



Fostering Coherence in Finnish Teacher Education: The MAP Model

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Abstract

This chapter discusses the process of fostering coherence in teacher education in Finland through a teacher competence model: the Multidimensional Adapted Process Model of Teaching (Metsäpelto et al., 2022). Originally developed to facilitate nationally unified student selection for initial teacher education, the MAP model represents a collective interpretation of teaching quality made by an expert panel from seven Finnish universities organizing teacher education. It encompasses the current evidence base and prevailing discourses on what teachers ought to know and be able to do. In this chapter, we examine recent trends in the Finnish educational landscape and present the argument that the MAP model holds promise for enhancing aspects of coherence within teacher education in both respect to its goals, emphases and shared guidelines as well as its implemented curricula across different units.

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G. Doetjes et al. (eds.), *Coherence in European Teacher Education*,
https://doi.org/10.1007/978-3-658-43721-3_11

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Additionally, we present findings from an analysis comparing the curricula of primary school teacher education programs (grades 1 to 6) in two universities, which provides evidence of systemic coherence. The chapter concludes by offering a critical reflection on the implications of adopting a generic teacher competence model for fostering coherence in teacher education.

Keywords

Conceptual coherence • Institutional coherence • Systemic coherence • Competence model • Student selection

11.1 Introduction

Program coherence in teacher education refers to the extent to which the core ideas of teaching and learning are shared by individuals involved in educating students in teacher education programs; and the degree to which the various components of teacher education—learning goals and contents in the curriculum, instructional methods, assessment, coursework, and fieldwork—are aligned in supporting the high-quality teacher education and the development of effective teachers for the future (Hammerness, 2006; Tatto, 1996). To make informed decisions about curriculum design to enhance program coherence, stakeholders in teacher education need to have a shared understanding and a clear vision of the program's purpose, objectives, and expected outcomes (Cavanna et al., 2021; Hammerness & Klette, 2015). However, creating a shared vision in teacher education can be difficult for several reasons, for instance, due to teacher education having diverse stakeholders with different perspectives, interests, and agendas (Richmond et al., 2019). Hence, to negotiate coherence, it is critical to involve stakeholders in dialogue which can make use of existing frameworks and models for effective teaching.

This chapter describes the process of developing a common vision or framework for program coherence in Finland by creating a teacher competence model titled Multidimensional Adapted Process Model of Teaching, which is referred to as the MAP model for short (Metsäpelto et al., 2022). We will first describe the context of initial teacher education in Finland. Then, with the MAP model serving as a guiding framework, we will discuss the benefits of building program coherence for teacher education in terms of internal consistency and interconnectedness of concepts, theories, and practices (*conceptual coherence*; e.g., Canrinus et al., 2017; Grossman et al., 2008). Special focus will be on coherence across learning

opportunities within a specific study phase or subject area (*horizontal coherence*; Grossman et al., 2009) and over the course of studies (*vertical coherence*; Darling-Hammond, 2017) from student selection at entry phase to the transition to working life and in-service phase. We will also address the challenge of promoting *institutional* (Hermansen, 2020) and *systemic coherence* (Wilson et al., 2022) by fostering a shared understanding of teaching within educational institutions and across the national teacher education system. In this context, we present results from our analysis of the curricula of two universities, specifically examining the systemic coherence of the initial teacher education programs for primary school teachers. The chapter concludes by providing a critical reflection on the implications of adopting a generic teacher competence model in the pursuit of coherence in teacher education.

11.2 The Context: Finnish Teacher Education

Finland is widely recognized as a country that highly values the teaching profession. In Finland, initial teacher education (ITE) programs are structured as a three-year bachelor's degree followed by a two-year master's degree. These programs encompass a comprehensive curriculum that includes studies in education sciences, subject-specific content, pedagogy and research methods combined with several teaching practices. While primary school and special education teacher students graduate at the master's level, early childhood education teacher students receive their teacher's degrees at the bachelor's level. However, those who aspire to assume leadership positions in the educational field can pursue further studies at the master's level.

