such a crucial factor in his profession, judgement of the completeness of the identity of a teacher has to be part of the assessment of a student teacher. So we provide two arguments in favour of letting students write their reflection reports for an audience: First, writing reflection reports thus learns students to be more transparent in the choices they make in their jobs; they have to make their choices explicit to "the others in the landscape" (Connelly & Clandinin, 1999). Second, because the supervisors of the students want to gain insights into the student professional identity. By reading, among other assessments, their reflection reports, we have a notion of their identity. The development therein would also be transparent to other accomplished readers.

The complete narrative reflection report contains, as stated before, the following main sections: 1) Story; 2) Comment; 3) Scenario; 4) New practice. We teach students to improve their creative writing skills and their academic writing skills. In their first year, in a reflection class, students take ten lessons and learn to write a narrative reflection report. In their second year, they take another five lessons. The acrostic WISDOM can be used as a tool for describing the various stages in writing the narrative reflection report:

- Watching the situation
- Interpretation and selection
- Selection and Structuring
- Diagnosing the problem
- Opinion and design
- Mastering the situation.

The W I S stand for the story writing, the D and O for the comment section, the M for scenario and new practice. In the comment section, they learn to raise questions about the focus described in the story and how to search for answers, based on pedagogical and didactical literature. In the scenario section, they present their intentions for practice, based on the insights in the comment section. In the new practice section, they conclude on the benefits of these new insights for their profession.

Students write a story on their experience in practical school. By writing a story of events in the teaching practice, and by examining and analysing this story, something is happening, called 'double reflection', as we said before: the reflection in the story, and the reflection on the story. Writing a story about an event in the classroom has the potency of empirical learning and increasing wisdom. The learning starts with the choice of the event for a story. It is a subjective choice and the event is told from the subjective perspective of the beholder. But the telling invites and focuses the teller to look at what happened with

a certain distance, a first phase of reflection. By writing a story the student structures more precisely what happened. Writing itself implies a form of reflection. The completer the story, the more thoughts it will provide to think about. So students first have to learn the characteristics of a story. This can be done by means of many examples of stories and by analysing stories, using the before mentioned time-honoured literary and rhetorical concepts.

Data

Data collection. In order to find an answer on the question stated above, we collected the narrative reflection reports of 47 first year student teachers, exploring the characters and the events. Student teachers handed in three narratives in the first year. This includes one narrative before they take the reflection course, another one after five lessons and the last one is a complete narrative reflection report that starts with a narrative, and is followed by the commentary and the scenario. In the second year they write two complete narrative reflection reports, and in the third and fourth year they write each year two narrative reflection essays in which the scope is broadened, first to the educational environment, then to the social and societal environment. Out of the group of 47 students we have analysed the narrative as a part of the first complete narrative reflection report. We have reduced the narratives of 47 first year student teachers to the plot.

Data analysis. In analysing how the plots of the students' narratives resemble one the basic plots of Booker, we define the four main plots as follows:

- the author has to deal with children that misbehave in the classroom or outside of the classroom and disturb the author's lesson: 'Overcoming the Monster';
- the author is wondering about the truth of a situation and is in search of a solution for this situation: 'The Quest';
- the author initially realises the impact of a new situation and afterwards he is aware of the benefits this new situation has brought to him: 'Voyage and Return';
- the author is under the influence of a fixed idea, a prejudice, an enquired habit and discovers that things can be quite different and finds out unknown qualities of himself: 'Rebirth'.

Results

Plot patterns of first year student teachers

First year student teachers often take up the role of heroes struggling with uncooperative pupils, unfamiliar school subjects and students, classroom expectations and rules, and the educational jargon of experienced teachers.

The plot patterns that emerged include 'Overcoming the Monster', 'The Quest', 'Voyage and Return' and 'Rebirth'. After taking a closer look at these four plots, it appeared that 'Overcoming the Monster' is the most frequent occurring narrative motive. After analysing all the 47 plots, 34 students tell a "Overcoming the monster" story, 8 students

tell a 'Quest story', 4 students tell a 'Voyage and Return'-story. One student tells a story not about herself, but about the behavior of another teacher, which is not the aim of the assignment. The plot 'Rebirth' was not found in this study.

Most of the students (73%) write about monsters in their classroom. They tell a story about one or more children who disturbed their lessons, who got angry or sad and misbehave in classroom or in playground. This high frequency can be explained by their little experience with teaching. These first year students have little experience with teaching and the behavior of a few children can be too much for them, they cannot handle that; they lose their grip on the situation.

17% tell stories about the quest, they would like to help a pupil with her situation and they are very eager to find the solution for it with about 8% creating a 'Voyage and Return'-story where they tried to explain a problem, for example a mathematical problem and they tried different ways of instruction, different ways and hoped that one way will succeed, so they can return.

We present four plots of first year students and analyse them.

The math test. *All class room tables are placed in the right position for the math test. However, Daan is nagging with his eraser. I walk in circles through the classroom and I keep an eye on Daan. After half an hour his test sheet is still empty. When he hears that everyone who has not completed the test has to continue working on it during the break, Daan starts immediately working. Within five minutes he has completed all his sums. I am curious about his test results.* The first plot could be analysed as 'The Quest'. The author is in search of solving the mystery, called Daan.

Furious. *Luuk is furious, because the girls won the game during the gymnastics class. He is especially angry with Chantal. After the gym class, he runs after her. Chantal is hiding herself for Luuk and the gymnastics teacher quickly locks the door. Luuk is pissed off and he is kicking the door, throwing sand to the windows and is continuously screaming at her. The teacher rings up the school secretariat, and after a while two teachers overpower Luuk, without success though. The gym teacher and I assist. Also Luuk's mom has been called. Eventually, with all of us, it is possible to get Luuk in his mom's car. It gave me muscles pain for days.* The second plot seems to have a lot in common with the theme of 'Overcoming the Monster'. Just like it is the case with *Lord of the Rings* auxiliary troops need to be recruited. Luuk seems to look like the bad wizard Saruman.

Boring lesson. *I had tried to make the boring geography lesson more attractive. The girls are the attentive public, but the boys not at all. Ron gives a wrong answer. Rik, a zappy guy, is screaming the right answers loudly through the classroom. I am reprimanding him and I make clear that I do not want to listen to his answers. However, Rik starts to be even angrier when it appears that a guy gets the turn who – according to Rik – has also screamed before. I order Rik out of the field; I still hear him mumbling at me: "Get lost, will you!" I feel like I am on the verge of giving them an emotional scene.* In addition, the third plot has a lot in common with the theme 'Overcoming the Monster', though the author needs more training before the monster can be beaten.

Attention. *How to deal with my new school trainee group? Kelvin is continuously attempting to attract my attention by chatting at me, telling me that I was his sister's favourite teacher. During the break, at the schoolyard, he is pursuing me, without saying that much. I think by myself that there is definitely enough to challenge in this group!* The fourth plot seems to fit in with 'Voyage and Return'. The main character ends up in a new situation and looks at the matter with full attention. The reader awaits the outcome with tension.

Students use these narrations to understand their behavior in the classroom, the choices they made, their thinking about teaching and teaching methods, and their visions based on their values. In a reflection report they ask themselves questions about these topics.

Development through the years

Another more comprehensive study should shed light on the approach of universal narrative motives in the light of the teacher's development of his identity. Focusing on development of using motives in plots, we have examined three stories of one student, Maaike, written over a period of three years. Maaike was a third year student during the academic year of 2012-2013. We present three of Maaike's stories (excerpts), written in her first year (2011), second year (2012) and third year (2013) of her teacher education. Her data, presenting her reports over three years are exemplary for showing development. After each narrative Maaike wrote a comment, parts from the comment will be used to illustrate the development of her professional identity. These are excerpts of her three stories:

First year: Robbie. *During my history lesson I see that Robbie has secluded himself from the group. He doesn't want to do handicrafts; he wants to make a wall poster. When I ask him to do his task, he runs out of the classroom and angrily shouts: "I don't want to work with you!" He hides himself in the boys' lavatory. I open the door and talk with him. He begins to talk about the divorce of his parents. Poor child, is all I can think.*

Second year: Math lesson. *While I was explaining fractions, I got the feeling that not everyone understood what I meant. I explained that fractions are difficult to compare, because the denominators in some sums are not the same. In percentages, these relationships are easier to recognise. But what kind of solution has been devised for this? What trick can we apply here? Floor gives me a dazed look; she is not very good in arithmetic. I write a few fractions on the smart board and ask what the differences are. Some children know that you need to reduce the fractions to the same denominator. But the weaker math students, such as Floor and Syd, look at me totally lost. Am I going too far?*

Third year: Literacy. *I have the children read alternating rows, but I have a difficulty keeping all the children involved. Pien is talking to Jeroen and Jens is just staring at nothing. Pien has been able to read well, but she still has to follow the regular instructions and exercises. I can imagine it is boring. I tell her she has to participate and point out the correct row. She reads it super-fast and the other children cannot follow her. Now it is Jens' turn, he swallows once and stammering he begins with the first word. He doesn't manage. It is taking far too long for the other children in 1st grade and they*

also lose interest. This has been enough, I think to myself, next time we will do this differently.

In the first year Maaïke struggles with the behavior of Robbie. He gets angry and hides in the boys' lavatory. In this story Robbie is the monster that must be overcome by Maaïke, this is a specimen of the 'Overcoming the Monster'-plot.

In the second year Maaïke explains fractions and she notices that not everyone understands her explanation, she sees the dazed look on the face of the weaker math students. She tries different ways to explain the complex math sums, but some children drop out. Maaïke did not reach her goal, she was underway, she took a voyage with the whole class, but she didn't return with all of them. Her knowledge of the didactics of math isn't sufficient. This is a specimen of the 'Voyage and Return'-plot.

In her third year she gives a reading lesson and she noticed the difference in levels of comprehension: Pien is able to read well, Jens can only stammer the first word. This is the approach of the supervise teacher, and she, as an in-service teacher, has to copy her approach. That doesn't feel well. She will choose another approach, she has serious problems with the approach of her supervisor, she is transforming her ideas and is starting with a rebirth. This is a specimen of the 'Rebirth'-plot.

In the first story Maaïke has difficulties with classroom management. In the second one, she controls the situation, but she doesn't have the didactical knowledge. In the third story, she controls the situation, she has enough knowledge and she is so convinced that there has to be another approach that she wants to give that a try the next time.

In these three years, Maaïke shows a growth in her professional teacher identity, a growth in skills, a growth in knowledge, a growth in opinions and a growth in attitude. Her concerns are no longer confined to problems of discipline, but stretch to formal knowledge and problems of didactics and even to confronting opposite points of views.

Conclusion and Discussion

In this article we stated the following question: what does the way in which student teachers write about themselves and their relevant others and the actions they took, reveal about identifying their teacher identity? Our underlying hypothesis was: the image students present of themselves in their autobiographical stories of something they encountered in the classroom reveals important aspects of their teacher identity.

As to the quality of this hypothesis we refer to Korch (1972): "Die Hypothese ist eine Entwicklungsform der Wissenschaft die den Character einer wissenschaftlich begründeten Annahme trägt und dessen Wahrheit nur mit Wahrscheinlichkeit behauptet wirdt. Das kennzeichnet sie zugleich als Vermutung" (p. 90). The hypothesis is a form of Development of Science bearing the traits of a scientifically founded supposition and the truth of which is affirmed only as a probability. Therewith it is characterized at once as a presumption.

This autobiographical image we call the narrative identity.

This poses the question whether autobiographical identity equals ‘true identity’. As identity is constructed as well by self-projection as by interpretation of verbal and non-verbal signs by interactional partners, analysing the image presented in the stories gives a trustworthy image of the story-writer-as-an-eye-witness’ image, both as he sees himself as in the recognition and reconstruction by the reader/analyst. We found that relating student teachers plots to the archetypes of Booker (2004) helps to discover general patterns in one’s identity at a certain point in the teacher’s development.

That leads immediately to the question how trustworthy this type of interpretation is (Glinz, 1973). We have to admit: interpreting stories is not exact science (Stecker, 2001):

When we interpret works of art and literature we are seeking to understand or to appreciate them, or to improve on our current level of understanding or appreciation. We do this by attempting to discover or, at least, ascribe on some basis, a meaning in or to the work in question, or to determine what significance the work has for us. (p.239)

In the words of Hirsch (1960): “Every interpretation is necessarily incomplete in the sense that it fails to explicate all a text’s implications. But this kind of incomplete interpretation may still carry an absolutely correct system of emphases and an accurate sense of the whole meaning”. Also Hirsch (1973): “Textual meaning is not a naked given like a physical object. The text is first of all a conventional representation like a musical score, and what the score represents may be construed correctly **or** incorrectly“ (p.463). On the other hand, interpretation guided by a sound theoretical framework and performed by a connoisseur delivers trustworthy results (Hirsch, 1973).

The concept of story might be subject of discussion as well, as the word bears wide and narrow meanings. We use it in the narrow meaning. Stories in that sense are a well defined literary genre with rules to follow. These rules may be not as strict and suffocating as those for more formalized genres like articles or reports, but there are rules for opening, exposition, attention keeping, perspective, suspense, language use, characters and more. That implicates that the stories students write and that form the core material of this investigation, should not be viewed as primitive everyday accounts of something that happened, although of course freshmen often start that way. The stories we use are the result of a guided process of creative writing in which students learn to concentrate on several aspects of the narrative as a form of art. In that way they learn to choose between several chances of story structure and to emphasize one or more of the literary elements of storytelling and -writing and its appropriate language. But it is in place here to remember that the writing of good stories is not an aim in itself, but serves the development of able and versatile language skills and as a means to and part of well organized reflection reports that reflect on the writers professional identity on his way to be a professional teacher.

