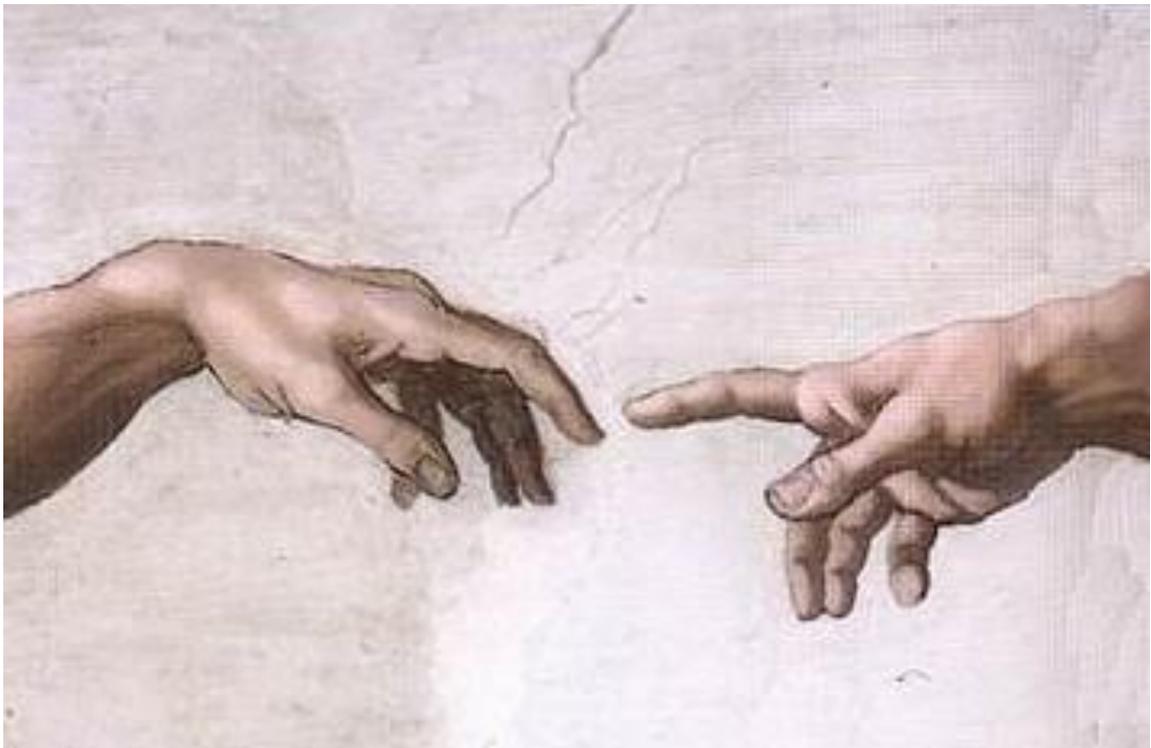


Meaningful learning in secondary teacher education

A portraiture case study at a Dutch Christian University on the role of worldview in student teachers' epistemology



MEANINGFUL LEARNING IN SECONDARY TEACHER EDUCATION

A PORTRAITURE CASE STUDY AT A DUTCH CHRISTIAN UNIVERSITY ON THE ROLE OF WORLDVIEW IN STUDENT
TEACHERS' EPISTEMOLOGY

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Abstract

Competing paradigms in society place the embodiment of a specific worldview in education under pressure, with significant consequences for student teachers and how Christian teacher education institutions develop new teachers. This study addresses the question how worldview plays a role in conceptions about meaningful learning that student teachers have developed in a specific context, namely a Dutch Christian University for teacher education, called Driestar. It addresses the contribution of personal and institutional worldview. Existing research has focussed on pedagogy in the relation between faith and learning. The relation between religious and professional epistemological beliefs has not been well researched. This study is therefore designed to address this relationship. The study further develops Polanyi's knowledge theory as an alternative to both constructivism and objectivism, building on the work of other scholars.

Portraits of student teachers are presented in the framework of a nested case study design, because the context of Driestar University matters. As meaningful learning can be situated in a paradox between universal and personal, speaking to both the person and the field is considered essential in the methodology developed. Therefore the study draws on both qualitative interviews and literature discussion.

The findings reveal that student teachers' conceptions are paradoxical and fragmented. The relation between religious and professional epistemological beliefs is complex. A profound dualism appears between these beliefs. Personal worldview plays a role in particular in thinking about meaningful learning.

This study illuminates and furthers the development of thinking around Christian education in a specific context. The major findings of this study illustrate a friction between the worldview of religious tradition and the worldview of individual choice, which presents a challenge both for student teachers and the institute of Driestar. The study reveals the importance of creating worldview consciousness and addressing epistemology in the teacher education curriculum at Driestar.

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I want to thank my dear family for their love, encouragement to persevere and sharing the laughter and the tears. Dear Mom and Dad, thank you for your empathy, you were always ready to help and give wise advice. Fries, thanks a lot for the 'finishing touch'.

In loving memory of my father in law.

Dear Ben, Sarah, Rosa and Elias, words have no meaning when trying to express what you mean to me. Thank you so much for your unconditional love.

Above all, thanks be to God:

Were the whole realm of nature mine,
That were a present far too small;
Love so amazing, so divine,
Demands my soul, my life, my all.

Preface

The well-known detail of the fresco painting 'the creation of Adam' by Michelangelo on the cover has appealed to me ever since I first met it. To me it presents a beautiful image of God reaching out and searching for man. It also expresses something of our human frailty and dependence on the Personal Other, who is 'ultimately One who comes in gracious deliverance from outside ourselves and our situation' (Meek, 2011, p. 370). Moreover it expresses something of the mystery of human being. Because we are made in Gods image and likeness, human nature is ultimately mysterious and can never be understood as it really is and constitutes a source of thought never exhausted (Louth, 1983, p. 146). As a researcher this confronts me with the 'now we see but a poor reflection as in a mirror (...) now I know in part' of this thesis. Finally, this fresco detail relates to my thesis in the sense that it beautifully expresses something of the essence of meaningful learning; its initiation outside us so that we receive it first, but also a personal 'reaching out our hand' as humans and answer the call.

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Chapter 1 Introduction

'Educating is more than teaching people to think—it is also teaching people things that are worth learning' (Hattie, 2009, p. 27).

'My desire to teach is driven by the idea of having meaningful encounters with students as well as the English language. It is in this respect that my religious belief comes into play.(..) And though we may be different in our beliefs, we share the desire to find meaning in our lives' (Portfolio 3rd year student teacher, Driestar Christian University).

1.1 Introduction

This study aims to contribute to thinking about meaningful learning in secondary teacher education. It takes place in the dynamic and complex context of education, with its tensions and pressure on teachers in education in general on the one hand and on the other hand the specific challenges that play a role in the context of a Christian University for teacher education, which stands in the Dutch Reformed tradition. This study can therefore be situated at the intersection of teacher education in general and Christian education in a Dutch context.

Thinking about meaningful learning furthermore encompasses a paradox between personal, particular and universal aspects of knowledge and knowing. This study therefore also addresses issues around the subjective and objective character of knowing and the immanent and transcendent character of meaning. Because of this paradoxical character of knowing this study cannot take place without addressing hermeneutics and personal worldview. The paradox as it presents itself between personal and universal aspects of meaning also becomes visible in this study in the dialogue between literature as the big stories of the disciplines and tradition and the little personal stories of the participating individual student teachers to help frame and understand what they mean (cf. Palmer, 2007, p. 79).

This chapter mainly serves to give background and context to this thesis and to introduce the main concepts. In section 1.2 of this chapter the sociocultural context of education in the Netherlands is outlined and related to the research topic. Section 1.3 addresses the initial research questions, purpose and research design. The specific context of this study is explained in section 1.4, which discusses the history and philosophy of Driestar Christian University. In section 1.5 I will address the significance of this research and section 1.6 summarizes the chapter and contains the thesis outline.

1.2 Education as a constant quest

The fundamental issues about what it means to know and learn have engaged scholars for a long time. The nature of transfer and the connections between what people learn in school and their lives

outside of school are issues that, in various forms, have continued to occupy the attention of educational psychologists (Putnam & Borko, 2000, p. 12).

The two different quotes on top of this page both also touch upon another aspect of education that has occupied educationalists and philosophers more than once; education as more than transferring knowledge, education as an encounter for life; education as formation (e.g. Biesta, 2014; Bulterman-Bos & De Muynck, 2014; De Muynck & Kalkman, 2005; Meijlink, 2013; Smith, 2009). It circles around the question: what is the aim of education? 'The issue as to whether the aim of schools is the cultivation of the whole person or training for external (for example economical, labor market, societal) purposes, is one of the core questions of education' (Miedema, 2014, p. 85). Education is therefore considered as a normative concept (Friesen, 2020).

These issues about knowing, learning and the aim of education together will constitute the background of this study.

Apart from viewing these issues from different paradigms on education, there may be a difference between ideals people have and the requirements of the system in a culture when thinking about this. What is important in teacher education connects to the question what is seen as important in education in a certain socio-cultural context. Hudson (2002) for instance has analysed the differences between Anglo-American and continental European traditions in thinking about teaching and learning. He attributes the key differences to the different traditions of *Didaktik*, stemming from Northern and Central Europe, and the Anglo-American *curriculum* tradition. The latter emphasizes organizational aspects aimed at building systems of schools. Implementation is a key word and the curriculum prescribes what teachers do. He refers to the situation in England, where, as he says, this 'narrow approach' (p. 47) to teacher education is combined with a strict inspection regime with penalties for those who don't meet the requirements set. In this situation 'teachers become the invisible *agents* of such a system, and are seen as animated and directed *by* the system. They are not seen as sources of animation *for* the system' (p. 50). Within the *Didaktik* tradition on the contrary, and Hudson mainly refers to the German tradition here, the curriculum is not seen as something that should explicitly direct a teacher's work. Teachers have relative professional autonomy, the teacher is seen as a *reflective practitioner*. Teaching further is seen as a moral activity in this tradition, in which the search for meaning is important.

Though The Netherlands belong to continental Europe, I do not think the ideals of the *Didaktik* tradition as reflected by Hudson can always be recognized in our current educational policy. This has been a point of concern for several scholars, who plead for a revival of attention for *Bildung* (often translated as 'formation') in education instead of a focus on usefulness, economic perspectives and

measurable results (Biesta, 2014; Boele, 2015; Bulterman-Bos & De Muynck, 2014; De Muynck & Vos, 2021; Meijlink, 2013; Miedema, 2014, p. 85 ff).

This “economic focus” has influence on the role of the teacher as well, as this becomes more restricted and narrow if teachers are seen as performers in a company, resulting in a ‘drudgery practice’ (Van Oers, 2009, p. 13). An additional problem to this focus is the tendency to disconnect knowledge and practice, which made Dutch educationalists plead to ‘give education back to the teachers’ (Bulterman-Bos, 2010, p. 5), as has also been Biesta’s (2016) argument. This separation between knowledge and practice has consequences for teacher education as well. Van Oers (2009) has analysed how this separation leads to a basic learning model of ‘applying’ in teacher education, which creates a detachment of knowledge and practice or acting. In this model the focus is on the transfer of socially relevant knowledge and skills. But in order for learning to be meaningful, more is needed, he states. This underlines what Putnam and Borko (2000) already ascertained: ‘Teachers, both experienced and novice, often complain that learning experiences outside the classroom are too removed from the day-to-day work of teaching to have a meaningful impact’ (Putnam & Borko, 2000, p. 6). This lack of meaningfulness is something that is recognized in the broader field of vocational education as well (Schaap, Baartman & De Bruijn, 2011). However, knowledge on how teacher education programs can foster meaning-oriented learning is currently not widely available (Bronkhorst, Meijer, Koster & Vermunt, 2011). A review on encouraging and discouraging factors in stimulating deep approaches to learning showed that influencing the nature of students’ learning in higher education in general is not an easy task (Baeten, Kyndt, Struyven & Dochy, 2010).

As becomes clear from the studies mentioned in this section, different understandings of meaningfulness exist beside each other in educational research. A fundamental question therefore is; what is meaningful learning? Meaningful learning, as opposed to rote learning, has been a topic of interest ever since the term was introduced by Ausubel a few decades ago (Ausubel, 1963). It is a widely used umbrella construct, which evokes an array of concepts, like deep, significant and purposeful learning (Hermida, 2015; Kuusisto, Hirsto & Ubani, 2019; Ohlsson, 2011; Scardamalia & Bereiter, 2006). It seems this term can be discussed from different perspectives.

A first perspective that could possibly be taken is an empirical-analytic perspective. Several large studies have been conducted in the past to sort out which factors are important in improving learning, for example Hattie’s (2009) synthesis of evidence-based research into what works in schools, the work of Ken Bain (2004) on the best teachers and what they do and the work of Marzano (2007) on what works in schools to positively influence the results of students. A different perspective could be a spiritual, looking at education and life’s meaning (Schinkel, De Ruyter &

Aviram, 2015), addressing an existential aspect in meaning, as in a humanistic psychological approach (Kuusisto et al., 2019). Another perspective could be a neuropsychological. Mudge, Fleming and Novat (2015) for instance have stressed the potential benefit of the neurosciences for education. Research on how the human brain works has shown that not everything we ever learn in our life will be stored in our long-term memory. The research shows that it is essential that knowledge makes sense and has meaning (Sousa, 2012). This implies that 'the knower must have some inner capacity to receive the known if knowledge is to result from their encounter' (Palmer 1993, p. 52). What is this inner capacity? What answers would the preceding perspectives give to this question? And what do these answers reveal?

These questions could be unravelled a bit further by looking at a fourth perspective. For within education meaningful learning is often approached from a constructivist perspective (Hermida, 2015; Popeijus & Geldens, 2009). Constructivism assumes that meaning is imposed on the world by the knower rather than independently existing in the world (Duffy & Jonassen, 1991, p. 8) and is rooted in experience. The knower creates reality (Meek, 2011, p. 15). Constructivism is often opposed to objectivism, in which impersonal knowing and objectivity are key elements. Objectivism assumes a sharp distinction between knower and known, the known is out there, apart from and independent of the knower (Palmer, 1993, p. 27). This shows that the philosophy of knowledge, what it is to know and the nature of knowledge, so epistemology, is closely related to the philosophy of education.

What I have aimed to illustrate is that, whatever perspective is taken, there is always more at stake than an answer to the question what meaningful learning is on its own. This question is always related to a view of knowledge, which is on its turn also connected to a view of reality. Epistemology and ontology are two important aspects of worldview. Shortly put, a worldview can be defined as 'the way one looks at life' (Bertram-Troost, De Roos & Miedema, 2006). Often a distinction is made between personal and organized worldview. 'Everyone has at least a personal worldview that may or may not be directly influenced by an organized worldview, and this should be taken into account pedagogically' (cf. Van der Kooij, De Ruyter & Miedema 2013; Miedema, 2014, p. 93). Both epistemology and ontology influence classroom practice in choice of pedagogy. This thesis will therefore have both an educational and philosophical concern. In this thesis meaningful learning will be regarded as a stratified concept with diverse dimensions and a teleological focus.

This research is operating within the field of a few existing discussions. The first is to what extent meaningful learning is preferred to rote learning and how it is related to other characterizations, like inquiry learning. Within this discussion I will mainly focus on conceptual exploration and clarity. Most relevant with an eye to the context of this study is on the one hand the ongoing discussion about the objectivity and neutrality of knowledge, learning and education (see e.g. Cooling, 2010; Cooling,

2012) and on the other hand the discussion about the appropriateness of the concept of a worldview in thinking about these issues, which is not uncontested (e.g. Smith, 2009).

1.3 Initial research questions, purpose and design

The main question in this study is:

How does worldview play a role in the conceptions about meaningful learning that student teachers at a Christian University have developed?

This question is addressed by means of the following research questions:

1. What is meaningful learning in the context of secondary teacher education?
2. How could the concept of a worldview help in our understanding of meaningful learning?
3. Which conceptions about meaningful learning do student teachers bring to the fourth year tutor group?
4. What do Driestar student teachers' conceptions about meaningful learning reveal about their epistemological beliefs?
5. What do Driestar student teachers' conceptions about meaningful learning reveal about personal and institutional worldview?

The first two questions are initially addressed in the literature chapter, following different theoretical strands. The last three questions are addressed by means of qualitative interviews with fourth year students from different denominational traditions, who are attending the secondary teacher education course at Driestar University. These interviews are complemented with concept maps, metaphors and vignettes, assuming that when talking about students' conceptions there is a tacit dimension to all knowing (Polanyi, 1966), so their thoughts have to be elicited to create awareness.

Purpose

The aim of this study is to provide conceptual clarity of the multi-layered concept of meaningful learning, in order to get insight in what meaningful learning looks like with student teachers in a specific context, namely teacher education in a Dutch institute, Driestar Christian University. This conceptual clarity is not expected to generate a neat model but it will leave room for dissonances and paradoxes, considering the complexity of education. The study focusses at the student teachers' current understanding of meaningful learning and how their personal worldview and the context of this particular institution play a role in their thinking. It aims to make a difference for future student teachers, in helping them understand and make sense of their own teaching on the one hand and to help tune the teacher education curriculum so that it appeals to student teachers on the other hand.

Research design

In this study a qualitative research approach is used. Portraits of student teachers are presented in the framework of a nested case study design, because the specific context of Driestar University matters. As the field of Christian education is far from homogeneous, empirical research at an institutional level is needed (Green, 2009). Because meaningful learning can be situated in a paradox between universal and personal, it is important to talk to the person. This warrants the choice to interview individual student teachers. The perspective of the student teachers is central, not formal educational policies.

The key opportunity a case study has to offer is to understand a phenomenon in depth and comprehensively. Considering the context of the case study, an important aspect of education is that it is variable, it operates in the field of actions and consequences, where our knowledge is always provisional because the reality we work in is always changing (Biesta, 2015b, p. 19). As will be explained more in-depth in chapter 3, this implies that this case study generates indicative knowledge, it is an interpretation of reality. Understanding is more important than explaining in this case. Because of the central role of the researcher in this type of research, reflexivity is important, as is further addressed in the methodology.

1.4 Driestar Christian University in the context of Dutch education

The core topic of this study concerns meaningful learning. But learning does not take place in a vacuum. It has to be contextualized in order to know what it means within that particular context. In this study meaningful learning will be considered within the context of secondary teacher education, more specifically at a Dutch Christian University for teacher education. For understanding and interpretation of this study it is essential to provide some background of this institution, in the context of the Dutch education system.

1.4.1 The Dutch education system and the existence of Christian private schools

The Dutch education system consists of primary (ages 4-12) and secondary schools (ages 12-18). After secondary school pupils can opt for Vocational Education (MBO), a University of Applied sciences (HBO, to which Driestar belongs) and University, depending on which level followed in secondary school (see Appendix A for a schematic overview).

What is typical for the Dutch education system is that all schools are state funded. After a decades long debate on public funding of religious schools, the so called 'school struggle', the equalization of public financing for private and public schools was realized in 1917 by revision of the law. This is

specified in article 23 of the Dutch constitution, an article that nowadays regularly comes under attack in the public and political debate (De Muynck, Miedema & Ter Avest, 2014). Today when we are talking about private schools we mean schools based on a particular religion, philosophy or pedagogy, like Protestant Christian, Reformed, Roman Catholic, Anthroposophical, or Montessori schools e.g. (Los, 2012).

It is important in order to understand the history, background and constituency of Driestar to look at the different types of private schools Driestar has aimed to serve from its start, namely orthodox Protestant schools, which besides the most distinct group of Reformed Christian primary schools also includes a number of Protestant Christian primary schools. I will specifically focus on the origin of Reformed schools, as not every reader outside the Dutch context will be acquainted with the characteristics of this type of private education.

Reformed primary schools date from the beginning of the 20th century. An important initiator of the schools was a Dutch Christian minister, G. H. Kersten, founder of the Reformed Congregations (Dutch: Gereformeerde Gemeenten), a conservative Reformed church. One of the motives for the initiation of Reformed schools was the idea that education is never neutral. A second motive was theological, and concerned positioning towards the neo-reformed (De Muynck, 2008, p. 115). Kersten called their theology soul-deceiving, because of Kuyper's¹ doctrine of presumed regeneration, which means children are baptised presuming a root of faith in them. Kersten advocated children cannot be saved without being born again. Although Kersten turned against Kuyper's theological ideas, in building own institutions he was certainly influenced by Kuyper's concept of sphere sovereignty (Exalto, 2012).

1.4.2 The experientially Reformed

As a clearly defined group, Reformed education only came into existence after the Second World War (De Muynck, 2008). It was in 1979 that Reformed education became acknowledged as a separate denomination by the Dutch *Onderwijsraad*, an independent advisory body of the Dutch government in the field of education. Most teachers and pupils visiting a Reformed school belong to the so called experientially Reformed. This is an orthodox Protestant movement within Dutch Protestantism, which finds its inspiration in the Further Reformation and has resemblances with the Puritans in the English speaking world. The Bible and Three Forms of Unity are sources of authority and leading in their spirituality (De Muynck, 2008, p. 100). Personal appropriation and subjectivity of

¹ Abraham Kuyper (1837-1920), an influential new-Calvinist, Dutch Reformed pastor, theologian and Prime Minister who founded a newspaper, a university, political party and a denomination (Mouw, 2011).

salvation are stressed within this movement (p. 101, 102). 'Reformed experiential preaching teaches that Christianity is not only a creed and a way of life but also an inner experience resulting from personal fellowship with God through the indwelling Spirit' (Heritage Reformed, n.d.). In experientially Reformed praxis a sharp distinction is made between an objective and subjective experience of faith. A similar distinction is made between knowing things cognitively and experiencing them subjectively, authentically (De Muynck, 2008, p. 104, 433; Van Vlastuin, 2019). The second, subjective, is the 'real knowing' (De Muynck, p. 104) while at the same time one's own faith experiences are distrusted because of human depravity² and sin. In this respect, the experientially Reformed have got their own version of a Cartesian/Kantian "turn to the subject". In experientially Reformed circles there is a lot of struggle around the appropriation of salvation. In its tradition the experiences of the believer have become subject of scrutiny. In sermons of the so called 'Forefathers' (Oudvaders), ministers in the Nearer Reformation who still have great authority, the journey of faith is described in stadia, counting as a pattern for the experiences the yet unconverted people are facing. A thorough knowledge of how conversion takes place is seen as an important formation purpose for church members (De Muynck, p. 105). Assurance of faith is seen as an exception rather than rule.

In a sense the experientially Reformed have got their own climate of formation and socialization. Anthropological research undertaken by Baars-Blom (2006) amongst youth of a secondary Reformed school, showed that they were religiously strongly socialized and had an open style of communication at the same time (in De Muynck, 2008, p. 117). The spirituality of the experientially Reformed is dynamic and knows a great variety of expressions and convictions, exemplified by the influence of Evangelicals for instance, expressed in the acceptance of gospel music by the Reformed youth. A number of religious traditions, having their roots in Puritanism, is important in the everyday life of the experientially Reformed. Sanctification of life is stressed, becoming visible in certain expressions like how one is dressed for instance. Although these expressions are mostly acknowledged as secondary (sub)cultural characteristics, they are often strictly respected (De Muynck, 2008, p. 101). The sanctification of life should also become apparent in the everyday habits and rituals. Personal prayer and family prayer before and after meal and reading a Bible section at the end of every meal are examples. The Sunday is a special day, a day of going to church twice, avoiding entertainment and not doing any work, in line with the fourth of the Ten Commandments (p. 106, 107). Many of the Reformed schools have strict admission requirements as well as

² The doctrine of total depravity means that the fall was so serious that it affects the whole person (as confessed in the Canons of Dordt, chapter 3.4).

appointments policy. In the Dutch context they are also known for their dress code. In the Netherlands there are about two hundred primary Reformed schools, seven secondary Reformed schools, one Reformed school for vocational education and one Reformed University for applied sciences (HBO), to whose history I will now turn.

1.4.3 Driestar's history in a nutshell

Driestar Christian University started in 1944 in the Dutch village of Krabbendijke at the initiative of Piet Kuijt. He was inspired and supported in his plans by G.H. Kersten. It started as a non-funded training college for student teachers in primary education. In 1954 Driestar University moved to Gouda. The number of students and possibility in studies increased. Piet Kuijt, principal of Driestar till 1975, was a prominent figure in Driestar's history. He played an important role in the '*coming into presence*' of the Dutch experientially Reformed (Exalto, 2014, p. 22). They had received their own place in Dutch society and fought for acknowledgment and state funding of diverse school types. The Dutch Reformed also worked on their own emancipation process: to make their pupils confident in propagating their philosophy of life and at the same time act as full citizens of society (p. 22). While Driestar had played a pioneering role in the founding of Reformed primary schools, in the beginning of the seventies Driestar's role ended at this point. In the establishment of Reformed secondary schools, Driestar is no longer key player but only one of the stakeholders, together with the VGS (Vereniging voor Gereformeerde Schoolonderwijs; the Union of Reformed Schools), school management boards and other Reformed organizations (Exalto, 2014, p. 10).

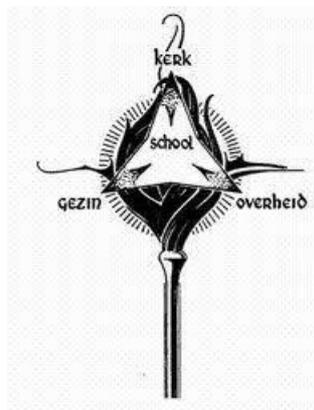
In 1982 Driestar University was divided in a school for secondary education, called Driestar College, and a pedagogical academy, which is the current Driestar University. Since 1985 Driestar University has also offered secondary teacher education and the study of pedagogy.

In the Reformed tradition of this institute God and the Bible are the central source of inspiration and the norm in their teacher education. 'Our foundation is the eternal and infallible Word of God and the confessions of faith based on the Bible' (The Three Forms of Unity; the Heidelberg Catechism, the Belgic Confession and the Canons of Dordt) (Driestar educatief, n.d.). God is the Creator of all things and is the source of all knowledge and wisdom. Important in its mission is the awareness that people live in the presence of God (*coram deo*), to use the talents that God has given to each individual and to be aware of dependence on God for His grace and power (Driestar educatief, n.d.). In its strategic policy plan for 2016-2019 and a supplement to this plan written in 2019, Driestar's mission is further explained.

‘Core in our ideal of formation is the desire that students and children personally know Jesus as their Saviour through faith and being born again and that this becomes apparent in their conduct’ (Driestar educatief, 2019, p. 5). ‘Our identity is portrayed in the early logo of our University; a burning torch, containing a star with three tips: family, church and government (society). School finds itself in the centre. The torch signifies the Bible. In the light of the Bible we work and have our place amidst family, church and society (p. 6, see Figure 1).

Figure 1

Driestar’s initial logo



Note. From Voortvarend 2021. *Supplement bij strategisch beleidsplan*. Driestar educatief, 2019 ([https://www.driestar-educatief.nl/medialibrary/Driestar/Over-ons/Bestanden/Voortvarend-2021-supplement-bij-strategisch-beleidsplan-\(2019-2021\).pdf](https://www.driestar-educatief.nl/medialibrary/Driestar/Over-ons/Bestanden/Voortvarend-2021-supplement-bij-strategisch-beleidsplan-(2019-2021).pdf)). Copyright 2019, Driestar Educatief.

1.4.4 Identity

Driestar from the start has wished not to be exclusively focused on the Reformed pillar but also to serve a broad range of (orthodox) Protestant Christian schools (Van der Schans, 2014, p. 217). A wish that also came to expression in that Driestar formally is a Christian University on a Reformed basis. During its history this has also presented a point of contention between Driestar and its constituency; parents and churches. In the seventies the idea already existed within the constituency that Driestar would have broadened its limits principally. In the eighties and nineties discussions took place within management and Supervisory Board about the admission policy, how broad or narrow it should be (Exalto, 2014, p. 71). Driestar presented itself as a Reformed University with a Protestant Christian fringe; in practice, 95% of the students belonged to one of the Reformed churches (p. 71). The department of secondary education (LVO) has always attracted a broader public of students than the department of primary education (PABO), including students who do not belong to a particular

denomination (p. 94). Since 2008, Driestar has used the motto 'wide and deep'; aimed at the whole width of Protestant Christian education and deeply rooted in the Reformed tradition (p. 106).

In reflecting on the history of Driestar's identity Van der Schans (2014) states that, although formally its identity has not changed, informally Driestar's identity has developed from an identity for Christian education on a Reformed basis to an identity for the stricter Reformed constituency, although parents and church councils showed to be wary of the opposite. This development is caused by developments in churches, the dynamic of the Reformed pillar and identitarian developments in Protestant Christian education (p. 213). That makes it more difficult for Driestar to be a place of diversity.

1.4.5 Pedagogy and vision on education

From the seventies on Driestar has reflected on and discussed its identity in relation to its vision on education and pedagogy. While the focus up until then had been on the teacher as a primary transferor of Reformed principles, from these years on teaching materials became more important and methods for Reformed education were developed (Exalto, 2014, p. 46). Through the years, Driestar has had a number of prominent, influential teachers who were outspoken about governmental notes for instance. In 1975 one of them wrote a brochure to object against a governmental focus on self-realization and instead plead for a focus on cognitive education aimed at transfer of knowledge. Another warned against the idea that didactics are neutral and unleashed discussions in Reformed circles about a method for reading (p. 47, 48). From the eighties on Driestar has had an international orientation, which led to the influence of a number of foreign pedagogues on particularly the primary teacher education department. An example of this influence can be found in encounters between German pedagogues inspired by the work of Wagenschein and Driestar. As Christian teaching has always been one of the main areas of focus of Driestar University, attention has been paid to how meaningful encounters with reality can be possible in a classroom. Different scholars at Driestar University have subsequently oriented on the ideas of Wagenschein about *Lehrkunst* (exemplary learning) in order to make didactics meaningful (Kalkman, Veldman, De Kool & Reijnoudt, 2005; Veldman, 2013). Core in Wagenschein's thinking is that the phenomena in which we educate explain themselves. The art of the teacher is to create conditions for a meaningful encounter with reality, so that it can reveal itself. These thoughts are also connected with the tradition of Reformational philosophy (Hengstmengel, 2015) and with Biblical notions about human nature and knowledge (De Muynck, Vermeulen & Kunz, 2018). Till 2012 the concept of exemplary learning has been very influential at Driestar (Exalto, 2014, p. 82).

In the eighties discussions were held whether or not a Christian pedagogy is possible and how central

cognitive development should be in education. These discussions have continued through time and although different accents have been made, personhood formation of both students and pupils has always been a central element for Driestar. In the nineties Driestar turned against an economization of higher education and instead stressed pedagogization and a broad personal and spiritual formation of students, aimed at their hearts (Exalto, 2014, p. 106 ff.). Christian teaching continued to receive attention, resulting for example in *The Essence of Christian teaching, a concise school pedagogy* (De Muynck, Vermeulen & Kunz, 2018; first published in Dutch in a preceding version by Roeleveld, Kalkman & De Kool, 2006) and a Lectorate Christian Teaching in 2012 chaired by Bram de Muynck as associate professor, which continues as an area of research in the current Research Centre. The question remains what this reflection on identity and Christian teaching does to the man or woman in front of the class (Van der Schans, 2014, p. 210). The busy agenda in the field of education, reigned by a daily school practice of performance orientation, inspection norms and other rules presents a problem to a serious reflection in the field (p. 211).

Currently, in its strategic policy plan Driestar's educational concept is described as:

characterized by sustainable (in the sense of durable or permanent) education of teachers. A teacher always remains a learner as well. A teacher is a guide on the learners' path of life, aimed at their formation. (S)he shows them the ropes in this world and offers perspective, to make their life journey purposeful. A teacher opens 'a window on heaven' for the learners. Students need 21st century skills in the current network society. Besides we encourage attitudes like modesty, concentration, consolidation, responsibility and altruism. To indicate their sustainable character we speak about '1st century-skills'. (...) We think a Christian learning environment is characterized by encounter as the basis for learning, that learning involves the heart, learning is discovering something of the secret behind reality, learning always includes responsibility and through learning the pupil or student becomes who (s)he may be (Driestar educatief, 2019, p. 7, cf. De Muynck, Vermeulen & Kunz, 2018).

1.4.6 Driestar's secondary education department (LVO)

The student teachers who participated in this research were all enrolled in the secondary education department. Within this department student teachers study for a degree to teach in Preparatory Vocational Education (VMBO), Vocational Education (MBO) or the lower grades of Senior General Secondary Education (HAVO) and University Preparatory Education (VWO). Driestar offers a full curriculum for degrees in Dutch, English, German, History, Maths and Economics.

The secondary education curriculum at Driestar (abbreviated as LVO) is a part-time study taking four

years, divided in a programme focussing on the subject taught and a generic pedagogic-didactic programme. In the latter I am a teacher educator. While there is a number of students who enter the curriculum without any teaching experience, most of them have been appointed as a teacher by the time they graduate. A lot of students combine their teaching job and the teacher education course right from the start. Students who do not teach yet yearly undertake an internship. The LVO serves a very diverse age group, as both students who have just left secondary education as well as second career teachers join the curriculum. The majority of student teachers teach at Reformed or Protestant Christian secondary schools. There is also a number of students who teach in public schools, partly explained by the broader public of students who enter the department, as discussed before. Driestar University has an open admission policy for their secondary education teacher curriculum. The only thing that is asked from female students is to comply with the dress code. A heterogeneous population is attracted because Driestar University has an educational focus, is a small scale University (the total population of LVO students was approximately 250 in 2019-2020) and several curricula have been ranked in the top of small Dutch Universities of Applied Sciences. It is on the other hand no longer self-evident that starting teachers at one of the secondary Reformed schools join the teacher education course at Driestar, as it used to be in the past. For practical reasons they sometimes go to the nearest public teacher education University. Over the past few years there used to be a trend of a declining number of students who enrolled, therefore currently suggestions and solutions are explored to keep the LVO viable and guarantee its continuation.

Students come to the teacher education courses every Thursday evening for their subject and on several Tuesday evenings for the generic programme. In the latter they join a tutor group of about fifteen students. The four-year curriculum of the generic pedagogic-didactic programme is arranged around seven themes, combined in different modules, namely Relation, Authority, Learning environment, Organisation, Unicity, Development and Responsibility. Interwoven through all these modules is the theme of Personal Formation. Literature belonging to a module is often tested before the start of a module, to give space to the deepening of themes and share teaching experiences during the module. A typical course evening at Driestar starts with a devotion by the teacher educator or by one of the students. On a course evening the specific themes central to a module are addressed by means of a variation of lectures, group work, presentations and assignments. Other regular features of a course evening are peer supervision and discussion of a lesson fragment from one of the students. Different types of assignments accompany a course module, often there is a choice for the students between several optional assignments. A lesson series has to be developed or an essay written, an e-learning module on child abuse has to be followed or a research assignment undertaken. Twice a year student teachers attend a masterclass about a historical pedagogue (e.g.

Erasmus, Augustine or Dewey), to give them insight in the fundamental questions that have occupied education since long and help them reflect on their own educational practice.

1.5 Significance of the research

A few different aspects constitute the rationale for this research. In the first place, it is on behalf and in the interest of the teacher education curriculum at Driestar that this study is conducted. As this Christian University holds a deeply personalist conception of education in its mission and philosophy, this study aims to help tune the teacher education curriculum appeal to student teachers. As we saw in the previous section, in its history Driestar University has always aspired to have personhood formation of its students in the foreground and to rethink the relation between faith and learning. An interesting question is how much of the ideals of the institute is reflected in the thinking of students in the current teacher education curriculum. What is the relationship between religious and professional educational beliefs within student teachers' thinking about meaningful learning?

Thinking in the tradition of Reformational philosophy, in which Driestar can be positioned, can have different expressions, as can be exemplified by what De Muynck wrote in reference to his doctoral research about teachers' spirituality in orthodox Protestant education. 'We see that vocation or calling is not only reinforced by inspiring experiences but also by convictions filled with Biblical ideas that influence a sense of responsibility. In that way, a calling can be seen as a spiritual act, a basic attitude or habitus by which a person interprets the matters of concrete life. The calling integrates so to say one's search for meaning in everyday life and directs the interpretation of one's daily work' (De Muynck, 2011a, p. 391). Something of what De Muynck wrote may be reflected in the quote from a student portfolio used at the beginning of this chapter. There seems to be an interesting link between spirituality, meaningfulness and interpretation of work in a Christian context.

The relation between teachers' professional (under which I classify their conceptions about meaningful learning) and their religious or worldview beliefs has not received due attention in research in European countries in general (Häusler, Pirner, Scheunpflug & Kröner, 2019).

Although thinking about meaningfulness in Christian education has not been completely ignored and its importance has been acknowledged, there is no systematic account of meaningful learning in Driestar's teaching curriculum at the moment. Thinking about worldview has maybe got an implicit place, but worldview is not discussed explicitly. Research revealed that teachers in secondary education aren't even really aware of issues like worldview (De Muynck, 2011a). Opinions differ on the question whether attention for worldview in Christian higher education would be desirable and what would be the right approach to do so (Blokhuys, 2011; Newell & Badley, 2011; Van de Lagemaat,

Wagenaar & De Wijze, 2011). A question that arises is to what extent the thoughts as discussed in section 1.4 about *Lehrkunst* and in the previous paragraph about Reformational philosophy have permeated into students' thinking and into their teaching practice. That this does not happen automatically is quite clear. 'We know that students learn as much from the "hidden curriculum" of institutional patterns and practices as from the formal curriculum of concepts and facts (..)' (Palmer, 1993, p. xiv). Besides that, Christianity is often only understood as an ethic, not as an epistemology (Palmer, 1993, p. 51).

Building on the previous paragraphs, I assume that a calling to teach is inspired by convictions, that can express elements of someone's personal worldview, which should be looked at in-depth. Most of the teachers will have a passion to be a teacher, I suppose. They will have ideas about learning and the aim of education, which is connected to a vision of 'the good life', for beliefs and construction have a place in all human knowledge. Educational practices are always framed by purposes and thus by ideas about what good or desirable education is (Biesta, 2012). The professional acting of a teacher is therefore always normative, for it gives direction to practice (Biesta, 2018; De Muynck, 2016). Education is therefore never neutral, as knowledge is not about neutral facts but every fact is belief laden (cf. Polanyi, 2013, p. 266). This is another important thought in the tradition of Reformed philosophy, in which I position myself as well. Education is based on a vision of what it means to flourish as a human being, deriving from a particular worldview (Cooling, 2010). Every choice a teacher makes is value laden and therefore in the end related to worldview. Therefore looking at the everyday stories of teachers and their personal thoughts about meaningful learning is related to a school's identity or worldview (cf. Bakker, 2004, p. 17). Reflection on the identity of a school does not begin with an abstraction but ideally starts at the point where the everyday practice is experienced as meaningful (Bakker, 2004, p. 18).

Christian education infers a worldview that believes something about the nature of reality, what it is to be human, that life is aimed at a certain telos, namely a divine destiny. One would expect its view of reality and being is also connected to its pedagogy and epistemology or theory of knowledge. Scholars are genuinely concerned about the question in how far this is currently realized, for there seems to be a large impact of the system on Christian education, creating a tension between (sociocultural) context and specific identity (e.g. Cooling, 2010; Goheen & Bartholomew, 2008; Smith, 2018). If worldview turns out to be important, and in the context of Driestar specifically a Christian worldview, how is it possible to make the transfer to professional teaching practice? To realize the ideal of Christian teacher education it is important to know what plays a role in student teachers' thinking. So there is enough reason for a profound research into this topic for the benefit of Driestar's teacher education practice. Insights and understandings from this study will contribute to

the teacher education programme of Driestar Christian University, its curriculum development and wider to thinking about teaching and learning in a specific context, Christian education in this case.

In the second place, Driestar's interest is not a distant one but it constitutes at the same time a personal interest, or calling in a sense. I have been a teacher educator in the pedagogical-didactic programme of this institute for over thirteen years. Before I took up this position I used to be a teacher of English in secondary school. I know by experience how demanding the combination of a teaching job and attending teacher education at the same time can be. In my teacher education lectures I have been struggling with the theory practice dichotomy and experienced that detachment between these two does not encourage meaningful learning with the students. I also see the struggle students have with faith-learning integration, I notice their experience of faith as something added on. The urgency of this research was again underscored at the start of the past semester, when the new students I met responded that their hearts had actually never been touched during their time in (mostly) Christian education. Therefore Wolterstorff's following plea appealed to me: 'We all know the phenomenon of people talking a better line than they live. We as Christian educators have to address that issue head on and not try to walk past it' (Wolterstorff, 2002, p. 116). I feel responsible, for as a teacher educator I have to 'teach as I preach'. It's not only about the 'what' but also about 'how' I teach, for what characterizes teacher educators is the intentionality to make the thinking behind their teaching visible (Kosnik, 2007, p.18). Student teachers tend to see their educators as an example. The educational decisions they make influence the learning of prospective teachers and their future educational choices. 'Who I am in how I teach is the message' (Kelchtermans, 2009, p. 259).

Currently, a chain of (international) research exists that has addressed the relation between teaching and Christian practices, focussing on understanding issues around faith and learning and how a Christian worldview can meaningfully shape practice (e.g. Cooling, Green, Morris & Revell, 2016; Smith & Smith, 2011; Smith, 2018). We know that there are tensions, disruptions and difficulties for teachers but we need to know more. There has been a focus on pedagogy in existing research but research on the role of epistemology and its relationship with worldview in Christian education has not received much attention yet and can be a valuable addition to existing research.

Lastly, what is known about meaningful learning in the context of education is often applied to technology, science and mathematics, or language learning (Jonassen, 2008; Novak, 2002). It would be a valuable contribution to the field of education to use insights about meaningful learning for the context of teacher education as well.

This thesis speaks to Christian teacher education in the first place. If I speak about Christian teacher education, this actually implies the context of Christian secondary or vocational education as well, from which the student teachers bring their teaching experiences and which constitutes their workplace. It is difficult to separate these contexts because of the structure of teacher education in the Netherlands, which will be explained in section 2.5. Therefore, if I speak about Christian education, I aim at both teacher education and secondary/vocational education. If I only aim at one of these contexts, I will explicitly indicate. This thesis speaks to broader teacher education as well, as any teacher education institution can benefit from a curriculum that appeals to the students. Moreover, everyone develops a worldview and professional beliefs and to gain insight in their relationship can be beneficial for a broad context.

1.6 Summary and thesis overview

In this study the topic of meaningful learning in secondary teacher education is addressed in a case study at a Christian University for teacher education in The Netherlands, called Driestar. It is discussed while taking into account that epistemology and philosophy of education play an important role at the background. This study investigates how worldview plays a role in the thinking of student teachers within this particular institution. The study aims to speak to both teacher education practice in a specific context as well as broader Christian education to help (student) teachers make sense of their teaching. In this chapter I have outlined the larger sociocultural and narrower specific context in which this study takes place. I have addressed the main concepts, questions and purposes this study is aimed at. This study aims to offer a small step forward in understanding the interplay between worldview and meaningful learning in a specific Christian context.

In chapter 2 a review of existing literature is given, in order to position the thesis topic in the field and develop conceptual clarity of the term meaningful learning. The chapter addresses the importance of epistemology and teachers' epistemological beliefs and explores the concept of a worldview. Chapter 3 presents the methodology, philosophical assumptions and research design of this study. Chapter 4 presents four portraits of Driestar student teachers. Chapters 5 and 6 contain a discussion of the portraits in synthesis with the literature. Chapter 5 will focus on what students' conceptions reveal about the epistemological beliefs of student teachers. Chapter 6 will focus on what students' conceptions reveal about personal and institutional worldview. In this chapter I will also draw implications for the Driestar context from both discussion chapters.

The final chapter presents the conclusions and limitations of this study and the research agenda.

Chapter 2 Literature review

What it is to know; towards a relational epistemology

2.1 Introduction

In this chapter I will further develop the main concepts of this study, which I have introduced in chapter 1. I am aware that there are many possible theoretical outlooks on the subject of this study. If I only consider the literature on theories of knowledge, theories of learning and theories of meaning which impinge on this study, their encompassing paradigms, inherent dichotomies and their sometimes arbitrary nature of classifications, danger lurks of either getting lost and losing sight of the bigger picture or oversimplification and misrepresentation of the most important parameters. I know therefore there is a lot of literature I am not addressing on debates beyond the central theme of this thesis, e.g. the debate between external knowledge and internal knowing in the UK (McGilchrist, 2019). Literature on linguistic, semantic and semiotic aspects of meaning also falls outside the scope of this study.

A conceptual exploration and clarification of the main concepts is indispensable however, as 'it takes a common language to make one's position acceptable--or even just comprehensible--to another person' (Sfard, 1998, p. 9). Therefore I have carefully considered what I present as the main landmarks in this thesis. With respect to the research questions the focus in this traditional literature review will be on a discussion of the concept "meaningful learning", in the context of teacher education and on the possible contribution of worldview to understanding meaningful learning.

Conceptually, meaningful learning is connected to what it is to know. Therefore I will start with a review of relevant knowledge distinctions and learning theories (section 2.2), to put the origin of the term meaningful learning into perspective and connect it to related terms. The perspective on meaningful learning in education is dominated by constructivism, therefore I will subsequently pay considerable attention to this outlook in section 2.3. A challenge to existing perspectives on meaningful learning will be addressed in section 2.4 by introducing the work of Michael Polanyi and thinkers who have developed his work subsequently, discussing its relevance for Christian education. Polanyi's thinking of knowing as grounded in a fiduciary framework offers a strong link between meaningful learning and worldview.

As this study takes place in the context of teacher education, with its specific characteristics and practices, these will be addressed in section 2.5, with a focus on the Dutch context. Furthermore, as this study looks for teachers' conceptions about meaningful learning, teacher beliefs are important to address, specifically teachers' epistemological beliefs, as an aspect of worldview. Beliefs about

knowledge and learning as represented in teachers' personal epistemology influence classroom practice in choice of pedagogy, which presents its own challenges for Christian education, as will also be addressed in this section. A helpful and supporting concept to thinking about meaningful learning in teacher education is the concept of a worldview, discussed in section 2.6. The common distinction between personal and organized worldview, along with adjacent concepts like ethos as well as contested aspects of worldview will be reviewed. Meaningfulness further connects to something beyond and to the person, therefore hermeneutics matter to this thesis and will be addressed in relation to worldview. In section 2.7 an integrative summary of the chapter will be given.

2.2 Meaningful learning reviewed

Concept formation and use can be very complex (Murphy, 2004). When talking about meaningful learning this is an important issue to consider, as conceptual understanding can help initiate and delineate the empirical research, although conceptual clarity can also emerge from the empirical part. In this section I will therefore evaluate the concept of meaningful learning. In 2.2.1 I will discuss some prevailing basic distinctions in knowledge from diverse perspectives, because when talking about learning we are talking about what it embodies; knowledge and knowing processes. Assumptions about the nature of knowledge and knowing belong to the philosophical field of epistemology (Hofer, 2001, p. 361). As mentioned in the introduction chapter already, this philosophy of knowledge is closely related to the philosophy of education. Assumptions about knowledge underpin and influence theories of learning and teaching practice consequently. Two main perspectives on what learning is will also be addressed in 2.2.1. The adjective *meaningful* is a term indicating the quality of knowledge and its origin will be discussed in 2.2.2.