The popularity of many ITE programs (especially primary school and special education) in Finland is remarkable, evidenced by a significantly higher number of applicants compared to the limited number of available spots. This reflects the high regard for the teaching profession and the value placed on quality teacher education in the country. Overall, Finnish teacher education strives to produce highly competent, reflective, and research-informed educators who are well-prepared to meet the diverse needs of students and contribute to the improvement of education as a whole.

Initial teacher education in Finland is primarily organized by eight universities located across different regions of the country. These universities have high autonomy in shaping the specific content and structure of their programs, and they are geographically dispersed to ensure that teacher education programs are accessible to students from various parts of Finland.

11.3 Developing a Shared Vision: Multidimensional Adapted Process Model of Teaching

By working together, stakeholders involved in teacher education can negotiate a shared vision of the goals of teacher education—constituting high teaching quality—that support the development of effective teachers. In Finland, building a shared vision of teaching quality became necessary to support the process of selecting students for initial teacher education, which was reformed in the year 2020. Teacher education in Finland differs from many other countries in that prospective teachers undergo a rigorous student selection process prior to beginning of their studies. The two-phase student selection is designed to assess the suitability of prospective teachers for the profession and their potential to excel in the demanding teacher education program. The first phase of student selection evaluates the applicants' cognitive skills by utilizing matriculation examination scores and a source-based multiple-choice test designed annually for this purpose (Haataja et al., 2023). The second phase involves an aptitude test, which includes multiple short interviews, such as assessing applicants' social and problem-solving skills and communication abilities (Metsäpelto et al., 2022).

With thousands of applicants participating in the two-phase selection process every year, organizing the entrance examination for teacher education in Finland demands significant resources and investment from the universities. Given that there is no separate qualification phase at the end of teacher education studies, student selection serves as a crucial gatekeeper in the Finnish educational system. Therefore, ensuring the validity and reliability of the entrance examination is of utmost importance, and student selection methods must be grounded in research and incorporate best practices in the field (e.g., Haataja et al., 2023; Metsäpelto et al., 2022).

As part of the 2020 reform, the selection process for teacher education was standardized across all eight universities that offer such programs, allowing applicants to apply to multiple programs (such as primary school teacher education, special teacher education, and early childhood education) within a single university or to multiple universities by taking a single entrance examination, which is administered and scored uniformly. Developing a national joint entrance examination required a shared understanding of the qualities that define effective, high-quality teaching. This involved establishing a common understanding among stakeholders across universities regarding the key skills in teacher profession that are developed and nurtured during teacher education studies, as well as the skills and competencies expected of applicants during the entry phase and, thus, evaluated during the student selection phase.

The challenge of forming a common framework or model depicting teacher's key competences was unprecedented in the Finnish educational landscape (or even internationally), as representatives of teacher education institutions had not previously strived to form a shared vision, even though some organizing principles had been shared among teacher education programs across different universities. One such principle is adherence to research-based teacher education, which has been described as a paradigm, orientation, leading principle or an organising theme of Finnish teacher education (Krokkfors et al., 2011; Toom et al., 2010). The principle that the contents of the curriculum and the practice of implementation of teacher education are guided by scientific research and knowledge was also the starting point for the design of the current teacher competence model, the MAP model.

The MAP model was built by an expert panel that included representatives from seven universities offering university-based initial teacher education degree programs in Finland. The work was part of the OVET project (2017–2020; <https://sites.utu.fi/ovet/en/>) funded by the Finnish Ministry of Education and Culture. An expert panel conducted a thorough examination of academic literature and studies on education to create a consensus and analyze the prevailing discourse in the field. The process of building a model also included discussions at each university with a pool of teacher educators, researchers, and representatives of the universities' Teacher Training Schools. The preliminary model was also presented to national stakeholders, including representatives from the Ministry of Education and Culture and the Trade Union of Education in Finland in professional meetings. The model was presented in several international conferences, and discussions were carried out with Professor Sigrid Blömeke, who, with her colleagues, had published the original teacher competence model on which the MAP model was based.