The method for analysing is that of literary or rhetorical criticism and therewith we could place our research in the framework of ‘Educational Linguistics’ as defined by Hornberger (2001, p.271): “the integration of linguistics and education (“the relevance of

linguistics for education and the reverse”); the close relationships among research, theory, policy, and practice (“a problem-oriented discipline”); and the focus on language learning and teaching (“scope with depth”). Although it also could be maintained that educational linguistics is just another branch of rhetoric, depending on point of view, in the same way one could speak of ‘the grammar of rhetoric’ or ‘the rhetoric of grammar’, ‘the ethics of communication’ or ‘the communication of ethics’. We are not concerned with the distinction Hirsch makes between critique and interpretation. Objected could be that the literary and rhetorical methods have been developed for and with sophisticated texts and so called literature. We hold that this type of text analysis is a universal method, applicable on all text-types and text-genres. But the more sophisticated the text, the more layered it turns out to be.

By analyzing different texts, either by students of the same group in the same time, or by one student in different periods of his training we hope to discover general traits and tendencies. As the stories of the students become more and more layered with their growing craftsmanship, our research concentrates on one or more elements. We started with lexical research: Pauw (2007) presents a linguistic analysis of word frequencies in relation to verbal strategies (as outlined in Van Lint 1980) and Pauw (2013) searches for the appearance of professional language. In this research however we concentrated on plots. Of course for the sake of Ockham’s Razor we neglect other important story features like character, relations, conflict, acts, means, time, space, aim, implicit or explicit value judgements (as token of a worldview) and more. These will be subject of investigation in continuing research.

It could be argued that there are other categorisations apart from those of Booker. The aim of this investigation was not to compare several categorizing systems and choose what is best, but just to investigate if and how Booker offers a useful system. He does, though maybe another analysis and another system might result in better and deeper insights. We omitted two of Booker’s categories: comedy and tragedy, because they are more of an umbrella-like category and so of a different order. Also we do not follow Booker in his value judgements; we did not value the quality of the plots, we just interpreted the categories.

The determination of the nature of the plots again is a matter of interpretation. Booker’s elaborate treatment of the plots offers a useful and recognizable model. Pauw & Van Lint (2014) deal with several types of models (see also Derman, 2010). Again, this is not an exact scientific model, like a botanic taxonomy or a system of chemical elements. At its best it is a metaphor, and metaphors are open to different interpretations, but within limits. Probably no one would interpret Harry Potter’s adventures as a cookbook or *The Lord of the Rings* as a travel guide. We compared the models sketched by Booker with the stories and looked for similarities. We trust that the comparison is defensible, though other investigators might emphasise other aspects.

We analysed different texts by students of the same group in the same period of their training. The outcome of the analysis was that the plot ‘Rebirth’ did not seem to model in

the stories, but the plot pattern ‘Overcoming the monster’ is the most frequently occurring narrative motive (34 of 47). That is not amazing, students struggle with all kinds of monsters in their training classes: unwilling children, difficult supervisors, complex handbooks, unfamiliar means, demanding parents, demands of the training college. In the first year problems with maintaining order in the classroom prevail.

Based on these results of the finding with the 47 plots the supervisor could have a conversation about the roles students placed themselves in, and look for ways to change these in a more positive outlook.

Further more we analysed different texts by one student in different periods of her training. The analysis of the plots of Maaiké shows a remarkable shift in point of view and a growth in professional identity as defined before. It is not yet clear if that is the result of her practicing reflection reports or just of her growing older and wiser. That must be investigated over a long time and in broader research.

In spite of the compelling and convincing research of Geerdink, Bergen & Dekkers (2011) so far we did not find any clues for gender differences, neither for cultural differences, probably due to the fact that the student population is rather homogenous, as stated before.

The crucial aspect is to link the individual experience to general patterns of identity. A longitudinal study would generate answers on the question whether narrative motives would change over time when junior students become senior students, and if they change, in what direction would they change?

This mythic dimension approach fits the idea of the teacher with a strong narrative identity. In addition, it has a double loop effect: on their turn, a teacher can help his students with their quest, with their journey around the world, or help them beating monsters; monsters that grown-ups will meet for sure along the long and winding road in their profession.

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SECTION 3

(STUDENT) TEACHER PRACTICES

Chapter 9

Inclusive classroom practices in secondary schools

Towards a universal teaching approach

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Abstract

As part of a multiple case study on inclusive education in secondary schools, classroom practice was observed across twelve schools, twenty-three classrooms and fifteen subject matters, representing all age groups and streams of secondary schools in Flanders (Belgium). The aim of the study was to identify best classroom practices in inclusive settings. The results led to two principal conclusions. First, in inclusive classrooms, teacher strategies are largely similar to practice in regular secondary classrooms. Providing a positive climate, routines and high quality instruction serve as universal strategies, also effective for inclusive practice. The teacher-student relationship shows a high degree of sensitivity, supportive of self-determination, self-regulation and peer collaboration. Teachers are able to apply a balanced whole class model as well as an individualized teaching model across subject and grade levels. Both teachers and peers are aware of the needs of students with a disability and are able to deal with these special needs in a subtle, balanced way. Second, few specific adaptations are in place, leaving teachers and students largely on their own to access the general curriculum. Based on best practices, a framework for universal teaching was designed as an instrument for student teacher practice in inclusive classrooms.

Introduction

In secondary schools, having many different classes and students, teachers may find it hard to be involved in specific student demands or additional needs. A more traditional approach of whole-class and test-oriented teaching offers them few opportunities for individualized instruction or cognitive learning strategies (Shippen et al., 2011). Studies on teachers' attitudes towards inclusion show many concerns among secondary teachers,

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related to secondary schools' structures and funding, as well as teachers' main interest in subject knowledge (Pearce, Gray, & Campbell-Evans, 2010). Vocabulary, comprehension, safety and time are indicated as both practical issues and negative beliefs that discourage teachers to welcome ability diversity in class (Ellins & Porter, 2005). Also collaboration with teachers and parents, individualizing instruction and managing challenging behavior are part of what teachers perceive as prerequisites for inclusive practice in secondary schools, leading to major concerns about workload, time consuming instructions and personal wellbeing (Savolainen, Engelbrecht, & Nel, 2012; Sharma, Loreman, & Forlin, 2012). However, by evaluating inclusive education by teachers' perceived self-efficacy or by academic outcomes only, other aspects of effectiveness may be overlooked. Co-teaching practices, peer support strategies and teachers' professional development interventions have proven to be effective social learning processes, raising awareness and empowerment of teachers and peers in secondary inclusive classrooms (Carter & Kennedy, 2006; Cesar & Santos, 2006; Florian & Rouse, 2001; Scruggs, Mastropieri, & McDuffie, 2007). Still, in spite of these social learning processes among teachers and students, practical demands and self-efficacy beliefs are numerous and persistent. Inclusive processes are vulnerable and lack sustainability, unless newly adopted classroom strategies are perceived as effective (Sindelar, Shearer, Yendol-Hoppey, & Liebert, 2006).

The present study aims to add more evidence of classroom practice that copes with the demands of inclusion in adolescent groups. In general, inclusion searches for a balance between individual needs and the needs of the majority. It can therefore be conceptualized through an individual or a collective lens (Campbell, 2002, in Paliokosta & Blandford, 2010). From an individual perspective, inclusion refers to the right of young people, categorized as having special educational needs, to be educated in mainstream schools (Ainscow, 2004). This right results in individual trajectories and support for students who participate in learning in a regular setting, based on an individual education plan (Giangreco, Cloninger, Dennis, & Edelman, 1999). In a collective view, inclusive education is defined as a process of professional learning that seeks to respond to diversity and to learn from diversity, identifying and removing barriers for participation, fostering the attendance, active participation and achievements of all students, with a particular vigilance for those groups of learners who may be at risk of marginalization, exclusion or underachievement (Ainscow, 2004). Taking into account both perspectives, for the purpose of this study inclusive classroom practice is understood as the whole of teaching strategies, teacher-student interactions and peer interactions in a regular classroom setting including students with special educational needs for whom an individual education plan is provided.

Theoretical framework

In general, classrooms provide a very powerful context for the development of youth, being one of the main microsystems in which multiple interactions take place on a daily basis (Bronfenbrenner & Morris, 2006; Pianta & Hamre, 2009). These interactions have the potential to create qualitative support for learning and social participation, both essential outcomes of inclusive education.

As a conceptual model of classroom settings, the Classroom Assessment Scoring System (CLASS, La Paro, Pianta & Stuhlman, 2004; Pianta & Hamre, 2009), offers a first-hand hold for the initial conceptualization of teaching strategies in heterogeneous inclusive groups. It is based on self-determination theory and attachment theory (Pianta, 1999; Ryan & Deci, 2000) and is empirically supported across grades and content areas in typical classrooms. Without reference to inclusion, this framework provides a universal language of teaching in line with teachers' expertise and, while focusing on student-centred strategies, in line with concerns for individual students, support needs and student engagement. The chosen framework focuses on 'a teacher's performance in the classroom as an instructor, socializer, motivator and mentor' (Pianta & Hamre, 2009, p. 109), relating the quality of teaching to student engagement, academic as well as social learning and development. As such, the framework provides a basic lens for teaching practice as a supportive, learner-centred activity, mediating student engagement.

The CLASS conceptual model organizes teaching strategies within a three-fold framework of emotional support, classroom organisation and instructional support (Pianta & Hamre, 2009). First, the domain of emotional support includes the dimensions 'positive climate', 'sensitivity' and 'regard for the student perspective' as a broad set of teaching strategies aimed to promote positive relationships, affect, communication, comfort, responsiveness, flexibility, autonomy and student expression. In general, emotional support improves the social and emotional wellbeing and academic engagement of the students (Pianta & Hamre, 2009). A fourth dimension 'negative climate' is added for observational purposes to cover disruptive interactions of disrespect or sarcasm. Second, classroom organization is defined as 'behaviour management', 'productivity' and 'instructional learning formats', referring to clear expectations, pro-activeness and redirection, efficient time use, routines and transitions and the promotion of student interests by means of an engaging approach. Third, the domain of instructional support emphasizes 'concept development', 'quality of feedback' and 'language modelling', including the encouragement of reasoning, creativity, student responses, expansion of performance and conversation (Pianta & Hamre, 2009).

In addition to a general framework of effective teaching strategies as a basic outline for analysis, both the adolescent perspective and the disability perspective require a central role in inclusive classroom practice in secondary schools. With regard to the adolescent perspective, autonomy is found to be the strongest self-determination predictor of student engagement (Hafen et al., 2012). When adding the disability perspective, student engagement needs to be addressed from a social and an academic point of view. Socially, positive teacher-student relationships are a first resource that contributes to the social participation of students with special educational needs (McDougall, DeWit, King, Miller, & Killip, 2004). By showing respect, valuing students' ideas and encouraging peer support, these relationships reflect an indirect teacher connection in inclusive secondary classrooms that can mediate a positive school culture (Hafen et al., 2012; McDougall et al., 2004; Murray & Pianta, 2007). Second, peer support is one of the most important strategies that underpin social participation in class, offering opportunities for interdependency and mutual tutoring, and reinforcing self-esteem, autonomy, tolerance and friendships in turn

(Carter & Kennedy, 2006b; McDougall et al., 2004; Salend & Duhaney, 1999). Academically, the quality of academic support is crucial to engage students with special needs fully in learning. While additional support – e.g. improving the accessibility of the curriculum – has often been the focus of former research (Carter & Hughes, 2006; Mastropieri et al., 2005; Wehmeyer, Lattin, & Agran, 2001), academic support for students with special educational needs is increasingly addressed by forms of universal design for learning, offering new opportunities to incorporate accommodations in teaching and leading to a more efficient use of resources (Messinger-Willman & Marino, 2010; Rose, Meyer, & Hitchcock, 2005; Stanford & Reeves, 2009). As a specific resource to access the curriculum for all, bringing special education or learning support services into the classroom, co-teaching or collaborative practices are found most effective when sustainable partnerships are formed (Scruggs et al., 2007). On the other hand, having too much assistance in class is known to be a barrier for social participation and may conflict with the adolescent’s need for autonomy (Giangreco, Broer, & Suter, 2009; Hafen et al., 2012). Therefore, in order to decrease the level of dependence of adult or peer support in class, self-determination interventions need to be taken into account as a means to access the curriculum for students with severe disabilities (Lee et al, 2008; Wehmeyer, Lattin, & Agran, 2001).

The purpose of this study is to describe and analyse inclusive classroom practice in secondary education, in order to understand its impact on the academic engagement and social participation of students with special educational needs for whom an individual education plan is provided. To investigate inclusive classroom practice in secondary schools, the overall research question is ‘What are the main strategies and interactions in inclusive classroom practice in secondary schools?’, operationalized in the following sub-questions:

- What are the actions and interactions of teachers and students in inclusive secondary classrooms that support student learning at the group level?
- What are the actions and interactions of teachers and students that allow students with special educational needs to participate in learning activities in secondary classrooms?

Answering these questions will lead to the development of a framework of strategies and interactions that are effective in diverse groups, which may support teaching education practices.

Method

Participants

Classroom observations were conducted as part of a multiple case study (Yin, 1984) in Flanders (Belgium) on inclusive education in secondary schools. Twelve secondary schools were selected responding to an online questionnaire on inclusive policy and practice (n = 200), based on the Index for Inclusion (Booth & Ainscow, 2002) and an addi-

tional literature review on secondary inclusion (De Vroey, 2009). In order to describe examples of good practice of school wide inclusion and inclusive classroom practice across a diverse range of schools, schools were selected a) based on the highest scores on themes identified by factor analysis as ‘climate and friendships’, ‘accessibility’ and ‘collaborative teams’, referring to the most prominent domains of inclusive culture, policy and practice and b) establishing a variation with regard to diversity in student support needs, curricular stream, grade level and region. A sample of twelve schools was needed to match both sets of criteria. In Annex 1, the distribution of schools selected for the study is added, with regard to total school population, curricular streams and number of students with a statement for additional support.