2.2.1 Types of knowledge and theories of learning

There are various possible distinctions I could use to introduce the diverse positions that can be held towards the nature of knowledge. A logical *epistemological distinction* to start with would be *the couple a priori* and *a posteriori*, which are two of the original terms in epistemology. *A priori* literally means "from before" or "from earlier". This is because *a priori* knowledge depends upon what a person can derive from the world without needing to experience it; it does not depend on evidence from sense experience (Pojman, 2001). *A posteriori* literally means "from what comes later" or "from what comes after", which refers to contingent, empirical knowledge, which comes to us from experience through the five senses (Pojman, 2001). These old philosophical terms, which are best known from the work of Immanuel Kant (Buehl & Alexander, 2001), were central in the opposing movements of rationalism and empiricism, whose adherents disputed whether reason or the senses

represent the main source of knowledge. Although the terms *a priori* and *a posteriori* may still be undergirding current philosophical discussions and critiques of the offspring of both movements, in the form of learning theories for instance, these original concepts are probably too distant from the field of educational research.

A distinction closer to the field of education is the one made by cognitive scientists since the seventies between *declarative* and *procedural* knowledge, also known as propositional and non-propositional knowledge (Novak, 2002; Scardamalia & Bereiter, 2006; Sousa, 2011). For whilst the field of epistemology has long been the terrain of philosophers, in the 20th century a psychological turn took place on issues concerning knowledge and knowing, which also raised a concern for the relation between knowing and schooling (Buehl & Alexander, 2001). Educational psychologists entered the territory as well and since Piaget started his inquiry into individual cognitive development, research into this field has grown (Hofer, 2001, p. 355).

In the context of education Bereiter (2002) has suggested to use the more pragmatic distinction between 'knowledge about' and 'knowledge of'. Declarative knowledge, or 'knowledge about', is factual knowledge, which focusses more on the 'what' and 'when'. According to Scardamalia and Bereiter (2006) 'knowledge about' used to dominate traditional educational practice but I presume their assumption may have changed in the meantime, as a result of educational innovations. Procedural knowledge is more concerned with the 'how', as in remembering how to do something, embedded in skills. There is some difference with 'knowledge of', knowing how and why, which is rich explicit and implicit knowledge gained through problem solving (Bereiter, 2002).

Beyond these diverse distinctions of knowledge, several theories of *what* learning is can be discerned. Two main ways that can be distinguished in educational research about learning have been proposed by Sfard (1998), namely acquisition and participation metaphors of learning. Behind these two metaphors lies the debate between cognitive and situated (or "situative") perspectives on learning and human activity (Paavola, Lipponen & Hakkarainen, 2004).

Within cognitive or acquisition perspectives 'knowledge is understood as a property or capacity of an individual mind, in which learning is a matter of construction, acquisition, and outcomes, which are realized in the process of transfer' (Paavola et al., 2004, p. 557). There are many types of entities that can be acquired in the process of learning, indicated by a great variety of terms, like knowledge, concept(ion), meaning, schema, to mention some (Sfard, 1998, p. 5). Many terms exist as well to indicate the process of making these entities one's own, like reception, transmission, construction or accumulation (p. 5). These terms mark different schools of thought on *how* learning takes place (p. 6, emphasis mine). Meaningfulness in this perspective could be summarized as to be able to transfer

knowledge to new contexts (see also 2.2.2).

Within situated or participation perspectives, learning is examined as a process of participation and shared learning activities. 'In this view, the focus is on activities ("knowing") more than on outcomes or products ("knowledge"). Knowledge does not exist either in a world of its own or in individual minds, but is an aspect of participation in cultural practices' (Brown, Collins, & Duguid, 1989; Lave, 1988; Lave & Wenger, 1991 in Paavola et al., 2004, p. 557, 558). Individuals and their environments both play a role in cognition and knowing, and learning is "situated" in relations and networks of distributed activities of participation. In this view, knowledge and knowing cannot be separated from situations in which they are used, they are constrained by context. Meaningfulness in this perspective is to function in a meaningful way in one's community (Kuusisto et al., 2019).

So learning theories can be placed upon two different axes, one positioning a theory on *how* learning takes place on an individualist-social axis and one positioning a theory on the axis of *what* learning is, on an acquisition-participation axis.

Sfard argued that both acquisition and participation metaphors are necessary to promote a critical view of learning and both have their advantages and shortcomings. They are rather incommensurable than incompatible (1998, p. 11). Korthagen (2010a) for instance sought ways to reconcile situated learning and traditional cognitive theory. He states that situated learning theories are still presented with the problem of the transfer of knowledge to new contexts. Korthagen stresses that the two perspectives of cognitive and situated theories in the first place serve different functions. Furthermore Korthagen and Lagerwerf (1996) developed a three-level-model to integrate the two perspectives, starting on a gestalt-level grounded in concrete situations, subsequently followed by a schema level, referring to a mental network developed through reflection, leading to de-situating knowledge or situated generalization and finally a theory-level, which not many teachers actually reach, according to Korthagen (2010a, p. 103).

Other 'bridges' have been developed in the meantime to overcome the perceived shortcomings of both acquisition and participation models of learning, like *knowledge creation models* for instance (Paavola et al., 2004), of which Bereiter's knowledge building theory is a well-known example. Scardamalia & Bereiter (2006) use the term 'deep knowledge' in this context, which is promoted by knowledge building pedagogy and leads to intentional learning. The knowledge-creation model strongly emphasizes the aspect of collective knowledge creation for developing shared objects of activity, an aspect that has not been the focus of the other two models (Paavola et al., 2004, p. 558).

2.2.2 Quality of knowledge from a constructivist perspective

Besides the distinctions between different types of knowledge, there are also discussions in the literature about the quality of that knowledge, or the level, of which most common are the comparisons between *meaningful* and *rote* and *deep* versus *surface* learning.

The term *meaningful learning* can be traced back to Ausubel (1963), a cognitive psychologist who advocated the importance of *meaningful learning* as opposed on a continuum to *rote learning* in his assimilation theory, developed in the sixties (Ausubel, 1963; Novak, 2002; Boekaerts & Simons, 2007). His ideas are mainly developed for use in science education by the American educator Novak. Rote learning implies that new knowledge is arbitrarily and non-substantively incorporated into cognitive structure, also defined as long term memory, so that the existing structure is not elaborated or reconstructed.

Knowledge acquired through rote learning soon becomes irretrievable from long term memory, and even if recalled the learner will have difficulty in using it in new contexts (Novak, 2002; Sousa, 2011). In terms of Bloom's taxonomy (Anderson & Krathwohl, 2001) the learner won't pass the first stage of 'remembering'. Much of school learning takes place near the rote end, Novak (2002) states, leading to the problem of the transfer of knowledge. 'What is commonly observed is that learners often cannot transfer what is learned in one context or setting to another context or setting, and hence learning is situated in the original learning context' (p. 552). This is sometimes referred to as 'situated learning' or 'situated cognition' (p. 549, 551), which illustrates that these cognitivists are not in favour of participation metaphors of learning.

Meaningful learning in this theory on the other hand implies that the learner chooses conscientiously to integrate new knowledge to knowledge that the learner already possesses (Novak, 2002, p. 449). To facilitate this integration, Ausubel stressed the importance of prior knowledge for learning: 'The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly' (Ausubel, 1968, as cited in Novak, 1990, p.31).

Knowledge in this view consists of networks of concepts and propositions; concepts that are combined. New concept meanings can be integrated into cognitive structure to a greater or lesser degree, depending on effort, quality and quantity of existing cognitive structure. Because these features vary per individual, there is a continuum in learning from extreme rote learning to highly meaningful learning (Novak, 2002, p. 551). 'The *meaning* of concepts derives from the *totality* of propositions linked to any given concept, plus emotional connotations associated with these concepts, derivative in part from the experiences, and context of learning during which the concepts were acquired'. Therefore 'meaning building is an idiosyncratic event, involving not only unique

concept and propositional frameworks of the learners, but also varying approaches to learning and varying emotional predispositions' (p. 551, 555). Meaning is not an objective given of learning material in itself but is given to the material by the learner in a process of knowledge acquisition (Van der Veen & Van der Wal, 2016, p. 134, 135). Novak and Cañas (2006) describe three required conditions for meaningful learning: (1) the material to be learned must be conceptually clear and presented with language relatable to the learner's prior knowledge; (2) the learner needs to possess relevant prior knowledge and (3) the learner must choose to learn meaningfully. 'The central purpose of education is to empower learners to take charge of their own meaning making' (Novak, 2010, p. 13).

Jonassen and Strobel (2006) have further developed the idea of meaningful learning with respect to technology in higher education. In their exploration of this area, they argue that meaningful learning is characterized by its being: active, constructive, intentional, authentic and cooperative. 'Human learning is a naturally *active* mental and social process. When learning in natural contexts, humans interact with their environment and manipulate the objects in that environment, observing the effect of their interventions and constructing their own interpretations of the phenomena and the results of the manipulation and sharing those interpretations with others' (2006, p. 1). During those activities learners are constructing their interpretations of their actions and their results. 'Rather than rehearsing what something means to the teacher or the curriculum developers, meaningful learning focuses on what phenomena mean to the learner (...) Humans naturally construct meaning. In order to survive, humans have always had to construct meaning about their world' (2006, p. 2). The result of meaningful learning lies in its cognitive residue, the learner's mental model, they say. Educators should help learners to develop their mental models of the world, for which the construction of computational models is effective, Jonassen and Strobel (2006) argue.

A complement to the work of Ausubel could be made by thinking of learning as a paradigm shift. According to Kuhn (2012), paradigms are achievements with two characteristics; legitimate puzzles and problems on which the community works (p. XXII). 'Achievements sufficiently unprecedented, and sufficiently open-ended' (p. 10, 11). He criticizes the concept of 'development-by-accumulation' (p. 2). A new theory is seldom just an addition to what is already known, but its assimilation requires the reconstruction of prior theory and revision of prior fact, like Ausubel postulated as well. The world is not only quantitatively but also qualitatively transformed through unexpected discoveries. There is a need to change the meaning of established and familiar concepts, a transformation. When paradigms change, the world itself changes with them. So learning in this view is not always a matter of growth, but it can be disruptive as well. 'To learn is to face transformation' (Palmer, 1993, p. 40). Similar thoughts can be found in human science pedagogy, or *geisteswissenschaftliche Pädagogik*,

which has been influential in continental Europe (Friesen, 2020). This is a way of understanding education in terms of human cultures, practices, and experiences, as well as through biographical and collective and sees education as one of the humanities rather than a science, or as a 'hermeneutic science' (Biesta, 2011, p. 185). In the Anglophone world, Biesta advocates a view of education as *Geisteswissenschaft* (2015a). The German philosopher Bollnow, one of its representatives, stated that 'human life does not basically unfold in a merely "organic" process of growth; rather only passing through crises does life assume its genuine being' (Bollnow, 1987, in Friesen, 2020, p. 314). Educational reality is something necessarily marked by unplannable interruptions, discontinuities, encounters and even crises, illustrated in the existential notion of crisis for Bollnow. Crisis refers to a singular or unique event that affects the whole person; 'it forces the subject to rethink his situation and to orient himself anew' (Bollnow, 1959, in Friesen, 2020, p. 314). In moments of discontinuity and crisis, teachers are provided with an opportunity to find new pedagogical and interpersonal possibilities. It's relevant to notice that the focus here is not only on cognitive learning or conceptual change, as seems to be most important in Ausubel's (1963) theory.

A characterization of the levels of knowledge resembling Ausubel's can be found in the literature in the use of the term 'deep learning' as opposed to 'surface learning' (Novak, 2010). Research into deep and surface learning has focused on student approaches to learning and has been conducted by four main groups of researchers in the seventies and eighties (Beattie, Collins & McInnes, 1997). These groups were represented in the work of Entwistle in the UK, of Biggs in Australia, in Sweden research on student learning was initiated by Marton and Säljö, who also coined the terms of deep and surface approaches, and in Richmond it was led by Pask (Beattie et al., 1997; Howie & Bagnall, 2012). Though their approaches to learning as a consistent trait (Entwistle and Biggs) or as variable (Marton and Pask) were initially different, in later research projects these approaches were combined (Beattie et al., 1997).

In the literature some critics can be found on the deep and surface approaches to learning model. Howie and Bagnall (2012) specifically criticize the model of Biggs, which is theoretically underdeveloped and conceptually unclear, they argue. They state the model was quickly incorporated and rapidly applied at the time but lacks a thorough scholarly critique. One of their points of critique concerns the assumptions behind the words 'deep' and 'surface' and the little reflection on these. 'It is immediately clear from the wording of the model that 'deep is good' and 'surface is bad'. These words clearly tap into strong underlying cultural responses' (p. 394). Howie and Bagnall object that while these words seem to hold easily recognizable meanings, it is unlikely that different exponents of the model and others using it all refer to the same meanings. Another

point of their critique addresses the semantic slippage of the terms deep and surface *approaches* to learning into 'deep learning' and 'surface learning' in the literature. 'This conceptual slippage can readily lead to the proposition that some students are deep learners and some are surface learners, bringing the argument back to the world of inherently fixed characteristics of students' (p. 397). This is precisely what the promoters of deep and surface approaches to learning opposed, Howie and Bagnall comment.

An illustration of their point of critique concerning the model's lack of conceptual clarity can be found in recent literature, for example on 'facilitating deep learning in education' (Hermida, 2015). Hermida bases his ideas on Marton and Säljö's model (p. 17). Deep learning in his book is referred to as an enthusiastic and committed approach to learning. It refers to a process of discovery and construction of new knowledge in light of prior cognitive structures and experiences, which can be applied to new problems and in different situations. Deep learning is learning that uses higher-order cognitive skills and lasts a lifetime. Surface learning on the other hand uses lower-order cognitive skills and is a process of receiving knowledge passively from teachers or books, it is asserted. Hermida's conception of the term deep learning is much broader than the original model of Marton and Säljö and includes aspects of several theories (p. 19). These aspects actually seem to be conflicting in their premises. On the one hand the idea is adopted that 'deep learning is a process of permanent knowledge construction' with a focus on prior knowledge, conceptual change and cognitive conflict. On the other hand the ideas of situated learning are adopted, which according to Hermida imply that 'knowledge is a social construction' (p. 109), not an entity that exists in the world, but negotiated among members of a community of knowledgeable peers. Hermida does not address the underlying assumptions of these views. Relevant is, incidentally, also what Hermida consequently indicates as a change in the role of the teacher. 'This new role requires us to give up control and to become facilitators of student learning' (p. 107). I will return to this consequence later (section 2.3).

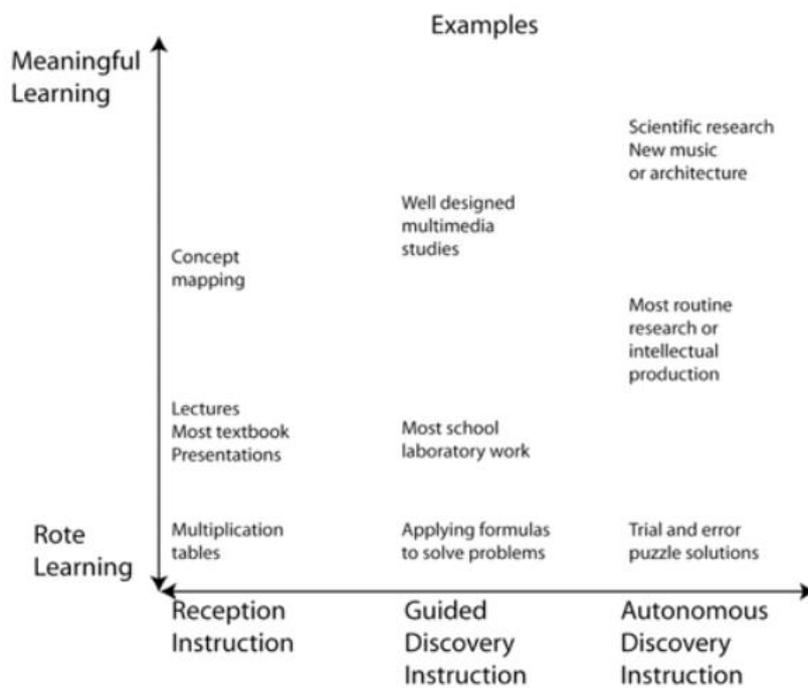
A seemingly totally different understanding of the term deep learning in the literature is suggested by Ohlsson (2011). His 'Deep Learning Hypothesis', as he calls it, is that 'in the course of shifting the basis for action from innate structures to acquired knowledge and skills, human beings evolved cognitive processes and mechanisms that enable them to suppress their experience and override its imperatives for action' (p.21). These examples both illustrate that Howie and Bagnall may be right in their critique on the conceptual clarity of the concepts of deep and surface learning.

Ausubel's theory (1963) on meaningful learning seems to be theoretically and conceptually more robust, although the term 'meaningful learning' as intended by Ausubel is also misinterpreted. Therefore an important clarification in terminology has been made by Novak. He distinguishes two

continua that easily get confused. The rote-meaningful continuum of *learning* is distinct from the reception-discovery (or inquiry) continuum for *instruction*. Both reception and discovery instruction can lead to rote or meaningful learning, Novak states (2010, p. 64).

Figure 2

Orthogonal relationship between two continua of learning and instruction



Note. From *Learning, Creating, and Using Knowledge: Concept Maps as Facilitative Tools in Schools and Corporations* (2nd ed., p. 64) by J.D. Novak, 2010, Routledge. Copyright 2010, Routledge.

This clarification is relevant as meaningful learning sometimes seems to be confused with inquiry learning or discovery learning (Bruner), while these two should be placed at the continuum for *instruction* according to Novak's model. Inquiry learning or 'enquiry-based learning' (Deakin Crick & Jelfs, 2011), plays a role in the influential Building Learning Power approach. This was developed by Guy Claxton in the UK and has in the meantime spread its ideas over the world (Deakin Crick, Broadfoot & Claxton, 2004; Lucas, Spencer & Claxton, 2012). 'Enquiry-based learning includes activities, in which students, individually or in groups, become involved in a process of inquiry and knowledge production relating to a specific problem and learn through inquiry rather than through simple transmission of knowledge from the teacher' (Gilardi & Lozza, 2009, as cited in Lucas, Spencer & Claxton, 2012, p.72). Self-authorship or 'pedagogical priority' (Cooling, 2013, p. 147) is important in this approach, which means that learners create meaningful knowledge for themselves (Deakin Crick & Jelfs, 2011, p.5).

Essentially, the knowledge quality characterizations discussed in this subsection are based on a constructivist theory of learning. Ausubel's theory (1963) should probably be placed more towards the receptive side of meaningful learning, oriented towards the acquisition metaphor. Hermida's account of deep learning in which he developed Marton and Säljö's model, although also explicitly based on constructivism (2015, p. xxi), should be placed more towards the discovery side of the continuum, oriented towards the participation metaphor. This illustrates once more the point made by Sfard (1998), that there are two different continua in learning theories, namely of *how* learning takes place and *what* learning is. At this point confusion easily arises, the literature shows.

Because constructivism is such an influential theory in education when it comes to knowing, learning and teaching I will now turn to the discussion of its tenets.

2.3 Constructivism

Constructivism is a meta movement (Smaling, 2010, p. 1), existing in many different variants, which mostly present both a view of science and of reality. All types of constructivism are opposites of types of realism (Smaling, 2010). Both realism and constructivism can be placed on a continuum from radical to moderate. Realism in a radical shape assumes that reality exists behind and beyond our experience (ontological) and is knowable (epistemological). Constructivism in a radical shape assumes reality is not existing but constructed and could therefore also be called anti-realist; that the social world is constructed differently by each person and words and events carry a different meaning in each situation (Smaling, 2010). Moderate types of constructivism say the world is real but structure is not part of this reality, that meaning is imposed on the world by our experience and that there are many ways to structure the world. So many meanings can be generated but none of them is inherently correct and meaning is rooted in experience (Fennema, 2010, p. 29). Methodological implications of these positions for this research will be further discussed in chapter 3. Whereas in the previous section I already discussed some of constructivism's underpinning assumptions about knowledge and touched upon aspects of its learning theory, in this section I will further focus on its implications for teaching and learning, for this movement has largely influenced classroom practice in recent decades.

As said, different types of constructivism can be distinguished, to a certain extent even conflicting, such as the radical constructivism of Von Glasersfeld and the cognitive constructivism of Piaget in which historical, cultural, and social factors play no or a minor role, to the social constructivism of Vygotsky in which learning is viewed as interaction between individual and collective (Fennema, 2010; Biesta, 2014). What unites these approaches and so generally characterizes the constructivist classroom, is an emphasis on student activity. Teachers and students each have their own

responsibilities in the learning process. Teachers are guides and facilitators in learning environments, fostering active processes of knowledge construction of students (Vermunt & Verloop, 1999). This is based on the assumption that students have to construct their own meanings, understandings and knowledge, and that teachers cannot do this for them (Biesta, 2014, p. 50). The influence of constructivism has been thus large that it has led to a change in practice characterized as a switch in pedagogy 'from teaching to learning', or from 'Instruction Paradigm' to 'Learning Paradigm' (Barr & Tagg, 1995; Hermida, 2015). The essential difference between these two is that in the instruction paradigm the focus is on the transmission of content from the teacher to the student, whereas in the learning paradigm the focus is on the ways in which teachers can support and facilitate student learning. In the traditional instruction paradigm, a view rooted in objectivism, students have a predominantly passive and receptive function (Cooling, 2013), which Palmer (2009) has criticized as 'the objectivist myth'. 'In this myth, truth is a set of propositions about objects; education is a system for delivering those propositions to students; and an educated person is one who can remember and repeat the experts' proposition (..) as if truth came down an antiseptic conveyer belt to be deposited as pure product at the end' (Palmer, 2009, p. 103, 104).

Constructivism as a learning theory in education has been criticized from different sides and for several reasons (e.g. Kirschner, Sweller & Clark 2006; Kirschner & Van Merriënboer, 2013). A major critic is professor Biesta. He raises several points of critique on the dominance of constructivism in the classroom. In the first place, constructivism is a theory of *learning*, not of *teaching*, he says. Therefore favouring a constructivist view of learning does not necessarily lead to a constructivist pedagogy, Biesta argues (2013a). He therefore does not criticise constructivist ideas in themselves but the way in which certain conceptions of constructivism have taken over education. A similar point is made by Kirschner et al. (2006), in saying that the epistemology of a discipline should not be confused with a pedagogy for teaching or learning it. 'The practice of a profession is not the same as learning to practice the profession' they say (p. 83). This confusion we saw already illustrated in the literature discussed in 2.2.2. Likewise, learning theories help us understand learning as a phenomenon, but they do not support reflections on what, how and why something should be taught and learned in school. These questions are the domain of didactics, Qvortrup and Keiding argue (2016, p. 173). Kirschner et al. (2006) criticize the instructional consequences constructivism puts forward in the shape of inquiry, discovery or problem-based instruction, with minimal guidance from the teacher, which is especially problematic with novice learners, they argue. Experts could do with less guidance. Mayer (2004) in this respect discusses what he calls the 'constructivist teaching fallacy' (p.15) which equates active learning with active teaching. Being cognitively active is not the same as being behaviourally active and active teaching is not the same as using discovery methods,

he states. According to Mayer (p. 17), *cognitive* instead of *behavioural* activity really promotes meaningful learning. Learning by thinking and cognitive processing. 'Guidance, structure, and focused goals should not be ignored. This is the consistent and clear lesson of decade after decade of research on the effects of discovery methods' (p. 17).

Biesta furthermore addresses the given that the language of learning has become prominent in educational research and practice and criticizes what he calls the 'learnification' of education (2013b, p. 5). This focus on learning is a result of several developments according to Biesta. Besides constructivist learning theories which have become dominant, he identifies a postmodern critique of authoritarian teaching, the silent explosion of learning, which means that more and more people learn in formal and informal ways, and the influence of neo-liberal policies on education. We live in a learning age, in a knowledge society, with an economic focus on human capital. Learning is an individualising term, according to Biesta, which obscures the importance of relationships in educational processes and practice.

Moreover, learning is in itself an empty concept Biesta argues, for the aim of education is not only *that* students learn, but that they learn *something* for some *purpose* from *someone*. The question of purpose is most central according to Biesta, because the answer to the question about the purpose of education determines subsequent decisions about content and relationships. The question of purpose is a normative and an inevitable question, connected to the question what good education is. Education is always framed by a telos (Biesta, 2012, p. 36). This is a fundamental distinction between learning and education. Biesta hastens to say that his ideas are not intended to be a conservative call for authority and control, for if teaching would be equal to control, the subject of the student or pupil is denied (2012, p. 35, 36) and subjectification is one of the three important domains Biesta designates as educational purpose (e.g. 2015a). But what he fears, as a consequence of a view of teaching as facilitating learning (as in a constructivist view), is an erosion of the teaching profession and of teacher identity. 'To suggest that the teacher adds nothing to the situation, to suggest that the teacher has nothing to give but is just drawing out what is already there is, therefore, a misrepresentation of what teachers do and what teaching is about; a misrepresentation, moreover, that has contributed significantly to the erosion and disappearance of teaching and the teacher' (2012, p. 41).

Biesta instead calls for an understanding of teaching in terms of transcendence, which means that teaching brings something radically new to the student, it is understood as something that comes from the outside and *adds* rather than that it just confirms what is already there (2014, p. 48).

Language plays a role here, as Biesta favours to use the phrase 'being taught by' instead of 'learning from'. The latter indicates a view of the teacher as a resource, that can be replaced by any other,

whereas 'being taught by' often leads to insights about ourselves and our ways of doing and being; insights that we were not aware of or did not want to be aware of, inconvenient truths or 'difficult knowledge' (Britzman, 1998 in Biesta, 2014, p. 53). This is neither in control of nor produced by the teacher, therefore Biesta speaks of the *gift* of being taught.

So to sum up, the major points of critique on a constructivist paradigm dominating education concern the confusion of a constructivist learning theory with a theory of teaching and classroom pedagogy and the dominance of learning over educating, which risks individualisation, a lack of purpose and missing out on a notion of transcendence in education.

Because this study speaks from a specific Christian educational context, it is relevant to see whether the use of constructivism in education has also been evaluated from a Christian perspective. In a reflection by several American Christian education professors on this issue (Lee, 2010), a distinction is made between philosophical, theoretical and pedagogical levels of constructivism as applied in education. They observe most differences at the first two levels between constructivism and faith-based education, so differences seem to diminish in a move from the philosophical to the practical aspects of education. The main criticism of a faith-based setting on constructivism as a philosophy concerns its assumption of reality and of the impossibility of objective truth. Constructivists say knowledge is constructed, not discovered, while divine revelation and a given structure of reality are fundamental aspects of a Christian worldview, it is argued. 'The Bible clearly teaches us that truth is discovered and that revelation is the only way of knowing in Christian education, as opposed to the constructivist model of gaining knowledge through personal experiences' Lee asserts (p. 50). I will return to this argument later in section 2.3.4. Constructivism is generally accepted as a pedagogical practice though. According to Lee all three levels of learner responsibility, namely inquiry, discovery and problem-based learning, are consonant with Christian teaching.

Within Dutch Christian education the use of constructivism has also been a matter of debate. As an ideology it is commonly rejected but the use of its pedagogy in the classroom is evaluated differently (e.g. De Boer, 2004; Praamsma, 2005). Some are convinced that it is possible to select the good elements and integrate them in one's own Christian paradigm, others are more critical and think its pedagogy cannot be seen separately from its ideology (De Boer, 2004). Toes (2020), chair of the management board of one of the Dutch Reformed secondary schools, in his doctoral research has focussed on the attitude in Reformed education towards educational innovations, which often draw on constructivism. He is critical towards a blind acceptance of a constructivist focus of putting a pupil at the centre of education. He criticizes a focus on the individual pupil, currently promoted in the development of personalised learning in education, the idea of learning as knowledge construction

and making a pupil responsible for his/her own learning. The role of a teacher is of eminent importance, he states, in a pedagogical relation between teacher and pupil.

2.4 The tacit dimension

A key author to draw on in this study about meaningful learning in the context of Christian education is the Hungarian-British chemist and scientist Michael Polanyi (1891-1976). A different light than from a constructivist perspective could be shed on knowledge and meaningful learning by paying attention to his work. Though, not only different from a constructivist, but also from an objectivist perspective, as we will see.

It seems that while in the theories and distinctions I have discussed so far types of knowledge are systematized and formalized in oppositions, Polanyi rather looks at the whole. A first noticeable thing is that he does not distinguish between theoretical and practical knowledge, 'knowing what' and 'knowing how'. Polanyi says: 'these two aspects of knowing have a similar structure and neither is ever present without the other. (...) I shall always speak of 'knowing' therefore, to cover both practical and theoretical knowledge' (Polanyi, 1966, p. 7). This is connected to his vision on knowing. According to Polanyi knowing is connected to indwelling. To know 'something' and reveal its meaning entails that someone indwells in that 'something', that is how it can appear meaningfully. '*We can know more than we can tell*', according to Polanyi (1966, p. 4, italics in original). He used the term 'tacit knowledge' for this, which means knowing implicitly, inarticulate knowledge. It is a form of knowing that is present in our acting. It is distinguished from explicit knowledge, that can be readily articulated, codified, accessed and verbalized. The process of knowing is not grounded on explicit operations of logic, according to Polanyi (Polanyi & Prosch, 1977, p. 63). 'Tacit knowing now appears as an act of *indwelling* by which we gain access to a new meaning' (Polanyi, 1962, p. 605). Tacit knowing is a from-to knowing (Polanyi & Prosch, 1977, p. 34). There are always two terms in tacit knowledge, we know the first term only by relying on our awareness of it for the second. The first term is called *proximal* and the second *distal*, or in other words *subsidiary* and *focal* awareness. The proximal term is the one on which we know more than we can tell. Polanyi illustrates these terms with several examples to make clear what he means. When we are attending to the characteristic appearance of a face (the distal) we rely on our awareness of its features (the proximal). 'We are attending from the features to the face, and thus may be unable to specify the features' (1966, p. 10). The same is true for relying on our awareness of a combination of muscular acts for attending to the performance of a skill, like playing the piano for instance or keeping one's balance on a bike, which we do not perform by following explicit rules but by dwelling in them.

We know subsidiarily the particulars of a comprehensive whole when attending focally to the whole which they constitute; we know such particulars not in themselves but in terms of their contribution to the whole. To the extent to which things are known subsidiarily in terms of something else, they cannot be known at the same time in themselves (Polanyi, 1962, p. 601).

A close scrutiny of the particulars, which Polanyi calls destructive analysis, even destroys meaning. 'Repeat a word several times, attending carefully to the motion of your tongue and lips, and to the sound you make, and soon the word will sound hollow and eventually lose its meaning' (1966, p. 18). This can be recovered through tacit or explicit integration of particulars, but it never brings back the original meaning, Polanyi says (1966, p. 19). Polanyi opposed a scientific objectivism reigning in his days, that separated the connection between knowing and being and deemed true knowledge as impersonal, universally established and objective. All knowledge is *personal* according to Polanyi, rooted in the tacit dimension. 'Into every act of knowing there enters a passionate contribution of the person knowing what is being known, (...) this coefficient is no mere imperfection but a vital component of his knowledge' (2013, p. viii).

2.4.1 Polanyi's legacy

Several generations of thinkers have been inspired by Polanyi's ideas and have used them in their theories of knowing for instance. His ideas specifically speak to Christian scholars. One of them is professor of philosophy Meek, who has developed Polanyi's epistemology in *Loving to know*, a book on what she calls 'covenant epistemology' (2011). In this book she discusses Polanyi's thinking about the false idea(l) of objectivity, in which false refers to a rigorous attempt to eliminate the human perspective from knowing the world. Meek portrays a defective default mode of knowing which as a consequence has deeply settled in Western culture as 'a subcutaneous epistemological layer' (2011, p. 5). She characterizes the sharp distinctions which are made in the way knowledge is generally thought of in dichotomies. A dichotomy of knowledge versus belief, facts versus interpretation and values, reason versus faith and theory versus practice or action. Knowledge, facts, reason, theory and science from this viewpoint are objective and opposed to the subjective of belief, values and faith, which has to be minimized. These dichotomies are based on a Cartesian dualism of mind and body, which also divorces mind from world or reality (p. 8, 9). Instead of a defective epistemological view of knowledge as statements and proofs, 'the human act of knowing is more aptly understood as an amazing feat of skill, much like learning to keep one's balance on a bike', Meek says in discussing Polanyi's view (p. 73). Meek distinguishes three sectors of clues or dimensions that play a role in knowing: the directions or the normative; the lived body and the world (2011, p. 76 ff). 'The world

clues are those contributed by the situation or circumstances we seek to make sense of' (p. 76). The lived body is our experience of our body as an instrument in achieving a certain task. The way we relate to our bodies in our knowing is subsidiarily. All knowing is skilled knowing. The normative guides our struggle to know, it often includes words of people with authority and the ideals and goals which inspire us. The act of knowing in a Polanyian sense is a normative shaping, according to Meek. 'To see a pattern involves assigning value to particulars: this is foreground, this is background, for example' (2011, p. 79). The normative 'is a much overlooked but essential feature of any act of knowing' she says (p. 79). Within the epistemic literature, 'a belief in authority as the source of knowledge is often viewed as a naive perspective, whereas belief in personal experience and reason as the source of knowledge is viewed as more sophisticated' (Buehl & Fives, 2009, p. 402).

Another important aspect of Polanyi's work that inspired Christian thinkers, is the acknowledgement of the fiduciary character of human knowing. Cooling was inspired by authors like Polanyi in becoming aware of the role of interpretation in human knowing as well as the influence of belief frameworks and presuppositions and has taken these ideas to the discussion of worldview and hermeneutics (Cooling, 2020). All knowledge is fiduciary at its root and belief is the source of all knowledge (cf. Polanyi, 1962). 'No intelligence, however critical or original, can operate outside a fiduciary framework' (Polanyi, 1962, p. 266). We will never have a 'God's eye view', but know the world only by indwelling it and can only speak about what is disclosed to our thinking (Kater, 2010, p. 240, 241). This indwelling also provides us with intuition in (scientific) research, as Palmer, also inspired by Polanyian epistemology, articulates: 'Without tacit knowledge, scientists would be clueless about where to turn for revealing questions, for promising hypotheses, for fruitful intuitions and insights about the direction in which truth may lie. The clues that allow us to know anything come from our relatedness to reality- a relatedness as deep as the atoms our bodies share with everything that is, ever has been, or ever will be' (Palmer, 2009, p. 101). Knowing is an act in which we are involved with our entire being (Pols, 2016). Human knowing connects us to the world.

In the literature on teacher education in general in the Netherlands the work of Polanyi has been developed by several authors (e.g. Bulterman-Bos, 2010; Pols, 2011, 2016). Pols especially developed the implications of Polanyi's thinking, in particular his concept of *tacit knowledge*, for pedagogy and teacher education. The knowledge base of a professional exists of practical and theoretical knowledge, Pols says (interestingly, Polanyi does not want to make this distinction, see section 2.4). Practical knowledge is idiosyncratic, non-formal, intuitive and implicit but very powerful (Pols, 2018, p. 65, 66). Formal, explicit, theoretical knowledge on the contrary is abstract and general. Pols in this context refers to Schön's idea (1983, in Pols, 2018) that professional knowledge is primarily knowledge-in-use, our knowing is in our action. This is reminiscent of Polanyi's tacit knowledge,

which refers to incorporated knowledge. An expert professional has an expert *hand* instead of an expert *head*. The tacit layer of what Pols calls 'silent knowing' (2016) is very important in education because it constitutes a highly complex practice which often requires immediate action. Shulman (2004) sees this implicit and intuitive layer of knowing as a starting point of 'the wisdom of practice' (in Pols, 2018, p.66). In order to develop this wisdom two movements are essential (Pols, 2011). The first is that silent or tacit knowledge needs to be made explicit. Silent knowledge which has been made explicit is knowledge of the particular, it is case knowledge, lived experience, crucial in the complex practice of education (Pols, 2018, p. 67). Tacit knowledge made explicit should then be confronted and connected with formal knowledge, which subsequently has to descend and become tacit again, through indwelling this formal knowledge. Through this dynamic interplay of specific and general professional knowledge, one's own knowledge, but also that of a profession, can be questioned, revised and renewed, according to Pols.

Pols' view may entail a risk to pull apart Polanyi's subsidiary-focal or from-to knowing though, as if they are separately available, for 'no knowledge can be wholly focal, but rather is always rooted in and outrun by the subsidiary. To speak of the focal is to imply the intrinsically, integratively, related subsidiary' (Meek, 2017b, p.17). Often, 'focal' is equated with 'explicit' knowledge but they are not precisely the same, it is possible to have focal knowledge that is nevertheless not explicit. 'There is a real sense, I believe, in which no meaningful knowledge is explicit knowledge. For it takes subsidiarily indwelling even the most articulate statement for it to be meaningful' (Meek, 2017b, p. 18). So it is important that the from-to structure of knowing remains intact when developing Polanyi's ideas for education.

2.4.2 Polanyi's benefit for Christian teacher education

In developing Polanyi's ideas for Christian education there are two related questions that I would like to address. How could Polanyi's ideas, and specifically his epistemology, be related to (Dutch) Christian teacher education? And how does Polanyi's thinking help in evaluating the use of constructivism in Christian teacher education?

Regarding the first question, what puzzles me is to what extent Polanyi's ideas about tacit knowledge reflect a Christian epistemology (as far as that can be defined). It is not really clear to me from Polanyi's work what he sees as the source of tacit knowledge. It seems that the source is human, self-authorized in the end, although Polanyi questions whether that's all. At the end of *The tacit dimension* he writes that 'men need a purpose which bears on eternity'. Truth and ideals could fulfil this purpose if we could be satisfied with our moral shortcomings and their evident consequences in society. But 'perhaps this problem cannot be resolved on secular grounds alone' (Polanyi, 1966, p.

92). From a Christian perspective, it could be asked: does tacit knowledge reflect something of the image of God, in which we are created? There are certainly elements in Polanyi's thinking that can be valuable when reflecting on a Christian epistemology and its implications for Christian education. (The notion of personal knowledge for example, God is a personal God and created man likewise). At this point Meek offers some interesting lines and important contributions in her work, developing the Polanyian schema of *subsidiary-focal* or *from-to* as the structure of all knowing, which implicitly signposts both personal and interpersonal elements in knowing, for Polanyi reintroduces the person as required and essential in the epistemic process.

A first kind of premise Meek distinguishes in following several thinkers is that all knowing is knowing God, the Person who is the ultimate object of all knowing on a biblical schema. We are therefore servant thinkers in our knowing (2011, p. 369). Knowledge of the world and oneself is connected to knowing God, which is a Calvinist notion. The nature of human knowing is furthermore both personal and interpersonal. Personal because of God as a Person who is the ultimate real and has made reality as a gift, therefore creation or 'the known' is full with the personal. Interpersonal, for we are being known by God and in our knowing this is reflected in a reciprocity between knower and known. In the moment of insight there is a shift in the act of creation from active to passive, the knower is being known (cf. Loder, Meek, 2011, p. 418). This concurs with a view of knowing and learning as transformation, not information, a view we met earlier with Kuhn and Palmer (section 2.2.2). 'The known seeks to know me even as I seek to know it; such is the logic of love' (Palmer, 2009, p. 58).

From a biblical perspective, there is a close connection between knowing and loving (Palmer, 2009). Knowing begins with love and is the expression of love. Polanyi's approach to knowing serves a Christian epistemology of love prior to knowing, in acknowledging a personal commitment to all knowing (Meek, 2011; Palmer, 2009). Loving is also connected to longing, where love is the active side of desire, while longing is the passive (Meek, 2011). In the words of Simone Weil, longing is waiting for and listening (in Meek, 2011, p. 431). This could be connected to another Christian notion, that love starts with a movement downward from God, who first loved us. In longing there is also a sense of wonder or adventure, distinct from selfish curiosity and control (Palmer, 2009). Genuine knowing and learning from a Christian view has more to do with studiousness and a degree of humility instead of control (Griffiths, 2011; Smith & Smith, 2011).

A degree of humility is also reflected in Polanyian epistemology in that it affirms fallibilism; that what we at one point take to be true can either be false or is ever revisable and transformable in light of subsequent insight. It offers a view of knowing as an unfolding story or a process of coming to know (Meek, 2011, p. 405, 420). Human knowing is creationally situated, embodied and encultured, all

subsidiary indwelt according to Polanyi. 'The knower moves from situated roots in situation and history toward the world and future' (Meek, 2011, p. 405). Our knowing entails no absolute or ultimate anchor of certainty, which is not a flaw but essentially what it is to be human. 'The transformative focal pattern we achieve remains distinctively fraught with the clues on which it relies. Our action is simultaneously rooted and free, immanent and transcendent' (p. 408).

Speaking about a Christian epistemology may evoke the question: are there specific 'Christian ways' of knowing or is real knowing only for Christians?

A few thoughts about these questions, far from a final or exhaustive answer. In a sense, believers and unbelievers are on equal footing when it comes to knowing. Both are on their way to knowing, we live in the 'already-not yet' of unfolding redemption from a Christian perspective. Knowing Jesus should help us to be better knowers, for as an implication of the central act of Christ's redemptive work, the first and central component of truthful knowing is having been redeemed by Him (Meek, 2011, p. 186). Those who know Christ know him who is key to epistemic health. But this side of renewal the effects of sin upon our mind is affecting all humans, so that only part of us points to God, although we can suppress even that. That part of us points to God is also called common grace. 'So an unbeliever may explicitly deny God yet implicitly signpost him. Or a believer can explicitly profess God and implicitly do anything but' (p. 186). Since God reigns, diamonds of truth can be found everywhere, though they may be distorted, and many cultural and epistemic productions of unbelievers nevertheless glorify God and advance his purposes in the world (Meek, 2011, p. 185; Van den Brink & Van der Kooi, 2012, p. 224, 225). A healthy epistemology addresses when are we knowing well, whether we know God explicitly or not. Engaging this matter does not require to be a Christian believer or embrace Christianity in order to benefit this way of knowing.

Resuming, important notions in Meek's development of Polanyian thought are; all knowing is knowing God; the person is essential in the process of knowing; knowing is personal and interpersonal; knowing is being known and transformed; knowing is loving and longing; knowing is fallible and a process of coming to know. We have already seen in 2.4 that knowing is also tacit and fiduciary from a Polanyian framework.

Returning to the question what impact a Polanyian epistemology could have on Christian teacher education, it is useful to look at what has been published in the recent past about knowing, learning and education in the Dutch Christian context. The thoughts Esther Meek developed based on Polanyian epistemology are not strange to thinking in Dutch Reformed education. In 2005 a book was published (*Perspective on learning*) as a result of a joint project of the secondary Reformed schools and Reformed vocational education, the Driestar, the Union of Reformed Schools and the Reformed

teacher cooperation. This book contains explorations of education and learning in the Bible and the Christian tradition (De Mynck & Kalkman, 2005). Important notions in this book are the idea that knowledge is always related to the person, in his/her relation to creation and creator (p. 141, 142), as in the Old Testament, in which knowing was always existential and relational, framed in the totality of human being. Knowledge should not be made absolute over affect and volition and it always has an ethical component. Living coram deo means human being has always a *responding* position in the world. Furthermore the notion is addressed that learning in the Old Testament took place in a covenantal context, something Meek underscores as well. An integrative conception of knowledge is suggested, holistic and aimed at developing wisdom or *phronesis*. A relational epistemology, connecting person, real and Truth, ultimately personified in Jesus Christ is held to be essential. This resonates very well with a Polanyian epistemology. The question is in how far these notions are still vivid in Christian education or whether they have been tacitly replaced by secular notions, under influence of governmental pressure, educational innovations and similar.

Another important question raised in *Perspective on learning* is how we view reality. This is a question Meek addresses as well, a question that cannot be overlooked in discussing a Polanyian epistemology. It touches upon some fundamental matters, which I have to address before being able to reflect further on my second question about Christian education, Polanyian thinking and constructivism.

2.4.3. Objects of knowledge and critical realism

Can we access the real in our knowing? This has been a central question in a centuries old debate between, in philosophy of science, so called epistemic realism versus epistemic anti-realism (Meek, 2011; Naugle, 2002). Because this has been a debate for such a long time already, different terms for the diverse positions have been distinguished over the course of time, of which the discussion falls outside the scope of this study. A central question however is: Is it possible that our cognitive effort represents knowledge of an external world or is it only a summary of our outlook or just a summary of data?

Generally speaking, two paradigms have been dominant. For long the modern paradigm of positivism or naïve realism has been prevailing, which assumes that definite, objective knowledge is possible. Objectively true things exist, about which we can have unquestionable knowledge, if using the scientific method of testing things empirically, so that science simply looks objectively at things that are there (Wright, 2013, p. 33), a view Polanyi fervently opposed in his writings. Sorts of knowledge that cannot be verified, like metaphysics or theology, are downgraded to belief within a positivist

view (Wright, 2013), which led amongst other to the daisy of dichotomies Meek discusses (see section 2.4.1). Its opposite position is a postmodern relativism or anti-realism, which rejects an independently existing external reality to which we can have access in our knowing, so that only individual subjectivity or social consensus remains. As said before, some radical types of constructivism can be considered as anti-realist.

A position 'in between' is a so called critical realism. Critical realism is mostly associated with the philosophical movement initiated by Bhaskar and exists in different perspectives (Edlin, 2020; Shipway, 2011; Wright, 2014). Critical realism seeks to offer an alternative to the extremes of both modernity and postmodernity. Three essential components of critical realism can be distinguished (Cooling, 2013). In the first place ontological realism; there is an external truth to be known. Second comes epistemic humility (Shipway, 2011); access to that truth is always mediated through situated, human interpretive activity and subjectivity is therefore inevitable. This epistemic humility however does not lead to judgmental relativism but to judgmental rationality, which comes third. This means that discerning the truth is dependent on critical enquiry into and judgement of the validity of the interpretations made by different people.

In the late 1950s from within the tradition of Christian theology, a 'theological critical realism' (Shipway, 2000; 2011) or Christian critical realism (Wright, 2014) first emerged, concerned with the interface between natural science and theology. Until recently this theological tradition developed almost entirely independently of the work of Bhaskar and his colleagues. A. Wright (2014) aimed to address this lack of engagement between critical realism and theological critical realism and has further developed a dialogue with the work of Bhaskar and colleagues.

Edlin (2020), a Christian educationalist, suggests a related but distinct form of critical realism, which he designates as reformed critical realism, based on the understanding of critical realism as espoused by Cooling (p. 4). It parallels but is not a synthetic reformulation of Bhaskar's critical realism and is reformed in a theological and foundational sense (p. 1). In reformed critical realism the starting faith commitment is the existence, authority and involvement of a knowable God who revealed himself through Jesus Christ (p. 5, 6). Bhaskar's critical realism, also characterized as secular critical realism (Edlin, 2020; Shipway, 2011), assumes that reality exists independent of our representation, but our knowledge of it is clearly distinct. Reality and our knowledge of reality are two different dimensions. In this type of critical realism the human mind remains the starting point (Edlin, 2020, p. 4, 5). It is not immediately clear how Edlin's reformed critical realism relates to Wright's (2014) Christian critical realism. As both respectfully and approvingly refer to the work of McGrath, their perspectives do not seem to diverge much.