The development of the MAP model was a challenging but ultimately rewarding collaborative endeavor involving expert panel members from seven universities, who brought with them diverse organizational backgrounds, unique values, and identities shaped by local policy environments and social and cultural conventions (Hermansen, 2020). The process of building the model has been described in detail by Metsäpelto and colleagues (2022). Briefly, in a multi-organizational setting, a multivoiced dialogue was initiated, incorporating features of an expansive learning cycle (Engeström & Sannino, 2010). Several cycles of panel discussions were conducted that revealed differing views, contradictions, and personal and institutional sense-making. The differing views became the driving force of the development of common framework of teacher competence that required collective agency and reflection of the key domains in teacher profession.

The first phases of model building process included specifying the goal, searching for information, and brainstorming. Blömeke et al.'s (2015) teacher competence model was selected as the starting point for the MAP model. This model outlines teacher competences as a continuum where dispositions (e.g., teacher knowledge, affect, motivation) are dynamically interlinked with observable job performance (e.g., quality of instruction), and the situation-specific skills such as ability to perceive and interpret classroom interaction and make decisions on instruction to mediate the connection between these two domains of competence. To create the MAP model, the expert panel undertook a rigorous process of refining and specifying competencies from Blömeke et al.'s (2015) model. This process involved conducting a thorough review of relevant research (Grant & Booth, 2009) and engaging in dialogue to encourage individual and group reflection. The aim was to create a model that could represent the diverse contexts of the teaching profession, spanning from early to special education and content disciplines. The next step consisted of establishing the research base and the last steps of refining and finalizing the model in terms of agreeing on the key constructs, their operationalizations and relations. The iterative process of revisiting the key competence domains continued for 16 months. The resulting MAP model was a collective interpretation of the current evidence base and the prevailing discourses on what teachers should know and be able to do. The MAP model is presented in Fig. 1.

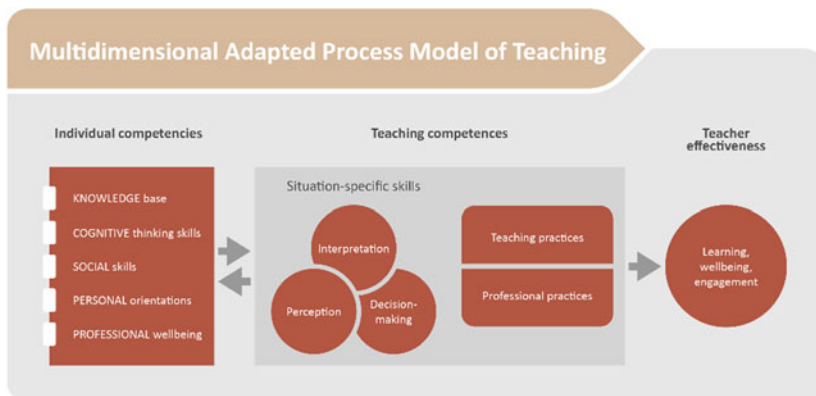


Fig. 1 The Multidimensional Adapted Process Model of Teaching (the MAP model), adapted from Blömeke, Gustaffson and Shavelson (2015)

The MAP model depicts the process of teaching and student learning as a dynamic system. Instead of constructing teacher competences narrowly through a limited set of skills, teaching is viewed as a multidimensional process that involves multiple components, such as teacher knowledge, social and emotional skills, beliefs and values, and instructional practices and emotional support, which all contribute to teaching quality and outcomes of teaching and learning at the student level. Student outcomes are broadly defined to include, for instance, student gains in basic academic skills and learning objectives but also motivational, social, and affective outcomes and student engagement in learning (Seidel & Shavelson, 2007).

An important conceptual distinction in the MAP model differentiates between teacher's individual competencies and teaching competences. The category of individual competencies refers to underlying yet developing competencies, such as knowledge base of teaching and learning, cognitive and social skills, personal orientations (management of oneself in the role of teacher, e.g., teacher identity and motivation for teaching career) and professional wellbeing (see Table 1).