In Flemish secondary schools, students with a disability are entitled to receive weekly 2-5 hours additional support of a visiting special education teacher, either for a limited time (2 years) or across all grades (6 years), depending on the severity of the disability. This group represents only a small number of students within the diversity range that can be addressed in inclusion, representing low incidence disabilities. For the purpose of this study, the criterion of having a statement to receive additional support provided by a visiting teacher was used as an objective indicator of disability. For these students, an individual education plan was provided. Classrooms were selected where one or more students with a statement for additional support attended. Twenty five students who received additional support for inclusive education were involved across twenty three class groups. A majority of these students had a statement for inclusive support because of a diagnosis of autism spectrum disorder (ASD), while eleven other students had a physical, sensory or intellectual disability. For all participating students an informed consent was obtained. Table 1 refers to the student characteristics by disability label and label distribution across the observations. Annex 2 offers a more detailed overview of student characteristics.

Table 1: Student characteristics and distribution across observations

Disability label	N of students	N of observations
Autism spectrum disorder (ASD)	14	35
Physical disability	5	13
Down's syndrome	2	7
Visual impairment	3	7
Auditory impairment	1	2
Total	25	64*

* In nine observations several students with a disability participated. The total number of observations was 55.

Fifty-five observations were performed in February-March 2010, across all secondary curricular streams, age levels and across fifteen subject matters. In Flemish secondary education, a general education stream exists alongside a technical, a vocational and an art education stream from 12-18 years, organised in six grades. A small number of middle schools organises the first two grades only (12-14 years). A larger proportion of observations was performed in grades 1 and 2, because a statement for additional support – being limited in time for many students – is often used in a transition stage to secondary school.

Table 2 displays the distribution of observations across grade levels and secondary education streams. Class size varied from 9-22 students.

Table 2: N of observations for each grade level and secondary curricular stream

Grade	General stream	Technical stream and Art	Vocational stream	Total
1st	14		9	23
2nd	3		6	9
3rd	4	4		8
4th			6	6
5th	2	2		4
6th	2	3		5
	25	9	21	55

All subject teachers involved in the observations were volunteering to participate. Most of them belonged to the school for several years, having experience with students with specific needs who attended their school. Because of the low incidence of an assistant or support teacher in class, their presence was not known in advance. Table 3 gives an overview of the distribution of subject groups.

Table 3: N of observations for each subject group

Vocational classes	6
Language	16
Science – math	19
Social sciences – history – economics	7
Music – physical education	6
Individual special support	1
Total	55

Procedures

In order to conduct observations in inclusive classrooms, an observational template was designed, based on the described Classroom Assessment framework (CLASS) for conceptualization and assessment of teaching practice (La Paro et al., 2004; Pianta & Hamre, 2009) and literature on inclusion in secondary schools. The template refers to the CLASS-domains emotional support, classroom organization and instructional support and the associated dimensions (see supra). In addition, each domain is linked to key strategies and needs in inclusive education, in order to alert observers for specific features of social participation and accessibility of the curriculum. Annex 3 displays the observation template for inclusive classroom practice in secondary schools.

In all of the participating schools at least four classroom observations were conducted in two different groups. Each classroom observation lasted at least one lesson (50') and was performed by the researcher and a master student. An observation training was organized, in order to enhance inter-observer reliability. The dimensions of the CLASS framework and broad additional concepts from inclusive literature were discussed during training.

Video and film materials were used for exercise purposes and notes were compared and discussed, in order to be able to use the template as a preliminary interpretation and organization of observations.

Each observer was asked to write down all activities, interactions and organizational aspects noticed during class, making use of a blank template informed by indicators for the respective domains, as displayed in Annex 3. Group interactions, as well as specific actions towards individual students and in particular towards the student with a disability were observed and noted. Notes were classified preliminary in the template without losing ‘thick’ descriptions of classroom interactions. Before analysis, both observers’ notes of each lesson were brought together within one template to avoid overlap or repetition of the same event. While coding, every observed teacher action, teacher-student or peer interaction that occurred in class was treated as a separate coding unit. Analysis of the observation data was done in a replication strategy studying each classroom observation as a case (Yin, 1984), constantly reviewing, refining and discussing the initial concepts of the template. The goal was to reconstruct an interpretive framework through the analysis of multiple exemplars of inclusive classroom practice. This process led to the recognition and description of most frequent teaching strategies, peer interactions and teacher-student interactions explicitly addressed to the student(s) with special needs in secondary inclusive classroom practice. Initial concepts as well as new concepts are withheld in a global framework for inclusive classroom practice.

Addressing both research questions, strategies and interactions were classified either at group level, including peer interactions, whole class activities and alternating individual instruction, or at individual student level, focusing on interactions with the target student.

Results

A detailed description of the final framework is presented in Table 4. Hereafter, following the research questions, group level concepts are presented first, according to the domains of the framework, followed by concepts describing an individual student approach towards a student identified as having special educational needs.

Towards a framework for universal teaching in inclusive classroom practice

The final framework for inclusive practice respects the distinction of three domains (Pianta & Hamre, 2009), valuing emotional and instructional support and classroom organization as a fit for the demand for social support and accessibility in inclusive classrooms. However, new concepts and a structure of distinctive group and student level strategies emerged, showing a gradual shift of strategies and interactions from the group level to the student level. While the group level part keeps a close alignment with the original CLASS framework (La Paro et al., 2004; Pianta & Hamre, 2009), the student level concepts represent an elaboration of group level strategies and interactions, rather than an additional or highly specialized repertoire of actions. Unlike the CLASS-framework,

Table 4: Framework for Universal Teaching in inclusive classroom practice in secondary schools

	Emotional climate	Accessibility and classroom organization	Quality of instruction
<i>Group level</i>	<p>Positive class climate</p> <p>Classroom interactions show enthusiasm, humour, emotional bonds and mutual trust. The teacher shows enjoying working with the students.</p> <p>Sensitivity and responsiveness</p> <p>The teacher offers sensitive support and responds to students' interests, worries and needs. Teacher-student interactions are open and responsive.</p> <p>Informal peer support</p> <p>Students are cooperative, support each other and stand up for each other. If needed, students stand up for the teacher.</p> <p>Social interventions</p> <p>The teacher addresses social relationships, conflicts or friendships directly and timely. Relationships are a matter of concern for everyone.</p>	<p>Routines and efficiency</p> <p>A clear lesson format and classroom rules offer students a handhold, especially for lesson transitions, tests or independent work time.</p> <p>Effective behaviour support</p> <p>The teacher refers to rules for conduct, attitudes and participation, to prevent or respond to challenging behaviour or unexpected circumstances.</p> <p>Differentiated lesson format</p> <p>The lesson format is designed for all and accounts for autonomy, competence building and participation of every student. Varied formats are effectively used.</p> <p>Effective use of accommodations</p> <p>The teacher makes use of available tools and devices, according to universal design for learning, allowing students to participate and express their learning.</p> <p>Peer assisted learning and co-teaching</p> <p>Collaborative practices are used, inviting the students to offer mutual support in learning through the use of cooperative learning, tutors or buddies, or using co-teaching models for academic support.</p>	<p>Focusing</p> <p>The teacher draws attention to the key concepts of the lesson, supporting the students to share, repeat or summarize the shared topic.</p> <p>Learning enhancing instruction and dialogue</p> <p>The teacher engages the students in a dialogue, clarifies new concepts, and broadens the context of the topic. He encourages the students to insightful learning and reflection about their own learning behaviour.</p> <p>Individualization</p> <p>The teacher helps individual students to start their work, he demonstrates outcomes and repeats instructions. He provides extended learning time for individual students if needed.</p>
	<p>Balanced class management</p> <p>The teacher is responsive to all students, engages everyone in an equivalent way in the activities in the classroom, balances in a flexible, natural and efficient way from a whole-class approach to a deepened personal instructional approach of students and vice versa.</p>		

Table 4: Framework for Universal Teaching in inclusive classroom practice in secondary schools (continued)

<p><i>Student level</i></p>	<p>Positive image and acceptance The teacher is a role model for the social participation of student(s) with special needs*. He puts them positively in the spotlight. Students are surrounded by classmates and belong to the group.</p> <p>Self-determination Both teacher and classmates respect the autonomy of the student(s) with special needs. They only intervene when students ask for support. Students show perseverance and independence.</p>	<p>Active participation and engagement The teacher pursues the participation of student(s) with special needs permanently. He invites them explicitly in instructions and dialogue. Students are fully engaged in the course of the activities.</p> <p>Use of an adapted curriculum The lesson content is selected, presented or translated in a way that the subject material and the curriculum are made accessible for the student(s) with special needs. During class or assessment activities special arrangements and curriculum adaptations are available or produced.</p>	<p>Self-instruction The teacher explicitly invites and supports the student(s) with special needs to perform an independent learning and work attitude. He helps the student to find his way in the material, to keep an overview and to control the outcome. Students follow teacher instructions to work independently.</p>
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aimed to identify teaching strategies only, several concepts are operationalized both from the teacher's and the student's perspective, emphasizing multiple and complimentary perspectives of specific classroom interactions. Because of this broader perspective, in the final framework the domains are renamed as 'emotional climate', 'accessibility and classroom organization' and 'quality of instruction'.

Strategies at the group level

Looking at the class as a group and class lesson time as a flow of social and instructional activities, twelve concepts describe distinctive strategies and interactions in secondary inclusive classrooms. Group level concepts were coded in a range of 12-51 cases or observations, with only one concept, *social interventions*, coded in less than half of all the cases. Coding references across all cases or observation extracts per concept range from 18-212, with each concept showing different qualities of performance. Four concepts stand out: *positive class climate*, *sensitivity and responsiveness*, *routines and efficiency*, and *learning enhancing instruction and dialogue*, showing a balance in strategies and interactions that approach both social and academic student outcomes.

First, the emotional climate of inclusive secondary classes is characterized strongly by *sensitivity & responsiveness* (*n ref*= 195; *n cases* = 51) and *positive class climate* (*n ref* = 168; *n cases* = 49). Examples of references illustrate how group level concepts characterize actions towards all students, including the student with a disability.

"The teacher notices a student who seems lost. He helps him to get back on track in the lesson. Meanwhile, two students are talking, the teacher invites them to join the conversation and to respond to the question asked in class. He encourages them to formulate a response" (*Sensitivity and responsiveness*, General curriculum, history class, Grade 5, 10 students including a girl with a physical disability)

"The teacher shows an interest in a little chat of a peer group of girls and Peter, a boy with Down syndrome. While she helps to focus their attention back on their work, she cleans up Peter's desk and tells him where she'll put everything" (*Sensitivity and responsiveness*, Vocational stream, Art class, Grade 4, 19 students including a boy with Down syndrome).

"After the test, the teacher provides the right answers. With every answer, the students react enthusiastic 'Yes!', counting their scores, and smiling at each other. The teacher concludes by reassuring the students who made some errors" (*Positive class climate*, Middle school, vocational stream, biology lesson, Grade 2, 22 students including one student with a physical disability and one student with ASD)

"Co-teacher and students behave very collegially during practical work. The co-teacher is preparing a new assignment for vocational class (woodwork), and wants to know what the students think. The students appreciate being involved as a professional" (*Positive class climate*, vocational stream, woodwork, Grade 4, 12 students including one deaf student).

Other concepts belonging to the emotional climate are *informal peer support* ($n\text{ ref} = 61$; $n\text{ cases} = 31$) and *social interventions*.

“One student changes places and sits beside another student to explain him how the test scores will be counted” (*Informal peer support*, General curriculum, history class, Grade 5, 10 students including a girl with a physical disability)

Social interventions ($n\text{ ref} = 18$; $n\text{ cases} = 12$) were only observed in groups with very challenging behaviour, leading to a conversation on social participation.

“The teacher refers to the situation in class, asking the students about subgroups. She poses a delicate question, starting a conversation about social relationships in class. She listens to the students and goes into the comments that are given. The students are listening to each other” (*Social interventions*, Middle school, language class, Grade 1, 18 students including a boy with a visual disability)

Second, as concepts of classroom organization *routines & efficiency* ($n\text{ ref} = 212$; $n\text{ cases} = 49$), a *differentiated lesson format* ($n\text{ ref} = 138$; $n\text{ cases} = 49$) and *effective use of accommodations* ($n\text{ ref} = 124$; $n\text{ cases} = 41$) are observed most. Although accommodations are mostly low-tech and well-established, differentiated lesson format and effective use of accommodations are distinctive in scope and quality, being either central or supportive to classroom organization.

“At the end of the lesson, those who have finished their work start cleaning up. They put all the materials of vocational class away where they belong. Others may continue for a little while.” (*Routines and efficiency*, Middle school, Vocational class, Grade 2, 9 students, including one student with a physical disability)

“The teacher starts the lesson with a whole-class feedback on homework. She lets students respond in turn, starting at the front row, left side. Tom, a student with ASD, sits on the second row, he knows when his turn will come” (*Routines and efficiency*, Technical school, Math, Grade 3, 19 students including a boy with ASD)

“Some students have finished the poster that was assigned in art class and attach it in front of the class. While the others are continuing, the teacher asks them to take their portfolio and make it as personal as possible” (*Differentiated lesson format*, Vocational school, Art class, Grade 4, 19 students including a boy with Down syndrome)

“The student with a physical disability is seated in front, and uses an ergonomic desk, that holds the papers with magnets. On top, a lesson schedule is attached.” (*Effective use of accommodations*, General curriculum, language class, Grade 1, 21 students including a girl with a physical disability)

Less frequent concepts in this domain are *effective behaviour management* ($n\ ref=100$; $n\ cases=40$), and finally a combined concept *peer assisted learning and co-teaching* ($n\ ref=92$; $n\ cases=32$).

“From now on you will raise your hands before answering, everyone, also those who have behaved lovely” (*Effective behaviour management*, Middle school, biology, Grade 2, 11 students including a girl with a visual disability and a boy with ASD)

Peer assisted learning as well as *co-teaching* are supportive of the lesson format, offering students a higher ratio of individualized instruction and support. The former dominated as a collaborative classroom practice, while the latter was only observed in five cases ($n\ ref=23$; $n\ cases=5$) for diverse reasons: in vocational class for safety reasons for all, in language class for signing for a deaf student, and in religion for learning support for a student with Down syndrome.