A critical realist position has a distinct impact on epistemology. An often quoted and clear explanation is given by N. T. Wright (2013):

'This (*critical realism, EAM*) is a way of describing the process of 'knowing' that acknowledges the *reality of the thing known, as something other than the knower* (hence realism), while also fully acknowledging that the only access we have to this reality lies along the spiralling path of *appropriate dialogue or conversation between the knower and thing known* (hence 'critical'). This path leads to critical reflection on the products of our enquiry into 'reality', so that our assertions about 'reality' acknowledge their own provisionality. Knowledge, in other words, although in principal concerning realities independent of the mind of the knower, is never itself independent of the knower' (p. 35, italics original).

Where could Polanyi's epistemology as discussed be situated in relation to the aforementioned positions?

Central to Polanyi's epistemology is the structure of subsidiary-focal integration, all knowing is rooted subsidiary, which moves beyond both positivism and relativism. The structure of knowledge is not certain or coherent in mutual consistency, it is tacit, lived confidence, including a risky and responsible commitment, essential in personal knowledge. We are dwelling in our basic commitments, which are not specifiable:

'Therefore we cannot ultimately specify the grounds (either metaphysical or logical or empirical) upon which we hold that our knowledge is true. Being committed to such grounds, dwelling in them, we are projecting ourselves *to* what we believe to be true *from* or *through* these grounds. We cannot therefore see what they are. We cannot look *at* them since we are looking *with* them. They therefore must remain indeterminate' (Polanyi & Prosch, 1977, p. 61, italics original).

Polanyi shows how we indwell the subsidiaries to unlock the objective world (Meek, 2011, p. 398 ff.), captured in the notion of personal with universal intent.

Polanyi stated that when a person makes a scientific discovery, the knower experiences an accompanying sense of Indeterminate Future Manifestations (IFM) (Meek, 2011, p. 97; Polanyi, 1966, p. 24 ff.). Real things are pregnant with unforeseen intimations, for Polanyi (Meek, 2011, p. 75). They contact and intimate a richly surprising reality. It can feel as if in the knowing the knower is the one being known and being changed. In our knowing we access the real and seek the real as one seeks a person (Meek, 2011, p. 401). Instead of coming to know, we are coming to be known. 'We are not lone seekers in a meaningless void. Somebody Else besides us is home in the universe. Knowing

proves to be a conversation' (p. 401). This resonates well with the way Pollefeyt (2020) has characterized a Christian image of the human person, as essentially consisting of a radical openness to reality, an essential indeterminateness and an ability to transcend his or her own reality. From what has become known as Polanyi's notion of contact with reality (2013, p. 104) a realist position can be inferred (ontologically); reality exists external to the knower and independent of any conception of it. This is a form of realism as a commitment though, a subsidiarily indwelling trust in the real (Meek, 2017b, p. 23). The personal character of knowledge Polanyi proposes subsequently is not opposed to access to reality in itself, it is precisely because of the personal that contact with reality is possible. There's no unbridgeable chasm between reality-in-itself and reality-for-us.

Now how could we evaluate Polanyi's epistemology in the light of critical realism, would it fit within this paradigm? Meek considers critical realism as well in her discussion of Polanyi and criticizes what she calls the negative outlook of critical realism, in its emphasis on what *keeps us from* knowing the world and what we need to try to diminish to know it better (2011, p. 399). It is not immediately clear from the context which critical realist perspective Meek refers to. Meek proposes, in developing Polanyi's thoughts, a covenant realism or personalist realism (and epistemology) instead (2011; 2017b). To her the difference is a focus on faithfulness instead of criticism. Polanyian realism offers a dimension of hope (Meek, 2017a, p. 256).

I wonder whether there is much difference indeed with what critical realism favours, at least a theological or reformed critical realist (RCR) perspective, as discussed above (Edlin, 2020). I can see several parallels with Polanyi's and Meek's ideas in what proponents of RCR write. Wright (2013, p. 45), for instance, says knowledge has to do with the interrelation of humans and the created world, so that it presents a form of stewardship. This is a thought Meek expresses as well in her covenant thinking (2011, p. 369). To know is to be in relation with the known Wright furthermore says, 'the critical realism offered here is therefore essentially a *relational* epistemology' (p. 45). I could not think of a better way to phrase the essence of Polanyi's epistemology.

Both RCR and Polanyian epistemology acknowledge the fallible character of human knowing, while at the same time this is no apology to withdraw from a responsible way of knowing. Human knowledge is incomplete and tentative but recognizes the need to act as if it is certain, RCR says (Edlin, 2020, p. 8), which concurs with Polanyi's responsible commitment, to hold a truth claim responsibly with universal intent.

Still, there might be differences in emphasis between RCR and Polanyi's ideas. Could it be that Polanyi's realism is more designed to transcendence³ than critical realism, in that it seems to focus on reality as initiating and inbreaking, pointing out a movement of inspiration? A related question that remains to me is: what is the role of the Spirit in reformed critical realism? In this respect I will take a critical realist position with a Polanyian accent in this thesis.

2.4.4 A return to constructivism?

What could the development of Polanyi's epistemology add to the discussion of constructivism in the context of Christian education? Where does it converge or diverge from a constructivist view?

In the first place, within a constructivist *learning theory* development of new knowledge (concept acquisition) is regarded as an interrelated *idiosyncratic* and *socially mediated* process (Novak, 2002; Schaap, 2011). The dual aspects of *idiosyncratic and social, person and community, public and personal* (cf. works of Vygotsky and Leon'tev) can be considered as central aspects of Christian faith as well and are elements worth to think about when talking about meaningful learning in a Christian context. In the Old Testament one of the key words for learning is *chanak*, which means initiation, socialization and practical learning. In the Biblical culture of Israel there was a balance between learning in community and personal learning. The community was important to keep a child from entering blind alleys. At the same time there was a constant personal dimension in learning. It is precisely in community that a person flourishes, an essential notion according to Verboom (2005).

There seem to be some similarities between the ideas of Polanyi and constructivist learning theory. In Polanyi's thoughts, the *idiosyncratic* aspect could be reflected in the focus on *personal* knowledge. But one important comment applies here. Polanyi makes a distinction between the *personal* and the *subjective* (2013, p. 300). The personal has a universal intent, a transcendent point of reference I would say. Here may lie a crucial distinction between constructivist, at least in its radical shape, and Polanyian epistemology (let alone his realist ontology, which precedes his epistemology). A constructivist view seems to be primarily immanent.

Knowledge also depends on tradition in Polanyi's view, which relates to the *socially mediated* nature of knowledge. Reason is embodied in a particular tradition and complex practices and skills also depend upon prior existence of a tradition. A skill can only be acquired by submitting to the authority

³ Transcendence understood as Palmer articulates it: 'We must resist the popular tendency to think of transcendence as an upward and outward escape from the realities of self and world. Instead, transcendence is a breaking-in, a breathing of the Spirit of love into the heart of our existence, a literal in-spiration that allows us to regard ourselves and our world with more trust and hope than ever before' (1993, p. 13).

of one who possesses the skill. Here we are reminded of what Kirschner et al. (2006, section 2.3) indicated as a confusion of constructivist theory of learning and pedagogy, that the practice of a profession is not the same as learning to practice the profession. At this point they seem to concur with Polanyi. 'To learn by example is to submit to authority. You follow your master because you trust his manner of doing things even when you cannot analyse and account in detail for its effectiveness' (Polanyi, 2013, p. 53). One must indwell the 'master's' teaching and although it may seem meaningless at first, 'meaning can be discovered by hitting on the same kind of indwelling the teacher is practicing' (Polanyi, 1966, p. 61). A leap to rote versus meaningful learning here, could it be that a certain knowledge base is necessary, which one learns to indwell, with the help of a 'master' one trusts? 'Teachers don't teach information; they teach themselves (...) they replicate themselves as authoritative guides in forming their students. For learning involves tacit indwelling of the embodied clues of the master, subsidiaries that even the master cannot name' (Meek, 2011, p. 137). This implies a tradition of knowledge that is passed on from one generation to the next (Mitchell, 2006, p. 103). If we think back on the constructivist approach in education, the learning paradigm and its consequences for the role of teacher, the 'master' aspect of teaching is something that seems to be missing. A focus on learning instead of teaching tends to neglect the social aspect of knowing, which might slip into individualization as Biesta feared, while individual autonomy only gets shape against the background of a community and within the framework of a tradition. It seems the idiosyncratic aspect has been singled out in (radical) constructivist pedagogy, and has received a subjective focus instead of a personal. For Polanyi however the personal always has a universal pole.

The distinction between personal and subjective is also important to shed light on the discussion of constructivism from a faith-based setting, as I touched upon before (section 2.3). Acknowledging a personal element in all knowing, as in Polanyian epistemology, so that truth is personal on the one hand, is not incompatible with a Christian epistemology. For the Truth is a person really, from a Christian perspective. Returning to Lee, who discussed constructivism from a faith based setting, it seems he equates a constructivist (in the sense of subjectivist) epistemology with a personal epistemology in his discussion of constructivism. He namely quotes Palmer (1993) as an example of a constructivist, referring to Palmer's statement that 'truth is personal' (Lee, 2010, p. 50). Would Polanyi then also be considered a constructivist? This is at least one-sided, for both Polanyi and Palmer speak about a universal or transcendent element in all knowing as well and take a different ontological stance. In a similar line I evaluate Lee's statement that 'the Bible clearly teaches us that truth is discovered and that revelation is the only way of knowing in Christian education, as opposed to the constructivist model of gaining knowledge through personal experiences' (p. 50). I question whether discovery and personal experience are really opposed to each other, speaking from a

Christian framework and taking Polanyi into account. Can't they stand together?

It surprises me that meanwhile a subjectivist pedagogy seems to be quickly accepted by Lee as consonant with Christian teaching, as said earlier (2.3). At this point I am more critical. Take for instance Lee's approval of a statement like 'let students satisfy their own curiosity' (Yount, 1996, as cited in Lee, 2010, p. 59). Is that commensurable with the essence of Christian teaching, I wonder? To me it is difficult to see how it is possible to reject a personal epistemology from a faith-based setting, like Lee seems to do, and accept a subjective pedagogy at the same time.

A point of critique on a constructivist focus in education expressed by Biesta, namely a lack of purpose or telos, specifically speaks to a Christian context. Not only because Christian education is aimed at a certain telos, but also because it impinges on meaning. If there is one thing which is important to consider from a Christian perspective, it is the notion of inherent meaning in reality. This is something we can find in Polanyi's writings as well.

'(...) the world cannot be thought of as *ultimately* meaningful unless the organization of its parts is meaningful, that is, unless there is some point to the way things are put together or, at least, to the direction in which they are developing' (Polanyi & Prosch, 1977, p. 161 italics in original). This implies a world that is not value-free. 'Some intelligible directional lines must be thought to be operative in it' (p. 161). Explaining meaning only in terms of formulas or order is not sufficient. Intellectual assent, prevailing since the birth of modern science, to the reduction of the world to its atomic elements acting blindly, has made any sort of teleological view seem unscientific and woolly to us and has set science and religion in opposition to each other, Polanyi wrote (p. 162).

Therefore we think the world is absurd because it seems to us 'that there is no end or aim or purpose to the whole business' (p. 161, 162), no meaning to the universe, except subjective meanings man tries to import into it. Philosophical alternatives to science have not restored teleology either.

'Teleology' has become a dirty word (p. 163).

This is untenable according to Polanyi, for living things are oriented toward meaning. The whole cultural framework of man is aimed at achieving meaning, scientific discovery depends on an intuition of a 'whole field of potential meanings surrounding us' (p. 178). 'We might justifiably claim therefore that everything we know is *full* of meaning' (p. 179).

At this point I can see a clear distinction between a constructivist focus on meaning (and meaningful learning) as constructed and imposed on the world and a Polyanian epistemology and view of meaning. The hope a Polyanian view on reality offers, the hope reflected in Christian faith in Jesus as the Logos, is that not we must go out and discover meaning, but that Meaning came in the world to find us (cf. Keller, 2016).

A difficult question that remains to me is, what does it mean for classroom pedagogy and the practice of Christian education. Is there no good at all in constructivism?

The route from a 'no' to a constructivist ontology and epistemology to a 'yes' to constructivist pedagogy in Christian education, as Lee for instance seems to take, is one I cannot make yet. It is striking, besides, that educational critics (e.g. Biesta) seem to make the route the other way round, at least from a 'yes' to constructivist theory of learning to a 'no' to its classroom pedagogy. Biesta's 'no' to a constructivist pedagogy addresses issues that are significant to reflect on from a Christian education viewpoint, like the notions of telos and transcendence.

Several thinkers who do not take a constructivist but a critical realist position (e.g. Cooling, 2005; Edlin, 2020) have thought however about the usefulness of a constructivist pedagogy in a critical realist paradigm, in mentioning notions like contextualization, discovery, creativity and interactivity in learning and developing critical thinking with students and challenging their assumptions.

I realize that the questions I raise are big questions, stemming from centuries old debates, to which I can give no final answers by far. Still, they remain important to reflect on from the perspective of Christian education. What I hope to provide is small steps in thinking about these questions. To that end I will try to summarize important Polanyian notions that might be used as building blocks for a (Polanyian) pedagogy, based on what I have explored in section 2.4 and following.

David Naugle already provided a first step for developing a Polanyian pedagogy, in saying that 'over against the impersonal pedagogy and radical individualism bred by the epistemology of objectivism (*and also of radical constructivism, I add*) there is a strong sense of commitment to learning by personal example and to the importance of an intellectually supportive community of conviviality fostered by the epistemology of personal knowledge' (2002, p. 194).

A first important notion, which Naugle also mentions, is that of a personal, relational epistemology. This connects with the interpersonal notion of 'knowing as being known'. It reflects a relation with the known, not a *manipulation* of objects, referring to the words of Jonassen and Strobel (2006) in section 2.3. Both an objectivist and a subjectivist position may apparently risk such a view. Knowing as being known furthermore reflects a notion of knowing as transformation; learning is not always a matter of organic growth but can go through crises (a notion that relates to Christian life as well and is therefore essential in Christian education!?). For Polanyi, the personal always has a universal intent, which refers to a commitment aspect of knowing. Knowing is grounded in a fiduciary framework of beliefs but is professed like 'here I stand, I cannot do otherwise' (Meek, 2011, p. 350, 351, 423). At the same time, the personal also illustrates the provisional and fallible character of our knowing.

A further important notion with Polanyi is that of knowing as indwelling, implicating a subsidiary-focal structure and tacit aspect to all knowing. This is important to keep in sight with an eye to meaningful learning, as this concept seems to be tainted as a conscious conceptual choice from a constructivist view of learning. Knowing as indwelling also relates to communal aspects of knowing, acquired in a tradition, rephrased by Meek as a normative aspect to all knowing.

Returning finally to acquisition and participation metaphors of learning, which I discussed at the beginning of the chapter, from a Polanyian point of view it might be preferable to think of a different metaphor, for it could be that both metaphors lack an existential dimension of knowing, learning and meaning, and risk a perspective of total immanence.

These notions are only preliminary and worthy of further reflection and development to the benefit of Christian education. They are also very relevant if Palmer is right in saying that 'the way we teach depends on the way we think people know; we cannot amend our pedagogy until our epistemology is transformed' (Palmer, 1993, p. xvii).

2.5 The professional practice of teacher education

After having discussed broader issues relating to meaningful learning, addressing its origin and constructivist emphasis, it is now time to narrow down to the particular context of teacher education in which this study is situated.

Teacher education constitutes a unique context with certain distinct characteristics. Characteristic for teacher education (in the Netherlands) is the two-fold structure in this type of education, consisting of the teacher training institute on the one hand and the workplace, the school in which students do their internship or are appointed as a teacher, on the other. The role of a teacher educator is different than that of a teacher. The students are generally more mature, the main task of a teacher educator is to 'teach them how to teach' (Loughran, 2015). Murray and Male (2005) have introduced the terms *first and second order practitioners*. *First order* indicates the school, *second order* the context of Higher Education, the teacher training institute. 'As second-order practitioners teacher educators induct their students into the practices and discourses of both school teaching and teacher education' (p. 126). Only at the end of the 20th century a start has been made with thinking about the pedagogy of teacher education, a term which is then coined (Korthagen, 2016, 2019). During the second half of the 20th century a large number of different, often debated, visions have been developed on the best way of educating student teachers (Korthagen, 2019). A central problem of teacher education has remained a gap between theory and practice, enhanced by the two-fold structure of the institute and workplace. A technical-rationality model (Schön, 1983), rooted in

positivist epistemology, has been dominant for many decades in teacher education, based on the assumptions that theories help teachers perform better in their profession; theories must be based on scientific research; and teacher educators should make a choice concerning the theories to be included in teacher education programs (Korthagen, 2010b, p. 669). As a consequence the impact of teacher education on the practice of students has been meagre (Brouwer & Korthagen, 2005; Korthagen, 2010b). The dominant model created little transfer from theory to practice and even caused a dislike of theory in teachers (Korthagen, 2010b, p. 670). Several causes have been mentioned in the literature for the theory-practice gap (Korthagen, 2010b), like teacher socialization toward established patterns existing in the schools; the complexity of teaching which consequently makes a priori research knowledge of little worth in this complex context ; the powerful role of teachers' prior knowledge in learning and its resistance to change. In connection with that, in the dominant model a cognitive perspective on teaching is stressed over its affective dimension, while learning to teach cannot be seen apart from the person of the learner (cf. Palmer, 2009). Teacher identity (what beginning teachers believe about teaching and learning and the self-as-a-teacher) is the basis for meaning making (Bullough, 1997 in Korthagen, 2010b, p. 671). A final important cause that has been suggested for the limited impact of many teacher education programs is that they focus too much on formal knowledge (episteme) and do not support their students sufficiently in developing practical wisdom or phronesis. For an integration of theory and practice several solutions have been suggested to bridge the gap, like making student teachers' preconceptions explicit (Korthagen, 2010b).

Meanwhile, in reaction to the dominant technical-rationality model, abandoning a more transmission-oriented education has been a current and contemporary innovation policy in many higher education and teacher education programmes in Europe and abroad (Donche & Van Petegem, 2011). A more process-oriented view on teaching and learning, the so called 'new learning' (Simons, van der Linden & Duffy, 2000), has been introduced to promote active knowledge construction and greater self-regulation behaviour of students when learning. A similar switch we met in section 2.3, from 'Instruction Paradigm' to 'Learning Paradigm'. The constructivist vision on learning led for instance to a focus on reflection in teacher education (Korthagen, 2019).

In the literature about teacher education, in which the association for teacher educators called 'Velon' is important in the Dutch context, a constructivist view also prevails. Donche and Van Petegem (2011) indicate that fostering the growth of self-regulation and active knowledge construction with student teachers as life-long learning skills is an important task for teacher educators. Besides a focus on constructivism some social learning theory is used in teacher education theory as well. 'Modelling' is seen as important in teacher education, which means teacher educators

should 'teach as they preach'. To make sure that their students learn from them it is important that teacher educators are able to clearly state their own acts and the choices they make, based on theoretical foundations (Loughran & Berry, 2005; Loughran, 2015). In a recent Velon reflection on the position of the teacher educator (Oolbekkink-Marchand, Kools, Stokhof & Vervoort, 2020) a shift is observed from teacher- to learner-centred education, in which the role of the teacher is changing from transferring knowledge to coaching knowledge construction and 'learning to learn'. There is also growing attention for so called '21th century' skills, like self-control, creativity, problem solving and cooperation (Volman, Raban, Heemskerk, Ledoux, & Kuiper, 2018). Despite all these developments, Korthagen (2019) concluded that, probably because of the late start in thinking about teacher education pedagogy, we are still a long way from a widely accepted and duly substantiated vision on good teacher education. Biesta, Priestley and Robinson (2015) earlier diagnosed that a professional discourse in teacher education is lacking and that there is often an instrumental focus of getting the job done. Biesta et al. assume that the lack of discourse:

ties teachers to the particular beliefs that circulate in their practice and prevents them from locating such beliefs within such wider discourses. As a result the existing beliefs cannot be experienced as choices but appear as inevitable. Access to wider discourses about teaching and education would provide teachers with a perspective on the beliefs they and their colleagues hold, and would provide a horizon against which such beliefs can be evaluated (2015, p. 638).

Teacher beliefs thus appear to be very important. These beliefs will therefore be discussed in the next section.

2.5.1 Teacher beliefs

To understand what happens in classrooms it is important to know how classroom instruction and interaction is understood and what it means to those involved in these educational processes, student teachers in the context of teacher education in this case. Therefore it is important to get insight in what student teachers think, their knowledge and beliefs (Kelchtermans, 2009). There is a conceptual difficulty in defining these two concepts, as it is difficult to say where knowledge ends and beliefs begin or vice versa and in the literature the terms knowledge, conceptions and beliefs are used interchangeably (Pajares, 1992; Richardson, 1996; Kelchtermans, 2009; Szukula, 2011). It would be outside the scope of this study to discuss this difficulty extensively. Most researchers agree that knowledge and beliefs are inextricably intertwined (Pajares, 1992). In this study I will therefore speak about beliefs and conceptions as intertwined terms. Chan (2011) concludes that conceptions about

teaching and learning are led by beliefs so that beliefs are underlying conceptions. The nature of beliefs makes them to be a filter through which the world is interpreted (Kelchtermans, 2009). Fives and Buehl (2012) not only speak of beliefs as a filter, but also as a frame on problems or tasks and a guide in action (p. 478). This would concur with the idea that knowledge has a fiduciary character and that belief is the source of all knowledge (cf. Polanyi, 1962). What becomes clear from research as well is the influence beliefs have on a person (Mesker, Wassink & Bakker, 2017). Individuals' beliefs strongly affect their behaviour (Pajares, 1992). When talking about teachers' beliefs in research, often teachers' educational beliefs are meant (Pajares, 1992). Teachers' beliefs are considered key to understanding teachers' behaviour (Mesker et al., 2017), although the impact of beliefs on practices should be seen as complex, dialectical and reciprocal (Häusler et al., 2019, p. 25), let alone that teachers hold both explicit and implicit or tacit beliefs (Fives & Buehl, 2012). Context and personal or individual constraints can lead to a gap between teachers' beliefs and actions (Donche & Van Petegem, 2011; Fives & Buehl, 2012).

Especially in the context of educational reform the importance of investigating teachers' beliefs, conceptions and related practice has been stressed (Donche & Van Petegem, 2011). Teacher beliefs and conceptions can act as barriers for change (Pajares, 1992). Mental models generally change slowly (Bain, 2004).

We use our existing mental models to shape the sensory inputs we receive. That means that when we talk to students, our thoughts do not travel seamlessly from our brain to theirs. The student brings paradigms to the class that shape how they construct meaning (Bain, 2004, p. 26, 27).

One of the reasons for this slow change can be emotional attachment to certain models. Changing models is not a matter of cold cognition but impinges on the values, emotions and beliefs attached to them (Pintrich, Marx & Boyle, 1993). Belief change could be similar to conceptual change (Hofer, 2001), so that through a process of disequilibrium and dissatisfaction new beliefs are integrated, but also a rejecting or ignoring of data instead of a process of change can occur. Beliefs, especially those which are early acquired, can be very strong and resistant to change. Not only emotional attachment hinders change but also cognitive tricks that are used to reinforce and confirm prior beliefs. The logic or necessity of change can be totally disregarded (Pajares, 1992).

Beliefs are important to understand self and world. They help to identify with a group and provide social structure and order. They reduce dissonance,

even when dissonance is logically justified by the inconsistent beliefs one holds. This is one reason why they acquire emotional dimensions and resist change. People grow comfortable

with their beliefs, and these beliefs become their "self," so that individuals come to be identified and understood by the very nature of the beliefs, the habits, they own (Pajares, 1992, p. 318).

Beliefs differ in nature, some are more core than others. Rokeach (1968) in the sixties developed a belief system whose tenets are still used in current research. He suggested that beliefs differ in intensity and power. Beliefs vary along a central-peripheral dimension and the more central a belief, the more it will resist change. The more connected to other beliefs, the more central a belief is. Beliefs concerning identity or self and shared beliefs are more central and thus more resistant to change (in Pajares 1992, p. 318). A similar message can be found in personal construct theory, developed by George Kelly (in Hull, 1985, p. 102). Constructs are reminiscent of beliefs, probably the terms could be used interchangeably. A person's construct system is the total of everything which a person has learned so far. It is acquired and developed by learning. Constructs are arranged in a system, in which lower parts are subordinate to higher. The permeability of constructs varies, some resist new experience and are impermeable, others are propositional and less restricting. The higher a construct stands in the hierarchy of the system, the more impermeable it is. Religious constructs are normally superordinate, they are very resistant to change.

If the construct system is critically under threat or if realignment of the system causes a feeling of guilt, disassociation or the creation of a sub-system may occur. Especially religious people are prone to disassociation, for they live in a culture that is not sympathizing with religious ideology. Christian construct systems therefore may defend themselves against change by making change and good opposites. Faith itself then becomes a disassociated sub-system, according to John Hull (1985, p. 109).

In summary, a common core to the concept of teachers' beliefs in the literature is that beliefs 'designate individual, subjectively true, value-laden mental constructs that are the relatively stable results of substantial social experiences and that have significant impact on one's interpretations of and contributions to classroom practice' (Skott, 2013, in Skott, 2015, p. 19).

Research has shown that it is important to identify teacher beliefs (Richardson, 1996) and take them as a starting point for extending knowledge (Meirink, Meijer, Verloop & Bergen, 2009). Student teachers should be confronted with their held beliefs in order to gain deeper knowledge and provoke deeper understanding (Patchen & Crawford, 2011). Beliefs of student teachers have been developed in the many school years before they enter teacher education. It is therefore important to listen carefully to student teachers' conceptions before challenging them. 'One of the most effective ways to help student teachers construct meaningful knowledge and understanding of teaching and

learning is by first identifying these preconceptions and beliefs and then working to tease out and examine the sources and legitimacy of these beliefs' (Bullough & Gitlin, 1995 in Leavy, 2007, p. 1218). So the treatment of personal beliefs should play a major role in teacher education curriculum. That is why it is important to gain insight in what student teachers' beliefs about meaningful learning are, as is one of the questions in this study.

Beliefs exist in different areas. In this study I want to focus on beliefs that student teachers hold about knowledge and knowing; their *epistemological beliefs*, or *epistemic beliefs* also commonly captured with the umbrella term of 'personal epistemology' (Lunn, Walker & Mascadri, 2015, p. 320). When we are talking about personal epistemology, more specifically individual conceptions of knowledge and knowing are addressed (Hofer, 2001). However, 'in terms of the psychological reality of the network of individuals' beliefs, beliefs about learning, teaching, and knowledge are probably intertwined' (Hofer & Pintrich, 1997, p. 116). What students think knowledge is and how they think they know are considered as critical components of understanding student learning, even more when it comes to student teachers, for they are the future educators.

Furthermore, beliefs about learning serve as foundation for beliefs about teaching (Fives, Lcatena & Gerard, 2015, p. 261). So these beliefs are essential to consider with respect to teaching practice, if pedagogy cannot change without looking at epistemology, as discussed before.

This is an issue that deserves more attention than it receives now, also in teacher education.

Advanced epistemological understanding is scarce in general, research shows (Hofer, 2001, p. 378), which is a concern for teacher education to address.

Different conceptions of personal epistemology exist in the field, which can be divided into developmental models on personal epistemology, models of personal epistemology as independent beliefs and alternative models that focus on theory and resources (Buehl & Alexander, 2001; Hofer, 2001). More recently, a view on personal epistemology as justification of knowledge has been added (Lunn et al., 2015). A further discussion of these diverse models will be disregarded in this study.

A point of discussion among researchers has been the extent to which beliefs about learning, education and intelligence are part of one's epistemology, or whether they are part of a larger set of personal beliefs and theories and whether these beliefs are domain general or domain specific (Hofer, 2001; Olafson & Schraw, 2006). Nowadays researchers widely agree that individuals can hold both domain specific and domain general beliefs at the same time and that teachers' beliefs exist in a system (Buehl & Fives, 2009; Fives & Buehl, 2012). Within an individual's belief system, beliefs can be held in clusters that can even be more or less isolated, so incompatible beliefs can coexist (Buehl & Beck, 2015). Educational beliefs are part of the total belief system and should be seen in relation to other influential beliefs (Pajares, 1992), like worldview beliefs. How we think about learning and

knowledge influences how we see our students. This is part of how we see people in general, which in its turn belongs to our overall worldview (Badley & Van Brummelen, 2012). However, there is not much research available on the relation between religious and professional beliefs in general and the relation should not be thought of in a too simplistic way (Häusler et al., 2019). The studies that have appeared seem to support the idea that religious or worldview beliefs influence professional beliefs and action (Häusler et al., 2019, p. 36).

2.5.2 Pedagogy and faith-learning integration

Beliefs about knowledge and learning, as discussed in the previous section in the form of teachers' epistemological beliefs, influence classroom practice in choice of pedagogy. A pedagogy is also based on what we believe about a learner (Smith & Smith, 2011), a particular anthropology, which is an aspect of ontology. Both ontology and epistemology are based on a particular worldview, as we have seen several times throughout the chapters. In chapter 1 the question has just been touched upon in how far thoughts about Reformational philosophy, aspired in Christian teacher education, have permeated into student teachers' thoughts and classroom practice. I also discussed that, although in Christian education one would expect a teacher's view of reality and being is also connected to a coherent view of pedagogy and epistemology, scholars are genuinely concerned whether this is the case, taking into account the constraints of external forces and pressures on Christian education (Cairney, 2020). Several scholars have underscored the importance of pedagogy as shaping or undermining the Christian classroom and school and expressed their concerns about temporary reductionist approaches to teaching and learning. (e.g. Cairney, 2018; Cooling et al., 2016; Green, 2015; Smith, 2018).

Especially Reformed education might be prone to a dualism between anthropology and pedagogy, as indicated in chapter 1. A corresponding divide exists between sacred and secular in conceptions of Christian education. This 'problem' is not only occurring in the context of Dutch Christian education though, but has been subject of research internationally, often filed under the umbrella term of faith-learning integration (e.g. Cooling et al., 2016; Hull, 2005; De Muynck, 2021; Smith, 2018; Van Vlastuin, 2019).

Roughly two approaches to the integration of faith and leaning in Christian education are discussed in the literature. The first one is more aimed at the formation of Christian minds and the idea that Christian teaching happens when the ideas taught are Christian (Hull, 2005; Smith, 2009; Smith, 2018). This leads to the prevailing idea that God is only present in the daily devotion and knowing Him applies only to spiritual life but has nothing to do with secular knowledge, so during the

continuing lesson God is the big absentee (Van Vlastuin, 2019). This approach has been characterized as 'icing on the cake' (Mechielsen, 1980) or 'Christians educating' instead of Christian education (Hull, 2005). The underlying view is that education can be religiously neutral, separated from religion (Goheen & Bartholomew, 2008, p.169). The second approach focuses more on attitude, a biblical lifestyle and a Christian ethos or spirit (Hull, 2005; Smith, 2018).

Particularly the first approach is persistent, research reveals. In the UK context, as a response to the prevailing secular paradigm together with a performative culture within education, Christian students tend to deny or minimise the impact of their faith on their ideas about teaching (Bryan & Revell, 2011). Bryan and Revell characterise this dual identity of secular teacher and Christian student coexisting in one person as an example of what Ball refers to as '*values schizophrenia*' (Ball, 2003, p. 221). In a research project by Cooling et al. (2016) after the influence of *What if learning*, a framework for a distinctively Christian pedagogy building on the work of Calvin University professor D. I. Smith (Green, 2015; Cooling et al., 2016), teachers also struggled with integrating their professional work within a Christian ethos. The perception of Christian faith by teachers in English Church Schools was influenced by a positivist view of objective truth and transmission of Christian content, teaching as telling Christian truths (Cooling et al., 2016). Using *What if learning* was therefore experienced as 'weird' or 'not Christian enough' (2016, p. 87, 93). Cooling and Green (2015) in their article on this research project conclude that teachers' assumptions about knowledge, pedagogy and theology are filtered through their prior assumptions about what it means to teach 'Christianly' and also by assumptions about pedagogy embedded within English education policy (p. 96).

This shows that assumptions prevailing in society and education have influence on the beliefs of those taking part in education, both pupils and teachers. Billingsley (2017) for instance found a persistent epistemic belief with pupils about a clash of science and religion (in Cooling, 2020, p. 409). This leads to serious tacit epistemological difficulties and has an important impact on the formation of a personal worldview. The research discussed above reveals that a similar clash is not unusual with teachers as well, so attention for the impact of the personal worldview of a teacher on their profession is just as important (Cooling, 2020). Therefore I will now turn to the discussion of the concept of a worldview and its role in thinking about meaningful learning.

2.6 Worldview

So far we have mainly been looking at meaningful learning in relation to epistemology, beliefs about the nature of knowledge and knowing, and subsequent theories of learning in relation to classroom

pedagogy. To dig a layer deeper it is where worldview comes into sight, a general belief and knowledge system.

For the understanding of the use and significance of meaningful learning in Christian higher education considerable attention has to be paid to the concept of a 'worldview' and the so called 'worldview approach' (Smith, 2009). In order to understand its current use and related discussions about the usefulness of this term, a brief overview of its origin and history will first be given. Furthermore, as the term worldview has entered into a range of disciplines, with each discipline using different definitions of the term (Flanagan, 2019, 2020), is it important to address the diverse characteristics of the term, taking into account adjacent concepts and contested aspects as well. This will help to gain clarity in discussing the function of a worldview. Just as one's worldview relates to the domain of epistemology, it does so to the domain of hermeneutics, which is essential to address, given the role of interpretation in education and thinking about meaningful learning. I will conclude with considering if, how and why worldview is a relevant and helpful concept for the present study.

2.6.1 History

In the late 18th century Immanuel Kant in his work used the term 'Weltanschauung' for the first time, referring to a sense of perception of the world (Naugle, 2002). The term was adopted by Kant's successors and soon became a celebrated concept in German intellectual life. In the 19th century the term 'Weltanschauung' moved through Europe and entered the English speaking world, where its English equivalent 'world-view' originated. Since its introduction it has become a very central intellectual conception in contemporary thought and culture, according to Naugle (2002). During the history of European philosophy it has been interpreted in different ways and has received diverse connotations. For the protestant-evangelical tradition the roles and persons of James Orr and Abraham Kuyper have been important in speaking about worldview. Orr, and in his footsteps Kuyper, stressed that worldview is important to Christian faith in providing a total vision, a whole, comprehensive picture of reality in facing other worldviews. As I have mentioned in chapter 1, Kuyper's ideas have influenced one of the 'founding fathers' of Driestar University (Exalto, 2012).

Currently the worldview approach plays a role in education in the ongoing debate between humanist and Christian philosophers about the role of religion in education on the one hand (e.g. Hand, 2012) but also in the tradition of Christian philosophy in thinking about the world, our being in there and the role of formation in Christian education (e.g. Smith, 2009).

2.6.2 Characteristics and definition of the concept 'worldview'

A useful characterization of the concept 'worldview' is given by Van der Kooij, De Ruyter and Miedema (2013; 2015; 2017). They call it a *specific* outlook on the world, which is focussed on meaning giving and existential themes.

A first essential characteristic they ascribe to worldview is 'that it can be used for religious and secular views on life. Thus, the concept "religion" is a subcategory of the concept "worldview"' (Van der Kooij et al., 2017, p. 173). Every religion can be called a "worldview" but not all worldviews are religious (Van der Kooij et al., 2013). In the past, the concept of a worldview was seen as either or not including non-religious worldviews. Recently, since the term has been prominently featuring in discussions in the UK around the field of RE, the term worldview has been suggested as useful and more inclusive than 'religion' (CoRE, 2018; Kuusisto et al., 2019; Van der Kooij et al., 2017) .

A second essential characteristic Van der Kooij et al. propose, is a distinction between *organized* and *personal* worldview. With *organized* worldview they mean:

a view on life that has developed over time as a more or less coherent and established system with certain (written and unwritten) sources, traditions, values, rituals, ideals, or dogmas. An organized worldview has a group of believers who adhere to this view on life (2013, p. 212).

Organized worldviews are often embedded in institutions. The Commission on Religious Education (CoRE) final report (2018) makes that clear by using the alternative term 'institutional worldview'. Religions are organized worldviews for example, as well as secular movements like humanism, although Flanagan (2020) problematizes to use the terms interchangeably for the first, as there is no single version of *the* Christian or Islamic worldview.

With *personal* worldview Van der Kooij et al. indicate an individual's meaning giving outlook on the world, life and humanity. It can be, but does not have to be, based on an organized worldview and can be more eclectic and idiosyncratic. Therefore it has become more common to use the term worldview in this sense, taking societal developments like globalisation, individualisation and the decrease of grand narratives into account (Flanagan, 2019; Van der Kooij et al., 2017). Concerns however have also been expressed that the scope in this way is narrowed to the individual and that worldviews are seen as nothing more than privatized micronarratives (Naugle 2004; Ubani, 2019 in Kuusisto et al., 2019, p. 398). A personal worldview does not have to be explicit, one can have a

personal worldview without being able to put it into exact words, Van der Kooij et al. further state (2013, p. 218).

Van der Kooij et al. (2013, p. 214) distinguish four conceptually necessary characteristics for both organized and personal worldviews, albeit these are more difficult to analyse for a personal worldview:

- 1) Existential questions
- 2) Influence on someone's thinking and acting
- 3) Moral values
- 4) Meaning in life; a personal interpretation of the meaning of life or other aspects in life

They conclude about an organized worldview that it 'prescribes answers to existential questions; they also contain moral values and aim to answer the question about the meaning of life. In this way, it aims to influence people's thinking and actions' (Van der Kooij et al., 2015, p. 81). About a personal worldview they state that it 'consists of (sometimes tentative) answers to existential questions. Someone's personal worldview influences his thinking and acting and gives meaning in life' (Van der Kooij et al., 2015, p. 81). If ideas and beliefs of a person do not influence his or her thinking or acting, it is a theoretical construct but not a personal worldview (2013, p. 222).

In a later article, Van der Kooij et al. (2017) only focus on existential questions, 'they distinguish a worldview from other views on life, the world, and humanity such as the views of political parties' (2017, p. 174). In a literature analysis they found that 'existential questions' are part of almost all of the descriptions of worldviews (Van der Kooij et al., 2017). Existential questions can be defined as 'matters of ultimate concern by which persons are grasped and which are taken with unconditional seriousness in their life' (Tillich, 1965, in Van der Kooij et al., 2013, p. 214; 2017, p. 174). On the basis of their analysis they propose the following list of existential questions a worldview deals with: ontological, cosmological, theological, teleological, eschatological, and ethical questions. It is not necessary for a personal or organized worldview to pay attention to all of these questions, they say:

A personal or organized worldview can have answers to some questions, reflect on others, without paying attention to others. This might be truer for a personal worldview than an organized worldview. However, to be able to say that someone has a worldview, (s)he should at least have (tentative) answers to the first, fourth and sixth question (2015, p. 82).

These are:

- Ontological questions. Based on the literature, Van der Kooij et al distinguish two types of such questions (2015, p. 82). The first focuses on the nature of existence: Why is there something

rather than nothing? The second focuses on the nature of human being, which can also be called anthropological questions: What is a human being? Is human nature good or bad?

- Teleological questions, and again they distinguish two types of questions (p. 82). The first focuses on the meaning and purpose of the universe and human beings. The second focuses on the meaning in life. Where the 'meaning of life' deals with an understanding of the purpose of (human) life in general; the 'meaning in life' is a personal interpretation of what makes life meaningful and what gives an individual's life purpose or sense (De Ruyter, 2002).
- Ethical questions. The questions and values in this category have to do with the broad theme of good and bad, right and wrong. 'What makes my life a good life to live?' is part of this category, as are questions about beauty and truth.

It is remarkable that epistemological questions or epistemology at all does not receive a place in the articles by Van der Kooij et al. as part of a worldview. Research on teacher beliefs seems to give enough reason to assume a relation between epistemology and worldview (e.g. Flanagan, 2019; see also section 2.5.1).

Another aspect of worldview which is not addressed in the work of Van der Kooij et al. is the idea of worldview presented as a story or narrative. This is a notion several other scholars address. Sire for instance defines a worldview as:

a commitment, a fundamental orientation of the heart, that can be expressed as a story or in a set of presuppositions (assumptions which may be true, partially true or entirely false) which we hold (consciously or subconsciously, consistently or inconsistently) about the basic constitution of reality, and that provides the foundation on which we live and move and have our being. (...) Each major worldview has its own meta-narrative, its own master story (Sire, 2015, p. 141, 145).

Similarly, N. T. Wright states that worldviews are characterized by certain types of stories (Wright, 2013, p. 43). Sire's definition, with its emphasis on worldview as a commitment of the heart, expresses that a worldview is not only intellectual, it is not first of all a rational system of beliefs. Acknowledging a narrative aspect of worldview places more emphasis on the 'lived-out' nature of worldview. Valk (2009, p. 70) rather characterizes a worldview as 'a way of life', for humans live out their values and beliefs. This is important, as the concept of a worldview has been criticized for being overly cognitive, as I will discuss in more detail shortly.

The advantage of a worldview approach has always been that it has an eye for all of life in its purview, not only its cognitive side, but also affirmations tacit in a society. (...) But like the

bias of theology toward the cognitive or intellectual side of life, worldview thinking often becomes overly propositional (...) (Newell & Badley, 2011, p. 120).

Including narrative aspects of worldview can help address this criticism of worldview. A narrative aspect is acknowledged in the CoRE interim report (2017) as well as the final report (2018) definition of worldview:

Recognising that the word has been given different definitions, we have used the term 'worldview' to mean an overarching structure, often known as a metanarrative, which provides a 'lens' which is both in the world and through which one views the world. Worldviews encompass many, and sometimes all, aspects of human life – they influence how people understand what is real and what is not, how they decide what is good and what to do, how they relate to others, and how they express themselves, to name but a few examples. (...) Worldviews are more than propositions, they have affective and affiliative dimensions as well (2017, p. 19).

(...) They are made up of practices, rituals, narratives, experiences, interactions, social norms, doctrines, artistic expressions and other forms of cultural expression, and should not be reduced simply to belief and practice but understood in all their complexity (2018, p. 72) .

Including a narrative aspect of worldview might make it easier to connect the concept of a worldview to life and lived experience. It gives worldview also a more *dynamic character* instead of a *static*.

Flanagan (2019, p. 3) therefore prefers to use the term 'personal embodied worldviews', as they develop due to life experiences and are lived out in individuals' lives. Like Van der Kooij et al, she portrays the eclectic character of these worldviews:

Personal worldviews may incorporate aspects of a broad range of 'organised' worldviews, (...) which, though contradicting each other at times, may remain alongside each other in creative tension. These worldviews have evolved over time due to life experiences and (...) these life experiences should be given greater attention (Flanagan, 2019, p. 3, 4).

Worldviews develop due to changing life experiences and can have core and peripheral views, varying in resistance to change (Flanagan, 2019), which shows similarities with the literature on beliefs. Flanagan's characterization concurs with Sire's discussion of the role of life experiences in the development of worldview, in the form of a crisis for instance:

How we view life affects the life we live; it governs both the unconscious actions we engage in and the actions we ponder before acting. That means that our individual worldview is

somewhat fluid. Sometimes, due to a crisis or a sudden insight or realization, our worldview shifts so much that conversion is the best term to describe the change. In noncrisis, ordinary interaction with the world outside the self, our worldview varies only slightly (Sire, 2015, p. 118).

Paying attention to a narrative, lived aspect of worldview is also essential when examining this concept in the context of a particular institution, as will be done in this study.

In the context of their research on the relation between individual and institutional identity, Belcher and Parr speak about 'an ongoing tension between on the one hand diversity and hybridity in narratives and on the other a unifying grand narrative' (2011, p. 45). They define worldview rather as dynamic lived experience than as a set of clear concepts that govern individuals or institutions:

We understand worldviews, on the other hand, to be frameworks for a dynamic all-encompassing view of life that provides a provisional picture of what life ought to be, and in which grand narratives are operative. Yet the provisional picture is not static: it is open to change and development. To put it another way, worldviews are not so much what you 'claim' as what you 'live' – and this makes the need to explore insider perspectives more crucial (Belcher & Parr, 2011, p. 45).

This underscores that it is important to start at a personal level when exploring the concept of a worldview, as stated in chapter 1. Every choice a teacher makes is value laden and therefore in the end related to worldview. Reflection on the identity of a school therefore ideally starts at the point where the everyday practice is experienced as meaningful (Bakker, 2004, p. 18). Worldview as 'lived' furthermore shows parallels with several adjacent concepts, to which I will now turn for discussion.

2.6.3 Worldview and adjacent concepts

Ethos

A first concept that verges on worldview is the concept 'ethos'. 'At the most general level, an ethos can be regarded as the prevalent or characteristic tone, spirit or sentiment informing an identifiable entity involving human life and interaction (a 'human environment' in the broadest sense) such as (...) an institution (...)' (McLaughlin, 2005, p. 311). Ethos is also defined as relating to the core values of a school and to that which is deep and fundamental in its life and work. There can be an important gap between what the school espouses with respect to ethos and what the ethos of school actually is (Eisner, 1994, in McLaughlin, 2005, p. 310). In the literature this is captured in a distinction between formal, aspirational, or intended ethos and ethos as it is experienced. Often the latter is the most common reference of ethos. This 'experienced' ethos often exerts influence in an indirect and

sometimes non-transparent and even unconscious way (McLaughlin, 2005, p. 314). McLaughlin also points out that there are clear resonances between the notion of an 'ethos' and Bourdieu's notion of a 'habitus' (p. 314), another adjacent concept. Mc Laughlin does so to underscore its character as implicit, culturally influenced and formed by habits. At this point I notice an overlap in particular between the terms institutional worldview and ethos, although there are different interpretations of the similarities and differences between these two, featuring in particular in discussions within cultural anthropology, which I will not discuss in detail here (e.g. Geertz, 1957). Shortly put, a worldview refers to the cognitive aspects of culture according to Geertz, and ethos to moral and aesthetic aspects. This depends on how a worldview and the function of a worldview is defined.

Habitus

A second concept close to worldview is the notion of 'habitus'. This is a term originating from the social theory of Pierre Bourdieu. Habitus is a matter of honouring the significance of our non- or pre-rational behaviour to the world. It refers to an orientation to and understanding of the world that is absorbed and shaped at the level of practice (Smith & Smith, 2011). It generates a kind of knowledge 'that is either unconscious or preconscious, but nonetheless intentional and oriented to some end or telos' (Smith & Smith, 2011, p. 10). This links to what the British philosopher MacIntyre stated, namely that any education has to be formative. Formation happens only⁴ through practices which inscribe a habitus- an orientation and inclination towards the world, aimed at a specific telos (in Smith & Smith, 2011, p. 9).

It is striking that both adjacent concepts refer to implicit, prerational habits or practices. This should not be seen separately from what I mentioned earlier, that the worldview approach has been criticized for being overly cognitive. Before turning to the discussion of the function of a worldview and evaluating its usefulness for this study, I will first address the contested aspects of the concept worldview, as this may help to gain clarity about its function. Moreover, these contested aspects also link closely to the aforementioned concepts of ethos and habitus.