The category of teaching competences refers, first, to teaching practices, defined through the quality of classroom processes. Classroom quality is affected by the teacher's ability to organize optimal learning environments to maximize students' engagement and knowledge-building and to facilitate a community of learners. For instance, according to Hamre et al. (2013), high-quality classrooms are characterized by a positive emotional atmosphere and teacher's skills to respond sensitively to students' needs. There are also clear behavioral expectations and proactive classroom behavior management strategies combined with instructional support that promotes students' higher order thinking and expands their understanding.

The category of teaching competences, as defined in the MAP model, includes a range of responsibilities beyond the classroom, collectively referred to as professional practices. These practices involve tasks such as planning and preparing instruction, organizing learning content into lessons that help students achieve their learning objectives, and employing analytical skills to select appropriate learning goals, assessment methods, materials, and resources. Other professional practices involve effectively communicating with parents and involving them in school partnerships, actively engaging in professional communities, advancing one's professional development, and demonstrating a motivational drive to incorporate new knowledge into practice. Additionally, these practices include taking on leadership roles and contributing to pedagogical development within one's school community (Metsäpelto et al., 2022).

Table 1 Descriptions of individual competencies in the MAP model and the frequency of mentions in the curricula of two universities

MAP Category	Description	Number of mentions in curricula		
		All	UTU*	JYU**
1 Knowledge base of teaching and learning		271	126	145
Content knowledge	Subject-specific knowledge of facts, concepts, and theories	98	48	50
Pedagogical knowledge	Cross-curricular knowledge of pedagogical principles and strategies (e.g., motivation)	21	6	15
Pedagogical content knowledge	Knowledge combining the content of the subject and teaching practice (e.g., differentiation)	111	54	57
Practical knowledge	“Wisdom of practice” built through practical teaching experiences and their reflection	7	2	5
Contextual knowledge	Knowledge of the school system and curriculum (e.g., effect of economic factors on schooling)	34	16	18
2 Cognitive thinking skills		155	72	83
Higher order thinking skills	Understanding, interpreting, classifying, comparing, analyzing, and applying information	55	19	36
Critical thinking	Analyzing ideas and arguments, and using reasoning to formulate beliefs and solve problems	17	6	11
Creativity	Generating original or inventive ideas, willingness to evaluate, and refine ideas by being open and responsive to ideas of others	63	38	25

(continued)

Table 1 (continued)

MAP Category	Description	Number of mentions in curricula		
		All	UTU*	JYU**
Communication, argumentation, and reasoning	Articulating thoughts and ideas and formulating arguments skillfully using diverse communication skills and media	2	0	2
Metacognition	Knowledge of and regulation of one's own cognition (e.g., monitoring learning processes)	18	9	9
3 Social skills		66	38	28
Relational skills	Ability to listen, take turns, seek help, convey empathy, cooperate, and manage conflicts	37	18	19
Emotional competency	Ability to perceive, understand, regulate, and express emotions	4	1	3
Diversity competency	Ability to respond to individual differences in ways that support and respect the dignity of each learner; commitment to equal treatment	15	12	3
Intercultural competency and interaction	Ability to navigate sensitively in multicultural contexts and consciousness and reflective stance around issues such as ethnicity and religion	10	7	3
4 Personal orientations		48	18	30

(continued)

Table 1 (continued)

MAP Category	Description	Number of mentions in curricula		
		All	UTU*	JYU**
Personal dispositions	Adaptive ways of thinking, feeling, and behaving in diverse situations across time (e.g., desire to be responsible, as in conscientiousness)	0	0	0
Self-conceptions	Beliefs and perceptions about oneself in different life domains (e.g., teacher self-efficacy)	4	1	3
Professional beliefs, values, and ethics	Beliefs about nature of knowledge, learning and learners; personal values, ethical standards and moral obligations of the teaching profession	22	6	16
Motivational orientation	Interest in and continual commitment to teaching profession and professional development	0	0	0
Professional identity	Dynamic process of understanding oneself as a professional, agency in identity negotiation	22	11	11
5 Professional well-being		5	4	1
Occupational well-being	Satisfaction in teacher studies/work; experiencing vigor, dedication, and immersion in work	5	4	1