“Two students, including a boy with Down’s syndrome, have prepared a presentation about eating disorders. They take turns in the presentation. A classmate helps them during the presentation to shift the slides” (*Peer assisted learning*, Vocational education, Social sciences, Grade 4, 19 students including a student with Down’s syndrome and a student with ASD)

“The interpreter moves to the front of the class, checks once and a while the teacher’s textbook and signs all teacher and student interactions. She is very expressive when she signs the students’ stories” (*Co-teaching*, Vocational education, Language class, Grade 4, 14 students including a deaf student)

Third, the concepts *learning enhancing instruction & dialogue* ($n\ ref=172$; $n\ cases=48$), *focusing* ($n\ ref=114$; $n\ cases=41$) and *individualization* ($n\ ref=103$; $n\ cases=43$) are added to the group level as referents of quality of instruction. Although both *learning enhancing instruction and dialogue* and *focusing* are addressing the group in an explicit way, inviting students to participate in cognitive learning processes, they differ in scope and character of support, as illustrated below:

“The teacher demonstrates how an engine works by drawing it on the blackboard and asking the students to help him to fill it in. What is missing? How does it work? And finally: is it a good engine? The students are fully engaged, as they are constructing this drawing together in a conversation” (*Learning enhancing instruction and dialogue*, Technical school, Electricity, Grade 6, 9 students including a boy with ASD)

“The teacher asks a student with special needs to postpone his question a while, in order to finish what he is explaining to the group and to focus on a difficult matter” (*Focusing*, Technical school, Electricity, Grade 6, 9 students including a boy with ASD)

Finally, at the group level the concept of *individualization* refers to a flexible and natural

instructional teacher strategy, inviting all students to ask questions and take the opportunity to have individual feedback in the course of their work.

“When a student hesitates to answer, the teacher switches to his mother tongue, gives a hint, helps him a bit, and shows patience to let him think for himself.” (*Individualization*, General curriculum, Language class, Grade 3, 19 students including a girl with ASD)

Strategies at the student level

Next, specific strategies were identified at the student level addressing the student with special needs. First, a *positive image and acceptance* ($n\ ref = 126$; $n\ cases = 41$) and *self-determination* ($n\ ref = 58$; $n\ cases = 31$) are added to the framework in the emotional climate domain.

“Students are engaged in a demonstration of the work in a train station, dispatching the incoming trains. Tim, a boy with ASD, is surrounded by his classmates and allowed to step in front to be able to follow the demonstration and to take part” (*Positive image and acceptance*, Vocational school, Technology excursion, Grade 1, 12 students including a boy with ASD)

Self-determination indicates moments of autonomy seeking by the student as well as encouragement of independence by teacher and peers. It was observed more often as a student’s expression of independent perseverance or refusal of help, in which case it is the student who initiates the interaction and generates a sensitive response of the teacher or his peers.

“Student chooses another place in class, not using the material of an adapted desk or the right side of a double desk, to sit beside her friend” (*Self-determination*, General curriculum, biology, Grade 1, 21 students including a girl with a physical disability)

Second, specific concepts in the classroom organisation domain are *active participation and engagement* ($n\ ref = 122$; $n\ cases = 41$) and *use of an adapted curriculum* ($n\ ref = 67$; $n\ cases = 24$), identified as specific augmentative or adapted materials in favour of the student with a disability.

“The teacher checks the responses in a whole-class discussion. When it’s Bob’s turn, a student with ASD, she allows him to stand in front of the class and take his time to give an extended answer” (*Active participation and engagement*, Middle school, vocational stream, biology, Grade 2, 11 students including a girl with a visual disability and a boy with ASD)

“Student with a visual impairment opens a historical map on the laptop instead of looking in the history book. Materials have been scanned for use in class.” (*Use of adapted curriculum*, Middle school, General curriculum, history, Grade 2, 13 students including a girl with a visual impairment)

Finally, *self-instruction* (n ref = 110; n cases = 32) acknowledges the teacher's skills to coach and prompt self-instruction, as well as the student's progress in self-regulation strategies.

“The teacher sits with D. at the end of his test and asks him to check all the answers” (*Self-instruction*, Vocational school, Language class, Grade 4, 19 students including a boy with Down's syndrome)

Balanced approach

As a final strategy, *balanced class management* (n ref = 85; n cases = 38) was added to the list of concepts. Clear moments of transition occurred during class, in which the teacher explicitly moves from a group approach to an individualized approach, in particular addressing a student with special educational needs. These actions show a balanced and thoughtful strategy, fluidly alternating individual instruction of the student with a disability with small group instruction and dialogue. A balanced class management can be seen both as the result of an effective teaching approach in inclusive classrooms, and as a deliberate action of the teacher trying to cope with many questions and needs in class.

“The teacher stands next to the student with special needs at the end of the lesson, checking his diary, while she explains the students' homework.” (*Balanced classroom management*, Technical education, Math, Grade 3, 19 students including a student with ASD)

Differential effects according to special needs labels

Different patterns of strategies were observed in relation to the special needs labels. Table 5 gives an overview of strategies according to specific needs. Given the small number of each label group, these results may only give a first indication. *Sensitivity and responsiveness*, which belongs to group level strategies, was found to be the highest in lessons where students with visual impairment, ASD or Down's syndrome participate. Student level strategies most performed towards students with Down's syndrome were *positive image and acceptance* and *self-instruction*, and towards students with a visual disability *active participation and engagement*. Students with a physical disability and students with autism spectrum disorder were generating the least specific student level support strategies from the teacher or peers.

Table 5: Different patterns according to special needs

Label	N of lesson observations	3 most occurring strategies ordered by frequency	3 least occurring strategies ordered by frequency
Autism spectrum disorder	35	Sensitivity and responsiveness Positive class climate Learning enhancing dialogue	Adapted curriculum Social interventions Co-teaching
Physical disability	13	Learning enhancing dialogue Differentiated lesson format Sensitivity and responsiveness	Adapted curriculum Social interventions Co-teaching
Down syndrome	7	Sensitivity and responsiveness Self-instruction Positive image and acceptance	Routines and efficiency Adapted curriculum, co-teaching Effective use of accommodations
Visual disability	7	Sensitivity and responsiveness Active participation and engagement Learning enhancing dialogue	Peer assisted learning Routines and efficiency Co-teaching
Auditory impairment	2	Use of adapted curriculum Co-teaching Positive class climate	Social interventions Informal peer support Peer assisted learning, self-instruction, balanced class management

Conclusions

Using a qualitative approach for the analysis of strategies and interactions observed in fifty-five lessons in inclusive classrooms in secondary schools, a framework for inclusive practices for secondary classes was developed, identifying a balanced pattern of strategies to be used in teacher education or professional development for training, reflection or problem-solving in teaching practice in diverse groups. The observed practice and identified concepts reflect teacher efficacy that relies on positive teacher-student relationships, organizational and instruction quality, very often without adding special techniques, materials, or co-teacher support. Teachers working in a secondary school with inclusive practice show acceptance and positive attitudes towards many students with special needs. A high sensitivity and responsiveness is observed across all groups as well as qualitative instructional support and individualization for all. Both domains of emotional support and instructional support are well balanced, together with classroom organization, leaning on routines and differentiated lesson formats. In a secondary school, where every hour another teacher takes over, routines seem to be well in place and helpful for many students. At the same time, routines also offer the teacher a way of finding a balance in instructional support. The teachers have a natural way in shifting attention from individual students to the group, and keep an eye on the students most in need of extra support. Well integrated strategies at the student level are active participation, providing a positive image or acceptance and self-instruction.

In addition, peers are an important source of support, giving help in a natural and informal way when needed. As a group, they contribute to a positive class climate, to the acceptance of students with a disability and their active participation and academic engagement, all of which reflect mutual student trust and positive relationships (McDougall et al.,

2004). Although peer actions that are subject oriented may be considered as an extension of teacher strategies, they also contribute to student engagement and learning in their own respect (Wentzel, 2006).

Based on observations, in all cases the classroom curriculum serves as a basic and general curriculum for all, adapted mainly in a technical way for students with a visual or auditory impairment, or offering more time to several students with special needs. Few differentiating criteria for evaluation were observed in class. Co-teaching was observed very little. In the case of students with a physical disability, support and adaptations were often limited. Effective use of accommodations and differentiated lesson formats were in place at a more universal, whole class level.

Overall, inclusive classroom practice relies most on the emotional climate among teachers and students and on a high quality of instruction provided by teachers. In the context of Flemish secondary classes, characterized by curricular streams, additional accommodations or an adapted curriculum don't belong to the daily practice of teachers.

Discussion

While secondary teachers express concerns about inclusive education, being afraid of new skills, time consuming instructions, workload, challenging student behaviour and collaboration (Savolainen, Engelbrecht, & Nel, 2012; Sharma, Loreman, & Forlin, 2012), this study reveals how teachers in secondary schools with inclusive practice cope with these new challenges by combining effective teaching strategies for regular classrooms with more elaborated individual student-centred strategies. Group-level strategies that belong to the conceptual framework of teacher strategies in typical classroom practices (Pianta & Hamre, 2009), sustain or stand out in more diverse groups. Sensitivity and responsiveness as well as a learning enhancing dialogue are just two of the strategies that are distributed widely across all lessons and are frequently used. Teachers show a sensitive support, which is subtle and with respect for the adolescent perspective. This may indicate that diversity or perceived support needs raise awareness and alert teachers to be nearby and responsive and to refine the quality of instruction. Student level strategies underpin, complete or stress the above strategies and seem to have an overall benefit in classroom practice, expressing a strong supportive teacher-student relationship. Together, they seem to represent effective teaching rather than special support, as they are still closely aligned to the basic conceptual framework of teaching strategies (Pianta & Hamre, 2009). Inclusive teaching seems to be a constant pursuit for a balanced approach, which may be found in the use of effective strategies belonging to a vast teacher repertoire, leaving space for a student-level elaboration of strategies. It shows a pragmatic approach of teachers, choosing a whole-class approach as a primary and effective resource for inclusive classrooms (Florian & Rouse, 2001), while accepting multidimensionality as a 'natural habitat' of the classroom (Doyle, 2006).

Self-efficacy may be improved when teachers find a balance in emotional and instructional support as well as in classroom organization shifting from group level to student

level in a flexible way. In classroom organization, the use of effective accommodations and differentiated lesson formats is promising. Many of these support all students and are in line with the principles of universal design for learning, providing presentation, expression and representation for all (Messinger-Willman & Marino, 2010; Rose, Meyer & Hitchcock, 2005). Still, they seem to be in place in an intuitively rather than a deliberate way and some students as well as teachers are left on their own when more specific accessibility is needed. In order to provide full accessibility to the general curriculum, additional accommodations may be needed to allow students to participate fully in the performance of learning tasks. Although it can be very challenging for teachers to keep up with assistive technology (Messinger-Willman & Marino, 2010), the results indicate that more specific accommodations and assistive technology options should be explored, in particular for students with a physical disability or in need of communication aids. Accommodations that were observed, were mostly low-tech and may be inadequate to address the need for expression or independent task performance of all students, including those with severe support needs. For students with a statement for inclusive support, usually students with low-incidence disabilities, teachers may need more guidelines to implement universal design for learning more effectively. Collaborative practices with special support services could focus on these specific solutions, without ignoring an overall picture of emotional, instructional and organizational classroom support. The framework may be used by special education teachers as well, to evaluate not only accessibility needs, but a balanced input of social and academic resources in place.

Both for the teacher and the student, adolescent autonomy and the need for support may be perceived as a dilemma for inclusive education. In secondary education, teachers may have to cope with challenges when co-teaching is implemented. Studies have indicated that subject teachers feel the work taken on by special education teachers is not equally divided or based on subject knowledge (Mastropieri et al., 2005; Weiss & Lloyd, 2002). The observations showed few but functional co-teaching practices and the analysis led to a broader category of collaborative practices in class, valuing peers' support equally. Adolescents may prefer peer support or sensitive support in a positive teacher-student relationship (Bultjens, Stead, & Dallas, 2002; Lightfoot, Wright, & Sloper, 1999). Self-determination stresses students' perseverance and engagement to fully participate, but it needs a sensitive response of both teachers and peers. For adolescents with a disability it may be difficult to express the need for support in class or remind the teachers of arrangements that were made at the beginning of the year. Therefore a clear description of self-determination as a learning process in class may be helpful, in order to find a balance between teacher support, peer support and student independence. A more frequent input of peer-assisted learning may offer a flexible solution responding to the adolescent's need for autonomy and relationships (Cesar & Santos, 2006; Hafen et al., 2012; Murray & Pianta, 2007). Research on inclusive education has addressed the need for autonomy as well as social participation critically investigating the social validity of support services, accommodations, co-teaching and consultative practices in secondary schools (Eisenman, Pleet, Wandry, & McGinley, 2010; Florian & Rouse, 2001; Giangreco et al., 2009). The place of inclusive support services needs careful consideration with respect for the

teachers' competences and efficacy and the student's need for autonomy and social support. Given the need for autonomy of adolescents, self-regulation strategies or peer support may not be overlooked as strategies in secondary inclusive classrooms.

However, whether the use of effective strategies for typical classrooms, in combination with student-level supportive interactions, leads to social participation, student engagement and successful achievements of the student with a disability, needs further investigation. Social and academic participation are both integrated in the framework as co-occurring in inclusive classrooms with effective teacher strategies, but further research is needed to evaluate student outcomes in relation to additional support needs. It is important to note though that all participating schools have experience with multiple diversity and that teachers volunteered for observations. This may indicate that the observed practices represent classroom practice of teachers who feel comfortable in diverse classes. The frequently observed strategies were seen as a natural disposition of the teacher towards all students.