⁴ This links to a discussion whether the unconscious or conscious is more prominent in guiding behaviour (in the Dutch context Aleman versus Lamme, Swaab, Dijksterhuis e.g.). The question is whether 'only' practices can accomplish this. Is intentional formation not possible? (e.g. Kruger, 2021).

2.6.4 The contested aspects of worldview

In discussions during the past decade among Christian philosophers about the role of Christian education, a central issue is whether the worldview approach is too much aimed at the level of ideas or not. One of the main initiators of this discussion is the American philosopher J.K.A. Smith. According to Smith (2009) there is too much focus nowadays in education, even Christian education, on what we know, instead of what we love. He is challenging the idea of humans as primarily thinking things or brains on a stick (2009; 2016). Echoing Augustine, Smith states that our heart plays a central role instead, an idea pursued in the Netherlands by Paul (e.g. 2017). Our heart is aimed at what we desire, what we love. That constitutes our identity, according to Smith. A central role in Smith's writings is given to liturgies as formative practices. Liturgies can be defined as 'formative pedagogies of desire that are trying to make us a certain kind of person' (Smith, 2009, p. 25). These practices shape and form our imagination. Implicit in them is a message about human flourishing, the *telos* of our life.

By reducing the genius of the Christian faith to something like an intellectual framework—a perspective or a worldview—we can (perhaps unwittingly) unhook Christianity from the practices that constitute Christian discipleship. And when that happens, we end up thinking that being a Christian doesn't radically reconfigure our desires and our wants, our practices and our habits (2009, p. 218, 219).

Smith states that we should pay more attention to the role of imagination in shaping our desires. Interestingly, it seems he took up the gauntlet where it was left a few decades ago by Philip Phenix, for similar thoughts were uttered when Phenix wrote:

Modern educational practice has been largely governed by the ideal that studies should be meaningful. The traditional academic curriculum was found deficient in meaning for the great majority of students, and in its place a more 'functional' curriculum was developed, guided by the principle that the greatest interest (and the most meaning) would attach to studies contributing to the practical concerns of the learner. (...) Suppose now that the concept of meaning presupposed by the functionalists is mistaken and that what students really care for, even if for one reason or another they may not acknowledge it, is the awakening of the inner life through the nurture of imagination. Then studies directed toward the satisfaction of organic and social demands will not enlist enthusiasm or induce effective learning. Students *will* respond to and learn readily materials that release them from their ordinary concerns and lift them onto a new plane of meaning (1964, p. 346).

Important in Smith's book *Desiring the Kingdom* is 'the social imaginary' (a notion he adopts from Charles Taylor). 'It is a way of intending the world meaningfully -giving it significance- but in a way that is not cognitive or propositional' (Smith, 2009, p. 66). People can have different images of 'the good life', different 'social imaginaries' exist. So what constitutes the connection between images and desires? According to Smith (2011) this connection is *praktognosia*, a bodily learning in which the somatic senses are the central issue. This *praktognosia* becomes evident in our habits or routines that people have internalized through practice, which resembles our procedural knowledge, 'knowledge of'. Liturgies have a practognostic dimension, they train our somatic senses, they decide what our comfort zones are, what is natural to us and what not (Paul, 2016). Not surprisingly, Smith (2013) introduces the notion of habitus in his work as well and prefers to use this notion together with the social imaginary over the notion of a worldview.

Paul (2016) uses the ideas of the German theologian Wannewetsch to discuss Smith's ideas about desire and formation. Wannewetsch posits that desires are nourished by other desires. Only desires can arouse desires; images, habits and practices just have a mediating role. He does not follow the track of practice theory but assumes a classical Reformed principle of spiritual impairment; it is first necessary that Christ opens the ears so that people understand God's voice in the Scriptures and in creation. 'The original act is the divine ephata, the awakening of the ears and hearts' (Wannewetsch, 2008, as cited in Paul, 2016, p. 49).

This view might have two consequences. The first is that liturgical formation in church is not the same as or even comparable with 'practical formation' at school or by the media. Smith states that secular and Christian liturgies 'work' in a similar way (Smith, 2013, p. 163). Wannewetsch develops not a 'common' but a 'special' pedagogy of desire, focused at desiring God. The distinctiveness of a Christian liturgy is so important to him that he is refraining from Smith's 'cultural liturgies'. Most likely because the desires in cultural liturgies like 'the mall' appeal to desires that are latent or manifestly present in human hearts, while Christian liturgies cause 'different, unprecedented, novel, divine affections' (Wannewetsch, 2010, as cited in Paul, 2016, p. 50). Further thinking along these lines may have consequences for thinking about meaning as well. It could be that Smith in his focus on practices is concentrating too much on 'beneath' and has too little attention for the notion of transcendence.

The second consequence is that Wannewetsch defines the relation between God and liturgical practice different from Smith. Smith says that Christian liturgies are 'primarily a site of divine action', but he adds that God works 'through material practices that shape the imaginative core of our being

in the world' (Smith, 2011, p. 15). So God hides as it were behind the material practices. But isn't Smith's worldview then more naturalistic than desirable, Paul asks (2016, p. 50).

Wannenwetsch speaks more clearly about divine action that precedes human desire for God. 'It is an answer that recognizes the reality and the necessity of *God's own passionate desire* for his creatures, his restless seeking of them, his emptying of himself into them as the *causative* reason for a human desire that can be brought to fulfilment at last, then can find its home' (Wannenwetsch, 2007, as cited in Paul, 2016, p. 50, 51). This links very closely to the notions Meek introduced in developing Polanyi's work, recognizing that reality breaks in first and realizing that in the process of knowing we feel like being known instead. An order of receiving first and then answering, which, in view of education, may have become in an inferior position nowadays. I suppose this is what Biesta addresses in educational sense, when he says that we should 'not underestimate our capacity to receive' (2016, p. 375). He warns for a view of making the universe immanent to our understanding and, in following Levinas, introduces notions like 'being addressed', 'being called for from the outside', 'be spoken to' and an 'interruption of immanence' (2016, p. 380, 384, 388). Biesta advocates an account of teaching that:

calls forth the subjectness of the student by interrupting its egocentrism, its being-with-itself and for-itself. This is not only a teaching that puts us very differently in the world (and in this regard it can be seen as teaching with existential import). We could even say that this teaching puts us in the world in the first place. It is (a) teaching that draws us out of ourselves, as it interrupts our 'needs', to use Levinas's term, or, in the vocabulary, I have introduced elsewhere (Biesta, 2014), as it interrupts our desires, and in this sense, frees us from the ways in which we are bound to or even determined by our desires. It does so by introducing the question whether what we desire is actually desirable, both for ourselves and for the life we live with what and who is other (2016, p. 388).

These are important additional notions to keep in sight when thinking about epistemology, what it is in essence to think about meaningful learning, specifically in Christian education.

Another issue that emerges when discussing Smith's work, is the relation between the notion of the heart and the notion of a worldview. Where Smith sees the heart as the centre in terms of desires, it is also seen as the centre in terms of a worldview. D'Orsa (2013) for instance writes in an article on Catholic curriculum:

The concept of worldview is a key one in considering Catholic curriculum. It embraces those foundational understandings, feelings and values which orient life for individuals, groups and

communities. When used of persons, it is akin to the Biblical notion of 'heart', the most important term in Biblical anthropology (...) (p. 69).

Likewise, Naugle argues 'that a worldview is an inescapable function of the human heart and is central to the identity of human beings as *imago Dei*' (Naugle, 2002, p. xix). So here is an interesting point of discussion among scholars about the relationship between cognition and affection, 'head' and 'heart' (see also Huijgen, 2019).

Some lines at this point can also be drawn with Polanyi's idea of 'tacit knowledge' (section 2.4).

Naugle wonders:

Is not Polanyi's notion of tacit knowledge commensurate with a common understanding of the function of a worldview as a set of presuppositions lying just below the "waterline" of conscious awareness that govern an individual's way of knowing and being in the world? (2002, p. 206).

This raises some interesting questions, like what is the role of cognition versus affection? How pre-rational or conscious are practices or *habitus* and worldview shaped and how are Polanyi's ideas about tacit knowledge related to these? These questions circle around the function and awareness of a worldview, which I will discuss next.

2.6.5 Worldview awareness and function

Meanwhile I have touched upon issues that relate to the function a worldview has in the life of people and in how far people are consciously aware of their worldview. In this subsection I will further develop these.

In the literature on worldview, the idea prevails that worldview can be placed at the level of what Polanyi would indicate as 'tacit'. Sire, to begin with, compared a worldview to a pair of glasses; we are not aware of them unless we pay attention to the glasses themselves (in Goheen & Bartholomew, 2008, p. 17). In relation to Sire's definition of worldview (section 2.5.2), Goheen and Bartholomew underscore that there is a vital distinction between *having* and *articulating* a worldview. Everyone has a worldview that is lived but not everyone is able to articulate what that worldview is (2008, p. 18). Cooling prefers not to speak about *having* a worldview, but instead speaks about human beings as *inhabitants* of a worldview (Cooling, 2020, p. 405). That would connect with Polanyi's idea of knowing as indwelling and do more justice to the function of a worldview. Cooling stresses the tacit nature of a worldview, which he also defines as 'Contestable Beliefs concerning purpose and meaning in human life' (Cooling, 2012, p. 557).

People may not be able to articulate them, or even be particularly aware of them, and for many they function at an intuitive level, but they are drawn upon all the time. People's worldviews may not often be the subject of their critical reflection, and are to some degree absorbed from family, peers and surrounding culture. They may well be influenced by several theories of the meaning of life. But they are fundamental in shaping people's judgments about the meaning and significance of human knowledge and shared values (2012, p. 558).

Cooling further concurs with criticism on worldview, if understood as purely cognitive with an emphasis on developing a Christian mind. He argues that a worldview is probably not a systematized set of beliefs but a disposition, a habitus, which is unexamined, tacit and inherited, and shapes being and living (Cooling, 2019). He therefore suggests the term habitus might have helped CoRE in their reports about worldview, although this term is difficult to understand for parents and practitioners. Habitus on the one hand includes emotional and identity-forming aspects of human life, as well as the role of desires and growing up in community. Habitus on the other hand endangers losing agency, 'treating the student as a product of cultural shaping by powerful traditions', Cooling says (2020, p. 409).

Actually it seems that meanwhile a general awareness prevails in the literature of the incorrectness of presenting worldview as mainly cognitive. Recent worldview definitions all include affect as a worldview dimension. Likewise, attention for the lived, embodied nature of worldview has increased. Naugle for instance realized that his former definition of a worldview tended to see the heart as 'a somewhat disembodied and independent thing which thinks, feels, wills, and worships'. Polanyi and Meek made him realize and recognize 'that this heart needs to be rooted in the physical body and this "enhearted" body or embodied heart needs to be anchored in the ebb and flow of the real world' (2004, p. 19). Thus,

worldviews grow out of lived bodily experience and it is from their embodied situations that people decipher the world in felt semiotic, narrational, rational, epistemic, and hermeneutical ways. This basic way of being in the world through the heart-body unity constitutes a worldview (Naugle, 2004, p. 19).

This approach may diminish the contradictions between worldview as cognitive or as a matter of the heart, with respect to the discussion in Smith's work.

It could also be very useful to see a worldview as a fiduciary framework (like Cooling suggests as well, 2020). If faith would be restored as the basis of all knowledge, like Polanyi rekindled the Augustinian notion of 'unless ye believe, ye shall not understand', we don't have to fear a worldview approach so much as being too cognitive. Lastly, using worldview resonates with Polanyian notions of "personal

commitment” and “personal with universal intent” as well. ‘The genius of the worldview notion is that it signifies both an inner conviction and an outlook on the world. Thus it combines the personal and the universal’ (Griffioen, 2012, p. 19).

2.6.6 Worldview and hermeneutics

Education is a system of communication, meaning making and interpretation (Biesta, 2015b, p.16). Therefore hermeneutics come into play. Hermeneutics’ central issue is that everything is a matter of interpretation. It recognizes that we cannot occupy a worldview-free position of pure reason (Cooling, Bowie & Panjwani, 2020).

Hermeneutics as it is used nowadays originates from the 17th century, where it was used in the context of biblical studies and guided scholars in interpreting scriptures (Crotty, 1998, in McManus Holroyd, 2007, p. 1, 2). Since it entered modern use, it has broadened to other areas as well and addresses not only the philosophy of the interpretation of texts but also of unwritten sources.

Two difficulties exist in general in hermeneutics. Firstly, the meaning of a text is determined beforehand based on the pre-existing knowledge of the interpreter. Secondly, due to the influence of the assumptions of the interpreter the interpretation becomes substantially subjective (Nagle, 2002). Reactions to the predetermined, subjective nature of interpretation can be twofold: accept this subjectivity as inescapable in exegesis and recognize the bias, or try to develop a scientific method to circumvent the problem and guarantee objectivity. The first is associated with a pre- and postmodern reaction, the latter with modernism, as represented by Enlightenment objectivism. During the Enlightenment, attempts were made to escape subjectivity, prejudice and tradition, to move away from interpretation and promote a separation between knowledge in the form of objective science and interpretation. In this way an attempt was made to escape human subjectivity. This position was criticized by two German philosophers, Martin Heidegger and Hans-Georg Gadamer.

Heidegger suggested a three-fold structure of understanding: fore-having, fore-sight and fore-conception (Nagle, 2002). Each interpretation that contributes to understanding needs to have understood what has to be interpreted. Humanity is not a distant observer of the cosmos, but is interwoven with it, grounded in being and time, and therefore a fore-structure exists by which the world is interpreted, which parallels with the concept of a worldview. At this point there actually appear to be some striking similarities between Heidegger’s ideas and Polanyi’s from-to thinking.

Gadamer focused on the notions of prejudice and horizon (Nagle, 2002; Veldman, 2013). There is a dialectic meeting between the prejudices of the interpreter and the text being interpreted. So

awareness of bias is essential. History always precedes the person, according to Gadamer. 'The important thing is to be aware of one's own bias, so that the text can present itself in all its otherness and thus assert its own truth against one's own fore-meanings' (Gadamer, 1960, as cited in Naugle, 2002, p. 317). This is also reflected in the concept of *responsible hermeneutics* (Thiselton, 2009, in Cooling, 2013). Every reader approaches a text with a 'pre-understanding'. 'So no-one reads a text totally "objectively" (...). There is always a subjective process of constructing meaning which draws on one's worldview, reflects one's cultural situatedness and often serves one's own interests' (Cooling, 2013, p. 9). We all interpret from somewhere. 'Therefore, no one is an interpretative island existing independently as a purely rational hermeneutic entity' (Naugle, 2002, p. 319).

Hermeneutics and worldview may also come together in the concept of a personal worldview (Blokhuys, 2011). His idea is that tradition, gender, social environment, age, and so forth influence worldview. 'In the working out of one's worldview to a comprehensive understanding of reality there is a continuing interaction between the personal worldview and ideas and questions in the social environment. In a pluralistic society there is no end to this process' (Blokhuys, 2011, p. 2). Similar thoughts are uttered by Canterbury scholar Ann Casson (2011) when she discusses the ideas of the French sociologist Hervieu-Léger. In modern societies, as opposed to traditional societies, collective memory is constantly changing. The memory of a religious tradition is no longer passed on to the next generation as a matter of course, but the 'chain of memory' is broken into fragments. This concurs with the eclectic and idiosyncratic character of personal worldview as discussed in Van der Kooij et al. (2013; 2017).

A final important issue in relating hermeneutics and worldview, specifically with respect to the research topic, is the possibility of any final meaning. This addresses the question who is the legitimate creator of meaning. Is it human being as signifier? Or, living after "the death of the subject", is there nothing real except an endless exchange of signs? Or "is there anybody out there"? As discussed before, in this study I take a critical realist position, which presupposes an ontological realism. Everything created reflects something of its creator and has an intended meaning in it. The world is to a certain extent independent from how we interpret it (Keller, 2016). Meaning is therefore not only present in texts, but in the whole of creation. 'Meaning making is not restricted to interaction with texts (...) it is taking place almost continuously in almost all classrooms, in the various kinds of talk that constitute or accompany the vast majority of activities' (Wells, 2002, p. 1). This view does not disregard human being as signifier but, following Polanyi and Biesta amongst other, the primacy of a notion of transcendence is essential.

'Thus, not only is the art or science of interpretation affected by a worldview, but the question about the very possibility of meaning itself is also worldview-dependent' (Naugle, 2002, p. 321).

2.6.7 The relevance of worldview to this thesis

As has been recurrently emphasized throughout this thesis, education is never neutral. Every choice a teacher makes is value laden and therefore in the end related to worldview. Knowledge is not just about facts but is belief laden. Cooling (2012) argues that to make meaning from knowledge is a matter of personal judgment, relying on commitment and beliefs or in other words a worldview. Specifically teachers' epistemological beliefs are relevant to consider, as they influence theories of learning, and consequently of meaningful learning. These beliefs are deeply rooted and formed in us so that we are not fully aware of them. Therefore critical reflection on one's personal commitments is a key issue for all those who are involved in education. It is essential for educational institutions, for they will have a vision for their students based on a worldview, in which their students will also be inducted. It is important for teachers to wrestle with the philosophical questions of life in order to examine their worldview, to enhance their teaching and learning (Flanagan, 2019). Worldviews have a key role in education, for if people with different incomparable paradigms join in an educational setting this may easily lead to misunderstanding and conflict. Flanagan therefore argues that teachers should become worldview conscious (not only RE teachers, as she suggests, but all teachers I would argue), which presents the challenge to elicit what is currently hidden.

Specifically the relation between organized and personal worldview is relevant to this study, in the context of an institution that articulates its identity in terms of a Christian worldview, regarding lived and formal aspects of institutional worldview, reminding the discussion of the concept ethos in 2.6.3. Furthermore, the relation between worldview beliefs and teachers' professional beliefs hasn't received much attention in research, while this may be highly relevant in the context of Christian education.

Another important point is that if the concept of a worldview turns out to be useful, how coherent does that worldview look with student teachers when talking about their conceptions? Is their *personal* worldview based on an *organized* worldview (Blokhuis, 2011; Van der Kooij et al., 2013) or would it be better to talk about 'bricolage' (Casson, 2011) because of the eclectic and idiosyncratic character of their worldview (Van der Kooij et al., 2013, 2017)? And what does that mean in the context of a Christian institution and for Christian teacher education?

2.7 Summary

Meaningful learning is conceptually connected to what it is to know. Questions about meaningful learning are therefore related to questions about the nature of knowledge and knowing, which belong to the domain of epistemology (see Figure 3). Epistemology is closely related to education, in several respects. In the first place because epistemologies belong to different paradigms or worldviews. Education is never neutral but is based on a particular worldview. Every choice a teacher makes is therefore value laden and in the end related to worldview.

Meaningful learning can be considered from within different paradigms. In education in general and in teacher education in the Netherlands more specifically, the constructivist paradigm is predominating. This paradigm also constitutes the root of the term meaningful learning. The term was coined by Ausubel (1963), indicating a cognitive, conceptual strategy of integrating new knowledge with prior knowledge. It is based on a constructivist theory of learning, which stresses that learners construct their own meaning. The literature shows that a constructivist theory of learning in education has easily been confused with a view of constructivism as a theory for classroom instruction or a pedagogy. Notwithstanding this confusion, constructivism has had an enormous influence in education, partly because of the alternative it offered to the traditional objectivist view. The admissibility of education for constructivist theories may have been enhanced alongside developments in society which moved away from authority and tradition and stressed individual autonomy.

An alternative view to both constructivism and objectivism has been introduced by discussing the work of Michael Polanyi and thinkers who developed his ideas subsequently. Polanyi's work could essentially be captured in the term personal knowledge. His ideas specifically speak to the context of Christian (teacher) education because he characterised all knowing as rooted in a fiduciary framework of beliefs. This overcomes a persistent Western dichotomy of thinking, also in Christian education, in knowing versus believing. A faith-learning integration struggle is not unique to the Dutch Christian context though, but it may have different expressions in different contexts.

Notions derived from Polanyi's thinking have been proposed to reflect on epistemology and pedagogy in the context of Christian education. Polanyi's personalist epistemology (and ontology) give focus to an initiation of knowing outside the person on the one side and a rootedness in the person on the other. In its transcendent character this epistemology refers to an existential dimension of knowing and meaning as well, for everything we know is full of meaning according to Polanyi. By characterising knowing as indwelling a fiduciary framework, Polanyi implies that knowing depends on tradition and authority as well, so that knowing is also inherently interpersonal and

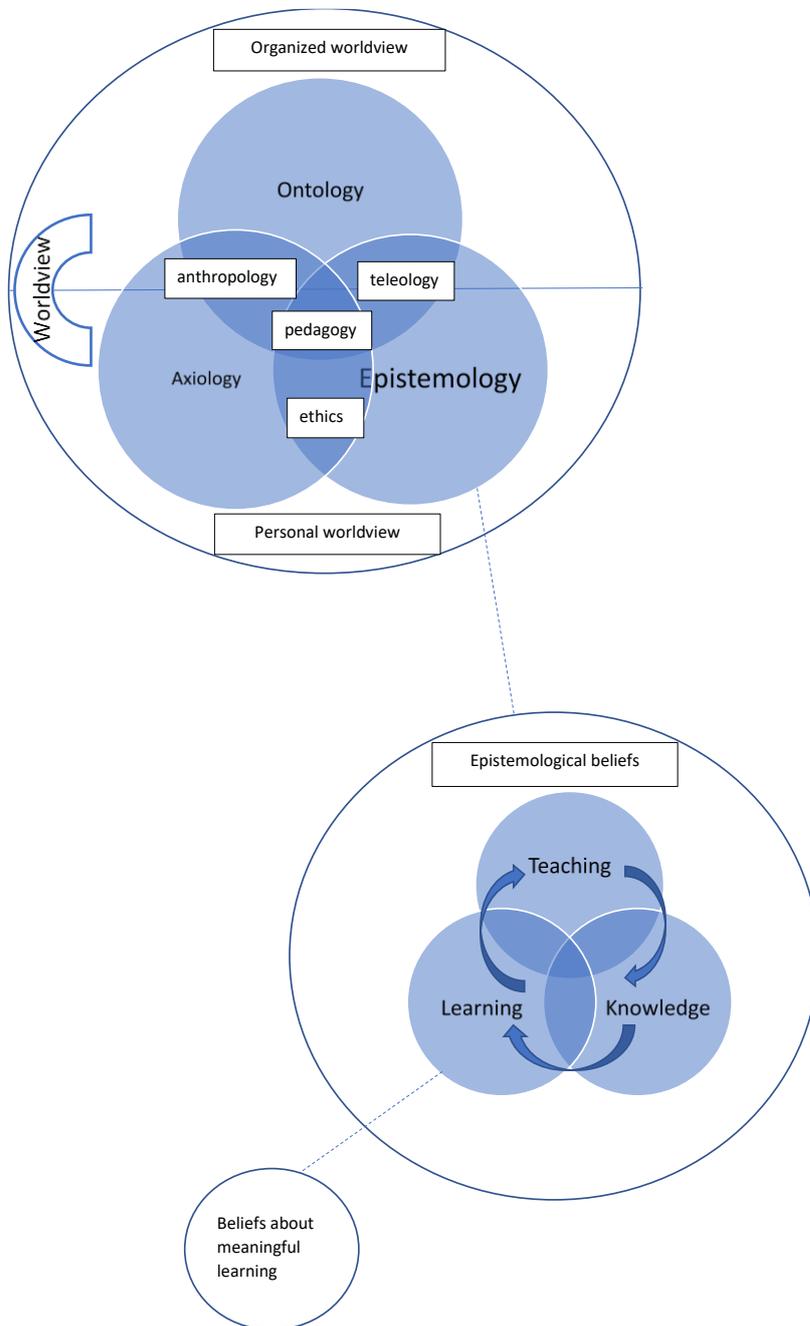
needs the person in community. A constructivist focus on learning instead of teaching tends to neglect the interpersonal aspect of knowing however and can be focused too much on the subject(ive). Therefore it may be more consistent with a Polanyian epistemology to speak about meaningful knowing or meaningful educating instead of meaningful learning.

Epistemology is further closely related to education in the shape of teachers' epistemological conceptions or beliefs, also called their personal epistemology, which are related to their theories of learning and classroom pedagogy consequently. Beliefs can be very resistant to change, especially beliefs that are close to the self and others, so shared beliefs. Teachers' beliefs exist in a system and can be held in clusters, possibly containing incompatible beliefs. Teachers' epistemological beliefs stand in relation to other beliefs, like worldview beliefs. How they are related is still understudied and seems to be complex.

In following Polanyi's idea of tacit knowledge, a worldview can be defined as a fiduciary framework of basic commitments, tacitly indwelled or inhabited. A distinction is commonly made between organized or institutional versus personal worldview. The relation between organized and personal worldview is relevant with respect to the specific context of the teacher education institution in this study, in particular its ethos. The literature tends to be theoretical. We are not sure how worldview operates at the personal and institutional level and in particular in teacher education, which is a gap this study wants to address. The tacit aspect of a worldview is a common element with the literature on the nature of teacher beliefs. Tacit knowing however raises the issue of the (im)possibility of making teachers worldview and beliefs' aware. Still, awareness seems to be very important, as teachers do not operate in a vacuum but are exposed to competing paradigms in education and society, which may also tacitly influence their beliefs and teaching practice. The tacit nature of knowledge and worldview will be an important issue to consider in the next chapter, which presents the research methodology. Its challenging aim is to develop a design that reveals how worldview plays a role in the beliefs on meaningful learning student teachers bring to teacher education in the specific context of Driestar Christian University. Somehow a balance between personal and universal aspects of meaning and knowing needs to be addressed. Speaking to the person and the field are therefore both essential to consider in the methodology.

Figure 3

Representation of the relation between worldview, teachers' epistemological beliefs and beliefs about meaningful learning.



Note. This is not an exhaustive model of worldview but presents the concepts most relevant to this study. The focus of this study is on how personal and organized worldview play a role in student teachers' conceptions about meaningful learning. Meaningful learning is related to beliefs about knowledge, learning and teaching, i.e. epistemological beliefs (sections 2.2; 2.5.1). Epistemology is an aspect of worldview. A worldview further addresses at least ontological, teleological and ethical questions (section 2.6.2).

Chapter 3 Methodology

3.1 Introduction

Previously we have established that thinking about meaningful learning encompasses a paradox between personal, particular and universal aspects of knowledge and knowing. Moreover we have seen that if we want to address students' conceptions of meaningful learning we need to take into account the tacit nature of knowledge and worldview. The methodology to be developed in the current chapter therefore needs to aim at revealing what kind of beliefs on meaningful learning student teachers bring to teacher education and how they perceive them in the specific context of Driestar Christian University.

Real life, education, further is complex and subtle and cannot be easily grasped in research (Bakker & Montessori, 2016). 'All those that are involved in education know and feel the dynamic energy, movements and subtleties that take place in such environments' (Mercieca & Mercieca, 2013, p. 235). This complexity somehow has to be reflected in the methodology as well. This chapter will set forth the road that has been developed to take these aspects into account.

The study presented is aimed at the understanding of meaningful learning with student teachers in a Christian University, their conceptual ideas and the role of the context of this particular institution in their thinking. In this chapter the research questions (3.2) will be followed by the research paradigm and design (3.3), the selection of participants (3.4), the data collection methods (3.5), the specific features of the approach used in this study (3.6), the approach to data analysis (3.7), the truthfulness of the research (3.8) and its research ethics (3.9).

3.2 Research questions

To recap, the question set out to be answered in this study, as given in chapter 1, is:

How does worldview play a role in the conceptions about meaningful learning that student teachers at a Christian university have developed?

This question is addressed by means of the following research questions:

1. What is meaningful learning in the context of secondary teacher education?
2. How could the concept of a worldview help in our understanding of meaningful learning?
3. Which conceptions about meaningful learning do student teachers bring to the fourth year tutor group?

4. What do Driestar student teachers' conceptions about meaningful learning reveal about the epistemological beliefs of student teachers at Driestar?
5. What do Driestar student teachers' conceptions about meaningful learning reveal about personal and institutional worldview?

3.3 Research paradigm and design

In order to address the gap and questions identified, this study will take a qualitative approach. Qualitative research can be defined in different ways. I will start by highlighting different definitions of qualitative research which pay attention to the role of meaning in this particular type of research. This provides a first rationale to choose for using a qualitative approach in this study, because the central concept here concerns meaning and meaning-giving.

Several authors have described qualitative research as focussed on meaning or meaning-giving. Boeije (2014) defines qualitative research as aimed at questions concerning topics which deal with the way people give meaning to their social environment and the way they behave according to that. Research methods are used which describe the topic from the participants' perspectives in order to describe and explain, if possible. Maso and Smaling (2004) characterise qualitative research, amongst others, with a research topic that is aimed at daily meaning-giving and meaning-relations between phenomena. Meanings people create in their interactions are important in that and a critical focus for this study. Wester and Peters (2004) describe qualitative research as aimed at the delineation of meaning-giving of those concerned. What these three different definitions have in common is an explicit focus on meaning and meaning-giving processes, in research topic and research aim, as a characteristic of qualitative research. They resonate with what is repeatedly mentioned as a characteristic feature in handbooks on qualitative research as well (e.g. Mortelmans, 2013; Robson, 2011).

Besides the focus on meaning in qualitative research, there are several more reasons to prefer a qualitative approach to a quantitative for the topic of this study. The research questions in a particular study are often key to methodological choices (Robson, 2011, p. 25). In this case, the research questions ask for conceptions and experiences from participants, their views are important. They call for eliciting information from respondents in an open way. The research questions are mainly about constructs which cannot be observed directly; conceptions or beliefs. These are best addressed by using a more open ended and inviting approach, as used in a qualitative approach. 'The nature of qualitative enquiry is interpretive, reflexive and creative' (Waterhouse, 2007, p. 276).

The emphasis in the results of this study will be on patterns, themes, meanings and perspectives illustrated with quotes from the respondents. Numbers, percentages and statistical analyses of variables are less suitable to address a topic like meaningful learning at this stage.

Next, as became clear from the literature review, there are still a lot of open questions concerning meaningful learning in teacher education and the relation between professional and worldview beliefs and there is a gap. That is a reason why qualitative exploration of this phenomenon is preferred to other approaches. Qualitative research is suitable if a research problem has to be addressed in which the variables are not known and the problem needs to be explored in order to develop a detailed understanding of a central phenomenon, as Creswell says: 'Exploring a problem is a characteristic of qualitative research' (Creswell, 2014, p. 77).

A final, but no less important, reason for choosing a qualitative approach, is the nature of learning and the context of education. As stated in the introduction to this chapter, education is complex to study. Education can be characterized as an open system (Robson, 2011). An open system is one in which there are many potential variables in operation which cannot be controlled in the way necessary for randomised controlled trials and where it is impossible to draw 'constant conjunctions between a particular cause and effect' (Shipway, 2011, p. 77). 'Mathematical and quasi-mathematical tools cannot take account of things such as an agent's values or reasons, which are an inherent part of open systems in the social sciences' (Shipway, 2011, p. 169). So to do justice to the nature of education, and learning, a qualitative approach is preferred as well. I would not do justice to my prior assumptions about meaningful learning either, as expressed in the literature review (section 2.6 ff.), when choosing a different approach. If human interpretation is inherent to meaning giving, I would contradict this assumption by using a positivist model in which human interpretation is not considered significant in the search for answers. A positivist model is often, but not necessarily, associated with a quantitative approach. I will further explore this in the next section about the philosophical assumptions underpinning this study.

3.3.1 Positioning the research; philosophical assumptions

Since the work of Kuhn (1962) approaches to methodology in research are often considered to reside in paradigms (Cohen, Manion & Morrison, 2011; Robson, 2011). A paradigm is defined as 'a way of looking at or researching phenomena, a world view' (Cohen et al., 2011, p. 5), an 'accepted model or pattern' (Kuhn, 1962, p. 23) or a distinctive belief system with clear philosophical assumptions (Robson, 2011, p. 20). In social research traditionally a distinction is made between a quantitative and a qualitative paradigm. This dichotomy is often linked to a distinction between positivism and

interpretivism, where the quantitative research paradigm has historically been linked to positivism and the qualitative to interpretivism (Mortelmans, 2013; Robson, 2011).

In the meantime this link has been problematized and several methodological handbooks indicate that reality is more nuanced (e.g. Cohen et al., 2011; Mortelmans, 2013; Robson, 2011). Maxwell and Mittapalli (2010) suggest that either type of research can be carried out from a range of philosophical stances. Other researchers have suggested it is better to talk about a continuum instead of a dichotomy (Morgan & Smircich, 1980; Guba & Lincoln, 1994, in Mortelmans, 2013, p. 65,66). This continuum can be elaborated on the basis of three central concepts: ontology, epistemology and methodology (Mortelmans, 2013). Ontological assumptions give rise to epistemological assumptions and these in turn give rise to methodological considerations (Cohen et al., 2011).

Where ontology considers the nature of reality and being, epistemology considers the nature of human knowledge about reality and methodology the position of the researcher and in what way a researcher can get to know something about reality (Mortelmans, 2013). As this study directly touches upon the nature of knowledge in focusing on meaningful learning, it is important to look at the different positions which can be held on the 'trinity' of ontology, epistemology and methodology and position this research in relationship to them.

Two classical research paradigms often distinguished within the social sciences (cf. Cohen et al., 2011; Mortelmans, 2013; Tracy, 2013), namely (post) positivism and interpretivism, will be discussed subsequently on the basis of these three central concepts. Next I will briefly mention poststructural or postmodern paradigms. I will argue why none of these paradigms would be adequate to use in this study and explain which assumptions underpin this research instead.

Ontologically the *positivist*, also called *realist*, assumes that a single true reality is waiting to be discovered. Researchers using this paradigm conduct research to 'observe, measure and predict empirical phenomena' (Tracy, 2013, p. 39). Epistemologically then this paradigm advances the notion that truth and knowledge about the world can be objectively proved through scientifically-based models of research. Researcher and researched are considered to be independent entities (Mortelmans, 2013).

Post positivism also looks for causal explanations but can be distinguished from positivism in the ontological belief that humans can only understand reality partially. Being human as a researcher brings inherent weaknesses and biases so fully capturing reality is not possible. These biases are objectionable so they should be corrected or minimized, in the post positivist view. Science is seen as objective, the background and biases of the researcher should not influence 'the truth out there'. So the human element is a problem to be overcome, not a resource to be developed. Methodologically,

methods used within this paradigm should be value free, multiple methods are ideally used in triangulation. The importance of evidence-based research is stressed within this paradigm. In England this has led to the use of randomised controlled trials (RCTs) in education, recommended to the government by Dr. Ben Goldacre, who recognizes the need for 'a slow revolution that puts evidence at the heart of teaching' (Government UK, 2013). The (post) positivist paradigm is often used in a quantitative and experimental design although qualitative methods can be used as well (Tracy, 2013).

In *interpretivist* or *constructivist* paradigms, the ontological assumption is that reality is constructed and knowledge about reality is always mediated through the researcher (Tracy, 2013).

Epistemologically, knowledge is seen as individually and socially constructed through language and interaction, so it is subjective and co-created. The social world is constructed differently by each person and words and events carry a different meaning in each situation. It is important to analyse social action from the actor's point of view- also called *Verstehen* in this tradition (Evers, 2007, p. 8; Mortelmans, 2013, p. 63; Tracy, 2013, p. 41). The choice of methods is considered to be a value choice in this paradigm. Multiple methods can be used, often with a hermeneutical aim, which means using a circular analysis alternating between data text and context (Tracy, 2013, p. 42) to seek holistic understanding.

Poststructural or closely associated *postmodern* paradigms are especially relevant to mention with regard to their explicit assumptions on meaning. Reality is viewed as fragmented, multiple, situated, and multi-faceted (Tracy, 2013, p. 44). The notion of a single truth is rejected and the relativism of meaning is stressed. Knowledge is contextual, partial and fragmentary (Fox, 2014). Postmodern theories of knowledge are characterized by an emphasis on subjectivity and particularities rather than objectivity and universals (Mitchell, 2006, p. 121).

In the beginning of this chapter I have already postulated that the nature of education can be characterized as an open system. A few problems arise if a positivist paradigm would be used to underpin this research, because as a consequence I would have to approach this open system of education with methods that observe, measure and predict within this system and try to find hard regularities whilst there are many potential influencing variables beyond control. It is not possible to isolate and control variables from an open system without violating its essential character.

Furthermore, MacIntyre (2013, p. 106) points out that the attitude in social sciences is tolerant to counter examples, so it is not useful to generalise in the social sciences in the same way as in the natural sciences, in which the positivist paradigm is dominant. The process of theory development in this research will therefore be explanatory and non-predictive.

Besides, if using a (post)positivist approach the researcher should act as a dispassionate, objective observer, not 'clouding' (Tooley, 1999, in Shipway 2011, p. 199) the results with prejudices. This implies that there has to be some neutral ground to start reasoning from. In chapter 2 we have seen that this is impossible. The core problem with assuming a neutral reasoning ground is clearly stated by MacIntyre: 'to be outside all traditions is to be a stranger to enquiry; it is to be in a state of intellectual and moral destitution' (1988, in Mitchell, 2006, p. 103, 104). Furthermore, a positivist approach would exclude the reasons people have for doing things as valid data, which would make it complicated to include student teachers' conceptions as a main element of data collection.

When trying to avoid the dangers of the Scylla of positivism, the Charybdis of relativism may be looming on the other hand (metaphor in Shipway, 2011), which could be the consequence of choosing a postmodern or constructivist paradigm, if applied in a radical way. Emphasizing subjectivity and particularities would be difficult to bring in accordance with the possibility of a transcendent meaning, which can be known only through relatedness with reality and would render a shared external point of reference. This is what Polanyi's paradigm assumes, which is considered to resonate with Christian notions confessed at Driestar as well (section 2.4).

But then what remains? Polanyi's ideas could help again, which offer an alternative to the excesses of both positivism and relativism. In Polanyi's view, reason and tradition are not opposed. All language is tradition dependent, which makes all human knowing tradition-dependent. 'No human mind can function without accepting authority, custom and tradition. It must rely on them for the mere use of language' (Polanyi, 1969, in Mitchell, 2006, p. 102). As we saw in the previous chapter as well, this relying on authority requires belief, which gives knowledge a fiduciary character. Belief is even the source of all knowledge (cf. Polanyi, 1962). 'No intelligence, however critical or original, can operate outside a fiduciary framework' (Polanyi, 1962, p. 266). When we acknowledge the fiduciary character of all knowing, the barrier that was erected between facts and values collapses (Mitchell, 2006, p. 123) so that the interaction of the real environment with the interior world of an individual agent can be recognized. In striving to make contact with reality we can at the same time affirm a personal element in all knowing. Knowing and so knowledge is never independent of the knower (cf. Palmer, 1993; Wright, 2013). On the other hand, the dependency of rationality upon tradition does not mean that it is not possible to transcend particularity. An external reality exists independent of the knower, that is universal and knowable. This universal truth is knowable only partially though, because of the personal element in knowing which serves as 'a lens by which we view reality' (Mitchell, 2006, p. 122).

This may sound like a circular logic and a theory of knowledge that requires belief is circular indeed. Still it is even better to speak of a spiral, for this is not a vicious circle at all in which there is no advance in knowledge. But one must commit oneself to premises and the conclusions one reaches in the end are entailed in these premises. 'This is then our liberation from objectivism; to realize that we can voice our ultimate convictions only from within our convictions- from within the whole system of acceptances that are logically prior to any particular assertion of our own, prior to the holding of any particular piece of knowledge' (Polanyi, 2013, p. 267).

The assumptions in Polanyi's theory of knowledge resonate very well with the paradigm of *critical realism*, in which this study is positioned, as discussed in chapter 2 (section 2.4.3).

Many Christian scholars have ontologically committed themselves to the belief in an external reality, created by God. I realize that I speak from within the framework of Christian belief and tradition I have been raised in. My knowledge at this point is committed to the authority of the Christian tradition. I want to underline the importance of this commitment to my research, for if there would be no independent reality it would be impossible to share meaning and experiences with others, for they would not exist. Even if truth would be relative to communities, as social constructivism assumes, this ultimately requires the existence of others, which presupposes a reality independent from subjects who experience it, otherwise it would not even make sense to share meaning in social communities. Real world research is possible, and is not only a matter of construction or imagination.

This does not mean that we have unmediated access to reality as human beings, for our knowledge of reality is provisional rather than that it provides us with objective truth. Our prejudices and worldview influence the truth we can know and our knowledge about the world, so that it is 'partially discovered and certain, partially invented and relative' (Naugle, 2002, p. 324). Truth is universal but our understanding of it is not (cf. MacIntyre, Polanyi, in Mitchell, 2006, p. 102). At this epistemological issue there are different points of view within Christian tradition. A biblical warrant for an epistemology which recognizes the fallible nature of knowing can, amongst other places in Scripture, be found in the words of the apostle Paul in 1 Corinthians 13: 12: 'For now we see in a mirror, dimly' (NRSV, 1989), as the American philosopher David Naugle (2002, p. 106) points out in his book on *Worldview* as well. Recognizing the fallible nature of knowing impacts on this study in that it generates indicative knowledge in an attempt to interpret reality, which makes that the word 'understanding' is preferred over the word 'explaining'. While the use of agents' reasons are taken as a valid part of the data, those reasons can be criticized at the same time and are not given absolute epistemic authority (Shipway, 2011). This is related to the third feature of *critical realism*, judgmental rationality. It means that we need others to check our interpretations and truth claims, and share our 'surplus of seeing' (cf. Bakhtin, in Naugle, 2002, p. 326). Human beings are gifted with the possibility

to think and make judgments. This is what makes it possible to give arguments and try to approach reality to the best of one's abilities in making a judgment concerning the best explanation for the data collected. This 'inference to the best explanation' is also called *abduction* (Thomas, 2011, p. 212) and for Polanyi this constituted a commitment aspect of knowing. It respects the variability of social life and human agency in all its unpredictability, recognising the complexity and frailty of the generalisations we can make about human interrelationships. Conclusions are therefore tentative and revisable.

Methodologically this critical realist position impacts on my research in that it is not tied to the use of certain methods. This means that many research methods which are familiar to postmodern perspectives for example can be used from a critical realist perspective as well, which gives them ontological grounding. Data gained from using these methods 'say' something about the real world in their final analysis. Subjective data, gained from methods like interviews, which will be used in this research, can indicate 'real' mechanisms. 'When several of these methods are employed to examine phenomena from different angles, they can provide convincing evidence of the reality of the situation' (Shipway, 2011, p.182). The data can also point to relevant underlying mechanisms which play a role in other situations.

In the previous section I have given different reasons why a qualitative approach is preferred in this study. The methods chosen for data collection can all be used in a critical realist paradigm in order to reflect part of reality and approach it as closely as possible by comparing the data, themes that emerge and connect them to relevant theory discussed in the literature.

The nature of educational research and the kind of knowledge it generates also impacts on the methodological criteria used in this study. Although there is a legitimate concern in all research for accurate data, 'hard' objectivity as would be required in a positivist paradigm, is not achievable in interpretive qualitative educational research. But that does not affect the reliability of the data per se. What can be done in interpretive, qualitative research to establish reliability is show rigour in the way the research was done, through describing the research procedure accurately so that the developmental process of the study becomes clear and justifying the interpretation of the data. Subjectivity is inevitable in research, from whatever paradigm it is undertaken, as human interpretation always plays a role. But instead of viewing it as a problem to be overcome, it can become a resource to be used when showing critical reflexivity towards and accounting for one's subjectivity by means of writing critical memos on thoughts, feelings and biases noticed during the developing research process.

3.3.2. Case study

The main question in this study is: how does worldview play a role in the conceptions about meaningful learning that student teachers at a Christian university have developed?

From this question can be derived that 1) this study will be looking at a particular social phenomenon, namely meaningful learning, within the real life context of secondary teacher education. 2) It takes place within a specific setting, namely the secondary teacher education curriculum at Driestar Christian University. 3) The focus will be on the role of worldview in students' conceptions, within this particular context. This context is believed to be relevant to studying these aspects and cannot be separated from the phenomenon itself. 4) The question how worldview plays a role in conceptions about meaningful learning asks for an in-depth inquiry as conceptions cannot be studied at surface level. 5) Because there is a finite number of student teachers who could be studied within the secondary teacher education programme of Driestar the phenomenon under scrutiny is bounded.

All these aspects need to be taken into account in following a particular research design. A design which seems well suited to do so and is therefore a legitimate choice is a case-study. A case study can be described as: 'an in-depth exploration of a bounded system based on extensive data collection' (Creswell, 2014, p. 493). Similarities with other forms of qualitative research are amongst others the search for meaning and understanding, the researcher as the primary instrument of data collection and analysis and a richly descriptive end product (Merriam & Tisdell, 2016). The key opportunity a case study has to offer is to understand a phenomenon in depth and comprehensively.

Other characteristics of a case study are the focus on 'how' and 'why' questions, the covering of relevant contextual conditions, fused boundaries between phenomenon and context (Yin, 2014) and a phenomenon which is bounded (Merriam & Tisdell, 2016). Case studies are often criticized because their findings cannot be generalized (Bryman, 2012; Tracy, 2013; Yin, 2014). But in a case study an intensive examination of a certain setting is important which elucidates the unique features. 'The purpose of a case report is not to represent the world, but to represent the case' (Stake, 2003, p. 156). This means that this study takes an *idiographic* approach, as opposed to a *nomothetic* approach which is aimed at generating statements that apply regardless of time and place (Bryman, 2012). An idiographic approach also resonates with a knowledge paradigm offering indicative insights instead of generalizable findings.

A first characteristic of this case study is that it takes an embedded or nested (Thomas, 2011), single case study design. This means that the case has subunits or subcases embedded within (Yin, 2014). In

this study these subunits were the participating fourth year student teachers in the secondary teacher education programme of Driestar Christian University. I have consciously considered whether a single, nested case study or a multiple case study would best address my research design. An essential element of this study is that student teachers share a wider, connected sociocultural context which is not only a physical context but also a vital element of the research. The Driestar context is addressed in the research questions, data collection and analysis. Furthermore, the primary focus of this study is not on comparison, as is the case in a multiple study, but the cases are important in themselves (Thomas, 2011 p. 143 ff.; Yin, 2014, p. 56 ff.). These issues legitimize the choice for a single, nested case study design as a framework.

A second characteristic of this case study is that it takes a particular creative expression which is explained in the next section. Other types of study can namely be combined with the case study, since it is a bounded system that defines the case (Merriam & Tisdell, 2016, p. 39).

3.3.3 Portraiture

As I have underlined in the introduction to this chapter, educational settings are both complex and unique (Bottery, Ngai, Wong & Wong, 2008). In education individuals and context metaphorically perform a dance together, which is hard to understand. There is therefore a necessary complexity, unpredictability and ambiguity to all situations in educational practice (Hoyle and Wallace, 2005, in Bottery et al., 2008, p. 184). 'Teachers don't do their job to a particular context, they do it in one, and both are changed by the interaction' (Bottery et al. 2008, p. 184).