(continued)

Table 1 (continued)

MAP Category	Description	Number of mentions in curricula		
		All	UTU*	JYU**
Stress management strategies	Coping with expectations and workload utilizing individual and community resources	0	0	0
Teacher resilience	Capacity to overcome stressors and bounce back from adversity	0	0	0

Note: *University of Turku, Finland; ** University of Jyväskylä, Finland

In line with Blömeke et al.'s (2015) competence model, the MAP model also includes teacher's situation-specific skills of perception, interpretation, and decision-making processes. They encompass the abilities to perceive, make sense of, and respond to the dynamic and multifaceted aspects of the teaching and learning environment. These processes play a vital role in teachers' ability to effectively plan, adapt, and deliver instruction to meet the diverse needs of their students.

According to the model, the components in the model are in a transactional relationship with each other and change over time when they are influenced by initial teacher education, continuous professional development, and working life experiences. The MAP model is already in use in Finnish initial teacher education and recently in professional development programs for in-service teachers, as well as in research on teaching and teacher development (Koski et al., 2023; Metsäpelto et al., 2022).

11.4 Building Conceptual Coherence to Teacher Education Through the MAP Model

Conceptual coherence in teacher education refers to the internal consistency and interconnectedness of the various concepts, theories, and practices that are taught to student teachers as part of their study paths within a specific teacher education program (Canrinus et al., 2019). Such coherence is important because learning to teach is enhanced when student teachers encounter consistent ideas across learning experiences that help them to make sense of the phenomena and make

learning experiences more cohesive, interpretable and meaningful (Hammerness, 2006).

Teacher education programs have faced criticism for lacking cohesion, with individual components appearing disconnected and failing to connect student teachers to the larger aims of education and the relationships between different aspects of teacher education (Grossman et al., 2008). Typically, fragmentation and disjointedness relate to a lack of links between theory and practice, that is, coursework organized at the university and field experiences organized at local schools or teacher training schools (Canrinus et al., 2017). Limited conceptual coherence and fragmentation in teacher education programs may result in student teachers experiencing uncertainty about who they are as teachers (Rogers, 2011). They may also have difficulties in formulating a vision of their own teaching and have an increased risk of leaving the teaching profession (Hammerness, 2014).

The MAP model was originally designed to serve as a guiding framework for Finnish student selection to teacher education programs. It was soon acknowledged, however, that the model also has the potential to bring conceptual coherence to our understanding of the core skills and knowledge which are currently taught in teacher education programs and included in curricula. Although research on the coherence of Finnish teacher education programs has been scarce, the little available evidence indicates that student teachers have, at least in some teacher education programs, perceived their program as lacking coherence, indicating the need for improvement (Canrinus et al., 2017).

The advantage of the MAP model is that it presents teaching quality as a comprehensive whole. The model unifies various previously separate or unconnected elements of teacher and teaching research, ultimately leading to a holistic understanding of the teaching profession. The holistic approach contrasts many other insightful models that determine knowledge and skills critical to teachers from a more narrow, specific view point (e.g., competences critical to mathematics teachers; Baumert & Kunter, 2013). The model is based on the prior extensive analysis of academic literature on education, making it consistent with the values of Finnish teacher education, which emphasizes a research-based approach (Krokkfors et al., 2011).

The analysis of the implementation of the MAP model as a conceptual framework in Finnish teacher education programs reveals variations across universities. For instance, one university places a strong emphasis on the MAP model, incorporating it prominently in its primary school teacher education curriculum. Several other universities have used the MAP model when determining the essential skills and objectives for their teacher education programs, although the model itself may not be specifically referred to in the curriculum. In some universities,

the MAP model has been used as a theoretical basis and guiding framework for teaching practices in the Teacher Training Schools. In Finland, teacher education goals and standards are regularly updated through periodic curriculum reforms. The MAP model was introduced recently in 2022, and its use as a conceptual framework in teacher education may become more prominent in the future.