Therefore the observations in the present study offer good examples of practice in balancing instruction and support in a trustful relationship with all students, installing additional support when students and teachers agree.

The framework is further evaluated as a handhold for teacher education practice. It offers student teachers a systematic overview, focusing on a large set of strategies useful for the preparation and reflection of lesson practice in diverse groups and inspiring for discussion on inclusive classroom practice. Using a framework for effective teaching strategies in regular classes as a basic guideline for inclusion, is a way of making a true inclusive turn in special needs education and a shift to universal teaching in regular schools.

Limitations

The observations in this study were performed by several observers, and observer-reliability was accounted for making use of a template and training sessions. Only written notes were taken, and in spite of a large number of lesson observations across all levels and subject groups of secondary education, it may be more effective to understand and interpret classroom actions, and in particular to track relations between actions, using videotapes. Due to privacy rules in the participating schools, this option was not available.

No reference is made to individual education plans of the students with a disability who were involved in the study. Although these plans could be a useful source to assess the effectiveness of classroom support as provided in daily practice, unless they fully reflect the student's perspective on support needs in class, they should not be the primary criterion. In a future stage, student level concepts may lead to hypotheses with regard to the impact of specific strategies on students' learning and participation. The present research does not measure the effectiveness of inclusive teaching practices as such.

Further, although this study indicates that effective teaching in regular classrooms and inclusive classrooms is based on very similar processes, no systematic comparison was

performed between non-inclusive settings and inclusive settings in the participating schools. Analysis of teacher and student interviews, as well as other additional data of these schools, may reveal more insight in the broader processes that can lead to self-efficacy in inclusive settings.

Finally, observations were not equally distributed across grade levels, with a larger amount of observations in first grade. Further analysis of differences between grade levels or age groups, as well as subjects, could reveal a more precise picture of the adopted strategies.

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Annex 1

School characteristics

School population	Type of secondary school (SE): grades and curricular streams (general GC, technical TC, art AC, vocational VC)	N of students with a statement for additional support by a visiting teacher
4 schools < 400 students	1 SE 1-6 GC + 1-2 VC 1 SE 1-2 GC + TC + VC 1 SE 1-2 TC + VC 1 SE 1-2 VC	< 10 students
4 schools 400-800 students	2 SE 1-6 GC 1 SE 1-6 AC + TC + VC 1 SE 1-6 TC + VC	10-20 students
4 schools > 800 students	1 SE 1-6 GC 3 SE 1-6 TC + VC	> 20 students

Annex 2

Casebook of students with an individual education plan involved in classroom observations, including student *observed support needs*

	Stream	Grade level	Gender	Identified disability	Mobility	Language expression	Social interactions in class	Independent work in class	Academic participation	N of students in class	N of students with additional support in class
1	GC	5	F	Physical	Uses a wheelchair	Fluent	Frequent	Independent	Moderate adaptations	10	1
2	GC	1	M	ASD	Independent	Fluent	Limited	Independent	Equal expectations	18	1
3	VC	1	M	ASD	Independent	Fluent	Limited	With assistance	Equal expectations	11	2
4	VC	1	F	Visual	Independent	Second language	Limited	Aids	Equal expectations	11	2
5	GC	3	F	ASD	Independent	Fluent	Limited	With assistance	Equal expectations	19	1
6	GC	1	M	ASD	Independent	Fluent	Frequent	With assistance	Equal expectations	22	1
7	GC	3	M	ASD	Independent	Fluent	Limited	Needs prompting	Equal expectations	10	1
8	GC	1	M	Visual	Independent	Fluent	Frequent	Aids	Equal expectations	18	1
9	TC	6	M	ASD	Independent	Fluent	Frequent	With assistance	Moderate adaptations	9	1

	Stream	Grade level	Gender	Identified disability	Mobility	Language expression	Social interactions in class	Independent work in class	Academic participation	N of students in class	N of students with additional support in class
10	VC	4	M	Auditory	Independent	Using sign language	Limited	Independent	Equal expectations	12	1
11	GC	2	F	Visual	Aid + peer support	Fluent	Frequent	Aids + assistance	Equal expectations	15	1
12	VC	2	M	ASD	Independent	Fluent	Frequent	With assistance	Moderate adaptations	20	2
13	VC	2	M	Physical	Independent	Speech difficulties	Limited	Independent slow pace	Moderate adaptations	20	2
14	TC	3	M	ASD	Independent	Fluent	Frequent	With assistance	Equal expectations	19	1
15	VC	1	M	ASD	Independent	Fluent	Limited	With assistance	Equal expectations	12	1
16	TC	3	M	ASD	Independent	Fluent	Limited	With assistance	Equal expectations	14	1
17	VC	1	M	ASD	Independent	Fluent	Limited	Needs prompting	Equal expectations	16	1
18	VC	2	M	Down syndrome	Independent	Speech difficulties	Limited	With assistance	Broad adaptations	10	1
19	VC	1	M	ASD	Independent	Fluent	Frequent	independent	Equal expectations	11	1
20	GC	6	F	ASD	Independent	Fluent	Frequent	Independent	Equal expectations	21	1
21	GC	1	F	Physical	Peer support	Fluent	Frequent	Aids + assistance	Equal expectations	21	2
22	AC	5	F	ASD	Independent	Fluent	Limited	Independent	Equal expectations	14	1
23	VC	1	M	Physical	Independent	Fluent	Limited	Independent Slow pace	Equal expectations	6	1
24	VC	4	M	Down syndrome	Independent	Fluent	Frequent	With assistance	Broad adaptations	19	1
25	TC	5	M	Physical	Aid + peer support	Speech difficulties	Limited	Aids + assistance	Limited adaptations	9	1

Annex 3

Initial observation template for inclusive classroom practice in secondary schools: first indicators for observation

Date / Time / Name of observer / Identification of school / Curricular stream / Grade level / (Core) subject			
N of students and class composition / Support needs of student(s) with SEN-statement			
<i>Directions for observation:</i>			
<ol style="list-style-type: none"> 1. Focus = class management, participation, peer support, accessibility of instruction and educational environment and emotional climate 2. Take students' perspective. Take notes on student participation and any action of teacher(s) or peers that contributes to academic and social participation of the student with special needs statement. Group level and specific student level actions and arrangements are relevant. 3. Write down examples of actions in detailed descriptions in a flow of activities and interactions. Refer to the classification (3 domains) if possible by writing down notes in the corresponding field (e.g. emotional climate) 			
Lesson format	Emotional climate Overall wellbeing <u>Social Participation</u>	Classroom organization Participation and student engagement <u>Peer support</u>	Quality of instruction Learning opportunities and accessibility <u>Curricular adaptations</u>
<ol style="list-style-type: none"> 1. Opening activity 2. Whole-class instruction 3. Whole-class dialogue 4. Independent work 5. Group work 6. Whole-class rehearsal and feedback 7. Test 7. Other activities 	<ul style="list-style-type: none"> - <i>Positive climate:</i> closeness, eye contact, non-verbal communication corresponds with verbal messages; enthusiasm; joy; positive interactions among students and teacher; teacher shows feeling comfortable in class; emotional bond; mutual trust - <i>Sensitivity – responsiveness:</i> teacher pays attention to emotional needs of the students, shows empathy; shows a personal interest, appreciates students' ideas and stories, shows patience - <i>Informal support:</i> students help and advice each other, stand up for each other - <i>Paying attention to social relationships:</i> interventions in class, explicitly referring to the perspective of others, self-esteem, problem solving skills, self-regulation, conflicts 	<ul style="list-style-type: none"> - <i>Quality of the lesson format:</i> universal design, paying attention to participation, autonomy, competence of all students, through the input of varied active formats; differentiation; effective collaboration (co-teaching), extended instructions; workshops, stations, projects. - <i>Peer support – peer assisted learning:</i> e.g. buddies (assistance); tutors (academic support); cooperative learning formats (mutual academic support); (semi)homogeneous or heterogeneous grouping - <i>Routines en efficiency:</i> easy flow of activities through routines; classroom rules support student engagement; clear structure and timing - <i>Effective behaviour management:</i> prevention, response and adjustment of challenging behaviour; clear rules for adjustment, consistent follow up and flexible responses to unexpected circumstances 	<ul style="list-style-type: none"> - Quality of feedback and individual instruction: individual feedback and remediation, deep engagement in student discussions; clarification of concepts and tasks; high expectations for all; learning enhancing discussion and dialogue; concept development and insightful thinking; process oriented and reflective instruction, appreciative for student efforts - <i>Curricular adaptations:</i> input of arrangements, accommodations and adaptations for accessing, replacing or augmenting the curriculum, using specific low tech or technology resources, adapting criteria; offering support for self-instruction and self-regulated learning
Notes (continuing on blank pages)			

Chapter 10

Effects of the structural and curricular changes following the Bologna process in Germany on the content knowledge and pedagogical content knowledge of student teachers of business and economics

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Olga Zlatkin-Troitschanskaia^c

Abstract

In the last decade, the higher education sector in Europe has been subject to enormous structural change processes associated with the Bologna Process. However, hardly any empirical studies have been conducted of the effects of these change processes on the quality of student teachers' education. In our empirical study, we examine the extent to which the structural and curricular changes made in higher education in Germany following the Bologna Process have had an effect on the professional development of student teachers of business and economics. First, we assess the content knowledge (CK) of business and economics of students from the to-be-discontinued Diplom study model and those from the newly implemented bachelor/master (BA/MA) study model. Then, we compare the results to determine whether their CK differs according to study model. Second, we explore whether an additional compulsory module on teaching methodology increases the pedagogical content knowledge (PCK) of students in the BA/MA study model. In this paper we explore teacher quality as described in Desimone's framework of teachers' professional development (2009). We focus specifically on professional knowledge (CK and PCK) of student teachers in the field of business and economics because numerous studies have shown that CK and PCK are key elements of teacher quality and central to teachers' professional development. Our results did not provide empirical evidence that the students' level of CK of business and economics differed significantly according to study model (Diplom vs. BA/MA). However, we found that curricular changes such as the implementation of an additional module on

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teaching methodology can enhance acquisition of PCK. We conclude that empirical evaluation of reform processes such as those of the Bologna Process helps qualify the effects of the associated structural and curricular changes in teacher education on the professional development of student teachers.

Introduction

With the introduction of the Bologna Process in 1999, ministers for education across Europe laid the official foundation for a common education area in Europe (Bologna Declaration, 1999). Ministers of the participating countries of the European Higher Education Area agreed to develop a “system, in which two main cycles, undergraduate and graduate, should be recognized for [enhancing] international comparison and equivalence” (Sorbonne Joint Declaration, 1998, p. 1-2). As a consequence, in Germany, traditional Diplom degree courses were to be replaced by consecutive, modularised BA and MA degree courses similar to those in the Anglo-American system of higher education.¹ These structural changes have also considerably influenced the design of teacher training degree courses in Europe (see e.g. the extensive objectives in teacher training, European Commission, 2007). Several debates on education policies have ensued, and discourse on teachers’ professional development has featured political catchphrases such as *focus on professional competence*² and *outcome orientation* (for further information on the focus on competence especially in Germany, see e.g. Beck, 2006; Blömeke, Zlatkin-Troitschanskaia, Kuhn & Fege, 2013; Zlatkin-Troitschanskaia, Kuhn & Toepper, 2014) on outcome orientation in teacher training, see e.g. Cochran-Smith et al., 2012). A main objective of these primarily policy-driven process processes is to enhance the quality of teacher training (see European Commission, 2007), which is to be measured according to the level of teachers’ professional competence and/or of teachers’ professional development (see also Desimone, 2009; Vanderlinde, Tuytens, De Wever & Aelterman, 2016). This aim has led to the implementation of numerous curricular, didactic, and organisational changes in the respective countries (see e.g. Center for Higher Education Policy Studies, 2006).

In Germany, there is a heterogeneous situation in teacher training due to the current transitional period. The to-be-discontinued Diplom degree courses still exist alongside the new BA and MA degree courses³ (see Bauer & Prenzel, 2012). However, little is known about how these different models of teacher training and, hence, the structural changes associated with the Bologna Process, affect the level and development of teaching professional competence (see Happ & Zlatkin-Troitschanskaia, 2014). Preliminary empirical research in this area, especially for teachers of STEM subjects⁴ (e.g., Blömeke, Felbrich, Müller, Kaiser & Lehmann, 2008; Rohaan, Taconis & Jochems, 2009), shows that assessment of professional competence requires (field-specific) assessment instruments of high quality, as they determine the quality of analyses and results and their consideration in education policy (Kuhn & Zlatkin-Troitschanskaia, 2011; Zlatkin-Troitschanskaia, Shavelson & Kuhn, 2015). In research on teacher training in the field of business and economics however, there is a lack of assessment instruments, at least according to the current state of research (OECD, 2011⁵; Fritsch et al., 2015). Consequently, our research project (ILLEV)⁶ was dedicated to developing suitable assessment instruments for the

field of business and economics in Germany. As part of this project, we present preliminary empirical evidence of how the structural and curricular changes associated with the Bologna Process affected the professional competence of teachers in the field of business and economics.⁷

The German system of teacher training consists of two phases: a theoretical one at university (phase 1), which traditionally is oriented towards teaching basic principles of pedagogy and the respective subject; and a practical one (German “Referendariat”) (phase 2), which provides hands-on teaching experience through autonomous teaching at schools, and which is supervised through a regional ministry of education (see Lisop, 2006, p. 378; Terhart, 2009, p. 425). The restructuring of teacher training programmes at university (phase 1) to adhere to a consecutive study model (BA/MA) as part of the Bologna Process has also been used in Germany to introduce changes to balance subject-related content, which traditionally has taken a rather predominant position in teacher training, with subject-specific teaching skills and hands-on experience. Thereby, the restructuring has also been meant to address the lack of coordination between the theoretical and practical phases of study. According to Terhart (2009, p. 426ff), there has been a shift towards increased outcome orientation and professional competence orientation in teacher training at university. More attention is being paid especially to fostering student teachers’ quality through practical experience and a stronger focus on professional knowledge, here especially pedagogical content knowledge (PCK), which is a crucial component in the teaching profession (Shulman, 1986).⁸ Thus, the key differences between the old Diplom and the new BA/MA study models in teacher training in Germany consist also in curricular changes. These were designed to enhance especially consecutive courses on subject-specific teaching methodology and the phase of practical teaching at schools through support by teacher trainers from the second phase of teacher training.