When doing research in an educational context there may be a danger of oversimplification of this complex reality. 'Research is only a more formalised and systematic way of knowing about people, but in the process it seems to have lost much of the subtlety and complexity that we use, often as a matter of course, in everyday knowing. We need to bring some of this everyday subtlety into the research process' (Hollway & Jefferson, 2001, p. 3).

In this study I used a variant of portrait methodology to address the complexity and uniqueness of research in the educational setting of Driestar and to give expression to the subtlety in knowledge about people. It also helped to do justice to the personal element that is present in all knowing, as assumed in earlier sections (e.g. section 2.4, section 3.3.1). Portraiture is a qualitative approach which produces a written description of an individual, in the third person form and confined to a few contexts or one major context. It has been developed and utilised by Lawrence-Lightfoot and Davis (1997):

Portraiture is a method of qualitative research that blurs the boundaries of aesthetics and empiricism in an effort to capture the complexity, dynamics, and subtlety of human experience and organizational life. Portraitists seek to record and interpret the perspectives and experience of the people they are studying, documenting their voices and their visions—their authority, knowledge, and wisdom. The drawing of the portrait is placed in social and cultural context and shaped through dialogue between the portraitist and the subject, each one negotiating the discourse and shaping the evolving image (Lawrence-Lightfoot & Davis, 1997, as cited in Hackmann, 2002, p. 51).

This study took place in an educational context, in which portrait methodology can be of particular interest (Bottery et al., 2008; Bottery, Man, Wright & Ngai, 2009). It has already been used several times in educational leadership research (Bottery et al., 2008; 2009; Hackmann, 2002; Waterhouse, 2007). Its use within school systems can be supported ‘since it combines the more scientific perspective of the researcher with the more anecdotal, impressionistic perspective of the school practitioner’ (Mueller & Kendall 1989, as cited in Hackmann, 2002, p. 56).

Portraiture can be considered as a creative form of case-study (Hackmann, 2002; Waterhouse, 2007). ‘A portrait is a likeness of a particular context. It is a close scrutiny of the actors, buildings and history of an institution’ (Waterhouse, 2007, p. 281). Its additional value compared to a regular case study is that it offers a more lively and vivid representation of the student teachers. The narrative features of portraiture can help in speaking beyond the academy. Examining an educational system or curriculum is useful because different individuals often attach different meanings to events (Hackmann, 2002). These variations in perceptions can be used in portraiture, so that together a certain composite is painted, in this case on the role of worldview in students’ beliefs on meaningfulness in the context of Driestar University, which helps in offering a rich, in-depth perspective of this particular context. Portraiture also helps to capture the dynamics of worldview as it is lived within an institution, for which exploration of insider perspectives is crucial (section 2.6.2).

3.3.4 Objections to portraiture

As happens with every method, portraiture has also been placed under scrutiny and a few objections have been raised.

One criticism of this particular method is the relative lack of intensive data analysis. While Merriam and Yin earlier apparently have criticized portraiture on this point in their books on case study research (Merriam, 1988; Yin 1994, as discussed in Hackmann, 2002, p. 54) in recent reprints of their books this criticism is no longer included (Merriam & Tisdell, 2016; Yin, 2014). Hackmann suggests

that one of the ways to address this concern would be to use a cross-case analysis, also called a horizontal analysis (Kelchtermans, 1993). By investigating a phenomenon by means of multiple individual case studies common themes, remarkable differences and recurring patterns could be found. In this study embedded subcases were therefore used and were analysed per individual, that is to say vertical analysis, as well as horizontally, to study common themes. This will be further explained in section 3.7. It should be noticed that a portrait study is context bound by its nature and it would be difficult to generalize beyond its unique setting. But as discussed in section 3.3.2, generalization has a different connotation and purpose in case study research.

Another criticism on portraiture, offered by English (2000) concerns the point of potential researcher bias. His main comment addresses a presentation of a portrait as a grand narrative, in which 'the truth' is claimed and imposed. From a postmodern paradigm he opposes the politics of vision which remains concealed in his view, the omniscience of the portraitist, who is in a position of power. The reader is presented with a finished portrait and has no means to form an alternative story or opinion. English states that the portraitist may have a preconceived idea of a 'central story' and merely constructs the story using data selectively collected within the research context as validation. Such confirmation bias would be inappropriate and unethical indeed. I addressed this point of critique by giving a detailed account of the steps I took to create a student portrait. Besides, the features of the variation I chose also prevented the possibility of a selective portrait, as the written portraits were shared with the student teachers involved. These features will be discussed in section 3.6, following the section on the methods used in this case study.

3.4 Selection of participants

The participants in this case study were five 4th year student teachers from the secondary teacher education programme of Driestar Christian University. The 4th year students were chosen because they were in their final year of teacher education and would be able to reflect on their experiences of a large part of the curriculum.

When talking about case selection it is important to choose cases that will most likely illuminate the research questions (Yin, 2014, p. 28), and provide the ability to learn the most about the phenomenon (Stake, 2003). The word 'sample' does not apply to a case study. The point of a case study is not to find a portion that shows the quality of the whole and an intention to represent a certain population is irrelevant (Cohen et al., 2011, p. 161; Thomas, 2011, p. 62). It is not a sample, it is a choice, a selection of cases which have intrinsic value.

Based on the findings of the pilot study and taking into account my research questions, I decided to look for both male and female students to participate, as I observed during the pilot interviews that there could be differences in how both experience meaningfulness. Secondly, years of experience in teaching could play a role in how student teachers evaluate meaningfulness in teacher education, so I also decided to look for a variety in experience. In hindsight, I do not think that these were possible 'independent variables' and in my analysis they have not played a role at all. My intention further was to include a range of students coming from different (non) denominational traditions. I could have prior information at this point from the student information system. With regard to the research questions I could defend this choice, as every student has got a worldview. It appeared that the fourth year cohort at that time did not have students who could be regarded as non-believers. One of the participating students could however be regarded as a non-practicing believer or a spiritual seeker, her portrait will further clarify. To include denomination I consider in hindsight to be still relevant with respect to worldview and the research questions.

I approached specific students to participate in this study for people normally are less inclined to feel responsible to answer a generic request or email. Beforehand I had asked colleague teachers in the fourth year whom of their students would meet the criteria discussed and also listed students I knew from previous years as a teacher educator. I approached a number of students via a personal email. One student was initially approached via one of my colleagues and after a positive response I sent an invitation. Not all the students responded to the first email and I have therefore sent a reminding email. Nearly all of the students I approached responded to this reminder. Some students declined to participate because of the workload in their fourth year of study, so I had to approach new students. I was faced with the challenge of recruiting students in another respect as well. A 6th student namely dropped out after the first interview, as she did not react to my invitations for a second interview. After her first interview I wrote a memo in which I noticed that this interview proceeded somewhat difficult. This student kept on her coat for instance, the eye contact was less, she gave short answers and probing questions did not always give clarity. I wondered whether it was related to the subject she taught, Maths, and if maybe her analytical competences were stronger than her verbal, as I had a similar experience with a Maths teacher in the pilot. A group of five student teachers was finally left, about whom some personal details can be found in Table 1 below.

Table 1*Participant information*

Case name	Gender	Age	Teaching experience in:	Subject
Grace	F	55	Primary education Secondary education	English
Jack	M	41	Secondary education	English
Dean	M	27	Vocational education	English
George	M	26	Secondary education	English
Meg	F	54	Secondary education	German English

3.5 Data collection

To establish the rigor of a case study it is best to use different instruments, in order to gain as much information as possible from different perspectives (Thomas, 2011; Yin, 2014) and create multiple layers of data around the case. This study consisted of three *semi-structured interviews* with each participating student teacher, while the first interview was complemented with *concept maps, metaphors and vignettes*. This resulted in a written portrait about each student teacher in the end. Each of these methods will be discussed subsequently in the following sections. The steps I took in the data collection procedure will be set out in 3.6.

3.5.1 Concept maps

The central research question in this study asks for students' conceptions. When talking about 'conceptions' it is helpful to have an instrument that gives insight in the construction of knowledge. A method that helps in providing this insight is concept mapping (Novak, 2002; see Appendix C for an example of a student concept map). A concept map is quite similar to a mind map, be it that it depicts suggested relationships between concepts by connecting lines. The original plan was to use

concept maps as a means to 'measure' conceptual change related to meaningful learning but the design of this study has changed over time and I have primarily used them to activate prior knowledge with the students.

Concept mapping is used in research on teacher knowledge for several reasons, of which one is to examine teacher knowledge and beliefs (Zanting, Vermunt & Verloop, 2003, p. 200). The advantage of using a concept map is that the construction of such a map is unique to the person, it helps in organizing and structuring knowledge, is useful to elicit thoughts and reflect on teaching (Reitano & Green, 2012, p. 172). It can be helpful in creating awareness, structure and reconsideration of beliefs with (student) teachers (Zanting et al., 2003, p. 210). A practical reason for choosing this method is that it offers considerable information while it requires little time and effort from participants.

Concept maps can be used in a structured or non-structured way. In structured concept maps, the participants receive a fixed list of concepts to construct with. In the more open, non-structured method, only the key concept is provided, while the remainder of concepts are brainstormed by the participant, before being organized and displayed on a concept map. In this study a non-structured concept map was used with 'meaningful learning' as key concept, because the focus of the research question is on the conceptions of the student teachers, which asks for openness instead of fixation.

Reitano and Green (2012) recommend that participants' thoughts as depicted in a concept map should be further elaborated on in interviews to help students understand and gain insight in the choice of particular concepts, which happened in this study. The concept mapping assignments were used as a starting point for the semi-structured interviews. Before the first interview, participating student teachers received an email with a concept mapping assignment (Appendix D), which once drafted they either sent to me before the start of the interview, if they managed, or brought to the first interview.

A disadvantage of using concept maps is that they focus more on rational, cognitive aspects of student teachers' knowledge. Affective aspects could better be addressed during the interview through an additional method, which will be discussed in the next section.

3.5.2 Metaphors

Chapter 2 discussed that it is important for student teachers to have insight in their beliefs and also assumed that a lot of knowledge is 'tacit'. So how could I research these beliefs?

It can be difficult to study what student teachers' beliefs are, as a belief is, by its very nature, unquantifiable and 'does not lend itself easily to empirical investigation' (Pajares, 1992, p. 308).

'Assessment of epistemological beliefs therefore requires one to identify and uncover what lies well beneath the surface' (Buehl & Alexander, 2001, p. 388). Research indicates that it is difficult indeed for teacher education to touch upon these beliefs. 'Teacher training often succeeds in elaborating explicit knowledge, while the trainees' tacit knowledge informing their routine actions appears to be unaffected' (Martinez, Sauleda & Huber, 2001, p. 973). But the importance of doing so is evident: 'Unexamined, these implicit beliefs and tacit knowledge may remain undeveloped and serve to reinforce and support classroom practices' (Leavy, 2007, p. 1220).

To get at these 'hidden' beliefs about knowledge, students teachers' epistemologies, research suggests that it is best to use indirect methods (Limón, 2006). One of the methods considered to be indirect is a metaphor, which can be defined as 'understanding and experiencing one kind of thing in terms of another' (Lakoff & Johnson, 1980, p. 5). Metaphors are amongst other described as 'compasses of consciousness' (Sfard, 1998), and 'blueprints of thinking' (Martinez et al., 2001). The works of Martinez et al. (2001), Leavy (2007), Saban, Kocbeker and Saban (2007), Mahlios, Massengill-Shaw and Barry (2010) and others emphasize the advantages of metaphor analysis of teaching and learning beliefs. Metaphors can provide insight into ideas that are not explicitly or consciously held, they aim more at the intuitive. They can be evocative, stimulating both self and others to tease out connections which might not be made use of by direct questions (Leavy, 2007). Metaphors are capable of linking the rational and the non-rational, implying cognitive and emotive elements (Scott Mio, 1996, in Szukala, 2011, p. 61). This makes the use of metaphors as a method a valuable addition to the use of concept maps.

Metaphors can be helpful for teachers to reflect upon their work in areas beyond conscious recognition, to explore inner realities and perceptions that shape their practice, their tacit knowledge (Patchen & Crawford, 2011; Szukala, 2011). I have used the ideas of Polanyi as a key theory to reflect on, and tacit knowledge constitutes one of its core elements. I consider metaphors as a means to address the from-to thinking central in Polanyi's thought, especially if we consider metaphors as 'that figure of speech whereby we speak about one thing in terms which are seen to be suggestive of another' (Soslke 1985, in Shortt, Smith & Cooling, 2000, p. 2).

Within the academic debate on the function of metaphors generally two views can be discerned; the *ornamental* view and the *strong* view (Badley & Van Brummelen, 2012). Within the first view, metaphors are seen as just nice ornaments to language, to help make explanations clear. So using metaphors is more a matter of language than of thought. Within the strong view they are 'powerful shapers of the very ways we think' (Badley & Van Brummelen, 2012, p. 2). Lakoff and Johnson state in their book *Metaphors we live by* that metaphors are necessary as 'human *thought processes* are

largely metaphorical' (1980, p. 6). I propose, in line with Badley and Van Brummelen (2012), a nuanced view on metaphors. It is important to acknowledge the power and influence metaphors have in education. Metaphors help shape the practices that educators follow. We have to choose our metaphors for education deliberately otherwise they will choose us (Badley & Van Brummelen, 2012, p. 7). The pervasive influence of metaphors often goes unnoticed because words are often not recognized as metaphors any more, Badley and Van Brummelen illustrate. They have been buried for such a time in our cognitive framework that they are beyond notice. On the other hand we should avoid that our behaviour is completely determined by our language and the models it implies (Badley & Van Brummelen, 2012, p. 9). Metaphors may change over the years, so practice also shapes metaphors and thinking. Teachers adapt and change metaphors during their careers, and blend them as well. Metaphors are limited in that no single metaphor can completely cover a teacher's vision or classroom practice. In my methodology I have addressed this nuanced view by not solely relying on metaphors but by using different complementary methods, like concept maps and vignettes, embedded in interviews.

A basic classification for organizing metaphors has been suggested by Martinez et al. (2001), which since then influenced a lot of metaphor analyses as an initial classification scheme (Szukala, 2011). They organize metaphors as falling into a three-dimensional categorical scheme, clustering behaviourist/empiricist, constructivist and situated/social-cognitivist perspectives. Other educational philosophers use a simpler classification and divide all metaphors for teaching and learning in just two categories; behaviourist (or received) and constructivist (or constructed) (Cheng, Chan, Tang & Cheng, 2009; Patchen & Crawford, 2011). Both positions influence the decisions teachers make about classroom instruction and content delivery (Schraw & Olafson, 2002), and have impact on the roles students take as learners (Patchen & Crawford, 2011).

Whatever categorization is used, researchers have found that teachers' epistemological worldviews do not precisely fit into a single category (Olafson & Schraw, 2006). Teachers blend metaphors, and by extension epistemologies. Dissonance seems to be a key word in here, as researchers have found dissonance between teachers' epistemological views and their practices (Olafson & Schraw, 2006; Wilcox-Herzog, 2002) and dissonance between teachers' metaphors and the descriptions of these metaphors (Patchen & Crawford, 2011). The latter even speak of a 'frame-clash', as 'teachers' substantive descriptions appear at odds with their metaphoric identities' (p. 295).

Researchers differ in their opinions about the reasons for this dissonance. While Olafson and Schraw (2006) consider the presence of blend metaphors as a result of teacher naïveté, Patchen and Crawford (2011) support the assertion that it is due to external pressures on teachers that these

blends or fusions exist, so it is the context of the field of education which is responsible. If context shapes what teachers do, it would be an interesting question how practice shapes epistemology. The value of using metaphors is that they can aid in this complexity between epistemology and practice (Patchen & Crawford, 2011).

Teachers often find it difficult to come up with their own metaphors (Goldstein, 2005; Mahlios et al, 2010). Therefore a sample of metaphors was provided to students during the interviews, namely of the teacher as artist, technician, facilitator, storyteller, craftsperson, steward, priest and shepherd-guide, as suggested by Van Brummelen (2009). I added the metaphor of the teacher as a catalyst (Badley & Hollabaugh, 2012) to this list, because the catalyst metaphor appeals to the aspect of meaningful learning as a paradigm shift (Kuhn, 2012).

During the interviews I asked student teachers to choose which metaphor best applied to how they viewed themselves as teachers and continued to ask whether the metaphor they chose would have been the same at the start of their teacher education career. If that was not the case, I asked which metaphor was applicable at that time and how it developed. I asked if they could give examples from their teaching practice to illustrate their metaphor.

3.5.3 Vignettes

A final method I used during the interviews were three vignettes (Appendix E). 'Vignettes consist of text, images or other material to which research participants are asked to respond' (Robson, 2011, p. 367). They are especially useful to elicit perceptions, beliefs and attitudes. 'Vignettes highlight selected parts of the real world that can help unpackage individuals' perceptions, beliefs, and attitudes to a wide range of social issues. The relative distance between the vignette and the respondent can facilitate this' (Hughes, 1998, p. 384). Vignettes do have conceptual boundaries as they cannot fully cover real life processes. Rather vignettes are used to partly simulate response to elements of the topics under study, as a complementary technique, alongside other data collection methods (Hughes & Huby, 2004). In this study they were part of an interview in which different complementary methods were used. They were mainly used as a focus for discussion during the individual interviews and to touch upon topics which had not been covered.

A limitation most often heard for this method is that a certain distance is created between the real social world and a vignette (Barter & Renold, 2000). But it is not the outcome but the process of meanings and interpretations used in reaching the outcome that is of research interest and vignettes can help to illuminate these.

In this study three vignettes reflecting different epistemological paradigms were used. These vignettes were not designed by the researcher but were taken in a slightly adapted form from a study by Olafson and Schraw (2006, see Appendix E). Participants were asked to reflect on these vignettes and describe in which vignette they best recognized their own view. They were allowed to combine elements from the different vignettes that appealed to them. A number of different perspectives can be adopted in inviting participants to respond to vignettes. In this study student teachers were asked to react from their own personal viewpoints. With sensitive research topics, like drug abuse for instance, it may be better to ask participants to respond from the point of view of the vignette character, in order to minimize socially desirable responses. There was no reason to expect the latter would be necessary in this study, considering its research topic.

3.5.4 Interviews

The complementary methods discussed in the previous sections were embedded in individual, semi-structured, in-depth interviews. The reason for choosing this particular type of method will be explained in this section.

Interviews are especially valuable for providing information and background on issues that cannot be observed or efficiently accessed (Tracy, 2013, p. 132). They enable the researcher to stumble upon and further explore complex phenomena that may otherwise be hidden or unseen. 'We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective' (Patton, 2015, in Merriam & Tisdell, 2016, p. 108). This specifically applies to the topic of this study as its core consists of 'the meaning students attach to what goes on' in teacher education. Students' understandings and conceptions cannot be observed directly and require skilful listening and trying to represent the reality of the respondents' perspective with respect and integrity. 'Qualitative interviewers listen to hear the meaning of what interviewees are telling them' (Rubin & Rubin, 2005, p. 14, 15). Using interviews fits well within a qualitative case study approach, as they can elicit affective and in-depth information. Interviewers focus on a small range of topics and aim to learn about these in detail. They aim at the specific rather than the general. 'The depth, detail, and richness sought in interviews, what Clifford Geertz (1973) called *thick description*, are rooted in the interviewees' first-hand experiences and form the material that researchers gather and synthesize' (Rubin & Rubin, 2005, p. 14). Interviewing is also the best technique to use when conducting intensive case studies of a few selected individuals, as was done in this study (Merriam & Tisdell, 2016, p. 108).

Qualitative interviews can be classified according to different dimensions. The first one is the number of respondents in an interview. I have chosen to use individual, person-to-person interviews because this is essential both to the research topic and to portraiture. I wanted to hear students' personal stories, I tried to find out and understand the context of their personal stories and explored themes in depth. Individual interviews are often used with complex themes and processes, under which meaningful learning can be aligned (Evers, 2007, p. 31).

Interviews are also often divided according to the degree of structure they have, from structured or standardized interviews to unstructured, and in between the semi-structured interview (Merriam & Tisdell, 2016). I chose to use semi-structured interviews. An important determinant to choose for a particular structure is 'fitness for purpose' (Cohen et al., 2011, p. 413). If more comparable data are to be gained, the interview becomes more standardized. If unique, personalized information is important, which was aimed for in this case, more open-ended and unstructured interviewing is used. A certain degree of structure was necessary however, so that topics that emerged from the literature review would be covered.

Semi-structured interviews both provide structure and at the same time allow room for probing deeper and following interesting trails. In semi-structured interviews most of the interview is guided by a list of questions or issues to be explored, and neither the exact wording nor the order of the questions is determined ahead of time, which makes it more flexible. For the first interview I developed an interview guide (Appendix F) with main topics I wanted to touch upon during the interview but not necessarily in a fixed order or wording. The flexibility this provided, allowed me to focus on topics that emerged as most fruitful, interesting and important and to new ideas on the topic (Merriam & Tisdell, 2016, p. 110, 111; Tracy, 2013). This allowed me to respond to the situation at hand, to the emerging worldview and understandings of the respondent. So on the one hand the use of semi-structured interviews created more room for the interviewee's perspective, which would fit with an interpretive constructionist approach (Rubin & Rubin, 2005, p. 28) in which the view and meaning people attribute to something is important. All knowing is interpreting (Meek, 2011), which resonates with a critical realist epistemology. On the other hand, I brought in themes from the literature in the interviews as well, so that a dialogue between personal and universal aspects of meaning also became visible in the dialogue between literature as the big stories of the disciplines and tradition and the little personal stories of the participating individual student teachers.

The interviews I held can also be characterized as in-depth interviews. The in-depth interview is amongst other used to explore issues or what is meaningful to participants and is apt for case studies (Cohen et al., 2011, p. 439). The fact that they are often semi-structured in nature, as was the case in this study, helped me on the one hand to let the course of the respondents' answers influence the

direction of the interview, while on the other hand I used an interview guide to keep on track. Probes were used to dig deeper into issues, elaborating and clarifying the respondents' answers.

My interview style could be characterised as responsive interviewing (Rubin & Rubin, 2005, p. 31, 32). This model recognizes the given that both interviewer and interviewee are people, with feelings, personality, interests, and experiences. Interviewers are not expected to be neutral, something I struggled with in the pilot study (see reflective memos at this point in Appendix G). Throughout my research journey I discovered and realized that neutrality in interviewing is impossible from a critical realist paradigm, while most of the principles of responsive interviewing resonate well with this paradigm. In responsive interviewing each interviewer develops a style that he or she is comfortable with and that matches his or her personality. Self-awareness of biases and expectations which might influence the interaction are essential however, so I wrote memos on these issues after interviewing (example provided in Appendix H).

The responsive interviewing model accepts that researchers develop different styles, varying from nonconfrontational to direct approaches. I felt most comfortable in encouraging the interviewees to talk most of the time and preferred to listen and ask probing questions. I did not often challenge the interviewees initially or give my opinion, although one interviewee sometimes asked for it (see section 3.6.2 for an example). This resembles a nonconfrontational style, which is best if there is a possibility of re-interviewing the same persons, as happened in this study. If I noticed contradictions in an interview or wanted to broach particular issues, I mostly addressed them in the next interview. This was also justifiable from the steps I took in interviewing, as will be explained in section 3.6.

In conclusion, my data collection consisted of individual semi-structured interviews. I also used concept maps, metaphors and vignettes during the first interview to elicit richer data.

My choice of these methods implies that I have deliberately left out other methods. In the first place the methods chosen were preferred to self-reports, for the reason that they yield more knowledge than self-reports (Schaap, 2011). Besides that, because of the time and effort self-reports require from participants I considered this method as inadequate for the participating students, who all had a 'double job' of working as a teacher and learning to become one. Another method I have explored but decided to exclude is photo elicitation. It would have encroached on student teachers' spare time if I would have asked them to create photo material and I considered this as ethically unwise. I could have come up with images as a researcher but selecting and introducing images also entails a risk of too much control (Evers, 2007). After piloting the methods chosen they seemed to generate adequate data, so it was not deemed necessary to use additional methods.

Considering all this, it is important to keep in mind that ‘ultimately no research tool can completely capture the complexity of social existence, however, by adopting a multi-method approach, researchers can build on the individual strengths of different techniques.’ (Barter & Renold, 2000, p. 312). Denzin developed a beautiful metaphor for using different methods, which represents how I intended to use the methods chosen to highlight different aspects of meaningful learning:

(...) each method implies a different line of action toward reality – and hence each will reveal different aspects of it, much like a kaleidoscope, depending on the angle at which it is held, will reveal different colours and configurations of objects to the viewer. Methods are like the kaleidoscope: depending on how they are approached, held, and acted toward, different observations will be revealed (1978, as cited in Hughes & Huby, 2004, p. 47).

3.6 The specific features of the interviewing and portraiture approach in this study

While portraiture was originally developed as an extensive and multimethod approach by Lawrence-Lightfoot (1983), different variations of this methodology have been developed since then. Bottery et al. (2008; 2009) for instance have written portraits after only one interview. In this section I will explain how I came to develop the approach to portraiture used in this study. I walked a while with my interviewees before writing a portrait. At this point I was inspired by an article written by Harvey (2015), in which she explained her way of interviewing. My attention was drawn to the fact that she had a similar question as I had during the process of method development; I had a clear idea of the questions and topics for the first interview, but how did I have to proceed? Harvey further felt uncomfortable with the way member-checking normally takes place, as a crucial aspect of research credibility. Often transcripts or interpretive summaries are returned to participants as member-checking procedure, which generates no deeper reflection and lacks impact on the development of the study. If, alternatively, a final interpretation is returned, there is often a long time span between the moment of first data collection and final interpretation, which makes it difficult for participants to remember the content and context of the interview.

In short Harvey’s procedure was as follows. She conducted the first interview with her participants with a set of questions and topics she had prepared in advance. Then she wrote a document with preliminary themes that she developed after analysing these first interviews. This document was sent to the interviewees before the second interview, and it made participants reflect and add things to what they had said in the first interview. In preparation of the third interview, Harvey developed a document with umbrella themes she found with all six participants. She illustrated the themes with examples from each participant. The third interview was about the document with umbrella themes.

Finally she wrote a kind of case description for each participant, based on the first three interviews. The fourth interview was about that case description.

In my research I used a version of Harvey's approach. First I will discuss the more technical aspects of the steps I took. I conducted three interviews with each of the student teachers participating, in a similar way as Harvey (2015) suggested. The first interviews took place in October and November 2017, based on the questions I developed and used during the pilot study (section 3.8.1). A second interview with each student was conducted in March 2018, in which I discussed the preliminary themes from the first interview per student. Then I had a third interview with each of the students in May and June 2018 about overarching themes that evolved from the interviews with all participating students. Most of the interviews took place at Driestar University. But as it was their final year, the students did not visit Driestar regularly at the time of the third interview. So two interviews took place at one of their secondary or vocational schools and one at a student's home. The interviews on average lasted one hour, although they varied in length between 46 and 90 minutes.

As becomes clear already, analysis took place in between the interviews and after completing them. I will explain more about my way of analysis in section 3.7. As a final step, I wrote a portrait about each student teacher and their thinking about meaningful learning in the context of Driestar University (see Figure 4). I did not plan a fourth interview with students about the written portrait, like Harvey did, as by the time of the third interview all students were finishing their studies at Driestar. But I wanted to offer them a possibility to react to their portraits, in a similar way Bottery et al. (2008; 2009) offered to their interviewees. I have sent the written portraits to the students and invited them to comment on the portrait by email. As stories are temporal in nature due to evolving understanding, the portraits provided a snapshot in time and context. Therefore I explained in the email to the student teachers that they possibly would have a different view now on things they said at the time of the interviews, because of their development. The students who reacted to their portraits did not have any comments and enjoyed reading them.

Figure 4

Interview process and development of themes



Why did these steps, as developed by Harvey, further appeal to me and to what extent do they resonate with my philosophical assumptions?

In the first place, the element of ‘togetherness’ which is reflected in these interview steps resonates with my knowledge paradigm. Meaning giving is personal on the one hand but it is not a solo-act: it is transcending the subjective level. This I aimed to reflect in the interview design by giving students the possibility to reflect on their themes and on aspects their fellow students introduced. Sometimes the perceptions or experiences of others can help us reflect on our own experiences. We need other people to come to know our selves, they can offer us their ‘surplus of seeing’ (cf. Bakhtin, in Naugle, 2002, p. 326). This dialectical process resonates with a critical realist point of view.

Secondly, this approach to portraiture resonates with my critical realist paradigm because I brought in themes from the literature on the one hand in the first interview and allowed for themes the student came up with on the other hand. The use of a concept map also helped with the latter. So I brought in elements from ‘reality out there’ (the literature) while I still acknowledged the personal participants’ perspectives. By deepening the themes that arose from my first analysis together with the student teachers, I addressed the aspect of judgemental rationality (3.3.1). I checked the validity of my interpretations with the student and also against the literature. I did not go as far as Harvey (2015) in talking about ‘co-construction’ of the data. I would rather call it a justification of my interpretation. I think it is inevitable that my perception as a researcher is reflected in the portraits, as they reveal something of my biases and experiences (Hackmann, 2002). ‘Since humans cannot rid themselves of their particularities, our knowledge of reality will always be colored by the particularities in which we live and which serve as the lens by which we view reality’ (Mitchell, 2006, p. 122). But I did not deliberately weave my voice into the portrait. ‘Voice’ is an important aspect of portraiture as developed by Lawrence-Lightfoot. In her methodology the voice or the self of the portraitist is central and brings in ‘I’ statements in the narrative of the portrait. At this point my

approach to portraiture also diverges from Lawrence-Lightfoot's. In this study I tried to be as faithful as possible to the perceived meaning of the student. So, returning to English' critique on portraiture as discussed in section 3.3.4, I do not claim to tell 'the truth'. Neither do I agree with the postmodern view that it is only 'a truth' or 'my truth'. This brings me to the question what function the portraits have in my research. I will discuss this issue in the next section.

3.6.1 Function of the portraits in this study

When it comes to the function of a portrait, an important question is: in what way have I portrayed students? In a more descriptive or a more interpretive way? To be able to answer this question I first need to turn to the field of hermeneutics and its relation to interpretive phenomenology. In this section I will give a short summary of these approaches and how they relate to my analysis. I will also address the issue to what extent the philosophical underpinnings of hermeneutic phenomenology can be justified from a critical realist perspective.

As introduced in chapter 2, hermeneutics as it is used nowadays originates from the 17th century, where it was used in the context of biblical studies and guided scholars in interpreting scriptures (Crotty, 1998, in McManus Holroyd, 2007). Since then it has inspired a range of disciplines and its application has become broader than texts only.

Via the work of Husserl, considered to be the founder of phenomenology, and later on the works of Heidegger and Gadamer, hermeneutics developed in a phenomenological sense. In his *Truth and Method* (1960/1989), Gadamer characterises interpretive hermeneutic inquiry as phenomenological in its method (in McManus Holroyd, 2007, p. 7).

Phenomenology is the reflective study of the pre-reflective, lived experience (Van Manen, 1997; Van der Meide, 2018). Phenomenology assumes an inseparable connection of human being to the world, refusing to draw a sharp distinction between subject and object. Experiences always refer to something in the world (Van der Meide, 2015). In that sense, meaning giving is always phenomenological. We know the world only by indwelling it, as characterizes Polanyi's thinking as well.

Phenomenology is a qualitative research approach with a variety of traditions, of which one is constituted by hermeneutic phenomenology (Van Manen, 2005). Phenomenology becomes hermeneutic if her method becomes interpretive, instead of purely descriptive. The contrast between descriptive and interpretive phenomenology is not that clear-cut though. Heidegger claims that every description is already an interpretation (Van Manen, 2005). A purely descriptive approach would ask from the researcher to 'bracket' all pre-understandings. As I have discussed in the

literature and philosophical underpinnings of this study, this would deny an essential characteristic of human beings. We all use a subjective lens to view reality, as we stand in line of a past and tradition which offers us these pre-understandings (cf. Newman, in Louth, 1983). 'From the moment of arranging to meet, through the interview or observation, through the transcription, through the analysis, the researcher's interpretation is omnipresent' (Josselson, 2007, p.550).

Hermeneutic phenomenology is described by Van Manen as 'a philosophy of the personal, the individual, which we pursue against the background of an understanding of the evasive character of the logos of other, the whole, the communal, or the social' (1997, p. 7). According to Van Manen (2005) a good phenomenological text creates a tension between unique, idiosyncratic and shared, transcendent meaning. A story contains multiple perspectives, in which individual and many are involved in a 'paradoxical play' (Crowther, Ironside, Spence & Smythe, 2017, p. 828). This is interesting with respect to the literature chapter, specifically what I discussed about the role of individual and community, the personal and social aspect in knowing. Hermeneutic phenomenology seems to be well resonating with these aspects in its methodology. Through dwelling in the data and staying close to the meanings of the participating students as a researcher, I aimed to provide a glimpse of the phenomenon to my reader. The power of the 'story' in a portrait is that it is idiosyncratic and transcending the subjective at the same time, in its ability to evoke recognition with the reader. I can provide an example of this kind of recognition from a respondent to my ISREV (2018) paper. She wrote in her response: 'Two examples: like Grace, as a very committed young Christian going to university I attended my first and only meeting of the student Christian Union to experience a complete disconnect between their version of Christianity and my own lived experience, in spite of the shared scripture and Christian vocabulary. Later, after my lived experience led me away from formal adherence to Christianity, I attended an interfaith education conference where everyone was happily labelled 'Hindu', 'Muslim' etc. whereas I had no label, and felt like Meg, in a world of believers to which I did not belong'. This is an example of how qualitative research can 'ring true', even though it is not generalizable. It may provide an encounter with ourselves and in this way addresses interpersonal or universal aspects as well. 'Hermeneutic phenomenology, as a methodology, provides glimpses of the meanings that reside within human experience' (Crowther et al., 2017, p. 826).

Each portrait is a written representation of a participant, derived from the interview transcripts, which shows resemblances with 'crafting stories'. 'Crafting stories from transcript data is about bringing the story together in a way that "shows" what the researcher is noticing and interpreting while working with the data' (Crowther et al., p. 832). The crafting is part of the interpretive analysis.

Van Manen characterizes hermeneutic phenomenology as fundamentally a writing activity, considering the reflective nature of writing (Van Manen, 1997, p. 7). Hermeneutic or interpretive analysis uses data 'to draw attention to the multiple meanings within phenomena and draw the reader/listener into new understandings' (Crowther et al., 2017, p. 828). Hermeneutic analysis uses a reflexive movement between parts and whole, and requires from the researcher to dwell in the data.

Within hermeneutics two forms of interpretive orientation were distinguished by Ricoeur, namely a hermeneutics of faith and of suspicion (in Josselson, 2004). A hermeneutics of faith aims at the restoration of a meaning addressed to the interpreter while a hermeneutics of suspicion assumes that meaning is presented to the interpreter in the form of a disguise. Josselson slightly adapted the terms 'faith' and 'suspicion' for use in narrative research, and replaced them by the terms restoration and demystification. These refer to the stance of the interpreter conceiving of the interpretative process as 'one of distilling, elucidating, and illuminating the intended meanings of the informant or of discovering meanings that lie hidden within a false consciousness' (Josselson, 2004, p. 5).

The portraits I have written are aimed at doing justice to meaning as intended by the teller, so in writing a portrait I tried to be faithful to the perceived meanings of participants, taking into account that even the most faithful attempt to do so is not conclusive and final.

With an eye to the fiduciary character of all knowing, I prefer to use Ricoeur's original term, so I used a hermeneutics of faith in writing the student portraits. A hermeneutics of faith takes as a starting point that what a participant shares is veridical and intentional, instead of disguised.

That does not mean that as a researcher I was limited to interpreting direct and explicit meaning only, or could only passively repeat what the participant told me. Implicit meanings that lay beneath the surface, like 'tacit knowledge', could be depicted and highlighted. I brought my own interpretation to the material and could take interpretive authority. 'Even if we ask our participants to corroborate our interpretation, it is still our interpretive framework that structures understanding. As with any work, each observer interprets from his or her own meaning-making horizon' (Josselson, 2011, p. 39). My horizon and interest with respect to the research questions is reflected in how each portrait is composed from the interview data. This horizon may probably diverge from that of the participant.

Even the most faithful stance within a hermeneutics of restoration reorders meanings. If we are working from an interpretive rather than a purely descriptive approach, we are not speaking for our participants. Rather, we are speaking about the texts we have obtained from them. (...) The meanings we derive from a text were not always already there in the participant (Josselson, 2011, p. 39).

In a sense, the portraits as they appear in this thesis can be compared to a painting. The written portrait is my composition, I am the 'painter' who has used words and quotations from participants' interviews to draw a portrait in words. The participants provided the paint but by making accents in 'colours' I tried to make contrast and depth visible in the portraits, so that some things became foregrounded and enlarged compared to others. The participants' quotations gave body to the themes in the portraits. By using them I tried to highlight layers of deeper meaning, which will be discussed in chapters 5 and 6, subsequent to the portraits in chapter 4. This way of portraying can still take place within a hermeneutics of faith, as long as the frame is not changed (Josselson, 2004). In a sense there is a distinguishment between the text of the portraits and the discussion chapters, in which I will discuss the portraits in conversation with the literature. I have a different aim in these discussion chapters, for interpreting the portraits at a conceptual level can imply that I understand a participant differently than (s)he understands him- or herself and possibly would be unwilling or unable to know what I as a researcher conclude. 'While the task of the researcher in the data-gathering phase is to clarify and explore the *personal* meanings of the participant's experience, the task in the report phase is to analyse the conceptual implications of these meanings to the academy' (Josselson, 2007, p. 550).

3.6.2 Participants' development and its impact on their portraits

A key characteristic of qualitative interviewing is that 'the interview may provoke new insights and changes in participants themselves (...) be a positive and enriching experience for all participants' (Kvale, 1996, in Cohen et al., 2011, p. 414). The portraits resulting from the interviews in this study are therefore intended to reveal something dynamic rather than static. In that sense the word portrait can be misleading for it can evoke the notion of something static. On the other hand, portraits in particular styles of art can be very dynamic, think about vivid brushstrokes which can indicate something of movement and dynamism. A certain dynamic could be discovered in the portraits if we consider the development that took place during the process of the interviews. Student teachers interpreted themselves during the course of three interviews, leading to greater awareness and engagement in self-reflection. This was strengthened by the approach to interviewing chosen in this study, for through the steps designed in between the interviews the students could reflect on their own themes as well as those of their fellow participants. The notion of development also entails that a portrait is never a finalized story of a participant, as development continues. This implies awareness of the temporality of the portraits presented, for several reasons. In the first place, mood, context and listener influence what is told (Crowther et al., 2017). Secondly, a portrait never fully reveals, for participants even do not completely comprehend their own experience. There

is always more meaning than can be captured, so experiences in stories *are* not the phenomenon but they help us understand and reveal what may be only a corner of the veil.

Multiple hermeneutics and the development of participants' thinking

Understanding the other requires a hermeneutic process. Maso and Smaling (2004) point out that there is not only a double hermeneutic in social sciences (as social reality is already interpreted by participants, a researcher interprets interpretations) but also a multiple hermeneutic. In the interaction between researcher and participant, the latter gradually develops an idea of what the researcher is doing. In the interviews this became especially visible with one of the students, Jack, who explicitly asked me questions about the research process in different respects. He was guessing at what I would like to hear, for example at one point during the second interview he asked: *'Is that meaning? I don't know what you are looking for?'* At another moment during the third interview, he was one step ahead in predicting the question I would ask him:

Jack: Meg has said, and I thought that was beautiful 'Limits are meant to protect yourself and the other'. I thought that was a beautiful statement. And now you are going to ask of course; what makes it beautiful for you?

I: (laughs) Exactly (laughs). You know quite well how it works.

Jack: You start to learn it after three times.

During the second interview I sometimes probed on statements Jack made in the first interview. One example of a statement he used was:

'Your worldview should be your meaning. (...) And I am teaching at a Reformed school, this is actually also a Reformed institute, Driestar, in which it is very obvious'.

I asked him if he could explain the final part, what did he mean with *'very obvious'* and how did he experience Driestar's worldview. Jack then started to ask me questions about my way of reading and interpreting the data:

Jack: What do you think I mean? I'm very curious after that. Look, you write it down, you select that part from a long, a very long interview.

I: Yes I, did

Jack: I'm really curious how you read this. How you re-listen and write down. Is it really that you're like: 'I don't know what you mean', or do you have a clue?

I: No, it's not that I haven't got a clue what you mean, you know, it's more that I often want to get things sharp (...) Look, I can give my interpretation of course (..) but I'm curious about the things as you experience them (...).

Here I touch again on what I have written in the previous section, namely that in the portraits I intended to give a representation of the student using a hermeneutics of faith.

Evolving understanding and development over time

It is interesting to see how participants' thinking developed over the time of the interviews. At the end of the third interview with Grace, I touched upon the theme of 'practical value'.

I: Practical value, that's where we started {in the first interview}.

Grace: Yes, that was my very first, funny, how much more has come up, because my first thought was; well, something is meaningful if you can use it in practice (laughs), yes.

Grace reflects here on 'how much more has come up' since we started the interviews, for in the first interview practical value was a central conception, as it was in her concept map.

A phenomenon I also recognized in the participants' development is that in the interview new levels of understanding and meaning-making can evolve (Josselson, 2004, p. 7). George's development is illustrative. George told me at the end of the first interview: *'You really gave me the third degree about it. You made me think a lot, so I, sometimes I had the idea that I didn't know what to answer, but then I tried to indicate that'.*

One of those moments in which he was searching for an answer was the following:

I: What's your view on knowledge and the transfer of knowledge? How do you think this happens with your pupils?

George: Knowledge is (...) more than words, it's about attitudes. It's even broader than that, but I can't find the right words for it. (...) But that's just a definition, I wouldn't know how to bring that into practice in my own teaching, as I actually think so little about it.

I: Yes, that would have been my next question; how do you practice that, but...

George: You really asked a question I never thought about. What is knowledge? (...) what it really is, I think that's very difficult to define.

At the end of the second interview I asked George about the themes I had sent him:

I: Do you recognize the themes, now that you've heard them again, do you recognize them yourself?

George: *Yes, I do recognize them in the sense, these are the things that I, authority and expertise for instance, I expect them to be there, that's who I am, connectedness is important to me, that flows from it. Then things can be brought together, and worldview, to me that lies beneath it. And meaning flows through it all so to speak, so in that sense I do recognize them. I can, and that's funny I think, by getting my own thoughts listed actually, I notice I get a more logical view on it, for myself.*

The final phrase is especially interesting with regard to the development of his thinking. By getting his own thoughts presented, George gained more clarity of thinking. After the third interview George said about participating in the interviews: *'This was also a kind of meaningful learning'*.

Another illustration of evolving understanding can be given from the interviews with Jack. At the start of the third interview he said, in reflecting on the previous interviews: *'You ask such kind of questions, which go quite in depth, so that I sometimes literally start thinking out loud.'*

With Jack, I can also see a development in his thinking about 'meaning', as he really struggled with the word. I mentioned already that he asked for my approval, so to speak. *'Is that meaning? I don't know what you are looking for?'* This probably arose out of his uncertainty about the word 'meaning'. Later on in the second interview, he did something similar:

I: *Do things have meaning in themselves, is meaning already present or is it created between teacher and pupils? What do you think?*

Jack: *I would like to turn the question around, is that clear to you already? Or is that whole word of meaning, is that still a floating concept?*

And he also explicitly mentions his difficulty:

Jack: *And then again, I still struggle with the word meaning.*

But at a certain moment during the second interview, things started to fall into place and he gained more clarity about the concept:

I: *Could you say that at the point where it chafes, where you confront, meaning...*

Jack: *Yes, that's where meaning arises, yes. Somehow. I just wanted to say that, I start to get a sort of {idea} for myself, at the section of pupil and teacher, at that section meaning is created, so to say. If something enters and the pupil has a response, has a thought, a reaction, (..) that's where meaning is, I think.*

Reflection and meaning giving

Interestingly, I also noticed differences in the degrees or ways participants reflected during the interviews on the themes I had sent them.

There was an interesting difference in the way Jack and Dean for example reflected on their first interview. At the start of the second interview, Dean said about the themes from the first interview: *'I still agree with 95% of what I've said'*. I could find no other specific utterances of reflection in his interviews.

Jack said at the start of the second interview, when I asked him if he recognized the themes I had sent: *'I've read it and then I start immediately to think about it and reflect on it like; all right, what have I said. I haven't got the context clear from like five months ago, but that doesn't matter. But what if we continue to talk about it, does it still make sense what I have said or do I have a plausible reason why I said it. And with a lot of things I think; o yeah, you see, because I think about that point thus and thus. So what I've said, yes, I think I can still very well support that.'*

George also explicitly referred to reflection at the end of the third interview.

I: What was it like, to see all these themes which actually came up from all the interviews?

George: To me that was really funny. I thought it was very funny. I think that you, I think that reflection is still important, that's, because you are very, you're very reflectively engaged, like: what, what was important to me and then you see; ah, these themes and these, I think that's an ongoing process, that it's not only now, just one moment, in which you are reflecting, but that (...) should continue.

His final sentence underscores once more the temporal character of a portrait. As stated before, it is never a finalized story of a participant, for their development continues.

3.7 Approach to data analysis

A few important aspects are central to qualitative data analysis in general. In the first place this type of analysis should generate thick descriptions, for data do not only describe events in context, but also reflections on meanings attributed to situations and phenomena (Geertz, 1973 in Cohen et al., 2011, p. 540). Secondly, several challenges are entailed in qualitative data analysis. Qualitative research generally yields a rich set of data which the researcher must select and order, so the researcher should be alert to personal bias. Furthermore, as I touched upon earlier, it entails a double hermeneutic process, in which the researcher interprets data from participants who interpreted their world on their turn and relates them in his/her own words. Therefore reporting and

analysis should combine etic and emic analysis (Cohen et al., 2011), which I will further explain below. Lastly, it is up to the choice of the researcher to include certain data and events and this choice has to be fair to the phenomena under investigation. With these aspects in mind I undertook my analysis, as will be accounted for in the following sections.

3.7.1 The process of analysis and development of the portraits

As explained in section 3.6, I conducted three interviews with each participating student teacher, using an approach suggested by Harvey (2015).

All interviews were audio-recorded and transcribed. Some of them were transcribed by the researcher, others by an external professional. If I did not personally transcribe an interview, I verified the transcript I received by re-listening the full interview, in order to immerse myself in the data. Sometimes I made minor corrections to the transcripts or completed minor missing parts.

After transcribing the interviews, I started a first cycle of manual coding, using open coding (Saldaña, 2013). A number of pages per interview were coded together with the second supervisor and these codes were discussed with an eye to their reliability, consistency and their level of abstraction. I had to find a balance in the level of description or abstraction of the codes used. Codes should not be too descriptive, because that hinders depth of analysis (Mortelmans, 2013). They should not be too abstract either, but stay close to the experience and specific wording of the respondent and capture the essence. I looked for codes emerging from the data, the code 'change' for instance, but also coded with a view to theoretical notions and the research questions (Mortelmans, 2013). In one of George's interviews I used the code 'personal knowledge' for example, referring to Polanyi's knowledge theory. This is also called an iterative analysis. It alternates between an emergent reading of data, which focusses on an emic perspective to catch the subjective meanings of participants, and an etic approach intended at the researcher's meaning and construction of a situation with the use of existing models, explanations and theories (Cohen et al., 2011, p. 221, 222; an example how I dealt with this iteration in Appendix O). It is a reflexive process in which data are visited and revisited and connected to emerging insights to refine focus and understandings (Tracy, 2013, p. 184).