11.5 Promotion of Horizontal and Vertical Coherence in Teacher Education

Horizontal coherence refers to the consistency and integration of different components of a teacher education program within a specific study phase or subject area, for instance, in the first study year or in a particular course (Grossman et al., 2009). It involves aligning the objectives, content, instructional strategies, and assessment methods to ensure that they support the overall goals and objectives of the program. One particular challenge during any study phase has been combining theoretical studies and teaching practice into a coherent learning experience. Student teachers often consider teaching practice as a highly meaningful learning experience, whereas coursework focusing on theoretical knowledge is often perceived as distant and detached from practical teaching in classrooms.

The MAP model promotes a close connection between theory and practice, with a focus on using knowledge to drive action. Theory and practice in teaching are integrated, as demonstrated in the construct of situation-specific skills, which involves a teacher's ongoing process of observing significant events in the classroom, interpreting their meaning, and making informed decisions, such as selecting an instructional approach (Blömeke et al., 2015; Kaiser et al., 2015). In this process, theoretical understanding is vital for teachers as it enables them to understand and analyze students' thinking, pay attention to other crucial elements of classroom dynamics and make informed decisions about the course of action in concrete teaching practice. The MAP model, by highlighting the close relationship between theory and practice, can facilitate the integration of theoretical and practical studies and enhance students' appreciation of the significance of theoretical knowledge.

The alignment of coursework and field experiences into a seamless continuum of ITE ensures that the knowledge and skills acquired by student teachers are connected and reinforced throughout their studies, known as vertical coherence (Darling-Hammond, 2017). The analysis of the implementation of the MAP model in promoting vertical coherence indicates that it has helped to determine

the essential skills and abilities required at the beginning of teacher training (especially at the student selection phase) (Metsäpelto et al., 2022). During the entry phase to teacher education, applicants are not required to already have teaching skills, and simulated teaching exercises are not part of the admission process in Finland, although they may be used in other student selection procedures (e.g., Bowles et al., 2014). Thus, at the selection phase, the MAP model directs attention to and emphasizes individual competencies, many of which are markers of the applicant's capacity to successfully complete teacher education and their overall suitability for the teaching profession.

Additionally, the MAP model can be utilized to construct a curriculum that facilitates the growth and enhancement of various skills and abilities throughout a teacher education program. For instance, in a primary school teacher education program in one Finnish teacher education department, teaching practices are arranged in a progression that increases in difficulty and complexity (O'Neill et al., 2014). The first teaching practice includes transitioning from being a student to a student teacher, learning to observe students and groups of students to gather information on their learning, motivation and other attributes as part of situation-specific skills, and conducting brief teaching sessions. The next teaching practice in the third year of study marks a shift towards taking on a teacher's role in the classroom. This involves planning and executing extended teaching sessions, and learning to evaluate the quality of teacher-student interaction in the classroom (Hamre et al., 2013).

Using the MAP framework to understand these learning experiences, it can be seen that the situation-specific skills practiced in the first teaching practice and the high-quality teacher-student interactions rehearsed in the second teaching practice are critical components that contribute to the quality of the classroom. A teacher's capability to recognize significant events in the classroom is the foundation for effective communication and interaction with students (Blömeke et al., 2020). By emphasizing the connection and accumulative nature of learning between each phase of teaching practices, the MAP model helps student teachers understand the progression and improvement of their skills, thereby enhancing the perceived coherence of the teacher education program.