In the present study, we examine the effects of the policy-driven process processes on the *professional knowledge* of student teachers of business and economics, enrolled in teacher education degree courses (as one crucial step of Desimones’ adapted framework (Desimone, 2009) on *professional development* in chapter 1, Vanderlinde et al., 2016). In our study, students from both the to-be-discontinued Diplom and the new BA/MA degree courses in teacher education were surveyed with regard to their professional competence. The *professional competence of teachers* is generally described as a combination of motivational orientation and cognitive components (e.g., professional knowledge; see Weinert, 2001). Following the approach of field-specific teacher knowledge presented by Shulman (1986) and further developed by Bromme (1995), we focus on CK and PCK of business education students as two key aspects of the professional competence of student teachers. In this paper, we examine how professional competence in these two areas is influenced by structural and curricular changes, such as changes in the type and number of classes, associated with the Bologna Process. The analysis was conducted under control of selected personal factors, such as intelligence, school leaving grade, previous knowledge at the beginning of studies, which were expected to be particularly influential, especially with regard to the changes following the Bologna Process (see Asarta & Rebeck, 2012). The Bologna Process was taken as a point of departure to realise not only

core aims of the process, including reducing programme entrance prerequisites and facilitating the mobility of students between countries (see Bologna Declaration, 1999), but also additional objectives, such as increasing enrolment in teacher training. Recent studies (Cappellari & Lucifora, 2009; Happ & Zlatkin-Troitschanskaia, 2014) have shown that the number of students enrolled in teacher education programmes in Europe has increased as has the heterogeneity of the class in terms of students' previous knowledge and linguistic backgrounds. These examples make clear that it is necessary to control for such personal influence factors affecting the professional development of students.

Theoretical conceptualization and design of the study

Framework and assessment instruments

In a preliminary step, the theoretical model of professional competence of business education students employed in our study was based on the COACTIV⁹ model of teachers' professional competence (see Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011). The model was then modified and specified to be in line with our further conceptual analyses.

As mentioned in the introduction, professional competence can be defined in accordance with Weinert (2001) as the available or learnable cognitive skills and abilities that are necessary to resolving problems and answering questions. In addition to these cognitive dispositions, Weinert's understanding of professional competence includes the related motivational and volitional dispositions and abilities necessary to finding solutions to various problems, for example, in job situations. However, most other approaches to defining professional competence, such as those by Bromme (1997) and by Klieme and Leutner (2006), clearly regard CK and the related cognitive dispositions as the fundamental dimensions of the construct of professional competence. Therefore, in our project, the cognition-oriented perspective was adopted in the modelling of professional competence. In addition to assessing CK, the survey gathered data on epistemological beliefs and motivational orientations regarding the study field of business and economics, but they were treated only as additional aspects of professional competence and were modelled and assessed separately from the (content-oriented) construct of professional competence. In our project, business and economic CK was modelled and assessed in line with the general distinction of the field in Germany into business studies and economics studies. Assessment was limited to selected key subfields of business and economics.

In addition to CK, PCK of business and economics was modelled and measured as well. Thus, our model followed the theory on professional knowledge of teachers by Shulman (1986), which distinguishes among general pedagogical knowledge, curricular knowledge, CK, and PCK of teachers.¹⁰ Various studies following Shulman's differentiation have set a special focus on CK and PCK and the relationship between both constructs. Based on first empirical findings from other fields (e.g., Blömeke et al., 2008; Krauss et al., 2008), we assumed that CK and PCK were separate, but correlated constructs (for an empirical foundation, see Kuhn, 2014).

Figure 1 shows the theoretical model of teachers' professional competence in the field of business and economics that was developed in our project. Below each aspect of professional competence, the figure also shows the corresponding assessment instruments used in the study, which are described in more detail below. Similar to Shulman's classification (1986) the present model features subject-specific knowledge, comprising CK and PCK, as a key aspect.¹¹

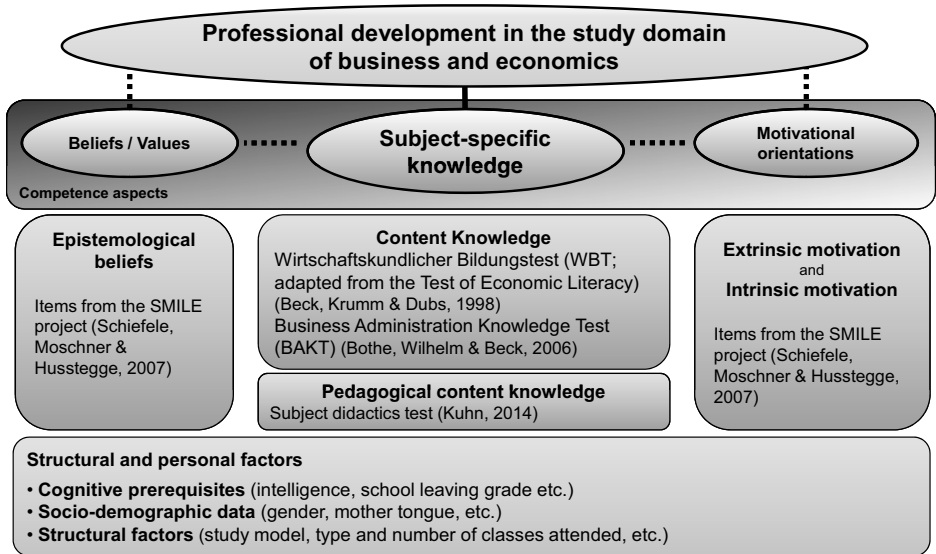


Figure 1: Model of teachers' professional competence in the ILLEV project (Zlatkin-Troitschanskaia, Happ, Förster, Preuß, Schmidt & Kuhn, 2013; following the COACTIV model by Richter et al., 2011)

CK in the field of business and economics. In our project, we adopted a subject-oriented classification of the field and divided it into the sub-fields of business studies and economic studies. Accordingly, in our project, we used two existing tests in abridged versions to assess business education students' CK of business and economics.

Assessment of CK of business was based on an abridged version of the Business Administration Knowledge Tests (BAKT; Bothe, Wilhelm & Beck, 2006). This test was designed specifically for higher education, and it enables the assessment of business CK of students (taking into account various sub-fields). Assessment of CK of economics was based on the "Wirtschaftskundlicher Bildungstest" (WBT) (see Beck, Krumm & Dubs, 1998), the German adaptation of the U.S. Test of Economic Literacy (Soper & Walstad, 1987; MacDonald & Rebeck, 2007), which contains a number of items that can be used for the assessment of economics-related content. Originally, the test was designed for basic and advanced vocational training. However, results from national studies (see Happ, Zlatkin-Troitschanskaia, Beck & Förster, 2016; Beck & Wuttke, 2004) and international studies (see e.g. Yamaoka, Asano, Abe & Rebeck, 2007) have shown that some of the test

items are suitable for assessing CK of economics at the university level. These items were selected and used in an abridged version of the WBT.

The selection of content areas and items from the two original test versions for the student assessment surveys was largely determined by the definition or delimitation of the field of business and economics. In our project, the selection was made on the basis of subject or curricular considerations, that is to say, with reference to the major subject “Business and economic studies” taught as part of the degree course in business education at the monitored university. First, we conducted a curricular analysis of the respective module descriptions and available teaching material. Second, we conducted an online survey with lecturers, which helped us evaluate the content validity and curricular validity of the selected test items. If results differed between the curricular analyses and the online survey, the respective items were discussed in additional interviews with experts. Based on these comprehensive, multi-step analyses, the project team selected the following sub-fields: marketing, accounting, and human resources (from business studies), and basics of economics, microeconomics, and macroeconomics (from economics studies).

PCK in the field of business and economics. For the assessment of PCK in the field of business and economics, there was no tested German-language instrument available (for accounting, see Fritsch et al., 2015). Internationally, there were two instruments that could be used for assessing PCK in business and economics, albeit neither one was perfectly suitable for the purposes of this project. The Mexican test on accounting education focuses only on the sub-field of accounting (Vidal Uribe, 2013); the U.S. test by the Educational Testing Service (ETS) assesses business education, but the corresponding section includes mostly items on CK or general pedagogical knowledge (ETS, 2006). Hence, a new test had to be developed, which required not only an a priori theoretical modelling of PCK, but also extensive validation, specifically for the field of business and economics (for details see Kuhn, 2014).

To maintain compatibility with similar studies from other fields (e.g., Blömeke et al., 2008; Hill et al., 2005; Rohaan et al., 2009) and with the structures used in their models of PCK (following Shulman, 1986; 1987), we conducted multi-perspective document analyses, including a thorough examination of field-specific requirements (e.g., of didactical principles, which are widely accepted and used in business and economics teaching) and expert interviews with teacher trainers in business and economics, university lecturers of courses on teaching methodology, and with experienced teachers. The expert interviews allowed us to put the aspects collected in the document analyses into context and to complement the field-specific characteristics.

On this basis, we developed a comprehensive model of the structure of PCK characterised by content-related and cognition-related specifications (for details, see Kuhn, 2014). Since it was not possible to operationalise the entire model, the following descriptions focus only on those parts that played a role in operationalisation. The construct was specified with regard to the content structure, taking into account practical requirements for teachers. Hence, the study focused on aspects of *lesson planning* and *reacting to statements made by students*. Despite limitations, the model retained the various facets of the

construct, giving prominence to the two general perspectives highlighted repeatedly in studies on PCK following Shulman's approach (1986), one oriented towards "the ways of representing and formulating the subject" (Shulman, 1986, p. 9) and the other oriented towards the students' point of view in the sense of "an understanding of what makes the learning of specific topics easy or difficult" (Shulman, 1986, p. 9; see e.g. the meta-analytical studies for the sciences by van Driel, Verloop & de Vos, 1998).

The construct was specified also with regard to the cognitive structure. We focused on the assessment of *case knowledge*, since it is considered particularly relevant for meeting the context-specific requirements of classroom teaching and since it can be assessed based on context-specific items, which was our aim for the operationalisation. Case knowledge implies general propositional knowledge. A third kind of knowledge is teachers' strategic knowledge, which allows teachers to act flexibly in varying contexts (Shulman, 1986). A valid assessment of this kind of knowledge representing the complexity of classroom practice would have required a more authentic format including a set of varying contexts, such as video-based assessment (Kuhn, Alonzo & Zlatkin-Troitschanskaia, submitted a). As the targeted construct of case knowledge is strongly oriented towards specific situations, the testing instrument should reflect this in the cognitive processes required for responding correctly to the business education items. Hence, operationalisation focused on the three cognitive processes of *applying*, *analysing*, and *creating*, which are considered higher cognitive processes in Anderson and Krathwohl's taxonomy (2001). Although answering business education questions requires also the cognitive processes of remembering and understanding, these processes alone are not enough to fulfil subject-specific teaching requirements, as defined in this project. As Shulman (1987) points out: "Comprehension alone is not sufficient [...] Comprehended ideas must be transformed in some manner if they are to be taught" (p. 14, 16).

There is a wide variety of content areas that business and economics teachers may be required to teach. To represent this spectrum, at least to some extent, we focused on sales, procurement, and economics. These may be considered core content areas for three reasons: they are relevant to many professions based on commercial training (see e.g. Brötz et al., 2011); they comprise topics concerning both business and economics; and they are geared towards essential competencies (e.g., weighing decisions, overcoming conflicts) defined as part of pupils' learning outcomes in business and economic classes (see e.g. Kutscha, 2009; see also Winther & Achtenhagen, 2009).

After developing the theoretical model and narrowing it down according to necessity, a paper-pencil test was devised and validated comprehensively. In its final version, the test consisted of eight closed and nine open situation-based tasks. The validation process was conducted according to four validity aspects – test content, response processes, internal structure, and relations to other variables – as emphasised by AERA, APA, and NCME (2014). Using qualitative approaches, including expert interviews and cognitive interviews, and quantitative approaches, especially Rasch scaling, confirmatory factor analyses, and comparisons with contrast groups, we found evidence confirming the test's validity as well as its objectivity and reliability (Cronbach's Alpha was 0.68; Expected A

Posteriori (EAP) reliability was 0.71) (for more details see Kuhn, 2014; Kuhn et al., submitted a).

Epistemological beliefs. To specify the above-mentioned model by Richter et al. (2011) with reference to Bromme (1997), in our project, we assessed the additional professional competence aspect of beliefs, more specifically, the students' epistemological beliefs about learning content (Zlatkin-Troitschanskaia, Förster & Kuhn, 2013). Epistemological beliefs can be understood as a person's beliefs about the nature of knowledge (Schommer, 1990). Students' epistemological beliefs include, for example, their attitude towards the subject they have chosen to study or towards the corresponding academic discipline (e.g., business and economics). For practical reasons (especially testing time), in our project, we used only one (slightly modified) scale to assess one dimension of the construct of objectivity of knowledge devised by Schiefele, Moschner, and Husstegge (2002) in the SMILE¹² project.

Motivational orientations. Based on current findings in research on motivation, we modelled two constructs with regard to the students' motivational orientations: extrinsic motivation (i.e., related to the profession) and intrinsic motivation (i.e., related to the studies) (see e.g. Schiefele & Köller, 2010). The corresponding items also were adopted from the scales of the SMILE project (Schiefele et al., 2002). The items were used to assess the subjects' motivational reasons for studying business and economics as a major subject of the business education degree course. Students with high extrinsic motivation may have chosen this subject of study because they expect to have a safe and well-paid job in the future. In contrast, students with high intrinsic motivation may have chosen to study this subject because they think that the content is important and/or because they have fun studying it.