Notes and memos were written in the margin of the transcripts during this process. These memos were sometimes an expression of my own thoughts and questions, sometimes I made a reference to something I read in the literature (examples in Appendix I). A case description about each student was drafted after having read the transcript several times, based on the first cycle of coding, with help of memos and first emerging themes (example in Appendix J). The case descriptions functioned as a provisional sketch for the portraits and themes for the second interview were derived from

these descriptions. I wrote a preparatory document for the second round of interviews (Appendix K, in which an example of themes for one of the students is given). I also developed additional questions to ask during the second interview, as a result of reading more literature on worldview (Appendix K). A document with individual themes was drafted for each participating student teacher. Feedback on these themes had been provided beforehand by the second supervisor, as they were written in Dutch. Each participant received a document with their themes listed. Each theme contained a paragraph in which I explained and exemplified with data why I had come up with this theme. I explained that the content of this document would be the basis for the second interview. The students were invited to comment on, question, critique or elaborate on the themes I had drafted. All participants said they enjoyed reading their themes, and they had much to say about them during the second interview. The themes were meaningful and relevant to them, although some clarifications and nuances were made. None of the themes was discarded. Jack at the start of the second interview laughed about his own unclearness, and evaluated positively that core issues were highlighted and categorized in the document. It was nice for him to see that a whole interview could be captured in a few key issues. Grace in the second interview nuanced or even amended what she said about Driestar's worldview in the first interview, in response to the document with her themes.

After the second round of interviews I wrote a reflective document (Appendix L). In this reflection I also included a third interview of one student, as I had drafted overarching themes based on the analysis of two rounds of interviews with all participants in the meantime. Following this reflection, I decided to add a section to one of the themes for the remainder of third interviews that still had to take place, about the connection between formal and lived worldview. The final overarching themes, drafted in Dutch again, were discussed and approved by the second supervisor. They were considered to be congruent with earlier data and sufficiently covering the data. The final themes for the third interview, with an example theme paragraph, are provided in Appendix M. The students received these themes in a document before the third interview took place. At the start of the third interview, Jack's reaction was: 'My first impression was: good piece of work, that's quite a lot of work!'

I performed a manual coding cycle of all third interviews, after which I made a summary of the third interview per person, consisting of keywords and short sentences. I tried to make a sort of pictures in words around what I thought to be themes, in which I used specific language of a student with reference to a theme. For Dean these were words around the theme of 'usefulness' for instance, '*being of any good, can make something of it, use, useless, win-win*'. I wrote a reflective document on the third round of interviews as well (Appendix N).

Table 2*Horizontal and vertical analysis*

	Student 1	Student 2	Student 3	Student 4	Student 5
Interview 1	↓	→	→	→	→
Interview 2					
Interview 3	→				
	Portrait				

To ensure rigor of analysis, both horizontal and vertical analysis were used. Vertical analysis of three individual interviews resulted in a written portrait per student teacher. Horizontal analysis came into sight at different times during the process. Explicitly in the third interview, when the student teachers reflected on mutual themes that evolved from the interviews with all participants. Implicitly, horizontal analysis was used in the analysis of every single interview (indicated by the interrupted arrows in Table 2), because eventually the process of analysis cannot happen isolated per individual, but takes place against the horizon of new data.

Before I wrote the first draft of every portrait, I read through all the interview transcripts once more, to “dwell in the data”. Per student I made a summary of each interview, with help of the topics that were addressed per interview. Maso and Smaling (2004) call this process of summarizing a descriptive analysis, which means you keep the information per person together, in order to be able to see the parts of information and the summary in light of the whole interview, in order to keep the connection. This descriptive summary was written with extensive use of participants’ own words. I started to write a portrait with help of the case description from the first interview, the summary of all three interviews and the memos I had written about the interviews. I often returned to the transcripts in order to verify the context in which something was said and sometimes to look for additional quotes. Key words and quotes were drawn around emerging themes. The themes which eventually were used in the portrait best covered the essentials of all interviews. The themes I used in the portraits and in between the interviews were developed in dialogue with the data, consistent with my critical realist perspective, so that they not only emerged from the data, neither did I frame the data only from my perspective. Looking back, I could see a lot of overlap with the themes used in the second round of interviews (appendix K), which offered confirmation of their internal consistency.

The final portraits, as they appear in this thesis, were crafted in both a systematic and creative process, guided by emergent themes, in which I aimed for a consistent relation between parts and whole. Although I had decided to use portraiture methodology, it took time and effort to see how I could best use this methodology. Since portraiture blends art and science, I had to find a balance between its systematic and creative aspects, which comprised a tension between both creativity in analysis and a methodological justification of what I had done. As Lawrence-Lightfoot articulated, 'with it {portraiture}, I seek to combine systematic, empirical description with aesthetic expression, blending art and science, humanistic sensibilities and scientific rigor' (n.d.). I wanted to avoid the 'easy beauty' of 'those who will use boundary crossing as a way to avoid the rigors and standards of both art and science' (Lawrence-Lightfoot, 2005, p. 9). How to bring this balance into practice constituted a challenge. I noticed that I wanted to stay close to the narrative or story of the interview transcripts, and had difficulty to let go of parts in deciding which ones had to be integrated in the portraits. This sifting step was of course essential in order to shed light on the research questions and tell a story about the data which provided an analytic narrative, beyond description of the data, making an argument in relation to my research questions (Braun & Clarke, 2006, in Robson, 2011, p. 486).

3.7.2 An act of coming to know

Data analysis is essentially interpretation. Interpretation involves imagination and is an act of coming to know (Waterhouse, 2007, p. 277).

The process, as I have accounted for it in the previous section, is an accurate representation of the steps I took in the procedure of data analysis. Still, I was not satisfied to leave it at that. For it would give a too linear, straightforward impression of the analysis process that took place. Since interwoven through the steps of analysis as described in the previous section, a concomitant process took place of a growing realization that my data analysis had to be in line with my knowledge theory, which draws on Polanyi's thoughts. This process specifically concerned how I could use coding in a Polanyian paradigm.

Different readings have helped me develop my thoughts when it comes to the method and process of coding, in order to keep it consistent with my knowledge paradigm. These readings illustrate that the research draws on different interpretative perspectives and academic disciplines.

In the first place, I encountered several articles on hermeneutic research which helped me to develop my view on coding. The purpose of hermeneutic phenomenology is to let texts speak, to reveal meanings beyond those taken for granted, leaving space for wonder (Crowther et al. 2017, p.

833). In that sense, its underpinnings lie more in line with the humanities than with the scientific method, if it claims a total control over the way to truth, which reduces mysteries to problems that have to be and can be solved (Louth, 1983, p. 145). The humanities give a central place to the mystery of human being and hold that in engagement between persons the mystery of another person challenges our self-understanding. Though the scientific method is often associated with quantitative approaches leading to objective truth, qualitative approaches can also bear a risk of reduction and losing sight of meaning and wonder, a risk called methodolatry. 'Methodolatry is a combination of method and idolatry, to describe a preoccupation with selecting and defending methods to the exclusion of the actual substance of the story being told' (Janesick, 1994, in Smaling, 2016, p. 3). It implies a preoccupation with the only correct way of applying a certain method, while content should be paramount instead, aimed at understanding of the subject of study, not the purity of method application (Smaling, 2016).

As explained in section 3.6.1, I used a hermeneutic research approach in the analysis of the interviews and in writing the portraits. From this perspective there is a specific danger in an overreliance on method. Gadamer warned already that, from a hermeneutical perspective, it leaves what is meaningful hidden, an excessive focus on method is unhelpful (in Crowther et al., 2017, p. 829). For Gadamer, hermeneutic inquiry transcends the use of method, especially if it is used to reign over truth, like 'use the method and reach the truth' (Louth, 1983; McManus Holroyd, 2007). This concurs with Polanyi's aversion of the scientific method, if used this way.

Hermeneutic phenomenology is aimed at the unconcealment of multiple meanings, and to write about them in an evocative, imaginative way. Van der Meide (2018) questions whether coding is the appropriate way to do so and points out the risk of data fixation, in which there is too much focus on describing and categorizing instead of understanding. This results in abstract categories, in which detail and richness of meaning can get lost (Van der Meide, 2018). Van der Meide also warns for literally using words of a participant as codes, for they may not refer to the underlying meaning. Coding is a frequently used method within qualitative analysis and is rooted in a Grounded Theory approach. The aim of this approach is to reach a substantive-level theory, which justifies an activity like coding in which data are labelled and categorized. Phenomenology nevertheless is not aimed at theory development but at revealing multiple meanings. Therefore Van der Meide promotes the importance of writing in the process of phenomenological analysis. Literature, specifically aimed at the phenomenon of research, can be helpful in the process of interpretation as well, for it supplies with insight in data by broadening interpretative ability. Strictly taken a phenomenological research process can only be described retrospectively, Van der Meide states (2018, p. 38).

Secondly, thinking and reading about Polanyi's subsidiary-focal integration has helped me to develop my view on coding. Integration requires two activities of the knower: creative intuition and creative imagination. Intuition evaluates the direction in which the thing we want to find lies, imagination is an active scrabbling in that direction (cf. Polanyi, in Meek, 2011, p. 72). 'Integration is always an effort to move from where we are to something beyond us, in a certain direction' (p. 72). Often we are not able to express how we came to the pattern, it is as if the pattern reached back and took hold of us (Meek, 2011, p.73). When I came across this idea, I realized how well it captured my experiences with the interviews, how separate sentences or data integrated into themes and patterns. The struggle from unrelated particulars at point A to a pattern at point B is a process of indwelling particulars which then turned clues. This integration accredits the active contribution of the knower to knowing but also the contribution of the known, the real.

The central act of knowing as integration is neither linear nor can be fully explicitly accounted for. A partial account of steps can be constructed later to help others to see the pattern, which should be thought of more as maxims than as proofs or strict methods (Polanyi, 2013, p. 30, 31). They can only function within a framework of personal judgement. 'Another person may use my scientific maxims for the guidance of his inductive inference and yet come to quite different conclusions' (p. 31). This required to let go of the idea of 'certainty' in analysis as a researcher and instead have 'proper confidence', accepting that the analysis also contained elements of tacit knowledge and personal insight, which cannot be fully explicitly accounted for. The overarching framework of a case study also allows for Polanyian creative intuition. Thomas (2011, p. 190 ff.) even stimulates to make use of it: 'when you are doing a case study, treasure it and don't let it become suffocated by concern over what you consider to be correct procedure'. A case study offers the capacity or predilection to see wholes rather than fractured parts. In that sense its use can be justified from a Polanyian framework as well.

How should coding be evaluated in light of the different readings discussed? Polanyi's idea of particulars turned clues, implying that in a pattern of the whole things receive their meaning, entails that too much focus on particulars can lead to a loss of meaning. Temporarily use of what Polanyi called destructive analysis can be necessary but a pattern never reduces in a linear fashion to the clues on which we rely (Meek, 2011, p. 241). Knowledge should not be restricted to the explicit result of destructive analysis (p. 421).

Since we originally gained control over the parts in question in terms of their contribution to a reasonable result, they have never been known and were still less willed in themselves, and therefore to transpose a significant whole into the terms of its constituent elements is to

transpose it into terms deprived of any purpose or meaning. Such dismemberment leaves us with the bare, relatively objective facts, which had formed the clues for a supervening personal fact. It is a destructive analysis of personal knowledge in terms of the underlying relatively objective knowledge (Polanyi, 2013, p. 63).

In retrospect, coding played a subordinate role in the development of a portrait. The codes I used were rather key issues with respect to meaningful learning and worldview, themes that best captured the essence of a participant's perceptions of meaningful learning, developed in an iterative process of moving from transcript to themes, comparing, adapting and complementing them with data from all interviews, until I believed a fair and accurate portrait was written. Reading the data over and over again and searching for meaning and patterns transcended the level of breaking data down into codes and categories. Writing a case description, a descriptive summary and crafting a portrait helped to stay away from abstract categorizing.

A final issue I want to address shortly in light of Polanyi's thoughts about integration, is the relation between concept maps and interviews, and in the end the development of the portrait. I struggled how I should see the relation between the complementary methods I used in the first interview and writing the portraits. The metaphors and vignettes did not receive a distinct place in my analysis but formed an integrated part of it, for at points they elicited thoughts about worldview, which were then used to write the portrait. Only in one portrait I explicitly mention a metaphor to illustrate a certain point. So in that sense, the complementary methods provided additional 'clues' to see a pattern.

3.8 Truthfulness

The portraits in this study were written based on semi-structured interviews, which reflected students' conceptions of meaningful learning in teacher education. Although a stage of horizontal analysis was enclosed in developing the portraits (section 3.7.1), it might be objected that they should be confirmed by other data to gain confidence, since interviewees can be hiding what they fully think and feel. At this point my emic perspective as a teacher educator was advantageous, for I knew the context if the students were talking about Driestar's teacher education programme. The steps I took in the process of interviewing, like using complementary methods and sharing first analyses of themes with participants, were intended to enhance trustworthiness, reflecting a kind of 'multivocality' (Tracy, 2013, p. 237).

For several other reasons the responses of the interviewees can be seen as truthful. In the first place, I emphasised confidentiality and anonymity from the start towards the participating student

teachers. Secondly, the interviews were not part of a larger University programme and did not in any way influence students' evaluation or assessment, which supported them to be open in their views. This was also secured in the relation between researcher and students, as discussed in the ethics section (3.9). Furthermore, this study is published only after students have graduated a few years already. One of the students made a remark at that point, in saying that I could publish all he had said, as long as he had graduated by that time. Students were open about their educational struggles, they mentioned criticisms of Driestar but also reflected on their own weaknesses.

3.8.1 Pilot study

In December 2016 and January 2017 a pilot study was conducted with three student teachers. The methods I intended to use, in-depth interviews, complemented with a concept map, metaphors and vignettes, were all piloted. A proposal was written for this pilot and approved by the supervisors. The findings of this pilot study and the implications for the final data collection are discussed in this section. More details of the pilot study procedure can be found in Appendix G.

I pre-piloted the use of concept maps in November 2016 with a group of twenty first year students. Students were aged seventeen to twenty-two years. In this pre-pilot I aimed for a better estimation of the suitability of using concept maps as a research method. I wanted to know if the maps would render adequate data and whether it would be feasible for students to create a map on the rather abstract concept of meaningful learning. The results of this pre-pilot were promising, for students had only recently entered teacher education and diverse topics already emerged in their conceptions as connections to meaningful learning. It gave enough affirmation to include the use of concept maps as a substantiated method in the pilot study.

Three in-depth interviews were subsequently planned and conducted, which lasted between 70 and 85 minutes. These interviews were transcribed by the researcher to refresh my earlier experiences with transcribing. I aimed to make the transcripts as complete as possible with different kinds of data like pauses, laughing and emphases indicated in them, to minimize the loss of data from the original encounter (Cohen et al., 2011). These transcripts provided a helpful first exercise with coding, after my initial theoretical immersion in this method. I started a first cycle of manual coding using initial and in vivo (using actual language of a participant) coding (Saldaña, 2013) and wrote a case description about each student (example in Appendix G). I also reflected on the content of the interview and the methods I used.

This pilot study served several aims. Firstly, it was aimed at evaluating the suitability of the complementary methods I intended to use. I experienced that the concept maps were helpful to

start the interview, they helped activate the students' prior knowledge. Meaningfulness was quite an abstract, difficult concept for students, during the interviews it was helpful to explore and elaborate on the concept map. So the concept map was functioning less as a method in itself.

During the pilot I noticed that the use of metaphors elicited enough interesting thoughts from the students to build forth on during the interview, like content about the knowledge paradigm of the student or worldview elements. I decided to continue with the use of metaphors in the final interviews. I made one small adaptation in the list of metaphors. I noticed that none of the pilot students chose the catalyst metaphor. There were no questions about it but I was not sure if this metaphor was clear. Maybe they did not choose it because they did not know what it meant.

Therefore I decided to use a more clear example of the catalyst metaphor in the final data collection, and added 'sand in oyster' to the list of metaphors. I also added a question to the interview guide whether students could illustrate their metaphor from what they had learned at Driestar and how they saw it exemplified in their own teaching practice. Furthermore, I noticed that the vignettes could help in eliciting thoughts or quotes about worldview (see Appendix G for an example).

Secondly, this pilot served the development of the interview content as well as methodological issues around interviewing, like validity, researcher reflexivity and rapport between interviewer and interviewee. Although I received research trainings in interviewing, both during my master's degree and as a teacher educator, the pilot study helped to develop my interview style and to reflect on my position during the interviews (see reflective memos Appendix G for examples). As an evaluation from the pilot interviews, I added a theme to the interview guide for the final interviews and asked a question about how students saw the relation between worldview/spirituality and meaningfulness. I noticed that this topic did not come up spontaneously and it was in my research's interest to gain information about it.

In summary, piloting the data-collection methods served both to refine the procedures and develop my expertise and confidence as a researcher.

3.8.2 Reflexivity

The curious thing is that we have no clear knowledge of what our presuppositions are and when we try to formulate them they appear quite unconvincing (Polanyi, 2013, p. 59).

As the nature of qualitative research entails that the researcher is an important instrument in data collection (Merriam & Tisdell, 2016) it is important to be clear about my position. As a former student teacher, former teacher in secondary education and as a teacher educator at Driestar Christian University, I had a relative 'insider' or 'emic' perspective in this study (Cohen et al., 2011).

With respect to what students shared about the secondary schools they were teaching at, my position would verge more towards outsider, as I knew these schools only by name.

As I have been a teacher of English at a secondary school and a teacher educator at Driestar for over thirteen years now, I had my own ideas and conceptions about meaningful learning. So I had to be aware of my own perceptions, biases and interpretations, consistent with my assumption that no one interprets from nowhere. This issue was addressed by writing memos and reflecting on my own role during the process of data collection. I tried to make explicit my tacit assumptions and pre-understandings, intrinsically connected to my 'nature and nurture'. Reflecting on my place in the family I grew up in as the eldest daughter, feeling responsible for my four younger brothers, I concluded that to me the concept of meaningfulness is strongly connected to others. Obedience to authority, respect but also helpfulness and generosity were important values in the family I was raised in. When it comes to who I am a shortcut would be to summarize it in 'you are what you love' (cf. Smith, 2016); loving and longing to listen, read, understand and be understood. I could therefore easier identify with some participants than with others. Still, in interviewing and reading the transcripts, I intended to do justice to every person. I did not want to abuse the students' words or sentences so that a skewed picture would arise but aimed to highlight their articulations in context of the research questions.

Three of the participating students had been in my tutor group in previous years, so I knew them better than the other two students. I was aware that my prior experiences, biases, and assumptions about these students could affect my interactions and the relationships with them and that these elements could have a bearing on the shaping of the portrait text. Therefore I kept personal notes about my memories of them and about the interviews as well. I experienced this prior acquaintance not as a disadvantage however. Maybe it was even helpful in reaching a deeper level during the interviews, because there was a certain trust between me and these students already.

A related issue is that my role as a researcher and teacher educator could have influenced the students' responses as well. I took this aspect into account by the deliberate choice to collect data from respondents who were 4th year students. Because I have been teaching the third year students since long, I was not their tutor at the time of the interviews. So students knew me more or less, but I was not in a position to evaluate their work or judge their assignments, which might otherwise have influenced their responses, as they could feel evaluated or judged and might not speak freely. This was addressed as an ethical aspect as well (section 3.9).

3.8.3 The journey of my research

When encountering students for the purposes of research supervision, we note that they seem weighted with the question of methodology, so much so that they need encouragement to elicit their research interest (...) a state of not knowing, which status can be rather unsettling and frightening (...) (Mercieca & Mercieca, 2013, p. 228, 232)

In this section I will give an impression of my journey throughout this research. Essentially it can be captured with the idea of travelling back to places I had visited before, but this time wearing different glasses. The quote above evoked recognition during the process of developing my methodology. Being educated in a tradition which approached reality predominantly in a quantitative way, my journey from the land of quantitative to that of qualitative research felt like a struggle to find my way, quite often. There were no signposts about what direction to choose at first. I had to use my own resources while I had learned to hide my own voice. I had to learn to deal with uncertainty. By encountering and immersing myself in different paradigms, stimulated by the 'surplus of seeing' of my supervisors, I gradually realized I had been educated within a reductionist or positivist paradigm, emphasizing objectivism and generalizability and my assumptions were challenged. It became true that 'the act of knowing transforms me, the knower, also' (Meek, 2011, p. 78).

From first to final proposal my research questions developed from a focus on promoting meaningful learning to the importance of the concept of a worldview and its relation to meaningful learning. While I started with the idea of looking at conditions for transfer and intended to use a multi-method, quasi-experimental design with interventions, aimed at conceptual change, becoming aware of the nature of education as a complex and open practice in which capturing different variables in a quasi-experimental design is close to impossible and easily leads to missing crucial aspects, urged me to choose a different path. Besides, 'meaning' is a concept that cannot be easily measured, for interpretation and so hermeneutics play an important role. Therefore it was important to change paradigms and design an in-depth qualitative research after students' conceptions.

My horizon as a researcher also changed over time due to interaction with the literature. Gradually different tones were added during the evolvement of the research, through discovering the field of hermeneutics and phenomenology. Actually the researcher development that took place during my research could be designated as hermeneutic, for 'hermeneutic researchers adopt an attitude or stance that ponders unfolding and evolving questions' (Crowther et al., 2017, p. 827).

Still, I struggled at different times during the course of my research to get rid of my 'objectivist feathers'. I really took time to become acquainted and feel at home with qualitative methodology, even more so with its creative and intuitive forms. I noticed I had difficulty with letting go of the idea of certainty, for instance in longing for a method or procedure to cling to, as a sort of assurance that my research would be robust.

Throughout the process I became aware of a growing sympathy towards the use of qualitative methods, while I started with a degree of scepticism. I realized that understanding experiences, which 'requires more imaginative empathy than cool detachment' (West, 1996, p. 32) is actually closer to who I am and how I teach than how I was formerly educated in doing research, during my degree in Psychology, namely from a neutral, distanced point of view. I concur with Crowther et al., that 'as researchers, the way we pose questions and read/hear stories is integral to who we are as humans and how we come to understand the world in a dialectic movement' (2017, p. 827).

3.8.4 Threats and limitations

The data in this study were collected in Dutch. Transcripts were made in the original language, in which I also worked to develop the documents with themes, which the students received in between the interviews, as part of the data analysis. I then translated the findings and supporting evidence in English. The case descriptions and portraits, as well as the reflections between the interview rounds, were written in English right from the start. Moving between two languages entailed a certain risk, for translation between languages involves interpretation as well (Van Nes, Abma, Jonsson & Deeg, 2010, p. 314).

A first thing I did to address this risk was to read the literature as much as possible in English. With respect to the thinking and reflection processes that are needed in the analyses, talking and reading in English can support thinking in the English language (Van Nes et al., 2010, p. 315). For specific Dutch terms which could be unclear to the English context, I asked a professional translator for support. Furthermore, in carrying out this research I benefitted from comments of both my English and Dutch supervisors, which may have helped in preventing the occurrence of language errors or misinterpretations.

A limitation to the data collection could be viewed in the level of abstraction of some interview questions. 'What is your view on knowledge' for example was a very abstract question. It is where a more narrative approach could have helped; telling stories about ways of knowing that might be thought of as significant in someone's life or in an encounter with pupils. Meaningful learning in itself

is also difficult term, but the pilot study and final data collection showed that exploring the students' concept maps during the interviews helped in understanding the term.

3.9 Research ethics

In this section I will provide insight into how the ethical issues of this study were addressed and what information participants received about the research.

In the information sheet the participants received before participation, the aims of the study were explained, as was the reason why this particular group of respondents was approached. The sheet contained an explanation of what would happen if they cooperated, anonymity and confidentiality were guaranteed, benefits and risks were explained as were data management and storage, as well as where to get more information. Their right to choose to withdraw from the study at any time was stated. Furthermore, there was some information about the dissemination of results. The student teachers participating in this study all gave their informed consent.

I submitted the participant information sheet (Appendix P), consent form (Appendix Q) and requested documents regarding ethics to the Ethics Committee at Canterbury Christ Church University in May 2016 and was successful in getting approval for my research at first attempt (approval letter in Appendix R).

Two issues were addressed in this application. The first one concerned my position of being a researcher and a teacher educator in the institution under study at the same time. Students might feel uncomfortable to participate in research by one of the teacher educators. This possibility was addressed by telling participants at the start of the interview that their information would be confidential, the data would be stored in a secure place and that they could withdraw at any time. I also stressed that it was their opinion and experience I was interested in. Further only 4th year student teachers were involved, of whom I was neither tutor nor assessor.

The second issue addressed was about the fact that I am a member of staff in the institution that is the subject of this research. There was a risk that I would not be free to operate as an independent researcher, if the management would have set a certain conclusion beforehand, which they would like me to write towards, or if they did not stand critical comments. Neither was the case. Still, the risk of not being able to operate as an independent researcher was addressed by keeping the secondary teacher education manager informed about the research, as well as regularly seeking advice from the second supervisor, who is a senior member of Driestar staff.

Digital data and documents of this study were stored on the network of Driestar Christian University, on a password-protected part that was only accessible to the researcher and on request to the supervisors. Fictitious names were used in participant quotations and portraits, in order to guarantee anonymity.

3.10 Summary

We can only come to know others in the measure in which they are willing to share. The resulting knowledge is not only our own achievement; it is also the gift of others (Newbigin, 1995, p. 10).

This is especially true for my research. The quote above illustrates a relational, interpersonal and transcendent aspect to knowing, central to thinking about knowing and meaningful learning in light of Polanyi's epistemology. It reflects something of being as a gift and of created persons who are receivers. The portraits presented in the next chapter would not have been realized without the gift of the participating students, who were willing to share their beliefs and ideas.

This chapter has presented how these beliefs and ideas were addressed in the current study. In order to address the gap and questions identified, this study needed both a detailed account of students' experiences and thinking as well as the perspective of the wider literature. This warranted the choice for both literature discussion and interviews with individual student teachers. The choice of complementary methods was warranted as the research aimed to elicit student teachers' tacit assumptions.

In this study a qualitative research approach was used, with a specific case study design, namely a portraiture case study. The portraits of student teachers were explained to be placed in the framework of a nested case study design, because the specific context of Driestar University matters. This chapter argued that the key opportunity a case study has to offer is to understand a phenomenon in depth and comprehensively. A portraiture case study was considered apt to vividly capture variations in perceptions, which together would constitute a composition on the role of worldview in students' beliefs about meaningful learning in the context of Driestar University.

The following three chapters all will present the findings of this study, but their character is very different. Chapter 4 presents the portraits and mainly voices the student teachers' perspectives, reflecting a hermeneutics of trust, as has been explained in the current chapter. Chapters 5 and 6 discuss the portraits in conversation with the literature and shed a more critical light on them.

Chapter 4 The portraits

4.1 Introduction

Now that we have established through the previous chapters that addressing meaningful learning in education is situated between personal and universal, so that it was considered key to address a fusion of personal and objective, essentially Polanyi's personal knowledge, in the methodology. And as it was found necessary to speak to both the person and the field, of which the latter has already been voiced in chapter 2, we will now turn to the heart of the findings. The four portraits presented in this chapter together constitute the core of this thesis. This chapter should be viewed as a linking chapter between the literature review and chapters 5 and 6, which present the discussion of the portraits.

The aim of the portraits in this chapter is to capture the tension between unique, idiosyncratic and shared, transcendent meaning. The portraits are intended to transcend the subjective and offer an encounter with shared human experience for the reader. The power of portraits is that they examine the specific, but inform the general. Embedded in the single case, universal themes can be discovered by the reader (Lawrence-Lightfoot, 2005). Furthermore, portraits speak to a broader circle than the academic only, which may help to ground the complex ideas of the study in the everyday realities of institutional life and serve as a catalyst for change within an institution (Lawrence-Lightfoot, n.d.).

The choice to present four portraits in this chapter instead of five (see Table 1, section 3.4) is made for two reasons. In the first place I chose the portraits which were considered to be most revealing with respect to the research questions. Secondly I chose the number of four to keep it manageable for the reader to remember the portraits during the reading of the discussion chapters flowing from the current chapter. Concerning the choice of subheadings in the portraits, mostly I have used words or expressions the student teachers used or captured the essence of what they said in a word or short sentence, which often figured as a theme in the analysis (see Appendix K and M). Sometimes I used headings based on the literature (e.g. paradigm shifts, bridging the gap, see portrait Jack).

4.2 Portrait Meg

Sometimes you don't have to travel to other countries to experience a different world. It can be very close home. This is what Meg experienced at Driestar.

Meg (54) is a teacher of German and English in a public secondary school. She was 47 years old when she entered education as a teacher. By then she has had different jobs, mainly in the world of tourism. Still, she decided to return to her childhood dream, for as a young girl she wished to become a teacher. It was only discouraged in those days because there was a lot of unemployment in education. In between jobs, Meg taught a few days a week in vocational education, and this experience confirmed that she still liked the dream of her younger years. So after she had left her own travel agency behind, Meg entered into the world of secondary education and started to follow the teacher education programme at Driestar. She started studying at this university mainly for practical reasons as she lives very close to Driestar, although she says she *'has a lot of respect'* for its Christian identity.

'World of difference'

As a child, Meg was baptised in a Protestant church, but the Christian faith wasn't practised at home and she hasn't received a Christian upbringing. Actually the climate at home was quite *'anti'* as she puts it into words and it still is. She characterizes the attitude of her family members towards the church as *'cynical, sceptical'*. *'They really see the church as people who know things very well and look down on the rest'*. She is the only one in her family who visits church regularly now. For when she turned forty, she started visiting church again and even made confession of faith. The reason was a period in her life in which she became entangled in a web of lies. She suffered from a bad relationship in which she lost herself, in the sense that she was manipulated to violate her identity and integrity: *'I didn't know anymore who I was, I couldn't forgive myself that I had been lying so much to my feeling, that I had betrayed. I couldn't forgive myself. Yes, I think that has been the basis of the fact: if I can't, who can? Who helps me to forgive myself?'* Forgiveness is what she tried to find in church. She regularly visits church services, mainly because she drives someone who is not able to do so, but she also likes it herself, although she is not member of a particular church. To her the meaning of faith is mainly *'very psychic, really something mental'*.

Her lack of roots in Christian tradition make her feel *'the odd one out'* at Driestar. She feels like moving between different worlds. *'This is a world to which I do not belong. As soon as I get out of the door, I'm in my own world again. (...) There's a certain structure here that I do not know'*.

In the second interview she further explains what she means with 'structure'. *'That's a world within a*

world that I start to know better now, but I didn't know about its existence (...) that's a world on its own. With, with their Sunday church attendance, the rules at the Christian schools, just the whole, yea, that's a structure within society that I didn't know beforehand or hadn't realised anyway'.

She mainly experiences differences with her fellow students in that they are *'being raised with the Bible, know the songs, know the pastors in church, are talking among themselves about all kinds of people I don't know, the schools they work at. Yea, that's really a world of difference to me'*. She also notices that the language used, in church in general and also at Driestar, stands in between the two worlds. *'I could write a book about it, I thought; what kind of language is this? That's a very different language than I'm used to'*. She illustrates this with an example of the word 'sin': *'You know, sin, the word 'sin', I mean: in my world that sounds very heavy, like, well, sin, while in the Biblical world it's something that belongs to life. And if you talk about someone thinking it's a sin or you've committed a sin, yea, someone outside the church will see that as a shaking finger, like: who are you to say that I'm sinful?'* She understands that if you interpret life with the Bible, things are fiercer, *'you've got more a feeling of accountability towards God for the things you do'*.

These experiences make her say about attending Driestar; *'I do not always feel at home. I'm always reserved'*. It's not that she doesn't feel accepted or welcomed. It is rather a feeling of not belonging, not being part of it, she doesn't feel connected to the 'Driestar world'.

'My life is outside the church and I stand with one leg here and one leg in a world where people know each other and to which I do not belong. (...) but that doesn't mean that I don't want to try to understand how it works and so on. And, but I will never be part of it. But it's not, I do feel welcome with you'.

Additional value

What she valued, when talking about her experiences with Driestar's worldview, were the beautiful things of the Bible that were disseminated, like mutual helpfulness, interest in foreign languages and culture, *'that really catches you'*. In reflecting on meaningful experiences in teacher education she mentions she was *'captured'* by the knowledge and passion of her teacher educators. This made her change her mind about the German language and culture. While during the time she worked in German tourism she didn't like the language and the country at all, she says that through studying, reading literature, deepening and having passionate teachers, in the end she started to see their beauty.

The worldview as she experienced it at Driestar has additional value to her, it adds to what she is learning. It makes her think, has more depth and is more profound than just superficial knowledge,

she tells me. There's more than the visible things, she says. *'You give everything a bit of something extra. Cause the kind of talks I have with you, I don't have them outside'*. And she will miss that, *'there's more meaning in it than in the things that keep me busy in daily life'*.

To add something is what she would like to do for her own pupils as well. She teaches very difficult classes this year and shares she struggles to keep it up. A lot of pupils seem to be indifferent towards learning, it doesn't have meaning to them to work hard for their future. That gives her the feeling that she hasn't got additional value, while that was a reason to become a teacher; to add something, so that pupils say that they learned from her. When I asked her what she would like to add, she mentions honesty, sincerity, always searching for a kind of truth, and perseverance. She went to South-Africa last year for an internship and tells her pupils about that experience as well. A lot of people on other continents would really love to learn and they can't. *'But they don't mind, it doesn't say them anything. And that makes me worried. So maybe I have to go to Africa'* she says, laughing. *'Can I add something right there'*.

She tells her pupils learning is a prerequisite for freedom to choose whatever you like. *'You first need to know what boundaries are before you've got the freedom to decide on things which are good for you'*. She speaks out of her own experiences in the past, for if she would have better known what her boundaries were she would have respected them and that would have saved her a lot of harm.

When asked about her vision on how pupils learn, she answers that she tries different techniques, *'scientifically or experimentally proved'*. She thinks that reproduction of words, just factual knowledge, doesn't have any meaning to them. So she tries to make them apply those words for a clear aim, pupils in their third year of secondary school visit Germany and have to do an oral test in German on site for example. She also tries to stay close to their living environment, if meaning is closer to themselves that helps in remembering.

It's important for Meg to be a model for her pupils. She says she is quite a strict person. She focuses on the behaviour of pupils, telling them what is acceptable and not is a *'weighty extra element'* in her work. She wants to form their character as well, to teach them respect.

'Pupils force you to be respectful while they totally do not know how to do that themselves. If you never say a thing about that and never touch upon it and keep running your legs off to remove all obstacles, then you're not really forming them, that's a real conviction I have. (...) They are persons with characters, and those characters aren't always that beautiful. And yes, I think you have to do something to that. You can't let your pupils graduate without having taught them anything at that point, right? (...)'

Meg's conviction is that pupils need to learn to persevere, teachers have to teach them that life is not always ideal. In her view a lot of teachers at her school are pampering students too much, they get all obstacles out of their way and in the end pupils don't have respect for that.

Freedom and responsibility

Pupils also need guidance, because they *'do not naturally know what is good, or sensible, or appropriate or meaningful'*. Therefore she has difficulty to deal with current developments at her school towards personalised learning, in which that guidance is not acknowledged. With 'custom-made' education we create very individualistic people, is her opinion. Pupils get the freedom to decide for themselves what they need to learn, which makes them egoistic, they get used to be served their hands and feet. They start to claim what they think are their rights in classroom. She experienced this gives her little space to correct them on their behaviour, a lot of pupils don't do their work because they do not feel like it. This type of education gives them freedom for foolish choices, Meg thinks. It's also more difficult to work with a class as a group, which is precisely what she likes. She describes herself as a craftsman, who likes to do things with a group, as it provides the right context to teach pupils decency, to listen and wait for their turn for instance. The current trend of personalised learning is contradictory to the importance of a group to pupils this age, they are very much focused on the opinion of their peers.

Although in this current development in education pupils get a lot of autonomy, if they think they understand they can leave class, Meg is still convinced that a lot of pupils like explanation by their teacher. *'I think they do like explanation of things. In the end. And they do want to understand. (...) Yes, I think that, that, very old fashioned, what I think, is still present in pupils, if you want to understand something, yea, then you would like an explanation about it (...)'*.

She does find it important to give her pupils responsibility but *'that is not a magic word, just tell the pupils and they will act likewise'*. They have to learn to take their responsibility. They have to discover things for themselves and also fall flat on their face. But they need someone to fall back on, a kind of mentor who allows them to make mistakes and carry the consequences, but on whom they can also call at any time. It's impossible to do that as a teacher for all of your pupils, they need someone else. A compass in life, someone who explains the things that happen in life and helps pupils how to deal with them. Parents could take that role but she notices that parents tend to see their children as a continuation of themselves, their kids have to achieve and are afforded little scope to make mistakes.

Meg thinks there has to be a balance between freedom and lack of freedom for pupils, in order to protect themselves and others. *'I think it's also Biblical'*. When I asked her if she could explain what

she meant with 'Biblical' she casually mentions she has studied theology for three years, which made her think a lot. The Old Testament with a lot of strict rules she views as a kind of upbringing, if you keep the rules you can live in harmony, for these rules are aimed at the good. The New Testament, since the coming of Jesus, gives us freedom to live with these rules, freedom to organise our own lives, within these rules. Meg notices pupils are resistant to rules and persons who impose the rules to their feeling. She thinks people are afraid to be curtailed in their own 'I' or resist out of uncertainty. She has to think about a certain procedure to check whether her pupils have done their homework for example. *'Well, yea, (...), it is not a matter of course. It doesn't come from within, like: I should do some learning because then I will pass my tests or (...) No, it's all like 'no, no, no', they don't think much of it, that's not what they want. And to me that's an interesting given of course: how come?'* Pupils see it only as a duty and think it's senseless, they prefer to do other things. She thinks that in her youth things weren't questioned so much, it was normal to do homework *'just like you had to learn to cycle'*. When I asked her about the reason behind this shift she said *'maybe it is because we've let go of a certain faith. Maybe' (...)* *The freedom of choice has become larger, the world is larger than it was at that time, much more accessible. There's a focus on what is fun. Everything has to be fun (...) so things which aren't fun don't have to be done any longer'*. It's difficult not to pay the bill for being of a different generation, is Meg's feeling.

In the third interview she immediately starts to talk about the lack of motivation of pupils, which is a huge problem at her school, especially because at the time of the interview the end of term is nearing. She thinks motivation is closely connected to meaning giving. If you don't give meaning to something, you're not motivated for it. She struggles how to give meaning for her pupils, to a lot of pupils at her school meaning is not connected with a faith or a deeper principle. Also not in the sense of doing their best for their future. *'Take direction of your own life, make sure you'll find the motivation to work, as no one else can give it to you'*. To her it's meaningless if she doesn't reach her pupils. They are only present at school because they have to, and even that's not sufficient. School has become completely meaningless to them. *'In everything you do in your life, if you don't give meaning to it, then why do you do it?'* Meaning gives people an aim in life, something to fight for, it doesn't have to be connected to a faith but can also be directed at something important in life, fighting cancer by cycling the Alpe d'Huez climb for instance.

To Meg, education is not only teaching her pupils a language, but also broadening their horizon. They live in a restricted world, *'of course it's okay to first understand your own world before you're going to get busy with the questions of life and death'*, but she wants them to have a broader view. Why did people do things, what is the motivation behind people's actions. She uses a movie about the DDR for instance to let pupils think about these questions. She notices that affects pupils, they have

got attention and are quietly watching, *'really watching'*. She likes to see that meaning comes in the end, that they get the hang of it. But that requires quite a lot of time and expertise from her as a teacher. She has to be well prepared, know the movie very well to explain, repeat over and over, and ask good questions.

Foundation

Meg thinks there will come a tendency in which people will start to search for meaning. *'You need to have a stable value, something has to be stable (...) people need meaning which is of stable value, because we all try to get everything under control, but we can't'*. To her, something of stable meaning is a faith. *'A stable value in the world which is aimed at the good, happiness, charity, health. (...) to me that's the core'*. She says that when you are young, you are not at that level of thinking. Therefore she understands that *'in the Christian world'* you have to be baptised, educated Christianly, because in the first years of life things become fixed for the rest of your life. So she sees the value of baptism for instance, although it is something that you have to give personal meaning as well. Often it's done just out of habit. The search for meaning is personal, someone else can't give it to you, Meg says. She is convinced that youth nowadays needs meaning, but she struggles, due to a gap in age, to find out *'what is their meaning and what can I pick up on?'*

In reflecting on the meaning of a worldview she says it's underlying, a foundation, otherwise everything would be meaningless. *'We're all on the world for a reason, (...) to me that would be faith, maybe not in the same way as at a Christian school, but to which I cling if there are things where I can do nothing about, to which you can do nothing yourself, you know, that's really a foundation'*. She thinks that foundation shouldn't change, otherwise it is no longer a foundation. *'Of course more superficial meanings exist, which can change (...) if the basis just stays the same'*. (...) *Imagine we would all come to Driestar wearing a jeans so to speak, that doesn't matter in principle, if the foundation stays the same'*. She understands there are certain agreements you make together, about clothing or a way of life for instance, which are done out of a foundation and which strengthen the foundation as well. She recognizes the point that Christians between themselves do not always identify. On a Driestar trip to England with fellow students she told them: *'you should stop arguing'*, because she didn't understand their discussions. *'As an outsider I don't understand anything of this. You've all got the Bible as a basis, as a foundation, why is there so much conflict in church. Why?'* Meg thinks more conflicts exist within the church than between outsiders and the church, because outsiders do not know all the differences. She thinks conflict is not Biblical, not how it's meant to be and it's a shadow over the church. The conflicts arise at the level of overlying values Meg notices, and she understands things can be threatening to churches, *'because someone starts to treat the*

utterances of the foundation, not the foundation itself, in a looser or stricter way or is critical towards them'.

Sometimes she is deterred by how people stand in their faith. We don't have the truth, nobody possesses the truth, she says. People can be so very convinced that their conviction is the truth.

'It's all human thoughts, I think, and as long as your fundament is good, God only decides who is faithful and who's not'.

4.3 Portrait George

'What does it mean for the daily life of pupils to live as a Christian'? That's an important question for George. He is a 27 year old teacher of English at an evangelical secondary school. Before starting to teach, he studied Public Administration and Public Policy Studies.

Inspiration

One of the key elements he relates to meaningful learning is an inspiring teacher. An inspiring teacher functions as a source and creates an environment in which other people become inspired. This kind of teacher also knows how to translate inspiration to the level of students. For George, sources of inspiration are very diverse, books for instance: *'The whole idea that someone has written something which makes me think, I think that's very pleasant. And that on its turn inspires me to do something in my lessons which makes my pupils think'*. But also feedback from his pupils can be inspiring, if they tell him they appreciate him not in the first place as a teacher but as a human being, in the way he interacts with them. For George that gives a pleasant meaning to his daily employment.

What he thinks is very important in his teaching practice is to see each pupil as a unique creature. He tries to make the pupils feel that he sees them one by one and tries to function in the centre of the educational process, not as a *'grey figure'* in the periphery. To be really interested in his pupils and create a sense of reciprocity. For George that can also mean being vulnerable, by sharing things from his own youth. He thinks it is important to be a real person, honest, share something about your own life at the right moment so that you can be a role model for pupils. If he shares something with a pupil about his own youth and notices it has been valuable for that pupil, it evokes a sort of meaningful learning in him as well, he says. Furthermore, taking a student into account and being given a chance can also be meaningful, George thinks. If you notice you are trusted by your teachers, that makes you willing to learn and gives meaning.

George's vision on education has been developed through dealing with circumstances, through people around him and examples of teachers or inspirational movies about education. He thinks it is very inspiring to look at other teachers who succeed to call up something in their pupils and then apply it in his own way to his teaching practice. To have a relation with pupils and knowledge about the subject you teach together creates a *'synergy'*, which has a lot of meaning to him.

Connection

For the person of a teacher it is important that he or she knows how to motivate students, knows the life world of students and is able to link that to the subject matter.

'I can connect things at the moment I have a clear view of them, so that's why I think it is important something has practical value, and that there's a connection between the things you teach them {the pupils} and how they can use that in practice' (...) Nowadays, I try to give a very clear practical situation first and then return to the theory, because I think that if you first succeed to make obvious the practical implication of something they will remember things much better'.

George says that if you notice that a teacher has put effort into preparing a lesson, has tried to make it interesting and is enthusiastic, then you become spontaneously inspired to take part and become motivated for that subject.

Some teacher educators use a lot of *'woolly words'*, others have clear aims and structure in their lessons, which creates *'coatracks'* to attach your knowledge to, as meaningful learning is also creating holds, connections between parts of the subject matter in his view. Having clear aims is important to George, *'so that you know why you have to do things'*, like assignments for example. A teacher educator should give him an idea of the right direction, *'I want to have an idea of the right answer to be able to go in that direction as well'*. A similar clearness in aim he would like to see in testing, it should be clearly reflected why a certain test is important for his learning process, otherwise it has no meaning for George. Just teaching to the test doesn't make sense.

Challenge

What George appreciates in teacher education is that he has learned to critically reflect on his own teaching practice, he has had concrete examples which he applies in his own lessons.

He also needs a certain amount of challenge in the subjects which are being taught. If subjects are challenging that makes it interesting, you want to know more about it and this gives it more meaning. *'If I can do it all alone, it is of little meaning'*.

George thinks it is important to challenge the thoughts of his pupils as well *'I think that's also a matter for education'*. Outside the comfort zone of pupils shake at the fundamentals of their thinking, as he calls it, and show them, *'hey, how do you combine this with your ideas?'*

He thinks this is important because *'I think real meaning can only arise if you do not only internalize things you have heard or copied from others as your own opinion but that you are challenged to very consciously consider what actually is your own opinion, and challenge that further.'* George says that

it's important that pupils learn to think for themselves. Sometimes you have to force pupils something down the throat, but they specifically have to learn why something is true and find evidence for that, know how to give arguments and substantiate their standpoint. He thinks that evokes meaningful learning, because pupils have to make it personal.

You need others from your surrounding for that, like teachers or mentors, who can have an important, meaningful role. In stories about which teachers have been meaningful for people, they don't talk about the subject matter but about the way that particular teacher taught or connected to them. The most important life lessons are learned at the moment someone talks with you, and you will remember that.