In continuing professional development for in-service teachers, the MAP model can serve as a reflection tool for teachers to help identify skills or knowledge domains which need to be updated. For example, following the COVID-19 pandemic, maintaining professional well-being has been recognized as an increasingly important competency domain (Warinowski et al., 2021), which one can effectively learn to regulate only after transitioning to working life with everyday experiences in teaching. A milestone has been achieved in the provision of

continuing professional development to in-service teachers with the collaboration of seven universities that developed the MAP model. An online course, aimed at teachers, has been developed to increase in-service teachers' awareness of the key competences and to educate them about the MAP model. The Regional State Administrative Agency, which is a key player nationwide in organizing continuing education for in-service teachers in Finland, has published a MAP model based online course in spring 2023.

11.6 The MAP Model in Promoting Institutional and Systemic Coherence in Teacher Education

Institutional coherence refers to the degree of alignment and consistency within an educational institution regarding its policies, practices, and programs for teacher education (e.g., Hermansen, 2020). Systemic coherence, on the other hand, functions at macro-level and requires nationwide partnership among institutions, policymakers, and other stakeholders to ensure that all components of an educational system work together in support of the vision of teaching (Wilson et al., 2022). Program leaders in teacher education have a central role in achieving coherence at institutional and systemic levels, although it necessarily requires dialogue and negotiation at all levels of the educational system.

Regarding institutional coherence, the goal of the MAP model was to identify competence domains, which are relevant across a wide range of teacher education programs and, thus, generic to teaching. The major teacher education programs in Finland include primary school teacher (grades 1 to 6), special education teacher and early childhood education teacher programs, but the perspectives of subject teachers and career counsellors were also considered when the model was constructed. Thus, the model was designed to focus on generic and transferable teacher competencies that would be common for all teacher education programs within a particular institute, thus bringing consistency to our understanding of teachers and teaching. Overall, the development of the MAP model for teacher competence was inspired by the global dialogue about teachers and teaching across the world (e.g., Schleicher, 2011). A comprehensive review conducted by Paine et al. (2016) highlighted the increasing global consensus on learner-centered teaching, fostering active learning and problem-solving, and embracing student diversity within international research discourses. The MAP model was conceived as a reflection of the evolving global perspectives on teaching and was informed by the growing body of research in the field, fostered by

an increasingly collaborative international community. Although aiming to identify the “core” of teaching quality across different teacher professions, it was initially acknowledged that some specific teacher competences are likely to take somewhat different emphases across teacher professions, for instance, due to different age groups of learners (e.g., early childhood education and primary school teachers).

The MAP model can be interpreted as an affordance that has a high potential for strengthening the coherence of teacher education beyond single teacher education programs towards coherence at systemic levels. Recently, Jyrhämä (2021) reviewed the contents and organization of teacher’s pedagogical studies in Finnish institutions that result in the qualification to work as a teacher. The analysis showed that although pedagogical qualifications are regulated by legislation, pedagogical studies were fragmented and there was significant variation between institutions in how the pedagogical studies were organized, signaling low systemic coherence in the consistency and uniformity of teacher qualifications in Finland. The study suggests a continued need to evaluate the coherence of teacher education programs at education systemic level and seek ways to enhance it.

11.7 A Case Study on Systemic Coherence in Initial Teacher Education Curricula: A Comparative Analysis of Two Universities

As an illustration of analyzing systemic coherence, we examined the curricula of the same ITE program at two Finnish universities. Curricula can serve as proxies or indicators of systemic coherence, as their alignment and similarities across institutions can offer insights into the extent of shared understanding within the broader educational system.

We analyzed how the five individual competency domains of the MAP model (see Table 1) were reflected in the learning objectives of primary school teacher education curriculum texts. The data consisted of the primary school teacher education curricula that were in effect in 2019 and openly available on the websites of the University of Turku and the University of Jyväskylä. The methodological approach used was document analysis, which involves analyzing written material that was originally published for a purpose other than research (Bowen, 2009).

The data was analyzed using a qualitative theory-guided content analysis approach. The curriculum texts were reviewed to identify and code mentions pertaining to the individual competency domains. In cases where coding was ambiguous, discussions were held, and necessary adjustments were made. Then,

mentions related to the five individual competency domains were compiled together and thematically organized in an effort to understand and interpret the type of competency the ITE program aimed to develop. Thematic categories were created by identifying the connections within the expressions and relating them to the MAP model and existing research literature. For a more detailed description of the procedure, please refer to Metsäpelto et al. (2021).