Structural and personal factors. We gathered further information on relevant traits of the students and used it as control variables. Due to the limited testing time, it was not possible to assess business and economic CK and PCK within one single survey. Therefore, those two aspects of the professional competence of student teachers of business and economics were assessed separately. Having two different surveys (one assessing CK, the other PCK) allowed us to adjust better the structural and personal factors to be controlled. At the same time, there were identical factors in both surveys (e.g., gender, type and number of classes attended, school leaving grade), which enabled comparison of the factors to be controlled.¹³

Survey design

In the following, we present the survey design used for the assessment of the two target constructs of CK and PCK in business and economics. Due to testing time constraints, these two constructs had to be assessed in two separate surveys, which also enabled specific adjustments in the survey design and the gathered control variables.

Combination of longitudinal and cohort design for the assessment of CK of business and economics. In our project, CK of business and economics was assessed in a longitudinal design. Beginning in the winter term 2008/2009, we surveyed students' CK of business and economics at one German university once a year over four measuring dates. The paper-pencil survey was administered during core business and economics classes and took approximately 75 minutes to complete. In a combination of cohort and longitudinal design (see Reinecke, 2005), students from both the old Diplom degree courses and the new consecutive BA/MA degree courses were surveyed over the course of three years. We observed BA students who began their studies in the winter term 2008/2009 over the course of their studies from the beginning up to the entry into a MA programme¹⁴ (see Figure 2). Analogously, we observed students from the Diplom study model who began their studies in the winter term 2007/2008 from the 3rd up to the 9th semester.¹⁵

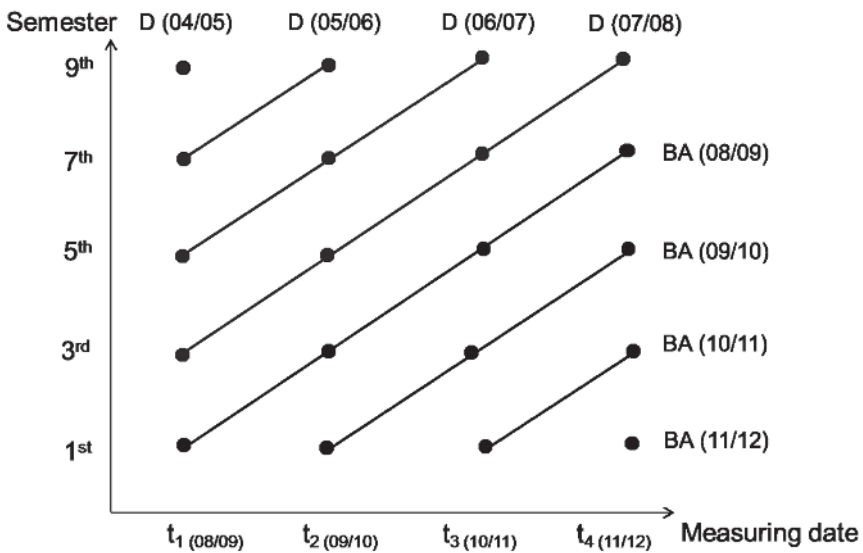


Figure 2: Combination of cohort and longitudinal design¹⁶ (following Reinecke, 2005)

Altogether 783 students of business education were surveyed over the four measuring dates.¹⁷ Hence, this data allowed systematic comparisons among various cohorts of Diplom and BA/MA students, and thus enabled us to control the influence of structural factors, such as the respective study model of the students, based on the cross-sectional data from the four measuring dates.

Assessing PCK in a quasi-longitudinal design. At the same time when the CK of business and economics was assessed for the third time (winter term 2010/2011), PCK was assessed in a separate survey, which took an average of 45 minutes to complete and comprised a newly constructed paper-pencil test and questions on personal and structural control factors. The time lag between the first CK survey and the first PCK survey occurred because the PCK test had to be developed from scratch.

To analyse the level of PCK during the first phase of teacher training, the project team surveyed 176 business education students from the old and the new study models. To gain further evidence on the development of PCK and on the validity of the instrument, we adopted a quasi-longitudinal design, surveying 109 student teachers at vocational schools¹⁸, as well as 53 in-service teachers of business and economics. The underlying hypothesis was that the level of PCK would increase over the course of teacher training (e.g., Blömeke et al., 2008). For further, discriminant validation, the test was also administered to students of business and economics without teaching perspective (N=58) and to student teachers and teachers from subjects unrelated to business and economics (N=84). The purpose of this was to test whether “pure” CK or general pedagogical knowledge would influence results in the PCK assessment. Since the focus of the present paper is on the first phase of teacher training in the context of the Bologna Process, we present only selected findings on this phase (for further findings and details, see Kuhn, 2014).

Research questions

One of the major changes in Germany associated with the Bologna Process is the transformation of the Diplom degree courses into consecutive BA/MA degree courses (Bologna Declaration, 1999). According to the objectives of the process, in the new study programmes, focus is to shift from teaching to learning, which indicates an orientation towards competence development during university studies. This entire process is characterised by a stronger orientation towards outcome and, hence, a turning away from a purely input-oriented design of the curricula. These ambitious educational policy objectives following the Bologna Process seem to imply that the changes in the framework conditions also can be expected to have an effect on students’ CK. However, there has been hardly any empirical research on whether the structural changes following the Bologna Process actually influence the students’ CK in business and economics. We addressed this research deficit through our first research question: *Does the study model (Diplom or BA/MA) influence the level and development of CK in business and economics?*

The Bologna Process and the associated structural changes in Germany have brought in particular the students’ PCK into the focus of teacher training. In our project, the need to develop student teachers’ PCK was addressed through the implementation of various measures. One particular aim of the ILLEV project was to strengthen the connection among subject-related content, general pedagogical content, and more practically oriented aspects in the curricula of the new BA and MA degree courses (see Zlatkin-Troitschanskaia, Förster & Kuhn, 2013). To this end, at the university where we conducted our research, an additional compulsory module on subject-specific teaching methodology (including a seminar and a practical class) was introduced respectively in the BA and MA degree courses.¹⁹ The two modules were consecutive. The link between theory and practice was further reinforced, as the modules were conceptualised and implemented in cooperation with instructors from the practical phase 2 of teacher training. In addition to having two modules on teaching methodology, we added more practical

teaching at schools to phase 1 of teacher training. In additional university courses, instructors of phase 2 further supported the student teachers by helping them prepare their lessons and evaluate their teaching after their practical experience. In accordance with the discussion on the conditions of “deliberate practice” we assumed that all the newly implemented opportunities for structured learning, for example, the guided reflection on practical experiences, provided students with continuous support in building their PCK within the new consecutive degree courses (Ericsson, n.d.; Ericsson, Krampe, & Tesch-Romer, 1993). Our second research question was as follows: *To which extent do the structural and curricular changes (targeted at PCK) in the BA degree course, consisting in the introduction of the additional module on teaching methodology, lead to an increase in the students’ level of PCK?*²⁰

Results

Research question 1: Does the study model influence the level and development of CK in business and economics?

As is apparent from the survey design for assessing CK in business and economics, there was a lag in the assessment of students from the two study models (see Figure 2). At the time the survey was conducted, the Diplom students had completed on average two semesters more than the students in the BA/MA degree courses. If we had neglected this lag – by considering findings only from purely cross-sectional analyses of single measuring dates – we would have risked considerable distortions of the results.²¹

To avoid such distortion, our statistical analyses were not based on the measuring dates as a measure of time, but on the students’ number of semesters in their respective study models. In the 4th semester, there were 119 subjects in the Diplom study model as opposed to 99 in the BA study model; in the 6th semester, there were 87 Diplom students compared to 94 BA students (see Table 1).

Table 1: Sample sizes

	N (Diplom students)	N (BA students)
4 th semester	119	99
6 th semester	87	94

As analyses from our project have shown (see also Happ et al., 2016), confirmatory factor analysis allows us to assume one-dimensional models for the two knowledge scales. Hence, calculations were based on the total score achieved in the knowledge test (sum score). The WBT sum score was considered separately from the BAKT sum score. Thus, the WBT score represented the achieved sum score of CK of economics, and the BAKT score represented the achieved sum score of CK of business. Table 2 shows an overview of the relative share of correct solutions (in percentage) submitted by students in the 4th and 6th semesters for both sub-dimensions. Both tests consisted of multiple-choice items, and each correct answer was worth one point.

Table 2: Share of correct answers on the WBT and the BAKT submitted by Diplom and BA students

	Diplom students		BA students	
	WBT	BAKT ²²	WBT	BAKT
4 th semester	62.1%	-	63.7%	-
6 th semester	69.42%	52.22%	65.5%	46.44%

Subsequently, a t-test for independent samples was conducted to see whether the differences between the average test scores of Diplom and BA students were significant. The method of the t-test required a preliminary testing for homogeneity of variance (using Levene's test). This test confirmed the basic assumption for our calculations. Because the samples were small, the t-test was complemented with the non-parametric Mann-Whitney U test (u-test). For the students in the 4th semester, the t-test for independent samples showed that there was no significant difference between the students of the two study models (t-test: $p=0.444$; u-test: $p=0.461$). Thus, the study model had no influence on the level of economic CK of students in the 4th semester. A considerable difference in the share of correct answers was found only in the responses to the WBT of 6th-semester students. However, this difference was significant only in the t-test at a significance level of 0.1 ($p=0.093$). In contrast, the u-test showed no significant difference in the WBT score ($p=0.180$). Thus, the analyses did not confirm a significant difference for the WBT scores of students in the 6th semester either. The picture was similar for the BAKT. In fact, the t-test and u-test showed that the Diplom students had a significant edge over the BA students, for a significance level of 10% (t-test: $p = 0.071$; u-test: 0.085).

With regard to the results of all of these calculations, we can summarise that the analyses did not indicate a clear edge for the Diplom students or the BA students. This was also confirmed by the further cross-sectional models within the project (see Happ & Zlatkin-Troitschanskaia, 2014). There, the two sub-dimensions of CK of business and economic were modelled as a dependent variable in a multiple linear regression model. In this model, further relevant influence factors, such as students' gender, mother tongue, verbal and numerical intelligence, and previous knowledge were controlled. Those examinations did not indicate a clear effect of the study model either. Altogether, the influence of structural factors, such as the study model, was found to be small or not significant (see Happ & Zlatkin-Troitschanskaia, 2014). Based on this finding, we cannot assume that the study model had a significant influence on the level of CK. With regard to further structural influence factors, the number of classes attended was, as expected, confirmed as an important predictor. These cross-sectional findings were also supported by analyses of the CK using growth curve modelling based on multilevel models (see Happ et al., 2016).

Research question 2: To which extent do the structural and curricular changes (targeted at PCK) in the BA degree course, consisting in the introduction of the additional module on teaching methodology, lead to an increase in the students' level of PCK?

To answer this question, we conducted comparative analyses based on the average score. The analyses were conducted for a subsample of 124 business education students in the

new BA degree course and 41 business education students in the to-be-discontinued Diplom degree course who participated not only in the CK survey, but also in the PCK survey. Of the 124 BA students, 62 had not yet completed the newly implemented compulsory module on teaching methodology (comparison group 1: BA students without compulsory module on PCK). The remaining 62 students had already completed this module (comparison group 2: BA students with compulsory module on PCK). By comparing these two sub-groups, we investigated a sub-question of the above research question: To which extent can we measure an (expectedly) positive curricular effect on the level of PCK among the BA students?

The comparative analyses also included the 41 Diplom students, who did not have any opportunity to attend such a module during their studies (comparison group 3: Diplom students). This way, we were able to investigate another sub-question: To which extent can we measure a structural effect of the different study models on the level of PCK? In this comparison, we were interested in whether the level of PCK differed fundamentally between the Diplom students and the BA students with a PCK module. It must be noted that, as the Diplom study model is to be discontinued, the Diplom students were at the end of their university studies (mean = 9.5 semesters, SD = 2.2), whereas the BA students with a PCK module were only at the end of their BA studies (mean = 4.4 semesters, SD = 1.6) and had yet to complete a MA degree course before entering phase 2 of teacher training.²³

Table 3 is a descriptive overview of the scores on the PCK test, which are the sums of the points achieved on the test (maximum 26 points). The use of such a sum score was justified, as the empirical analyses confirmed a one-dimensional structure for the PCK, using confirmatory factor analysis and the Rasch model for ordinal data (for details see Kuhn, 2014). Furthermore, the table contains selected socio-demographic data to facilitate comparison of the findings.

Table 3: Descriptive overview of PCK scores and socio-demographic factors

	BA students without compulsory module on PCK (N = 62)	BA students with compulsory module on PCK (N = 62)	Diplom students (N = 41)
PCK score (mean, SD)	7.5 (3.6)	10.1 (3.6)	11.4 (4.5)
Age (mean, SD)	23.0 (3.3)	23.9 (2.6)	26.5 (1.9)
Female	53%	62%	54%
Mother tongue German	95%	97%	94%
Completed commercial vocational training	53%	52%	40%
School leaving grade ²⁴	2.4	2.4	2.4
Practical teaching experience (in weeks)	1.1	4.5	3.8
Current number of semesters (mean, SD)	2.0 (1.2)	4.4 (1.6)	9.5 (2.2)

First, the socio-demographic data showed that the age distribution fit the respective study phase. The gender distribution was quite equal in all groups. Most subjects were native

speakers of German. Approximately half of the students in all three groups had completed commercial vocational training prior to their university studies, which can be regarded as an approximation for previous knowledge of business and economics. The average school leaving grade – regarded as an approximation for general previous knowledge – was identical in all three groups. Altogether, this facilitated comparative interpretation. Furthermore, the number of weeks of practical teaching experience corresponded with the respective study phase as well as with the study model. While the BA students without a PCK module had hardly any practical experience, the BA students with a PCK module had on average slightly more teaching experience than the Diplom students. The Diplom students were close to entering phase 2 of their teacher training programme; hence, they had no opportunity to gain more practical teaching experience during the university phase of their teacher training programme.