It's important to be open minded as a teacher as well, to let your own fundamentals be challenged, reflect on your position and on how to broaden your horizon. *'I think learning has meaning and keeps to have meaning if you dare to keep looking at what's challenging for you.'*

A constant challenge for George is inherent to the character of education: *'I think the disadvantage of education is that it's always a kind of quest, that there is never a fixed, at least to me, there is no fixed thing. Well, the subject content is reasonably fixed, but everything around it is fluid. Changes with time.'*

Authority and expertise

Sometimes George would like to have had more formal lecturing, with the teacher educator as authority telling how things are, and George listening first and starting to think about it himself later on. If someone has expertise in a certain area, you're more inclined to listen and it gives more meaning if someone like that tells how things work. This can be of meaning to your own learning process, he says. On the contrary, if his fellow students taught part of a lesson this was not meaningful to him, because he says it was more *'informing, it doesn't contribute to real learning'*. Therefore he needs background and context to the information given. In teacher education a lot of cooperative learning is used, which is less meaningful to him because if two people who do not know have to work together you get a *'suboptimal result'*.

In reflecting on the role of others in learning, George says there should be a balance in learning for your own interest and helping others. On the one hand you need others, others can help in being a mirror and motivate to start learning. *'I think I really need others to become motivated to start learning. But that's a sort of ground, that's something beneath meaningful learning, because you first need a motivation, some pushback to start learning anyway'*. To make his learning process meaningful he needs himself and others, like a teacher who makes it interesting and gives him the

feeling that it's worth to invest in. But on the other hand you're going to school to make progress yourself and not only to help others, although he has some difficulty to express his thoughts like this *'as it has some egoistic element in it'*.

George tries to add a lot of games to his lessons, to do things his pupils like. But sometimes they have to do things, like learning the irregular verbs with grammar, so learning is not always nice, *'as an expert I know this is necessary and you have to do it whether you like it or not'*. Sometimes a teacher decides what is meaningful to the students, because as a craftsman you know what is important for them to learn, and have to force things down their throats, although he wants to be careful with that. *'I do the things of which I as a professional think: this is important to do now. (...) I know what's good.'* The facilitator metaphor also appeals to him, for as a teacher you arrange a learning environment in which pupils can grow and flourish. But to be able to facilitate you first need authority and expertise, knowledge of your subject and didactics, he says.

He thinks his own pupils learn by means of exercising a lot, not by telling them a lot but by giving them personal attention. This is interesting, as it seems to contradict his own reflections on teacher education considering authority and frontal teaching. *'Yes, that's quite weird'*, he laughs. He notices he appreciates being taught by an expert because he is getting annoyed by *'an overkill of group work'* in teacher education. He thinks that pupils still have a need for authority though but that the increasing individualization in society is also reflected in the role authority receives in education. *'I cannot explain the feeling very well, but I think that they {the pupils} are much more focussed on things they can find themselves than on things that are offered to them {in education}. You see that in the role of friends, in YouTube movies in which things are explained, in private tuition, in which tutors can have much more one on one contact and can teach them on a much more personal level (...) can bring it closer while in a setting in which you've got 32 pupils in a classroom, you're simply not able to do so'*.

Freedom: individuality, community and paradoxes

This individualization also has its influence in the group. Because pupils are so occupied with individually being seen, with their status in a group, which is valued higher than a good atmosphere in class, other pupils suffer from that. Youth is addicted to endorsement, confirmation in their thinking, their essence and being, is George's feeling.

In reflecting on trends in education towards personalised learning or differentiation, he says these *'beautiful theoretical concepts'* are practically impossible to reach in the current Dutch educational system, because teachers are limited in time. He uses a computer program at his school in which pupils work at their own level but that is *'incredibly individual'*. *'I don't think we want to create a kind*

of cyborgs, sitting behind their computer, using online information and parroting the Net, because we want to educate them as humans thinking for themselves. Who are individuals but at the same time are also able to live in a community'. On the one hand you'd like to see a pupil swim against the tide in a good way but on the other hand also swim with the tide. George sees an enormous tension there, a paradox between freedom and individuality, because they can't go together long-lasting. 'For if you give an individual entirely freedom, that individual also has freedom to completely ignore or annihilate another individual. So somewhere you need authority. I think that specially comes from people in relationship with someone else, who are being able to guide from within that relationship' .

George thinks it's very important to teach his pupils respect for others, treat others as you would like to be treated, so obey Jesus' commandment to love your neighbour, and have compassion. These are important values for George to teach his pupils, everything he wants to give his pupils can be traced back to these. His desire for his pupils is that they see what others need by looking at them, which he thinks is depending on the condition of their hearts.

It's also important to teach pupils that they always have to reason from their own framework of values, *'then you put it with the individual clearly but I think everyone has an idea of normal behaviour. (...) I don't think there is an objective measure of what is right. I think that is determined by a school culture, rules and the way teachers try to live according to these and teach them their pupils'*. So although we really want to educate the pupils as individuals, we are after all educating or forming them as a community, he reflects.

Teaching pupils to think and act from a framework of norms and values is also important with an eye to the aim of education, George says. If pupils are allowed without limit to decide for themselves how and where to spend their time, they will let their meaningfulness or the use of their time or life mainly be determined by what is offered.

'At the same time you see a trend in magazines or newspapers in which precisely meaningfulness and use of your life is a real theme, there's a lot of attention for it, mindfulness and other ways to use your life or to give your life at least a certain aim and I think that is what we really need in this time in education, that education has an aim, it needs to have meaning, so that it serves an aim. And to me that would be to educate pupils to self-thinking, down-to-earth thinking people, who leave education with a certain framework of norms and values. And are able to flesh out their lives from within that {framework}. And to me that doesn't mean that we educate pupils to Christians or so. But still that we try to interpret from our being a Christian teacher how to live your life as a Christian or how to live as a citizen in society.'

George thinks meaning is often created together, in a group. That is because meaning is personal, something can be meaningful for the one but not for the other. He doesn't think there are universal meanings but there is something like individual transcending meaning giving, *'for example the cross, you can see that as a symbol but you can also group transcending attach meaning to it. (...) In Jesus I think you do give meaning to that, but that's at the same time something of yourself and something group, as a collective, transcending or so'*.

'Abstract Christianity'

Reflecting on the Christian worldview of Driestar and meaningful learning, George says the daily devotion was often very separated from the content of a lecture. So he was not really involved, in an *'off-modus'* as he words it. He hesitates to talk about giving shape to identity this way as *'meaningless'* because it sounds like a harsh judgment.

He also thought this to be a less attractive part of Driestar as he went through a certain development in his thinking, which he felt being judged for. He explains this development as letting go of a certain structure. First he was quite occupied every day with his faith and how to proclaim that and read and pray very consciously, now he is much more focussed at witnessing through his attitude what he thinks Jesus would have done and let go of the idea that he can contribute anything {to salvation}.

What he missed at Driestar was the space for dialogue, the openness of his fellow students and guidance of the teacher educators in facilitating that dialogue. Often a *'conventional point of view'* was parroted in his experience. Discussions among students from *'established churches'* didn't have his interest. He experienced a certain narrow mindedness with his fellow students, the tendency to pigeon hole someone, although he says this is more a feeling than that he is able to refer to a concrete memory.

Worldview is not leading in meaningful learning he thinks, but it *'gives a sense of urgency'*. *'We've all got an opinion about who God is, how you can live your life as a Christian and serve your neighbour. If you think about that, it automatically influences your teaching'*. To him that means being a good Christian in current society. How to pass that on to his pupils is something he struggles with, because he is aware that his vision may differ from that of the school he is teaching at. He tells them how to love another person in a right way, to keep a balance between demanding and giving. But in his *'real teaching'* as he formulates it, he doesn't do a lot with it. *'What it is like to be a Christian teacher and to give that meaning during the lesson, that's really difficult for me'*. He thinks that is partly caused by the expectations of his school. *'The school has once been founded with the idea of including the Bible in every lesson. And that's a beautiful thought but the Bible is not a textbook, not an English textbook, so I can't do anything with a statement like this'*. What he is a bit afraid of is to overwhelm pupils

with what's in the end an *'empty form of religion'*. He tells that pupils report that they feel like they get swamped with well-meant comments about faith. *'So I can't really work with that idea'*. It even evokes a defensive reaction with him, he tells me. *'I don't want to. I don't know how to give that hands and feet in my lesson. So I try in being an example, I try to hand it down, I try to connect worldview with it, more than specifically using it in my lesson'*. When I asked him for the vision of his school behind the idea of using the Bible in every lesson, he tells that's still not clear, despite the many meetings dedicated to developing a vision.

This difficulty is also caused because he thinks *'abstract Christianity'* is not always effective. What he means is that you perfectly know how to biblically justify why something is true or not. But that it has little connection with everyday life, it remains at a distance. He would especially try to teach his pupils to walk as they talk as Christians, and make them aware that there will be expectations from their surroundings about their lifestyle because they are Christians. He hopes to offer his pupils specific clues of what it means to be a Christian. But he thinks he offers these rather implicit in his attitude during his lessons. *'Actions speak louder than words'*.

4.4 Portrait Dean

'You know, we are all different, everyone has got his or her own experiences, because you just are what your experiences are, so take them into account'. 'Experience' is a key word for Dean, a 26 year old teacher of English in vocational education. In the three interviews I had with Dean, he often reflects on his own life experiences, around school and his identity development. He chose not to teach in secondary education because he finds it boring to teach generic English and do the same thing every day. He also doesn't like the age group in secondary education, *'too childish'*. The students in vocational education suit his personality better, he says.

Usefulness

For Dean meaningful learning is connected to learning something that is useful, his students should be able to make connections to their life from what they learn. The theory they have to learn has to be applied, otherwise it is useless and has no meaning. Students learn best if learning has interface with practice. He teaches them by building up knowledge step by step and thinks his students need repetition of information. It is important that they internalize and get habituated to grammar rules for instance. If students just learn for a test, what they have learned loses meaning as soon as they pass.

Dean thinks it's a waste of time to go to school for useless things. He didn't finish his secondary school as a lot of things didn't have meaning to him, he didn't feel like it. In reflecting on this episode in his life he says *'meaningful learning is, well, how can I put it into words, you can't grasp it so to say, what has meaning for one person doesn't have meaning for someone else. But it can become meaningful afterwards, so sometimes it can be good to learn things which are of use only afterwards, that it becomes meaningful later on, that's also possible'*. Later on he repeats his point: *'Like I said, sometimes you learn something which has no meaning to you at that time and sometimes a year later it has meaning to you. And that's, I personally think that's the most difficult point about meaningful learning'*.

Dean thinks meaning is created by a learner; if something has impact in your life, if you are personally interested and see the use of it, meaning arises, he thinks.

Some subjects in teacher education were completely meaningless to him. As an example he mentions pronunciation, which to him is *'clearly useless'*. He's never going to use British English because it is not relevant for teaching in vocational education. *'I don't need British pronunciation (...) to me it has lost its value'*. His pupils are used to international Netflix English. International intelligibility is the most important criterium, because that's what they are going to use in their

profession. *'Why should Driestar force me down the throat that I have to study that British dialect?'* Same with phonetic script, part of the subject pronunciation as well. He's never going to apply it, never going to use it. *'It's not of any good to my pupils'*. Pupils in vocational education need practical things, he says. The only meaning this subject has, is that it gives him a mark on his list, it has no personal meaning. He says *'it's rigid if you have to do it, you'd better give a choice'*. It's a pity if you're wasting your time at school on things which are of no use to you, is Dean's opinion. *'(...) What about APA-norms? What's the use of it? I know I will never become a researcher. (...) So why would I have to do that in a strict pattern? (...) That's a waste of time for me'*. What he appreciates in teacher education is things which are of practical use to him, like didactic methods or learning formats. If something is interesting to him, learning happens *'by itself'*, he mentions. He forgets everything that he is not interested in, on the contrary.

Dean acknowledges there's a tension in who decides what is useful. *'People think on the one hand that they know what is useful for you. But that's not always the case, experience tells. But sometimes it is true on the other hand'*. Sometimes a teacher can determine the meaning of something for the pupils, because a teacher has more expertise. But the teacher has to give account of it and explain the meaning: *'if you can't explain why something has meaning, why would you teach it? That's of no use'*. He had to do subjects in secondary school which he didn't like and failed, *'but I've never missed them in my life. You see, nowadays you've got the Internet, so if you need only one or two things of a whole subject, you can also google them. Let's be honest'*.

How pupils experience education is also important, according to Dean. If they don't like it, it will not be effective as they will not be motivated. Learning has to be a pleasant experience, *'otherwise you're not motivated to go to school, and if you're not motivated it will never become pleasant'*. This might be related to his choice for the entertainer metaphor, humour is important for Dean as everything is already serious in life. *'You don't want a life that is just serious, that would be tiring'*.

Freedom of choice

Freedom and the ability to make his own choices are recurrent topics during the interviews with Dean. Sometimes that causes clashes between his professional identity and his personal values. Dean mentions for instance that the teaching aspect in vocational education is *'actually a side issue'* because as a teacher you're mainly bringing up students, teaching them values like respect. He wants to be an example as a teacher, although he admits that is not always easy because *'you want to live your own life and make your own choices, which aren't necessarily exemplary'*.

People should be free to make their own choices, Dean says. Giving freedom is showing respect towards others, *'let someone be free, you know. That is also a Christian value, right?'* Freedom of

choice is important because *'if you start to impose things on a person, that person will get a lot of frustrations. I've seen that with a lot of my friends, they all left church behind, that doesn't work. Someone needs space to discover his/her own values and identity'*. Oppressive frameworks will be thrown away like a yoke. To *'force a Christian identity down the throat'* doesn't work in current society, in which freedom is highly valued. The theory of Marcia (1966) on identity development, which he first met during his teacher education course at Driestar, has been of great importance to him in developing his thoughts about this topic. *'I thought that was really interesting to study, these modules were by far the most interesting of the whole teacher education curriculum'*. Marcia's theory has helped him to understand his own identity development, the family he was raised in and it gave him insight in others' actions. It has broadened his view: *'literally, a world opened to me'*.

Dean is critical towards authority and the Reformed tradition. This may have to do with his own religious identity development. Dean was raised in a Christian family but at a certain age he turned his back towards church and faith *'because I was really done with it'*. But he started believing again through all kinds of experiences, as he says. He was stopped by certain events which changed his life. One of these moments was when he woke up on the roadside in the morning, having fallen asleep on his bike after a night out. Then he thought: *'if I would have fallen on the street, I could have been dead'*. *'Through all these experiences I have had a different formation than someone who has continued to visit church from an early age on'*.

Exploration is necessary for pupils and should be stimulated in his opinion. If pupils groundlessly accept things they will definitely have identity problems later in life, Dean thinks. Pupils should find their own way. As a teacher he can be an example and tell them how God would like them to live. But it's up to a person to do something with it, *'you can't force the Christian faith down someone's throat'*. *'We've got God's Word, that should be leading in pupils' life and you can lead them in that, that's a part of identity development in which you give them freedom and let them explore, and then a lot of things will get meaning'*.

In inspiring his students in faith issues, he appreciates freedom in what he reads and discusses with them. Dean doesn't like things that restrict his freedom, like using a Bible reading schedule for example. In sharing things about faith issues, practical application is important to his students. Maybe the students have the same questions as he used to have, and *'I can give them a nudge in the right direction. But it doesn't work if I chew the answer, they have to find out for themselves, because that's what Marcia taught me, you can only reach identity achievement if you have explored and made a choice afterwards'*. (...) *'I just indicate how I do things and why I do them, but I don't, I don't tell them what they should do. And I think that's quite a thing that goes wrong in Reformed*

education, that often is said: No, you should do this, you should do that. (...) There is a multi-interpretable truth when talking about the Bible (...) the Bible is not a handbook'. There are many differences within Christian tradition. Dean explains to his pupils what his point of view is and tells what others think. 'Mine isn't better, I don't possess the truth, they neither (..) pick for yourself.' If people have a different point of view 'who are you to criticize someone for that'? Things have changed in education, the teacher is no authority any more, he says, in reflecting on the vignettes. Someone's opinion can work for himself but not for others. 'So you have to find out what works for you, that's the case with everything in life'.

Formation is important in Dean's eyes, therefore pupils shouldn't get very safe frameworks. Reformed schools are inclined to create safe havens but pupils need confrontation with society, for *'only if you get confronted, you start thinking: 'What's my opinion? Why do I think that?'* Formation needs to receive a lot of attention, but his school does so, he says. Asked for an example he says: *'ethics, apologetics, and RE, there's really a focus on Paul also, how he defends faith and looked at things from the Bible, how you can give Biblical answers to social challenges'.*

Pupils also need to learn to properly deal with things that can also be used badly. *'You know, in the past they used to ask in strictly Reformed circles: 'Do you have a television at home?' That shouldn't be the question, it should be: 'What do you watch on television. (...) What matters is what someone wants and how someone is formed (..) that has effect'.*

When I asked him about his view of humankind, he thought that was a difficult question. *'I can give a perfect answer like; young people live in a fallen world and so on, but I don't like that. That's a bit pessimistic. Just as if there's a permanent thundercloud above our school, that's not true, you know. (...) I think every human being is unique. And makes his/her own choices and for every person happiness is different, every human being has a different, personal definition of happiness.(...) Yes, happiness is very subjective. It's just what someone does and how someone is'.* Again Dean mentions that he thinks it important to give people freedom, *'if you like it, just do it'.* 'The good life' is living in the moment, enjoy what you are doing at that moment and fully do what you do, according to Dean. Give each other freedom in things you don't want to do. At the terrain of faith 'the good life' is knowing you are saved, being in a right relationship with God, love you neighbour and love instead of hate. Share the good news with others and shine your light, that gives happiness as well. Dean thinks it is important to share the positive message of being Christian, the Gospel of good tidings. Something needs to happen in human being's life, he says, but in his church it is approached in a

passive way, like *'may it happen'*⁵. Dean says: *'That's too dark, the Bible is very proactive'*. Salvation by the blood of Christ should be freely offered to all pupils *'but it does have consequences if you start living your life with the Lord'*. He used to think these would limit his freedom *'but in Christ you get even more freedom, that's what pupils need to discover themselves. (...) Things do get a different meaning (...) some things lose their value, others gain value.(..) your intention has become different'*.

Limits

Exploration should be unlimited, according to Dean. Only if people start to do things which harm themselves, should you intervene. If someone comes home drunk one time that's a good sign, because that means (s)he is exploring, but if it continues for years it becomes a problem, in Dean's view. So you should protect people against themselves if they start to make choices that impede their life. *'But actually it is not useful if someone is addicted and doesn't want to stop to send him to a rehab. (...) someone needs to make the choice himself, to change, and needs to be willing. (...) People need to get stuck or actually become unhappy and only then motivation arises to improve'*. Dean refers to his own experiences. He has explored a lot, which has made him the person he is at the moment, and he knows exactly why he does the things he does. He says this allows him to respect other people who make different choices. People need to face it themselves if these choices are bad. That's how learning happens and motivation emerges.

When talking about freedom in the classroom, Dean thinks pupils learn to develop their own responsibility by practising with freedom and boundaries. If you give them freedom, they learn how to deal with it. Forcing them to do things and impose things doesn't work. You should always start from the positive. Stimulate motivation by referring to the relevance of the things you teach and create optimal learning conditions, make sure that pupils start learning out of themselves. If that doesn't happen, then the relevance of what you're teaching is not clear.

Dean doesn't care if pupils don't do their homework or don't do anything during one of his lessons. They have to carry the consequences, though. *'But of course there are things which are generally seen as normal, which I think pupils have to do. (...) for example, I think it's normal that if you're taught by a teacher, you bring your books.'* The teacher decides what is normal; *'my rules apply to my classroom'*. So when I asked him whether there are anyway more limits than only things that harm a person, he says: *'Well, it should be workable. If pupils don't bring their books, that creates a*

⁵ The language used here is a very specific language, used in some strict Reformed churches. The language often refers to the offering of grace, whether it should be offered indefinitely to all people, or just to the chosen. Conversion is often approached in a very passive way, you can't do anything but wait for God to do so. 'Something needs to happen, or 'may it happen' refers to the moment of conversion.

lot of turmoil in the lesson, so actually that is for myself. So I set that limit (...) because they impede the lesson and distract other pupils'. At some point it's over, you have to, whether you like it or not. By setting certain clear limits, pupils start to think about their professional attitude, Dean thinks. If a pupil is obstructive it is also important to try to understand what may be the reason behind that behaviour.

The person of the teacher

Dean thinks it depends on the teacher educator in how far Driestar's worldview is reflected, he experienced differences in how much attention they paid to worldview. But in general he says: *'I think we could witness more. (...) Yes, that's difficult, but I think we, especially the teacher educators, should be a sort of landmark at this point and they should not make mistakes, but they are all human beings, it is difficult to live as an example. I can say that myself as well'. Dean refers amongst other to a difficult period with conflicts in one of the departments. 'I think you fail in being an example this way, particularly because non-Christians are in this University as well, I think it's a shame. (...) I think you should be ashamed of yourself if you say 'we are a Christian university' and then you get a quarrel among the teachers'.*

Dean also has experienced some incidents at Driestar between him and some teacher educators. These incidents had to do with his results, and it has been his experience that his wellbeing was of less importance than Driestar's performance. One of the incidents he refers to was that he had to resit a year at Driestar because he didn't have enough credits to continue. *'I think Driestar has imposed things on me with which I still don't agree. I thought that was very silly.'* He says that according to the rules they were right because he had insufficient credits. He had drafted all his assignments but they still had to be handed in and checked. *'But the year still had to start and I was not allowed to join. I thought that was very silly. They told me "you first have to finish everything and then you can continue". First of all, who are you to decide that for me? I was 25 years at that time and then you tell me you decide that I'm not ready to continue? Hey man, you don't know me at all, you haven't spoken to me for a year. And then you tell me this. This is nonsense. I've been really angry about that.(...) I thought that was so silly, and it's deciding what is right according to the rules but morally isn't. I think you cannot Christianly justify that'.*

Dean had the impression that rules were sometimes more important than engagement with the students. He didn't feel the space to give feedback at this point. He was afraid that would influence his grades as he felt distinctions were made between students *'but well, I can never prove that'*. Dean characterizes himself as someone with the heart on his sleeve and if he doesn't agree with

something, he will counteract and some people think that is annoying, for he doesn't avoid to face things.

Dean saw the worldview of the institution mainly reflected in the daily devotions. He says that during the lectures it was actually impossible to address worldview, for those lectures were specifically about a subject. A few times worldview featured in literature lectures, when they had to read C.S. Lewis for instance. *'But I think it's more a sort of witnessing, it's more what a teacher conveys as a person, that reflects the worldview of an institution. (...) So you've got the daily devotions and how the teacher positions him/herself, so to speak, and how (s)he acts, and that extends to really small things'*. To be interested in people is already a whole thing. At that point, he experienced Driestar as more business-like.

When I asked him about his own lessons and the relation between the content of his subject and worldview he said: *'Yea, that's difficult. I teach according to the curriculum and it says little about it. If I would explain grammar with help of Biblical examples, I think that's not respectful'*. (...) *'You could use Christian texts and Christian songs but I don't see how I can do that at the level I teach at'*. He wouldn't know how to facilitate discussions about faith in some of his classes. *'I think that's for the RE teacher' (...) Yea, that's quite a specialist task'*.

Dean thinks being a Christian teacher can best be expressed in the daily devotion, in sharing experiences of your own life as a Christian: *'Show from your own life that the Christian faith is living and tell them your own experiences, between you and God and things that have happened in your life, give them an example'*. In the daily devotion it's also important to bring the Christian faith to the pupils' lifeworld, Dean says. *'So vanity, what is vanity? That's the time you spend on Netflix'*. Continuing Dean says: *'I think you have to be a Christian teacher in this way, and is it necessary to connect teaching material to Christian faith? I'm not sure. They told me when I was appointed at this school: "In the first place you're a teacher of English and besides you may tell something about faith in the daily devotions but it's not supposed to take too much space as we are still a school and not a church"'*.

4.5 Portrait Jack

If you meet Jack, his build, short hair and plain, firm way of speaking make you can imagine him once as a soldier in military service. Jack now is a 41 year old teacher of English in secondary education. After having served in Dutch infantry for five years, he worked several years for an ICT company. Later on he made a switch to an employment agency but this was not the right job for him, as he said, and after having been thinking about it for some time he started teaching at a secondary school and following teacher education at Driestar at the same time. After having been a teacher for three years now, he says he still feels limited in his educational vision, as his primary focus is his study in teacher education. Reflection is therefore very important for Jack, he reflects on nearly everything that happens. *'Am I doing what is right?'*

Fundamental certainties

For Jack it is important to put a pupil centre stage, they are necessary for the existence of a school. This is also the focus of Driestar in his view. It's also relevant, for governmental innovations (Education 2020, 2032⁶) also put a pupil at the centre. He thinks it is important to connect to the living environment of pupils. *'Everything we do needs to be in the here-and-now of a pupil'*. Knowing your pupils is also essential to Jack. *'I can't teach but I do have a relation with them'*, he jokes.

Learning also has to be practical, otherwise it is not meaningful, Jack says. Pupils have to be able to touch it, become owner, so that's it's not far away from them anymore.

Meaningful is also to let the pupils decide for themselves. Agency is a key word for Jack, give pupils responsibility. *'A student is not an Easter bunny⁷ sitting in the classroom until it has all passed'*. Agency gives pupils self-assurance. As an example Jack mentions that at his school pupils go on school trip to England for a week, in which he sees pupils "grow". It does something to them, more than just becoming better at speaking English, they start to realize that they can do more than they thought. *'These are the things we hear; "I did this and that myself"'*. It has become their own, that makes it meaningful. At the same time you need to teach pupils responsibility within a certain framework, which the teacher needs to determine. Maybe a teacher even is the framework, Jack thinks. Pupils could never do without a teacher. This focus on community is important, Biblical, according to Jack, for there are no loners in the Bible.

⁶ The Dutch project Pupil2020 supported teachers and secondary schools to develop a vision at personalised learning and its practical implications, aimed at future oriented education. Platform 2032 received a governmental task to develop a vision on knowledge and skills pupils need in future society.

⁷ Idiosyncratic language, Jack's speaking is full of idiosyncratic expressions.

Talking about his vision on education, he says it's important to focus on the qualities of a pupil, their strengths. Discipline and hierarchy are also both very important, very healthy as he says, because that gives structure, a solid ground on which flexibility can stand. This vision has mainly been "built" on the job, in discussions with colleagues. Jack works at a school which is innovating and developing, as he describes it.

For Jack it was meaningful to share experiences from practice in teacher education, in an open setting, and not only share the positive experiences. Sharing experiences makes him reflect on his own teaching practice. Besides that he likes *'very dry, dry taste study material, which has been so proved, which has been fixed for years, that's just how it is'*. *'A lot of people like us {student teachers} have a need for rock-hard subject matter {during the lectures in teacher education}, so that we don't have to study three books for the test anymore (...) to discuss hard theory. That's meaningful to us'*. He also appreciates topics like brain research and core qualities. To him these are useful, because he can connect them to pupils and people he knows, that makes them meaningful.

Another meaningful experience in teacher education was an assignment for which he had to visit a traditional reform school. Jack went to a Montessori school. At the end of his visit he told the principal of the Montessori school that he could never work at that school, because they were fundamentally too far apart. For Jack that has to do with the core of meaning, the meaning of education: where you stand for, your convictions. In its view on humanity for example, the Montessori philosophy that people are able to continually bring forth the good runs counter to his view, for Jack radically believes in total depravity, in brokenness of human being. Vision on education and content of education are given meaning from within that view on mankind. Within a school that view can't be given up, *'that has nothing to do with being the voice of doom'*. Asked for the consequences of this view for curriculum development, he says pupils need to work under continuous monitoring. Reality would be that if not so, things would be demolished and pupils would not be working, except the good ones. A certain coercion is necessary, because pupils can't handle agency, so we should not expect that either. That's again a fundament, a certainty for Jack. *'We know it will go wrong, so let's act in advance'*.

Jack is looking for guidance, certainty, not only in theory but also in spiritual aspects as will become clear.

Continuity and change

For Jack there is a difference between the formation of pupils, which has a fixed framework, that message always has to stay the same, and the way in which we teach, which is subject to change. Meaning is also subject to change, frontal teaching for example wouldn't have meaning for pupils

nowadays, because we live in a different society. If you look at technological developments alone, time changes. *'We have created something, our youth is like they are now and we have to deal with that'*. We can't go back to 1990 and flesh out education as it was at that time.

But Jack also recognizes that meaning can be predetermined, especially in certain social communities: *'I think the meaning of a lot of things is fixed before you start to think about it yourself and is blindly adopted by the world at large (...) the power of the past is still very clearly present in some societies, in which things are like they are, have meaning because they have always had so much meaning and you're not allowed to touch them. That's socially determined, culturally, give it a name, locally of course, where you come from'*. To him scriptural preaching is something that shouldn't change, connected to a fixed liturgy. But education can't stay the same (*'education is no ministry of the Word'*), although one shouldn't uncritically follow all innovations.

Some things are meaningful beforehand to his pupils, Jack thinks. As a mentor he regularly confronts his pupils with themes like racism, bullying, addictions. You don't have to give meaning to those things he says, because they connect to pupils' experiences. Sometimes you have to deepen or clarify meaning as a teacher. At the point where it chafes, where he confronts pupils, meaning arises, he thinks: *'Somehow. I just wanted to say that, I start to get a sort of {idea} for myself, at the interface of pupil and teacher, at that cutting edge, meaning is created, so to say. If something enters and the pupil has a response, has a thought, a reaction, it doesn't even have to correspond, but there's a piece of meaning in it, I think'*.

Paradigm shifts

Jack experienced that the meaning of things has changed in his own life, in particular at certain crucial moments.

During the five years he served in infantry he thought *'this is it'*, you get the idea that you're superior to the ordinary crowd. *'Übermensch feeling comes from it, jumping out of a plane, hanging cliffs, you think you can do everything'*. Until you come in civil society (*'that's how we called it, this was Defence and outside you had the civil society'*), and have to learn to fight your own battles. Then things really get a different meaning. *'And if the Lord later on really interferes in your life, then things again really get meaning'*.

He also mentions a specific age after which things became different to him; *'Yes and then, after 30, life really begins. Things happen and things get a different meaning in all areas of life. You start to think about things you didn't think about before. I always call it turning point 30. Life becomes*

serious. Then you're married and things sometimes don't go so well and then you think, things really get meaning'.

As an example of meaning that changed after his thirtieth, he mentions: *'Behind every front door there's a story. People don't do things for no reason'.* At first he thought his way of thinking was the only right way, other people were wrong and didn't think things through. Until you start talking with people in an honest and open way, then something can get new meaning. *'There is more than my exclusive truth, that's difficult to accept of course but (...) at a certain moment you know: there's more than my truth.'* Asked for a more specific example, he says *'I'm really focused at the spiritual, scriptural, the exegetic aspect, things are like they are. I'm not in a church which boasts on steel traditions about clothing and that sort of things. But in the beginning I was very much like that, things have to look so and so, otherwise it can't be real {real faith}'.* He then tells about people who dress or express themselves in a different way than he would like to see. But when he visited them at home as a member of church council, he was positively surprised about their spirituality, while people who looked exactly as he would like to see were not spiritual at all. *'It even entails a change in view on Scripture. It is that large. It brings a wholly different meaning, also to things you read. Once more, I mention the Bible because that's something very large. Look, with all other aspects of life it's very normal to me that things can get a different meaning. (...) So that things get a certain meaning and those meanings can change, I don't have difficulty with that. Within the spiritual domain it's really important to me, yes, to me that's something really big. If things apparently turn out to be different than I thought. It frightens me more, I have to struggle with myself or reflect more compared with the things of everyday life. (...) That's how I face life. There's something like Scripture, and that's the core of everything so to speak, and everything outside that changes anyway'.* To Jack the spiritual is the magnet around which all other things float, it's the core, the truth, from there you give meaning to everything.

Jack thinks he is able to put things into perspective, although a lot of people think he's not because of the way he expresses himself, but *'I keep standing with the foundations, for things are sometimes really cast in stone but that doesn't mean that things on top or around that cannot change. The heart of the matter often stays the same. (...) There are certain things, which are simply proved, that's not going to change any more. And those I would like to hold on for ever, and around those there's movement. Can things get a different meaning. But if it concerns spiritual aspects, Scriptural aspects, then it has the most impact so to speak (...) and then you learn to think completely different'.*

Flexibility in the truth of the foundation is large says Jack, but it should be a Biblical foundation. That is the line of the writings of the forefathers⁸, which he hears reflected in the sermons in church, those are fundamental issues to him. *'A house can be remodelled, but if you start to undermine its foundation, at that moment it goes wrong.'*

Broadening of horizon

Still, Jack recognizes that although people have the same confession, the expressions can be different. He also admits that the utterances in Reformed circles can be a bit out of touch, *'maybe because we have a very small world'*. Sometimes you have to "lock" these expressions. He mentions an example of an event for which he had to cooperate with evangelicals. *'Then I had to put my being-Reformed in the closet, because you sing together, gospel with a guitar, and you get a Reformed prayer contrasted with a very evangelical prayer, well, that's a world of difference. But you have to lock that {a focus on differences in utterances} for a while'*.

Jack endorses the value of these experiences, and also thinks you constantly need new experiences to keep broadening your horizon. To him dialogue is an important word, if you see that people do things in a different way than you do.

'There's more to the horizon than only my thoughts, my perception, my meaning. (...) the foundation should stay where it is and the fact that other houses are being built on that same foundation, of which the one is beautiful, the other ugly, the one firm and the other ramshackle, so be it. I think maybe that's Biblical in the end.' So utterances can be different but he prefers what feels comfortable. *'I can live with it, but don't ask me to imitate it. You know, you want, and that's typically human, you're going to stay there where you feel a bit at home. As herd animals we turn to each other and we prefer to be there where people are thinking a bit in a similar way as we do'*. But it has to be authentic, sincere or genuine. No piety without content for Jack.

If you look at the world at large, Jack realizes that the Dutch Reformed tradition represents only a small margin. *'We have got a fundament and I am convinced that our fundament is very solid. Our theology, our Bible commentaries, our exegesis, but if you look at Israel, you start thinking: maybe we actually know only a little bit, and if you go and have a look at the big evil world outside, then you think: ooh, do we claim the only, exclusive truth? And if you go into the whole Christian world further on, from North-Korea, to China, Eritrea, where people act and experience things very differently and still they are sincere Christians, who belong to the multitude apparently, yes, then who are we? That's a difficult thing to me. I stand for 'my truth'. But how far can I impose that opinion on others?'*

⁸ See chapter 1, section 1.4.

Bridging the gap

Jack likes to reflect on the relationship between worldview and meaning, but also has some struggles how to deal with this relation in his own teaching practice.

For Jack worldview and meaning go hand in hand, your worldview should be your meaning, ideally. Worldview is part of the fact that you give meaning to something, and they can't be separated. *'We have got a worldview and it should shine on in our meaningful lessons or learning practice. Otherwise it sticks out like a sore thumb'*. That doesn't mean that everyone should be a Christian, for *'a very humanistic human being is very well able to teach a meaningful lesson, we don't have exclusivity'*.

But he also has questions that remain for him. *'Can we make our worldview congruent in everything with a meaningful lesson, or meaningful learning? Is worldview the only thing that is meaningful?'*

To Jack the worldview of Driestar is very obvious. The identity of Driestar is firmly founded on the ancient forms⁹ and there's a positive Christian atmosphere he thinks, there's no iron regulation like; this is how we do things at Driestar. There is room, within the pluralism of churches, *'the whole width of the Christian community at large does feel at home there'*. The line between worldview and meaning gets shape through assignments in which you have to use the Bible and commentaries, according to Jack, and he appreciates these assignments. We can always rely on our worldview, on the Word, he says.

We can show something to students with a different worldview as a community at Driestar, Jack says, in the way we treat each other. *'Not in an American way like hugging and crying always, but very simple, practically showing, look: this is where we stand for'*. We don't have to prove ourselves, or give a beautiful show, but have to be there as a Christian for any other person. Small things can have a lot of meaning, Jack says, referring to hospitality. Especially with an eye to non-religious fellow students, you should take them by the hand, make them feel seen. *'They feel not 'like us'*. In contact with these students, Jack tries to tear that feeling down, because trying to overcome us-them thinking is our duty, as he says. His experience was that these students perceived the atmosphere at Driestar as good, specifically the contact among students and the helpfulness.

In his own teaching practice, the daily devotion is the moment par excellence to create chances to connect worldview and meaning, Jack thinks, *'for the spiritual aspect you can always enter at that moment'*. During daily devotions you can create openings for other lessons, but *'a window on*

⁹ The Three forms of Unity, i.e. the Belgic Confession, the Canons of Dort and the Heidelberg Catechism. Many Reformed schools ask their staff and students to subscribe to these forms.

heaven'¹⁰ can also be created during a lesson. He shares an example from that afternoon. In an idiom lesson about religion he made a step from the word symbolism to music, and he told about his own youth. He was vulnerable about who he used to be as a youngster, that he listened to music he doesn't want to listen now any more¹¹, but admitted that music is still his weak spot. And he said to his pupils: *'Listen, this is who I was, bring on your questions'*. Discussion and openness in a lesson, maybe that's really meaningful, he thinks. *'It lands at that moment. Look, and you can't make it, you can't force it. But in preparing your lesson you can put a hatch in it, and if it falls¹², then it falls, and I can enter and we can go in depth'*. When I asked him what made such a moment meaningful in his view, he said: *'to put it very plastically, I think back to the sessions with, what is our brain-friend called again? Sousa?¹³*, a certain emotion comes with it, a certain depth with touches a pupil. But, he says, this takes place at the level of equipment and formation of a pupil, *'besides that you have to run your normal lessons, you want to get finished with the curriculum'*.

So fundamental issues, as Jack calls them, can mainly be addressed during the daily devotion. *'As a teacher you have to walk as you talk and that should be clear for a pupil. And if you have for example really been able to make that clear in the daily devotion, in your contact with pupils. Then they can really know, see, taste who you are and see whether that's coherent. That's what they need. And whether in the normal lesson just something of that is expressed, of where you stand for, to me that's, that's a very difficult thing. (...) Look, my colleague {in the room} behind comfortably teaches his RE lessons, he can make it personal and put a great stamp on it, and give practical examples'*. Jack tells that he also uses practical examples in his daily devotions, *'but then you're talking about the daily devotion again. Look, at that moment the Word is open and you have got the space, and you can mention those fundamental things. And bind them on the pupils' hearts, and then, yea, then the lesson starts and how do you continue?'* This is still an open question to Jack, *'I have no answer'¹⁴*.

¹⁰ 'A window on heaven' is a book written by Priestar teacher educator Mackay (2014), which concerns the question how to connect confession and profession as a Christian teacher, starting with the lesson content. The title refers to C.S. Lewis' 'The Pilgrim's regress', in which John receives a glimpse of the Island, looking through a window in the wall.

¹¹ In Reformed circles, certain music genres are generally rejected as inappropriate to listen to as Christians, e.g. pop/rock music.

¹² To fall: Jack explains this is a synonym for involvement, engagement, you've got the student.

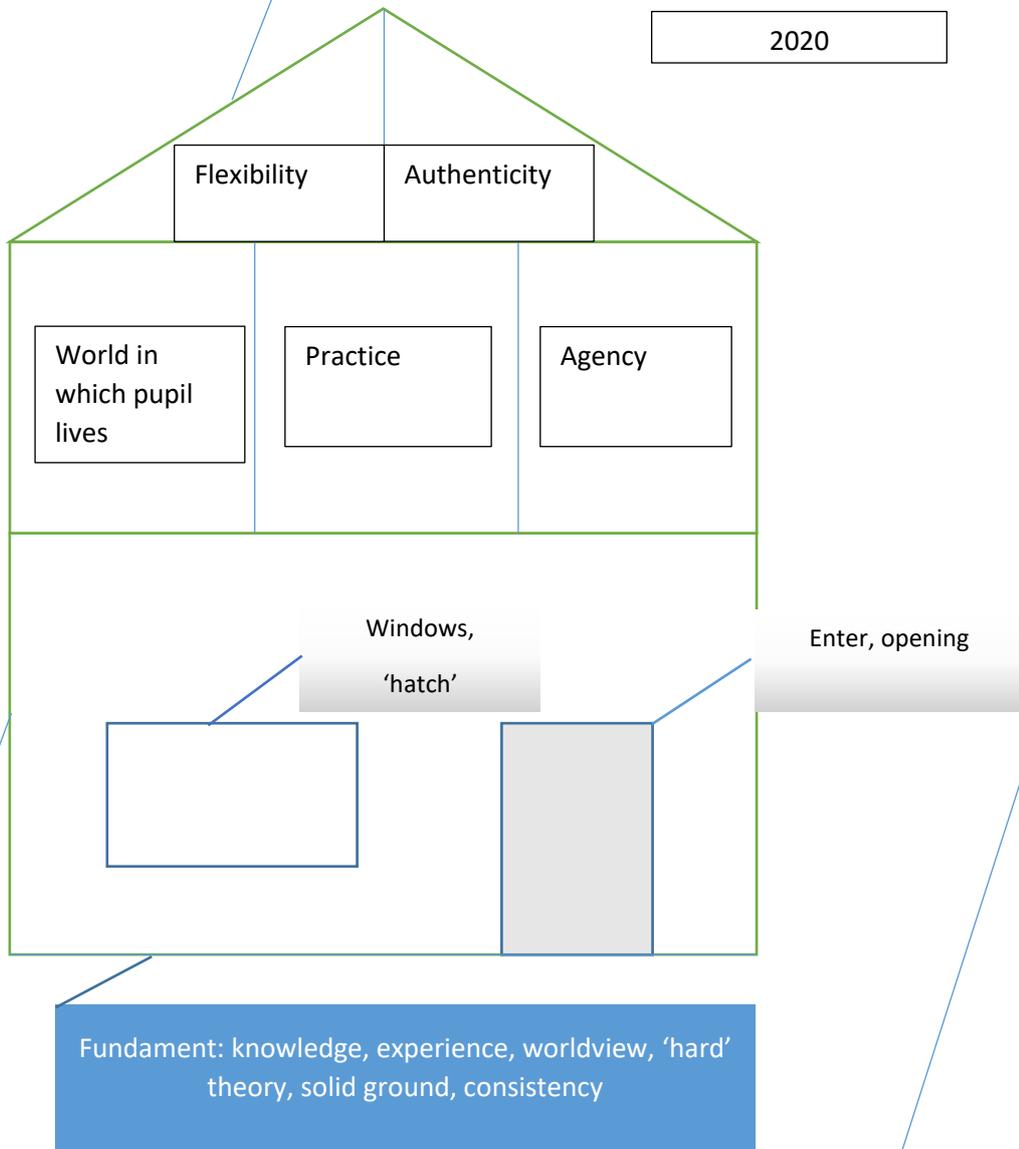
¹³ Jack refers to the book 'How the brain learns' (Sousa, 2012) used in the teacher education course.

¹⁴ On the next page a metaphor of Jack's house of meaning can be found. Researchers can also analyse the data and interpretively construct a metaphor that sums them up. This can bolster some very interesting interpretations (Tracy, 2013, p. 213). Jack used a very specific idiosyncratic vocabulary, I noticed in an analysis of words. Mystic, religious words on worldview. A lot of words he used, like build, hammered, set down, solid ground, fundament, create 'hatches', could be connected to the metaphor of a house. Jack received this metaphor as well, together with the themes for the second interview.

2032

'The house of meaning', Jack

2020



1960

4.6 Summary

Now that I have let the student teachers speak via their portraits as trustworthy as possible in this chapter, it is time to 'speak' to their portraits and discuss them in light of the literature. The next two chapters aim at the discussion of the conceptions of meaningful learning as they emerged from the portraits and the role of worldview, viewed in the context of the institution.

Chapter 5 Epistemology and Driestar students

5.1 Introduction

In chapters 5 and 6 I will expand a critical discourse on key issues which are emerging from the portraits as presented in chapter 4. I will draw on the four portraits and add insights from the data analysis of the interviews with one other participant, Grace, whose portrait did not appear in this thesis. The issues I chose to discuss are relevant with respect to the main question of this study:

How does worldview play a role in the conceptions about meaningful learning that student teachers at a Christian University have developed?

The aim of these discussion chapters is to explore what the data suggest can be said about the significance of worldview in relationship to meaningful learning. Chapter 5 will focus on research question 4.

What do Driestar student teachers' conceptions about meaningful learning reveal about their epistemological beliefs?

As stated in chapter 2, questions about meaningful learning are related to questions about the nature of knowledge and knowing, so epistemology plays an important role. Epistemology is closely related to education in the shape of teachers' epistemological conceptions or beliefs, which influence their theories of learning and their classroom pedagogy consequently, according to the literature. What kind of epistemological beliefs can be discerned in the portraits?

Chapter 5 consists of two parts. In part I, I will focus on the discussion of perspectives on meaning I encountered with the student teachers (sections 5.2.1 and 5.2.2). Then a key theme which unexpectedly appeared from the findings as related to meaningful learning will be central to the discussion. This is the theme 'freedom' (section 5.2.3), which is connected to issues of authority (5.2.4) and community (5.2.5). I will subsequently give an integrative summary of the preceding sections and connect them to part II (section 5.2.6).

In part II of the chapter, I will develop two key points that capture current challenges for student teachers in Christian education in discussing their perspectives on knowledge (5.3.1) and faith-learning integration (5.3.2). In conclusion, an integrative summary and connection to chapter 6 will be given (section 5.3.3).

In the previous chapter four portraits of student teachers were presented. Now that I have listened to the students, in the following two discussion chapters I will interpret what they have shared in the

context of my earlier reading of the literature. A dialogue between the students' portraits and the literature will lead to a synthesis in addressing the question about meaningful learning. For 'while the task of the researcher in the data-gathering phase is to clarify and explore the *personal* meanings of the participant's experience, the task in the report phase is to analyse the conceptual implications of these meanings to the academy' (Josselson, 2007, p. 550).

As stated in chapter 1, the paradox between personal and universal aspects of meaning also becomes visible in this study in the dialogue between literature as the big stories of the disciplines and tradition and the little personal stories of the participating individual student teachers, to help frame and understand what they mean. What is their voice and how do their voices meddle with the voices of the literature? Are there dissonances or are they like minded? As explained in the methodology (see section 3.6.1), I have a different aim in these discussion chapters than in chapter 4, in which I presented the portraits. Where the portrait approach could be designated as reflecting a hermeneutics of faith, this is balanced by the discussion chapters which reflect a hermeneutics of suspicion (Josselson, 2004).

An analysis of the literature showed that meaningful learning in education in general, and in teacher education and Christian education in the Netherlands in particular, is characterised by constructivism, presented in a switch from a paradigm of teaching to one of learning. This switch took place as a reaction against an objectivist, traditional transmission view of learning which had been prominent before. The constructivist prevalence over education has been criticized for several reasons as discussed, which also speak to a Christian context. Although Christian education is based on a different worldview, it is difficult to escape from the dominant ideas in secular culture, for education does not take place in a vacuum, as has been illustrated in chapter 1. The pressure of the socio-cultural context on teachers in a specific context is substantial (e.g. sections 1.1, 1.4, 2.5.2). Against the background of the conflicts and challenges inherent to education, student teachers struggle to integrate their different beliefs, is what we will see in the following discussion chapters. Students are juggling with the influence of liberalism and constructivism in education on the one hand and the Reformed worldview on the other.

The issues that appear in this chapter arose in a creative interplay between the literature and the findings. The origin of the themes discussed can be traced back in Table 3.