The results showed that, in the primary school teacher education curriculum texts, a total of 544 mentions of learning objectives associated with the MAP model's competency domains were identified. As can be seen in Table 1, the domain with the highest number of mentions in both universities was Knowledge base of teaching and learning, totaling 271 mentions. The domain of Cognitive skills was also prominently mentioned, with a total of 155 mentions. The domains of Social skills and Personal orientations had relatively fewer mentions, 66 and 48, respectively. The domain of Professional wellbeing had the fewest mentions, with only 5. When comparing the mentions in curricula between the two universities, we observed that although the number of mentions was not identical, the overall magnitude was highly similar. This indicates a significant level of consistency and alignment in terms of learning objectives within the teacher education programs of these universities. It suggests that there is a shared understanding or agreement on the key components of initial teacher education, at least across these two institutions.

11.8 Conclusion

In this chapter we have discussed coherence of teacher education by focusing specifically on the benefits of using a unified teacher competence model, the MAP model, as a guiding framework for developing national coherence in Finnish teacher education.

The use of the MAP model has a lot of potential in improving teacher education coherence, but it also has its challenges. One of the challenges is the risk of having a vision that is too strict, limiting the opportunities for student teachers to discover different viewpoints and ideas about teaching and learning (Buchmann & Floden, 1991; Hammerness, 2006; Richmond et al., 2019). To overcome this risk, it has been recommended that teacher education programs should have a clear framework (such as the MAP model) while also allowing room for exploration and creativity (Hammerness, 2006). This will guard against overly constrained views on teaching and learning and provide support for student teachers development of agency and negotiation of teacher identity. One advantage of the MAP

model is its presentation of main competency domains at a relatively general level, allowing for student teachers to interpret and apply the model in their own unique ways. Additionally, the model encompasses a wide range of competencies, which provides flexibility and accommodates diverse perspectives.

The construction of the MAP model is the result of a multidisciplinary approach that integrates educational psychology, learning research, as well as contextual and constructivist perspectives from fields such as educational sociology and multicultural research. While some may argue that the model may appear to be missing certain important concepts when viewed from a single perspective, its true benefit lies in its ability to provide a holistic view of teaching. By incorporating diverse perspectives, the model offers a comprehensive understanding of the complexities and nuances of the teaching quality. Yet, for the communities of teacher educators and educational leaders, the process of seeking and negotiating coherence can be a demanding process, and it may be realistic to accept that all teacher educators in any given program will not agree with the articulated vision. In order to have a better chance to achieve a shared vision of teacher education at all system levels, the process must invite wide involvement (Bruch & Higbee, 2002) so that there is a sense of program ownership among those involved in educating prospective teachers.

Through the analysis of curricula, we investigated the level of coherence in learning objectives within the teacher education programs of two universities. Using the MAP model as a framework, the results indicated that these institutions were striving towards relatively similar learning objectives, suggesting the presence of a cohesive vision of teaching. It is important to note that curriculum similarity alone does not guarantee systemic coherence, but it does provide a valuable starting point for assessing the alignment and consistency in ITE. These findings have implications for discussions and strategies aimed at improving coherence and quality in ITE programs within the broader educational system, which, in turn, can contribute to the overall enhancement of teacher education and the promotion of effective teaching practices.

Finally, it is important to recognize that coherence in education is not a fixed or objective aspect of an system, but rather a subjective perception of how the different parts of a teacher education program function together (e.g., Penuel et al., 2009). The MAP model has the advantage of making the connections between the various knowledge areas and skills required for the teaching profession clearer, thereby increasing shared understanding and dialogue in making the learning experience more research-based, meaningful for student teachers, and visible for teacher educators.

Funding This study was a part of the SITE consortium project of University of Jyväskylä and University of Turku and was funded by the Academy of Finland (project number 342191).

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