As expected, a positive *curricular* effect was evident in the level of PCK, as the BA students with a PCK module scored higher than those BA students who had yet to complete this module. The t-test and u-test analyses²⁵ confirmed a significant difference ($p = 0.000$) and a strong effect (Cohen's $d = 0.73$ ²⁶).

With regard to the *structural* effect of the two study models, we found that the PCK score of the Diplom students was more than one point above the score of the BA students who had completed the PCK module. This difference turned out to be not significant (t-test: $p = 0.106$; u-test: $p = 0.089$), albeit with a small effect (Cohen's $d = 0.33$). Even though we could not make definite conclusions due to the small sample sizes, preliminary interpretations of these findings seem plausible. Even if the Diplom students could not attend a comparable PCK module, they still had attended classes preparing them for the job. Even if these classes were less connected, they still must have had an effect on the level of PCK.

Conclusion

In this paper, we investigated two research questions concerning the effects of the structural and curricular changes in the newly implemented BA/MA study model. The new model was compared to the to-be-discontinued Diplom study model with regard to the levels of content knowledge (CK) of business and economics and pedagogical content knowledge (PCK) among student teachers of business and economics, enrolled in business education degree courses and studying to become teachers at vocational schools. For CK of business and economics, we observed hardly any effects that could be attributed to the structural changes following the Bologna Process. This finding can perhaps be explained by the fact that the structural changes, for example, the modularisation of the study courses, were not paralleled by any essential curricular changes in the major subject of business and economics.

With regard to the comparison of the level of PCK among different groups of students, the results indicated that the level of PCK among future teachers in the field of business and economics increased as additional classes on subject-specific teaching methodology were introduced and as the number of practical teaching phases increased within the new

BA/MA study model. Thus, the structural measures implemented as part of the research project, which consisted in essential changes in the curriculum, provided more opportunities for deliberate practice and early support by teacher trainers.

Overall, the findings suggest that opportunities for structured learning with a theoretical and practical orientation, such as the ones implemented in the new BA/MA degree courses, should be considered important for the development of PCK in business and economics in the university phase of teacher training. Evidence of the relevance of such opportunities was found in further analyses, where student teachers from the second phase of teacher training achieved a higher level of PCK than student teachers from the first phase. In comparison to the first phase of teacher education, the second phase includes even more opportunities for structured learning with more autonomous teaching at schools and corresponding guided reflection (see Kuhn et al., submitted a; Kuhn, 2014).

In the first phase of teacher training, the curricular changes in the MA were also designed to provide more opportunities for structured learning at a higher level compared to the BA, including, for example, the consecutive compulsory module on PCK and advanced practical phases. Hence, we can expect the BA students' level of PCK to increase further over the course of the subsequent MA degree course and eventually exceed the Diplom students' level of PCK at the end of the university phase of teacher training.

To what extent the level of PCK is also influenced by other traits which were not considered in this paper, for example, self-regulation abilities, remains to be examined in future research (see Neuweg, 2011).

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Notes

1. The main aims of the Bologna reform are to enable comparison among tertiary-level education institutions across Europe and to encourage and facilitate mobility of students, teachers, and researchers across the continent.
2. Competence is understood broadly as a combination of cognitive, affective-motivational, volitional, and social dispositions that are the basis for performance. From a developmental perspective, competence can increase through learning (or decrease through forgetting) (see also Shavelson, 2013).
3. The reason is that the enrolled Diplom students have not yet finished their studies.
4. Science, Technology, Engineering, and Mathematics.

5. Germany does currently not take part in this study, but the study does point out a lack of suitable measuring instruments for international assessments of business and economic contents.
6. The ILLEV project is funded by the German Federal Ministry of Education and Research (BMBF) under grant no. 01PH08013. The abbreviation ILLEV stands for “Innovative Teach-Study Network in Academic Higher Education”. One aim of the ILLEV project was to implement key curricular changes in the degree course of business education at the monitored university in order to enhance the quality of the students’ training at university. For further information on this research programme see <http://www.hochschulforschung-bmbf.de/de/1312.php>. Specifically the modelling and assessment of pedagogical content knowledge in this context was covered by a sub-project funded separately by the BMBF under grant no. 01JG0928 (see Kuhn, 2014).
7. Even though the present empirical study focuses on teachers in this particular field, the findings can be applied well to teaching in other fields especially with regard to the methodology.
8. In this regard, we can also draw on research from other study domains, such as the studies by Hill, Rowan and Ball (2005) as well as Morris, Hiebert, and Spitzer (2009) for teacher education in mathematics as well as the works by Grossman and colleagues (1990) for teacher training in English language teaching.
9. The German abbreviation COACTIV stands for Professional Competence of Teachers, Cognitively Activating Instruction, and Development of Students’ Mathematical Literacy.
10. General pedagogical knowledge was not considered in this study primarily due to practical reasons (testing time). Aspects of curricular knowledge are considered in the theoretical modelling of pedagogical content knowledge (see Kuhn, 2014).
11. We are aware that this simplified model does not include all aspects of teachers’ professional competence that have already been theoretically established, for example, diagnostic competence. However, it is not feasible to successfully assess all these aspects within one study, which is why we focused on the ones described below.
12. Self-concept, Motivation, Interest, Learning strategies, Epistemological beliefs
13. In both surveys, subjects were asked to generate a personal code for re-identification purposes. This code did not reveal the identity of the individuals but made it possible to identify those subjects who had completed both the CK test and the PCK test. This also enabled comparative analyses of the relation between CK and PCK among student teachers of business and economics. For more information on the relation between CK and PCK, see Kuhn, Happ, Zlatkin-Troitschanskaia, Beck, Förster and Preuße (2014).
14. Usually, it takes students six semesters to complete a bachelor degree. The majority of students begin their master studies (provided they are admitted) when they are in their 7th semester at university, which is then counted as their 1st semester of a master programme.
15. This is a simplified schema. Over the four survey dates, assessments involved students up to the 18th semester.
16. This combination of cohort and longitudinal design frequently has been used for surveys, particularly those in the social sciences (Reinecke, 2005).

17. To enlarge the sample, we assessed students of business and economics (without teaching perspective at the end of their studies), given that they attended the same classes in their major subject of business and economics. Including these students resulted in a larger sample (with a total of 4,187 observed students). Consequently, the data situation was considerably better for analysing the development of business and economic CK in systematic longitudinal analyses (for details, see Happ et al., 2016).
18. Student teachers have completed their university training and are in phase 2 – the practical phase of teacher training.
19. All structural and curricular changes that occurred in the degree courses targeted by ILLEV, such as the introduction of the additional PCK module, were supervised and evaluated scientifically over the project runtime of four years (see also Kuhn and Zlatkin-Troitschanskaia, submitted b).
20. Since there were only few students enrolled in the MA degree course at the time when the PCK survey was conducted, there was not sufficient data for a quantitative analysis on the effects of the teaching methodology module in the MA degree course. The same applies to the additional practical phases with dedicated support, which are mainly part of the MA degree course.
21. In purely cross-sectional analyses of the data, the students of the Diplom degree course would achieve better results on the CK tests on all four measuring dates than the BA/MA students since the Diplom students are more advanced in their studies. Hence, there is no purpose in discussing such cross-sectional findings here.
22. The BAKT was not used on the first measuring date, only from the second to the fourth measuring dates. This is why students in the 4th semester did only the WBT, not the BAKT.
23. The bachelor students without a PCK module were on average in the second semester (mean = 2.0, SD = 1.2), that is, in the middle of their bachelor studies.
24. In Germany, the grading system includes grades from 1 (excellent) to 6 (insufficient), where the lowest pass grade is 4 (adequate).
25. Levene's test confirmed the homogeneity of variance among the two groups, but the non-parametric u-test was applied as well because of the quite small sample size.
26. According to Cohen (1988, p. 25f.), effects of 0.20 can be defined as small, effects of 0.5 as medium, and effects of 0.8 as large.

Epilogue

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This book “Professional learning in education: Challenges for teacher educators, teachers and student teachers” is the result of an open call launched at the ISATT 2013 conference “Excellence of Teachers? Practice, Policy and Research”. All conference participants were invited to submit the paper they presented for a chapter in this edited book. As such, this book is not a collection of all papers presented for the ISATT 2013 conference, but a selection of papers specifically submitted for publication in this book. Nevertheless, while considering possible chapters for this book, we – as editors of this book – checked whether the submitted manuscripts fitted the overall conference theme on excellence of teachers and teacher educators on the one hand, and whether the submitted manuscripts demonstrated a high scientific quality on the other hand. After a process of call, submissions, selections, reviews, revisions, book reviews, and final revisions, nine chapters were finally selected. These chapters are presented in three sections: 1) professionalism of teacher educators, 2) professional development of (student) teachers, and 3) (student) teacher practices. These sections are preceded by an introductory chapter (Chapter 1) that provides a general framework to link the three sections. In this introductory chapter, we presented a model for professional development and tried to find connections between the individual chapters of the book and this model. The model we presented as overarching frame for our book, is an adaptation of Desimone’s (2009) conceptual framework on teachers’ professional development. In our view, this model is an interesting model to both conceptualise and study teachers’ professional development. Desimone presents with her model an operational theory of how professional development influences both teacher and student outcomes. The model encompasses variables or features that mediate or moderate professional development in education. Desimone underlines that her model represents interactive relationships between the critical elements or features of professional development, teacher knowledge and beliefs, classroom practice, and student outcomes. In Figure 1 in Chapter 1 (p. 12) we presented the adaptation of Desimone’s conceptual framework that illustrates that professional development comprises a number of consecutive steps. Four core elements are identified:

1. Teachers experience effective professional development through interventions (Block 1: *Intervention Characteristics*).
2. The professional development increases teachers’ knowledge and skills and/or changes their attitudes, beliefs, or identity (Block 2: *Teacher Quality*).

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3. Teachers use their new knowledge and skills, attitudes, and beliefs to improve the content of their instruction or their approach to pedagogy (Block 3: *Changes in Teaching Behaviour*), or
4. The instructional changes foster increased student learning (Block 4: *Changes in Students Learning Results*).

Additionally, these four consecutive steps of professional development are situated in:

5. A broad spectrum of school organizational conditions such as leadership, school culture, and school policies. (Block 5: *School Organizational Conditions*).

When comparing Desimones' conceptual framework with the content of the nine chapters selected for this ISATT 2013 edited book, we can draw some general lines. What is most obvious, is the clear, unique and strong focus of the ISATT 2013 submitted papers on Block 2 'Teacher Quality'. Almost all chapters pay attention to this block of the conceptual model. Chapter 5, for instance, focuses on teacher commitment in relation to teacher work and teacher identity. Also Chapter 8 focuses on teacher identity. This chapter presents research on analysing plots of student teachers' narratives to support teacher identity development. Somewhat different – but still with a focus on block 2 – is the focus of Chapter 10 on professional content knowledge of student teachers in the field of business and economics. Chapter 6, Chapter 7, and Chapter 8 also focus on teacher quality, but are further interesting as they also describe connections or implications for interventions and intervention characteristics (Block 1 in Desimones' model). Chapter 6 presents research on teachers' professional development, and particularly on issues of motivation, commitment, professional competence and confidences, and connects this with intervention initiatives. Chapter 7 focuses on teachers' attitudes and identity, and specifically on motivations for becoming a teacher. The results of this chapter have implications for intervention characteristics, e.g. interventions to support the necessary teaching competencies in line with who they are and what motivates them to become a teacher. Somewhat similar, Chapter 8 has implications for reflections on student' teachers narratives as a specific intervention to support teacher identity. Next to these chapters, some chapters have a unique focus on interventions (Block 1). This is especially the case for Chapter 4 describing intervention characteristics of a communal model for teacher educators' professional development. Other chapters (2, 6 and 8) also present connections with professional development intervention initiatives or characteristics. Besides, Chapter 4 also makes a connection with block 3 as intervention features are studied in relation to changing teacher behaviour of teacher educators. Chapter 6, 8 and 9 pay also attention to the feature of 'Changes in teachers' teaching behaviour' (Block 3). Chapter 9, for instance, describes a study to identify best classroom practices in inclusive education settings with a focus on teacher behaviour to deal with diversity. When looking at chapters that make a connection with block 4 (Changes in students' and pupils' learning results), we found that not a single chapter in this book makes this connection. On the one hand, this is surprisingly, as changed students' and learning results is meant to be the outcome of professional development activities, or the result of changed teaching knowledge, skills, attitudes, identity and teaching behaviour. On the other hand, reporting on changes

in students' and pupils' learning results is a complex – and especially long – process that asks for research designs that are probably not the focus of conference papers. Nevertheless, in this context, we repeat our plea (see Chapter 1) for more intervention studies on teachers' professional development initiatives that investigate the impact of interventions on possible changes in students' and pupils' learning results. In addition, we would like to stress that changes in learning results should be broadly conceptualised, as this does not only refer to domain specific knowledge and skills (e.g. mathematics and science), but also to general knowledge and skills such as socio-emotional processes or self-regulated learning. At the same time, we want to emphasise that teachers' professionalization initiatives are always situated in specific and authentic school contexts that strongly influence the relations between interventions, changes in teacher quality, changes in teacher behaviour, and changes in students' or pupils' learning results. In this book, only Chapter 6 deals with this question as changes in teachers attitudes and beliefs are studied within the context of collaborative cultures and leadership, both in its formal and informal nature. Finally, we see that Chapter 2 and Chapter 3 are more difficult to situate in the model, as these chapters are more conceptual in nature. This is not surprising, as these chapters are based on two of the three keynote lectures at the ISATT 2013 conference. In general we can conclude that more research providing a connection between the blocks of the presented model is needed, and also, research with a longitudinal focus that helps us understand how professional development might benefit pupils or students. In this way, the ISATT community can continue to contribute to our understanding of professional development of teachers and teacher educators, both pre-service and in-service.

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