Two issues are important with respect to the structure of the discussion. The first is that the way I conducted the discussion reveals my voice and interpretive authority and my own meaning-making horizon, influenced by my experiences at Driestar. I saw connections and patterns in the data, but also contributed my reading and knowledge of the world, which resulted in new thoughts and

insights (Thomas, 2011, p. 180). I started weaving the threads, connected my findings with those of others and have made judgments concerning the best explanation for the findings, as in Polanyi's commitment aspect of knowing. My conclusions are therefore justifiable and at the same time tentative and revisable. The second is that in developing my thesis points I intended to do justice to the voices of the students as well, and aimed to make sure that the discussion was grounded in their data when interweaving with the literature. In order to address the second aim I considered it to be a valid choice to start with the participant data in most sections and interweave with the literature subsequently.

Table 3

Origin of themes discussion chapter 5

Theme	Literature	Findings
Immanence versus transcendence	Biesta Meek Polanyi Palmer	All portraits Conceptions of meaningful learning
Movement of meaning	Biesta	Appendix M; theme 4 Portrait Meg Case description Grace Portrait George Portrait Meg
Freedom	Taylor	Appendix M; theme 3 Portrait Meg Portrait George Portrait Dean
Authority	Polanyi Meek Biesta	Appendix O Portrait George Portrait Jack Portrait Meg
Community	Meek Polanyi Palmer	Appendix N Portrait George Portrait Meg
Knowledge as information	Meek	Appendix M; theme 5

	Palmer	Appendix O
Connecting sacred-secular	Cooling De Muynck	Appendix M; theme 2 Appendix O Portrait George Portrait Jack Portrait Dean

5.2 Part I Perspectives on meaning

5.2.1 Immanence and transcendence of meaning

Where does meaning reside? Is it revealed or is it constructed? Is it dynamic or static? Is it originating inside a person and moving outward, or the other way round? These questions all circle around the issue of the immanent or transcendent character of meaning. These are questions to which I can give no final answer; they are relevant to consider in the discussion of the student teachers' conceptions about meaningful learning, for they may reveal something about the relationship between meaning and worldview and provide a first step in thinking about their relationship.

In chapters 1 and 2 I outlined the case that in reaction to a transmission oriented view on education and its instruction paradigm nowadays the focus across education in the Netherlands is on a process view and its associated learning paradigm. Student teachers today are formed in a constructivist worldview of knowledge. These paradigms bring their own philosophical assumptions and would lead to different answers to the questions above, so that the answers to these questions are in the end related to worldview. On what paradigm(s) do the participating student teachers base their thinking? One might expect particular answers in a Christian teacher education context, that resonate with a Christian worldview. But given that prevailing culture in education broadly tends to focus on immanence and construction of meaning, how do the student teachers at Driestar relate to these prevailing ideas? I observed diverse perspectives on meaning with them, which I will discuss in this section. This section will subsequently address issues around immanence and transcendence, the encounter between immanence and transcendence, mutuality in meaning and the relation between meaning and purpose, linked to personal knowledge.

Dean, to start with, thinks meaning is created by a learner; if something has impact in your life, if you are personally interested and see the use of it, meaning arises, he thinks. Meaning for him is also rooted in experience; *'you are what your experiences are'*. In terms of the literature, he puts emphasis on idiosyncratic aspects of meaning here. In his conceptions about meaning as rooted in experience and created by a learner, Dean's view at first sight seems to concur with a constructivist paradigm on meaningful learning. The focus in constructivism is on immanence of meaning (chapter 2). Constructivist epistemology sees production of new knowledge as a human construction and it focuses on what phenomena mean to the learner (e.g. Hermida, 2015; Jonassen, 2008; Novak, 1990).

In his speaking about meaning as the usefulness and relevance something has for a person, Dean appears to further address immanent aspects of meaning. For him, usefulness and relevance appear

to be connected to freedom of choice. *'People want to have a choice nowadays, freedom of choice and delve into things which are of meaning to them'*.

A connection, such as Dean makes, between freedom of choice and its consequences for thinking about meaning is not unusual in the literature (e.g. Taylor, 1991). If meaning in (teacher) education is considered as a matter of individual choice, with a focus on created or constructed meaning, this will have implications for its view on community and tradition. Developments in education take place against a horizon of certain cultural and societal developments that imply a conviction about the good (e.g. Meşeci Giorgetti, Campbell & Arslan, 2017; Smith, 2018; Stephens, 2007). Several developments have taken place at this point during the past centuries, especially in Western culture and societies. To give a rough sketch, till modern age people thought it was not good to find meaning in life on your own (Keller, 2016). People used to see themselves as part of a larger order, which on the one hand implied restrictions, on the other hand these orders gave meaning and significance to the world (Taylor, 1991). These orders became discredited in the development of modern freedom, which although it has brought us a lot of benefits, also has had consequences for human life and meaning. In Western societies since the 1960s a growing focus on individualism proceeded. The dark side of this individualism is that it has led to a focus on the self and a loss of attention for issues transcending the self, which we saw illustrated in chapter 2 in the 'learnification' of education (Biesta, 2013b, p. 5). A risk of a focus on the individual can be that it both flattens and narrows our lives and makes them poorer in meaning (Taylor, 1991, p. 14). For thinking about meaning as subjective also has consequences for purpose or telos. As we saw in chapter 2, Polanyi already observed that teleology has become a dirty word (section 2.4.4).

It could be very challenging for (teachers in) Christian education to swim against the tide, if necessary, in thinking about these questions, for they do not live isolated from surrounding culture. This could specifically be a challenge if, as Biesta et al. (2015) state, a robust professional discourse about teaching and education more generally is lacking. The connection between meaning and freedom (of choice) is one that is important to keep in sight, for it turned out to be an important theme in the findings, as will be further addressed in section 5.2.3.

Dean's statement about the desire for freedom of choice related to meaning further prompts questions like: who determines what is useful and has meaning? Is it only an individual choice or are there communal aspects to meaning as well? These questions are important to consider from a perspective of Christian teacher education, if, as is done in this thesis, teaching is considered as a normative profession and education as a normative concept (Friesen, 2020). I will return to the relation between individual and community in section 5.2.5.

Dean identifies that there is a tension in the question ‘who decides what is meaningful?’. He thinks a teacher can sometimes decide on the basis of expertise what is useful and has meaning for the pupils. Dean at this point further makes the condition that the teacher must be able to explain the meaning of what is taught to the pupils, *‘if you can’t explain why something has meaning, why would you teach it? It’s of no use’*. In his case that would lead to getting rid of speaking British English, for it has no relevance to his pupils; they are used to Netflix English and that’s what they speak *‘but that’s okay, for people apparently don’t need British English any more’*. What is remarkable here is a focus on usefulness and functional meaning, which is also dominant in the instrumental or “economic” focus in (teacher) education in the Netherlands, as discussed in chapter 1. This is a focus I will return to in part II of this chapter (section 5.3.1).

Now that we have only looked at a few of Dean’s conceptions about meaningful learning and what they reveal at first sight, various connections already appear; between meaningful learning and individual versus community, teleology, freedom of choice and between meaningful learning and a functional, instrumental paradigm. This indicates something of the complexity and stratification of the term and reveals that professional epistemological and worldview beliefs are closely related to these conceptions.

Although in his *conceptions* Dean in terms of the literature appears to focus on immanence of meaning, he also shared some *experiences* which had impact in his life that express a notion of transcendence. There was a time in his life when he did not believe any more. *‘And at a certain moment I was stopped, by God really, truly by events’* he said. Beside the ‘roadside experience’ mentioned in his portrait, such moment was on a summer camp, during a Bible study. The camp leader then addressed a Bible verse to him about the sportsman who has to give everything to reach his aim, otherwise he will be disqualified. In the preceding half year, Dean had recurrently started and stopped sporting. And to Dean’s brother, who was a gardener, a Bible verse about the vine and the gardener was addressed. *‘Then I thought: this is really not normal. This is not possible, you know, this can’t be coincidence. I felt that it was no coincidence. So yes, that’s really been the reason that I started searching really’*.

It could be that at a conceptual level different things are valued as meaningful than at the level of experiences, or ‘lived experience’. If I consider Dean’s portrait, this would make sense, as at a conceptual level he talks about meaningful as practical and useful, while at the level of experiences I also observe transcendent notions. This difference could however also reveal something of explicit and tacit aspects in someone’s beliefs or illustrate a complex relation between religious and professional beliefs (see section 2.5.1). In terms of worldview, Dean’s experiences could be said to be existential experiences, which may have shaped his personal worldview.

I notice transcendent aspects of meaning appearing as well when Dean further reflects on meaningful learning, and expresses that it can be difficult to grasp. Meaning is not always there and it is not bite-sized. Something can become meaningful afterwards or later on, he says. So meaning can be hidden at one time and appear in future moments, which could be said to reflect a developmental, dynamic aspect to meaning, that cannot always be viewed immediately by the learner. This developmental aspect could possibly be related to stages of professional development of learners. But it may also reflect that learning is not always a linear and smooth process. Learning can require pain and effort, reflected in notions like paradigm shift and crisis, as discussed in the literature review. Development of meaning could also relate to the process of knowing as an unfolding story, as it is characterized in Polanyi's epistemology (2.4.2).

In Dean's saying that meaning is not always immediately available, something of the fallibility of human knowing can also be recognized. 'Everything we know is full of meaning, is not absurd at all, although we can sometimes fail to grasp these meanings and fall into absurdities. In other words, meaning can be missed, since the emergence of life opens up the possibility of success but also, of course, the chance of failure' (Polanyi & Prosch, 1977, p. 179).

Considering a theological or Christian framing of meaning for a moment, could it be that this elusive aspect of meaning is also one of the characteristics which reflects something of its Origin? Just as the Spirit works to develop the particularity of things, eschatological, unfolding in time (Gunton, 1993, in Meek, 2011, p. 337), meaning may also unfold in time, and arrive at a later moment. Elusiveness of meaning would then refer to transcendent aspects of meaning.

So, to sum up, at one level I observe Dean's conceptions reflect immanent aspects of meaning but at another level also transcendent aspects of meaning. An interesting question would be if he is aware of these differences in beliefs.

Jack's conceptions, which focus on putting a pupil at the centre of education, '*everything we do, needs to be in the here and now of a pupil*', also appear to reflect a constructivist view on meaning. Interestingly, Jack says he has experienced a pupil at the centre as Driestar's focus as well, it is '*partly Driestar's heritage*'. Has he experienced the curriculum at Driestar as putting the pupil centre stage, like in a radical constructivist focus? Or has the distinction between individual and person, subjective and personal¹⁵, not been addressed during the teaching courses? This would be despite Driestar's aim to offer person-centred, not individual-centred, teacher education (see chapter 1, section 1.4).

Some things do have meaning for pupils beforehand, Jack says, you don't have to give meaning to them because they connect to the experience of pupils. But then I observe a layer is added, when he

¹⁵ This distinction has been discussed in chapter 2, section 2.3.4.

says that sometimes you have to deepen or clarify meaning as a teacher. Here he seems to identify meaning as not only residing with a pupil but hints at an intermediating or revealing role the teacher can play. Remarkable is that this appears to correspond to what Biesta in the literature captured as “being taught by” (2013a). This becomes clearer when Jack continues that he thinks that at the point where it chafes, where he as a teacher confronts pupils, meaning arises; *‘Somehow, I just wanted to say that, I start to get a sort of {idea} for myself, at the interface of pupil and teacher, at that cutting edge, meaning is created, so to say. If something enters and the pupil has a response, has a thought, a reaction, it doesn’t even have to correspond, but there’s a piece of meaning in it, I think’*. In chafing and confronting the role of a teacher becomes even more prominent.

Something seems to be happening here of a meeting between meaning originating inside and meaning as inbreaking from the outside. Jack talks about something he offers as a teacher which evokes a real response from the side of a pupil, and then there is a connection, an answer.

Something enters, Jack says, and a mutuality between teacher and pupil emerges. At the interface of pupil and teacher a shared space comes into existence. Is this what Polanyi would identify as a pupil indwelling the master’s teaching and discovering meaning this way? An aspect of mutuality or reciprocity in meaning can also be observed in what George experienced. If he shares something with a pupil about his own youth and notices it has been valuable for that pupil, it evokes a sort of meaningful learning in him as well, he said. If you give something as a teacher and it is received by a pupil, that can be a very meaningful experience.

Jack’s reflection about meaning arising in a shared space links to what I noticed several students articulate in the interviews. I interpret what they said as a need for space, in two directions, for meaning. In the first place from the perspective of the teacher towards the pupil or student. The teacher needs to give space to the immanent side of meaning, so not only impose or transmit knowledge to the pupils but make allowances for the personal interpretation of each pupil. In what Dean and Jack articulated this need already appeared, but it can also be found with George, for instance when he says that it’s important that pupils learn to think for themselves. Pupils specifically have to learn why something is true and find evidence for that, know how to give arguments and substantiate their standpoint. (George does not mention the word, but at this point he seems to draw attention to the role of hermeneutics and his view about pupils’ critical thinking could be said to resonate with judgemental rationality, as an aspect of critical realism).

Secondly, there appears to be a need that pupils allow for meaning from their side as well. Pupils need to make space or leave room for meaning, which is not only their own, but is revealed from the outside, offered by the teacher for instance. This need I can see expressed for example in what one

of the student teachers, Meg, formulated as her desire *'to add something'* in the lives of her pupils. But she notices that it is really hard to fulfil her desire, because her pupils are so occupied with themselves, as she phrased it. There seems to be no space for the meaning she would like to add. Meg identifies a relation between the difficulty her pupils have to see meaning and the fact that meaning is not connected to a faith or a deeper principle at her school. Meg thinks a faith or deeper principle enhances certain values that they have let go at her school. Such a deeper principle also helps to look further than your own interests, *'it doesn't turn all around your little universe'*. Meg sees a connection between the lack of motivation she meets with her pupils and a lack of meaning. Meaning gives an aim, something outside yourself that is important to fight for. As an example she mentions participating in heavy sportive effort in the fight against cancer. In the literature we can find that an act like that offers a transcendent point of reference (e.g. Frankl, 2008).

George also talks about the relation between meaning and aim. He says that if pupils are allowed to limitless decide for themselves how and where to spend their time, they will let meaningfulness or the use of their time and life mainly be determined by what is offered. What George is referring to is a certain purposelessness, living without an idea of where to go and therefore just consume what is offered, in which social media then receive a leading role, he says. But George also observes a countermovement in magazine articles for example, in which meaningfulness and giving your life an aim is a central theme *'and I think that is what we really need in this time in education, that education has an aim, it needs to have meaning, so that it serves an aim'*.

The issue of a need for a certain purpose and meaning, like Meg and George express and struggle with concerning their pupils, is not only a question of our time, but is relevant to any society that struggles with signifying meaning and the idea of a subject-transcendent meaning. A focus on individual life can lead to a narrowing and loss of purpose and meaning (Taylor, 1991). At the beginning of the twentieth century the American philosopher Josiah Royce answered the question why people need meaning by saying that human beings cannot live without dedication to a cause more important than their individual interests. He said we need *'devotion to something more than ourselves for our lives to be endurable'* (Royce, 1908, in Keller, 2016, p. 70). This resonates with an essential notion in Christian thinking about human being (section 2.4.3), namely the ability a person has to transcend his or her own reality. If this is essential indeed for human flourishing, the problems Meg experiences with her pupils are understandable and imply an urge to reconsider this notion of self-transcendence, not only in Christian education but just as much in secular education.

At this point I notice there is an interesting link with Polanyi's ideas about personal knowledge, as I can see the notion of *'something more than ourselves'* reflected in this aspect of his thinking as well.

As discussed in chapter 2, Polanyi makes a distinction between the personal and the subjective (2013, p. 300). The personal has a universal intent, a transcendent point of reference one could also say, while the subjective is not aimed at others and the Other. The subjective could well be characterized as “incurvatus in se”. It indicates a life inward for oneself rather than outward for others. Or think again about Meg’s characterization of her pupils as ‘so occupied with themselves’. It is remarkable that an apt illustration to discern the two terms of *subjective* and *personal with universal intent* is given by George, when he talks about the cross. He says ‘*In Jesus¹⁶ I think you do give meaning to that, but that’s at the same time something of yourself and something group, as a collective, transcending or so*’. So it is something individual, but not subjective, and something communal, but not collective. This is how I interpret Polanyi’s notion of the personal. The personal breaks the dichotomy and opposition between subjective and objective, between individual and collective.

So far I have discussed diverse conceptions of meaningful learning from the portraits of the student teachers. What they point towards is the complexity of the term meaningful learning, as it appears to be a stratified concept with different related dimensions. A dimension of immanence versus transcendence, personal versus communal, time, direction and space I observed to be gently appearing. Further I observed that the emphasis of the student teachers was diverse. Some appeared to focus on meaning constructed inside, others on meaning added from outside. At the same time I could see reciprocal aspects of meaning identified by the student teachers, referring to an encounter between immanent and transcendent, so that meaning came into existence where outside and inside met. Meaningfulness was experienced as emerging in a mutuality and a shared space between teacher and pupil by several students. Two students struggled with a lack of purpose and meaning with their pupils and addressed a need for self-transcendence.

At points, dissonance appeared to exist between different beliefs of the student teachers, which could be important in thinking about the relation between epistemological and religious or worldview beliefs. An emerging dimension that I will further develop in the next subsection is the dimension of movement. In light of the literature this could be an important dimension for education, as constructivism suggests there is a movement of meaning from the inside outwards in the first place, meaning as imposed on the world. Objectivism on the other hand imposes impersonal knowledge on the learner. In Polanyian epistemology there is movement in the characterization of the process of knowing as being known and reality breaking in (section 2.4.3).

¹⁶ In a personal relationship with Jesus, one of the main elements of Christian faith.

5.2.2 The movement of meaning

A key issue related to meaningful learning for George is an inspiring teacher. An inspiring teacher functions as a source and creates an environment in which other people become inspired, George thinks. He also noticed that if a teacher has put effort into preparing a lesson, tried to make it interesting and is enthusiastic then you become spontaneously inspired to take part and become motivated for that subject. George further spoke about inspiring teachers who succeed *'to call up something in their pupils'*.

Looking at the origin of the verb "inspire", the Latin verb "inspirare", its meaning is: to blow into (Lexico, n.d.). This gives already a clue about the direction of the movement of inspiration, namely a movement from the outside inward. Definitions of the verb "inspire" all start with words like animate, create in a person, make someone. They indicate a movement which is initiated outside the person and makes something going inside a person. It makes someone's spirit go. Someone who makes me think, is what George said about an inspiring teacher. He did not confine this inspiration to persons only, books or movies can also have this role for him. *'The whole idea that someone has written something which makes me think, I think that's very pleasant.'*

George seems to oppose this idea to the idea of a movement of meaning that is only directed inwardly, immanent. *'If I can do it all alone, it is of little meaning'*. This may be connected to his interest in something to reach for, a challenge; if subjects are challenging that makes them interesting, you want to know more about them and this gives more meaning, in his view.

The issue of inspiration in its direction from the outside inward connects to a theme that emerged during the interviews with several student teachers, which was also a theme all students reflected on during the third interview, namely the broadening of horizon or the opening of new perspectives. Grace, for instance, really enjoys it if someone offers her something new, new ideas or a new connection. She says: *'I think I'm not very creative. So I can't think out of the box very well. And if someone else is able to do so, I think; 'wow, that's how you can look at it as well, how nice!'* This can also happen when she has to read works of literature, *'they give more understanding and empathy for others, also from other cultures or former times (...) they broaden your view'*. Grace also mentions obligatory assignments on literature, which she didn't like. But in the end they were meaningful for her, as they broadened her view. She had to talk with other students, which made her go deeper and see new perspectives. Grace further admires teacher educators with a lot of knowledge and expertise, who trigger something in her, a longing to be like them. So she likes things she would not have found out on her own, but which are handed. She likes what she calls an aha-erlebnis, *'ah, I didn't see that yet'*. Grace compares it to trying to solve a puzzle and suddenly it is finished and fits.

Similarly, Dean's encounter with Marcia's (1966) identity development theory in teacher education made him say: *'when I had studied this theory, I thought; wow! Literally, a world opened to me'*. Marcia's theory helped him to understand his own identity development, the family he was raised in and it gave him insight in other people's actions.

Meg experienced new perspectives in studying the German language. She was *'captured'* by the knowledge and passion of her teachers, and by studying, reading literature, delving into the history of a country she started to understand, she got eyeopeners, *'so that you really see, oh, I've had these, aha, oh, yea, that's how it is. I've never understood that before'*. Meg on her turn would like to broaden the horizon of her pupils as well. She talked about the use of movies, to make her pupils think about life questions. What she likes to see is that meaning arrives in the end, but that requires quite some effort from her as a teacher. A teacher can have an intermediate role in revealing meaning to pupils, is what I infer from her experiences.

In addressing broadening of horizon, these students seem to touch upon transforming aspects of meaning. I will further develop this issue in thinking about learning as a paradigm shift, in section 5.3.1. Two issues I will highlight here. First, what appears to be common in these students' experiences about broadening of horizon is the role of others, be it teachers or fellow students but also literature and movies. These experiences reflect a movement from the outward inside. The students appear to appreciate something from the outside that is added rather than only confirmation of what is already present (cf. Biesta, 2015). *'Others may- must- help us see and sense what, left to ourselves, we would not'* (Meek, 2011, p. 72). This relates to questions about the role of community and authority in education, to which I will return later (sections 5.2.4 and 5.2.5).

Secondly, what is striking, is that these students' experiences with the direction meaning makes in receiving new perspectives, reminds of Polanyi's structure of knowing as subsidiary-focal integration, as discussed in chapter 2. Specifically the experiences of Grace and Meg remarkably concur with Polanyi's speaking about knowing. He proposed that knowing is the active shaping of clues to form a pattern (Meek, 2011, p. 69). This is what he called integration (Polanyi, 1966, p. 6). *'It involves shifting from looking at puzzling and apparently unrelated particulars to relating to them differently: relying on them (...) to comprehend a deeper pattern'* (Meek, 2011, p. 69). The shift to identify a coherent pattern is a moment of insight, the *'Oh! I see it! moment'* (p. 69). The similarity with the wordings Grace and Meg chose for a moment like that, as illustrated above, is striking. If a person integrates particulars into a pattern, this pattern becomes focal, we focus on it (p. 70). We cannot give an explicit explanation for this, often we do not know how we came to a pattern, it is as if the

‘pattern reached back and took hold of us’ and ‘we usually feel that the insight was in some way given to us from outside us’ (p. 73).

So the structure of knowledge as subsidiary-focal appears to be connected to the direction of this change of particulars into pattern, a movement from the outside inward; and seems to reflect something of meaning as a transcendent gift (Biesta, 2014) and something that cannot be always explicitly identified. Like Jack said about a meaningful moment in one of his lessons; *‘It lands at that moment. Look, and you can’t make it, you can’t force it’*. But is there only a movement from the outside inward? Does meaning only come from the outside and add? Is it only pre-existent and discovered? Or is there more to be said? Here I touch upon the paradox between personal and universal aspects of meaning and I observe something of that paradox in the students’ conceptions as well. The paradox becomes even more complicated because, as Pollefeyt (2020, p. 117) stated, these days there are many players in the market for meaning, which all want to voice their own interpretation. There is no longer an overarching philosophical or religious system offering conclusive answers and reality—also our own inner reality—is radically marked by a form of ‘polyphony’, by a multiplicity of voices, by plurality (p. 117). If education is normative, aimed at formation of pupils, somehow this plurality of voices has to be addressed, particularly in Christian education.

George seems to touch upon this plurality when he stresses it is important that pupils learn to reason from their own framework of values. Education should set meaning and aim in contrast to aimlessness, in his view. Further, if pupils learn to think for themselves that evokes meaningful learning, because pupils have to make it personal, George thinks. For him it is important to challenge the thoughts of his pupils as well, because *‘I think real meaning can only arise if you do not only internalize things you have heard or copied from others as your own opinion but that you are challenged to very consciously consider what actually is your own opinion, and challenge that further’*. In saying this, George touches upon the importance of hermeneutics in education. He further thinks you need teachers or mentors to be challenged on your thoughts, which implies a role for teachers as guides. Despite the stress on the individual pupil in education, after all we are forming pupils as a community, he reflects. But inside the pupils something needs to happen as well, it is not just copying what others offer but also giving a personal answer so to speak.

Another illustration of a personal answer I observed with Meg. She talks about the importance she sees in a Christian tradition of baptism and receiving Christian education, because in the first years of life things become fixed for the rest of your life. But she also stresses that these are things that you have to give personal meaning, for often these things are only done out of habit. The search for meaning is personal, someone else can’t give it to you, Meg says. Someone else can play a revealing or intermediating role, but meaning has to be internalized and become personal. She holds her pupils

accountable for their personal responsibility: *'take direction of your own life, make sure you'll find the motivation to work, as no one else can give it to you'*. At the same time, she struggles where she can connect to her pupils, she is convinced they need meaning but she experiences a gap in age in this regard.

Grace also touches on a personal element that plays a role in meaning, it helps her for it evokes inner motives. She spoke about a lecture of which the subject touched her, *'there's a piece of yourself in it'* she said. This reflects again something of reciprocity in meaning and something of a knower not left unchanged in the process of knowing; knowing as interpersonal and transforming (see also section 5.3.1). *'When we know something truly and well, that which we know does not feel like a separate object to be manipulated and mastered. Instead, we feel inwardly related to it; knowing it means that we somehow entered into its life, and it into ours'* (Palmer, 1993, p. 57).

In conclusion of this section, if I step back and reflect on what I interpreted from the portraits, I can see diverse issues emerge.

Meaning appeared to come and arise in a reciprocal movement. I observed the initiation of meaning is connected to a movement from the outside inward in the conceptions of several students. If this movement is in the first place one from the outside inward, this would have consequences for education, namely for the position of a teacher as authority or the authority of the discipline being studied. This can be related to a theme that emerged connected to meaningful learning, namely broadening of horizon, for which we need others or the other. But a movement of in-spiration alone appeared to be not enough, meaning cannot be depicted in a one-way direction. I observed not only a movement from the outside inward but also a reverse movement, from the inward outside, in the conceptions. Four students talked about a personal answer or response as well. Meaning does not bypass the person, which appears to be another essential notion for education. Developing Polanyi's notion of personal knowledge could be helpful at this point for teacher education.

In the meantime I have been wondering how far the student teachers were aware of meaningfulness in relation to terms of transcendence or immanence. I did not observe any signs that they relate meaningfulness to issues of epistemology. These philosophical terms may be unfamiliar to them, at least these are not addressed in the teacher education curriculum at Driestar.

Some student teachers further expressed tensions between their ideals and ideals of current education in the Netherlands, represented in educational developments which focus on the individual. Nowadays mixed responses to tradition in society and to authority in education can be noticed. These also have consequences for knowledge and meaning, as touched upon in the literature review.

In the next section I will therefore turn to an important theme that has everything to do with tradition, authority and the relation between individual and community. This is the theme of 'freedom', which appeared as central in the portraits of several student teachers, in diverse respects. The central connection with meaningful learning is one I had not expected. So this is a theme worth further exploration.

5.2.3 Freedom: just do it?

'I make my own choices, because I live my own life' (Dean)

'If you give an individual total freedom, that individual also has freedom to completely ignore or annihilate another individual. So somewhere you need authority. I think that specially comes from people in relationship with someone else, who are being able to guide from within that relationship'.
(George)

These quotes set us in the middle of the tensions that arise around the theme of freedom. As said, these tensions focus in particular on issues of individual versus community and on authority. For some student teachers these issues posed struggles with freedom and boundaries in the context of education. For others the focus seemed to be merely on freedom.

A struggle with freedom and boundaries may be inherent to the complexity of education, but can be amplified by cultural influences on this context, particularly in societies which have their roots in liberalism. The emergence of the theme 'freedom' with the student teachers might therefore be related to current culture as well. Many contemporary Western societies contain fundamental elements that have liberal roots. Liberalism is a movement which has its roots in the Enlightenment (De Wachter, 2012). Taylor has designated freedom and the human being as autonomous subject in the centre as key elements of this ideology (Taylor, 2011). As discussed in section 5.2.1, as a consequence of a focus on freedom, a growing focus on individualism proceeded in many Western societies. The downside is that it has led to a focus on the self, reflected in developments in education that focus on the individual as well, as in a constructivist focus (Biesta, 2013b). Taylor characterized the principle of individualism as 'everyone has a right to develop their own form of life grounded in their own sense of what is really important or of value. People are called upon to be true to themselves and to seek their own self-fulfilment. What this consists of, each must, in the last instance, determine for him- or herself. No one else can or should try to dictate its content' (1991, p. 14). *'I think it's stupid. (...) Who are you to say: it's not allowed? Are you better than I am?'*

When it comes to the issue of freedom and boundaries, any Christian may recognize something of the tension between these two, as Christian freedom poses one of the paradoxes inherent to Christian faith. True freedom only exists in relationship with Christ, namely as Christ's slave or servant (NRSV, 1989, 1 Cor. 7: 22) from a Christian perspective. The apostle Paul says Christians have a great deal of freedom in Christ. However, our freedom in Christ must be balanced by a desire to build up and benefit others. 'Do not seek your own advantage, but that of the other' (NRSV, 1989, 1 Cor. 10: 24). Love is what limits Christian freedom. Paul addresses the ability of human being to self-transcend, a central notion in a Christian view on human beings, as stated in chapter 2. The self-sacrifice this may require however will continue to give struggle in the life of any human being, specifically in a cultural context that promotes self-realization as a narrative pattern (Paul & Slob, 2015). Dean expresses something of this tension and struggle when he says it is not easy to be an example as a teacher; *'you want to live your own life and make your own choices, which aren't necessarily exemplary'*. On the one hand there is a powerful individual choice worldview at present, on the other hand there is the collectivist worldview of tradition, strongly present in a Christian context, and the question is if and how these two can be reconciled.

From Dean's portrait I observed he values a freedom to choose action and to identify. How can we understand the emphasis on freedom with Dean?

A possible understanding is that this focus forms an expression of his personal worldview, shaped through his life experiences. These he regularly refers to. *'As I am a sort of, I would almost say from among the Gentiles, as I was done with faith but started believing again through particular experiences, some things are irrelevant to me'*. This corresponds to what we met in the literature on personal worldview. 'What one individual views as the 'norms' of life may merely be a product of their own life narrative and worldview', Flanagan says (2019, p. 4). Similarly, Van der Kooij et al., (2013, p. 221) say that the beliefs and values of someone's personal worldview are one of the sources that are used in reflecting on what to believe, what to strive for, and consciously or subconsciously can be a stimulant to act and perceive life in a certain way.

Freedom is especially important for Dean at the point of religious identity development, therefore he is critical towards authority. He is resisting the shaking finger he experienced in Reformed circles; "you should...and you should not". Imposing things or *'force a Christian identity down the throat'* does not work in current society, in which freedom is highly valued, Dean says. *'Someone needs space to discover his/her own values and identity' (...)* *'let people be free to make their own choices, those kids are in development, do you really have to push them in a certain direction?'* Dean relates this to meaningful learning in the sense that it is about learning what is applicable in life, also at the terrain of faith. Dean has explored a lot, which has made him the person he is at the moment, he

says. Exploration combined with freedom is therefore very important in Dean's eyes. *'I think people develop through exploration and freedom. I don't think it works to impose anything on people, really.'* In his thinking he has been influenced by the work of Marcia (1966) *'how could you ever explore if you've always worked in a Christian bakery, a Christian bookshop, go to church, send your children to a Christian school. Then you get foreclosure (...) that's no good, we know that from Marcia. So let it go. Freedom again, someone needs to do what he or she wants, otherwise it's not going to turn out well with identity'*. Dean points out the space pupils need to develop their own meaning, arising from his own experiences. His language seems to be close to liberalism.

In modern liberalism, freedom especially means freedom from the restrictions and shackles of authority, nature and religion. This is what Taylor identifies as negative liberty, following Isaiah Berlin, who first introduced the concepts of positive and negative liberty (1958, in Gescinska, 2011). Negative means *freedom from* external restrictions and is opposed to positive liberty, which circles around possibilities, and is a *freedom to*. The differences in interpretation Berlin and Taylor made of the two sorts of freedom fall outside the scope of this research, but the point my attention was drawn to is that Taylor (2011) qualifies negative liberty as lacking content. It is an empty freedom, because it is not on its way to some end or meaning. So there seems to be a relationship between a focus on negative freedom as understood in liberalism, and a lack of meaning. At this point I became interested, as I observe it connects to a point of struggle of some student teachers, already touched upon in the previous section, where I discussed the importance and need of a self-transcendent aim and the consequences if such an aim appears to be absent in education. When Meg for instance says her experience is that pupils are only present at school because they have to, and even that is not sufficient. School has become completely meaningless to them and she wonders *'in everything you do in your life, if you don't give meaning to it, then why do you do it?'* While her pupils seem to be focussed on 'freedom from', Meg would like them to see the 'freedom to' education can offer. It appears Meg views authority as a prerequisite to choose and have freedom to. *'You first need to know what boundaries are before you've got the freedom to decide on things which are good for you'*. George also struggles at the point of freedom and authority, as illustrated with the quote at the beginning of this section. A tension between the two is also appointed by Grace, who rather wishes that her pupils discover for themselves why they have to learn something, but she notices a tension in dealing with such freedom at their level. They need someone who says: *'you have to do this'*, while Grace does not like to say that.

Moving away from authority and a focus on individual autonomy appears to have consequences in various areas of education. Authority in the context of education is related to morality in the first place if a normative aspect to all knowing is assumed (Meek, 2011; section 2.4.1)). As explained in

chapters 1 and 2, thinking about education and learning in a Christian tradition has underscored that knowing always has an ethical component (e.g. De Muynck & Kalkman, 2005; Vos, 2011). And if authority in (teacher) education is related to a normative dimension of knowing, this also implies a role for the community. The relationship between individual versus community moreover is related to identity (development), which Dean regularly touched upon. In the coming two sections I will therefore further discuss the findings of the portraits on authority related to morality and on individual-community in relation to identity.

5.2.4 On authority; between freedom and framework

Authority nowadays is no longer self-evident in society and also in teacher education. This is illustrated by Jack. He shared an event from a study trip with a group of Driestar fellow student teachers. They were constantly discussing to which pub they would go, which irritated one of the teacher educators. After that particular teacher made a remark about their discussions, all students got annoyed, *'it's none of his business'*. But Jack also recognizes a change in thinking about authority with his own pupils: *'What is a 16-year old nowadays compared to someone that age twenty years ago? Who usually still had a certain authority, yea, hierarchic view and I think that was stronger at that time, and that's absolutely no nostalgia or complaint or going back to the past like; everything was better at that time. Surely not. But what we have got now, we have created ourselves.'* Not only Jack makes a connection between the time we live in and the fact that relationships of authority have changed. Meg does as well. In the past it was not done to think *'oh, the teacher is explaining something to someone who doesn't understand, but I do, so let's walk through the classroom. While the teacher is explaining. It wouldn't come to your mind'* she says. The perspective has shifted in her view. What can be the consequences if there is a shift in thinking about authority indeed, especially for meaning and knowing in the context of education?

Meg notices that her pupils have got difficulty with rules or the people who impose those rules to their feeling. She attributes that to a fear of people to be curtailed in their own 'I' or a resistance out of uncertainty. That sounds reasonable if the dominant perspective in education is such that it fears the threat authority presents to individual freedom. But could the reverse also be true, so that it's not *authority* but *freedom* as viewed from an individual perspective that threatens a person most? The latter is what Meg and George seem to point out. As said, Meg thinks freedom is preceded by boundaries, which ensure that you don't harm someone else but also don't harm yourself. She speaks out of her own experiences. Freedom is not that those with the loudest voices steal most freedom. Therefore you need rules as a protection, to guarantee freedom for everyone. Those rules or boundaries are agreements made in schools, she says. Meg also refers to another framework

which makes a healthy development of freedom possible. She mentions the Old Testament rules, which are aimed at the good. God has given us the framework of the Ten Commandments to protect us, Jack says similarly, for He knows we can't handle freedom. This sets limits to the ideal of individual autonomy but also puts the friction between worldviews on edge.

The problem is that proposing a framework or authority, as these student teachers appear to do, may be received with mixed feelings in education, as the term has become associated with coercion (Bellah, 2006). Interestingly, in an older tradition of classical political philosophy, authority was the condition to freedom, so that when authority disappears freedom collapses into coercion. The negative association of authority with coercion has had epistemological consequences as well. The normative dimension of knowing has concomitantly gotten out of sight. 'Counting authority as a source of knowledge has for centuries fallen into disrepute' (Meek, 2011, p. 315). In education this has led to a concern that the teacher consequently mainly becomes a facilitator, as we saw in chapter 2. A teacher as someone who has nothing to offer but only needs to get out what is already inside the pupil and least of all asks difficult questions and raises uncomfortable issues. This leads to a shape of education in which teaching pupils should be treated as a process of satisfying customers, according to Biesta (2014). By opposing to a view of teachers as disposables and replaceable resources for learning, Biesta places himself in the footsteps of Polanyi and others who have noted that science can only grow in the context of communities of tradition and pointed out the critical role of tradition and apprenticeship with skilled masters (Meek, 2011, p. 316). 'Every act of knowing requires normative guidance, both from worldview commitments and working maxims. But they also involve, most fundamentally, I believe, authoritative guidance from other persons' (Meek, 2011, p. 79).

The need for authoritative guides is identified by Meg, when she says that pupils need a compass in life, a mentor who explains the things that happen in life and helps pupils how to deal with those. Who also functions as someone to fall back on, on which they can call at any time so that they can make mistakes and carry the consequences in the development of responsibility. Authority as to guide from within relationship is how George reflects on this issue as well. This authoritative guide does not have to be a teacher per se. But teachers can play an important role, as we saw in section 5.2.1. They can act as a mediator in meaning, they can challenge and confront their pupils and broaden their horizon. While Jack on the one hand stresses agency as important for his pupils, on the other hand he also thinks you need to teach pupils responsibility within a certain framework, which the teacher needs to determine. Maybe a teacher even is the framework, he says. Pupils could never do without a teacher in his view.

But George notices this aspect of teaching is suffering under the current status of authority. He

thinks that pupils are still in need of authority though but the increasing individualization in society also influences the role authority receives in education. Pupils are much more aimed at what they can find themselves instead of what is offered to them by the teacher. Pupils become more self-centred, George experiences. He notices that this also influences the classroom relations between pupils among themselves, and thus influences community as we will see further on.

The difficulty pupils have with authority may, besides to their developmental stage, also be connected to developments that focus on the individual in education, as Biesta observed (2013b, p. 6). At Grace's school developments towards personalized learning have been initiated. Personalized learning is an educational approach that aims to customize learning for each student's strengths, needs, skills and interests. Each student receives a learning plan that is based on what (s)he knows and how (s)he learns best. It's the opposite of the "one size fits all" approach which used to be dominant in most schools (Morin, n.d.). Grace doubts whether this will work for the pupils at the level she teaches, *'because you have to oblige them to do something, otherwise they do not feel like it'*. The tension Grace feels essentially captures a tension in approaches that focus on the individual in education. The desire to protect freedom from imposed restrictions makes obligations problematic, for they imply restrictions. *'If I am obliged to do something, I am (morally) restricted from not doing it, and hence less free'* (Levisohn, 2009, p. 98).

Without any obligations, individual pupils could act at their own discretion in classroom and the teacher could easily become side-lined, which is what Meg experiences. She is struggling with similar developments at her school, aimed at differentiation and personalized learning. Pupils get the freedom to decide for themselves what they need to learn in this approach, which makes them egoistic in Meg's view. She thinks they get used to be served hand and foot, as an excess of custom-made education. *We educate them as individuals, Meg says; 'if I think I need it I want instruction from the teacher (and right now), if I think I don't need it I don't have to participate'*. The pupils think they can decide and start to claim what they think are their rights in classroom. Meg experienced this gives her little space to correct them on their behaviour. A lot of pupils don't do their work because they do not feel like it, she says. Interestingly, Meg makes a connection that is also made in educational literature, between a change in the authority of teachers and the rights pupils start to claim. MacLeod, MacAllister and Pirrie (2012) characterise the impact of the neo-liberal political agenda on teachers in the UK with the emphasis that it places on the rights and responsibilities of pupils, the 'rights agenda'. *'It is legitimate authority that may be most challenged by the rights agenda in schools. The relationship between the social roles occupied by teachers and pupils has changed to one in which it is no longer the duty of the pupil to do as they are told, but rather their*

right to question what they are being told and to resist' (MacLeod et al., 2012, p. 499). It would be interesting to study if this agenda also influences the position of teachers in the Netherlands.

Resuming, focussing on the individual in education overlooks a normative dimension of knowing and the community aspect of education. The need for a framework is expressed by various students, to protect pupils, teachers and the community they constitute against indulging in individual freedom. Several tensions student teachers are facing in their teaching practice and bring to teacher education at Driestar were discussed above. Attention for current developments in education and formation of the student teachers how to cope with these developments both seem important.

Returning to teacher education, George indicates that he sometimes misses the teacher educator as authority. There is a focus on cooperative learning in the curriculum, while George sometimes would like to listen first and start to think about what is offered subsequently. So a shift to coaching and learner centred education, as reported in recent literature on teacher education (section 2.5), is not only valued positively by George. What is remarkable is that what George is longing for bears resemblance to a master-apprenticeship relation, as Polanyi suggested for learning. 'To learn by example is to submit to authority. You follow your master because you trust his manner of doing things even when you cannot analyse and account in detail for its effectiveness' (Polanyi, 2013, p. 53). By indwelling the master's teaching meaning will appear. Reviving Polanyi's 'master' aspect of teaching and the trust in authority it reflects, could be valuable in considering the expert aspect of teaching several student teachers identify. The term expert however may have become contaminated with a top-down, objectivist way of teaching, which wants to exclude all subjectivism (e.g. Palmer, 2009). As a reaction to this view, a focus on cooperative learning was introduced, with the teacher as a facilitator. Surely a key role for teachers is to facilitate learning, but there is more. If students are left to their own devices they will only explore what interests them, not what is in their interests (Badley & Van Brummelen, 2012, p. 61). So they sometimes need 'an interruption of immanence' (Biesta, 2016) or what George says '*as an expert I know this is necessary and you have to do it, whether you like it or not*'. This is not meant as a harsh, authoritarian regime but a teacher as a good craftsman instead is aimed at the good for his/her pupils and can be trusted. For as a craftsman you know what is important for them to learn, George says. '*I do the things of which I as a professional think: this is important to do now. (...) I know what's good*'. The teacher has something to give, is aimed at a certain telos, which is fundamental in education, as discussed in chapter 2 (2.3). This should be seen in balance with George's view as discussed in 5.2.1, pupils have to learn to think critically as well. It could be helpful to see what he says here in light of the discussion of constructivism in 2.3, the epistemology of a discipline should not be confused with a pedagogy for

teaching or learning it and the practice of a profession is not the same as learning to practice the profession.

Authority in teacher education on the other hand can be perceived as unfair. This was Dean's experience when he had to repeat a year at Driestar because he didn't have enough credits to continue, as set out in his portrait. *'I think Driestar has imposed things on me with which I still don't agree. I thought that was very silly'*. He felt not being done justice, *'while we learn to do justice to every pupil and to be realistic'*. He says that according to the rules Driestar was right but did not like that it was decided for him, *'and it's deciding what is right according to the rules but morally isn't. I think you cannot Christianly justify that'*.

A few things that stand out. Firstly, the direction of decisions seems particularly to be the problem, as Dean used the word 'imposed'. What irritates him is a high level of *'finger-pointing'* as he says. This is understandable in the context of what I discussed before about his attachment to freedom of choice. *'Today we conceive of freedom and obedience as contradictory states. We regard freedom as the autonomy of the self-seeking self, the self cut loose from traditional and communal bonds, and we think of obedience as the act of slaves, not free persons'* (Palmer, 1993, p. 65).

'It {authority} is thought to be mindless, requiring resigned compliance (...) to accredit authority as viable and responsible, and to see ourselves as responsible in trusting authority, is completely alien to the Enlightenment, rationalist mind' (Meek, 2011, p. 315).

What also appears to be important is the balance between relationship and authority. Dean perceived that rules were applied without standing in a relationship to him, *'Hey man, you don't know me at all, you haven't spoken to me for a year. And then you tell me this'*. Dean's perception shows a sense of a lack of personal authority (MacLeod et al., 2012). Research, particularly with pupils who have been in difficulty in school, is remarkably consistent in its findings. *'Pupils value those teachers who make an effort to establish a relationship with them (Pomeroy, 1999; Galton, 2007; Sellman, 2009 in MacLeod et al., 2012, p. 503). (...). The importance of personal relationships, in addition to the possession of pedagogical skills and subject knowledge has been a key finding of research since studies into pupil voice began (p. 503)'* and this seems to be the same for student teachers. I will return to this point in chapter 6, when I discuss Driestar's ethos.

A third point is that what is right according to the rules and what is morally right (or Christianly) appears to be opposed in Dean's thinking. A question for Driestar is how it happened that Dean has perceived these as opposing. There is a strong sense that Dean is unsettled with the Christian ethos at Driestar. Freedom and respect are important values for Dean. Beliefs and values of someone's worldview develop in a framework of the good, in the tradition of a particular community. The

problem at this point, according to Taylor, is that the worldview supporting the ideas of the good has become fragmented, so the only thing that remains is acknowledge that formally rights and duties exist, but the substantive shaping of these is up to the individual. The good life and what is morally right then is what each individual seeks, in his or her own way (Taylor, 1991), which leads to an individual interpretation in absence of a coherent, indicative framework of 'the good'. Taylor defines moral subjectivism as a view in which 'moral positions are not in any way grounded in reason or the nature of things but are ultimately just adopted by each of us because we find ourselves drawn to them (1991, p. 18).' There is no shared authority in this view that can adjudicate in moral issues because everyone is free to determine his or her own meanings (Keller, 2016, p. 70). As a consequence, a vision on how tradition, community and authority influence a person's worldview as a fiduciary framework can become clouded. Fragmentation at this point could be an important challenge Driestar has to deal with and make its students aware of, if this is a philosophy that wider plays a role in the thinking of students at Driestar. The challenge for Driestar would be to find its way in the friction it presents between the worldviews of individual autonomy on the one hand and tradition, community and framework on the other hand.

A friction between framework and freedom further emerges in Dean's portrait in thinking about his role as a teacher in the identity development of his pupils. *'We've got God's Word, that should be leading in pupils' life and you can lead them in that, that's a part of identity development in which you give them freedom and let them explore, and then a lot of things will get meaning'*.

Dean's speaking about identity development reveals an image of 'the right direction' for his pupils, *'I can give them a nudge in the right direction'*, in spite of his focus on freedom and individual autonomy. On the one hand he appreciates individual freedom as value, on the other hand I can see a norm revealed as well in his speaking. For instance at the moment Dean talks about giving his pupils freedom in the classroom. Some things he does not care about, but, he says *'of course there are things which are generally seen as normal, which I think pupils have to do'*. Dean uses the phrase *'things which are generally seen as normal'*. With these words he seems to refer to a larger whole, a framework, shared by a community. That would diverge from his words about individual freedom. He also mentions that the teacher decides what is normal; *'my rules apply to my classroom'*. At some point he sets his pupils clear limits. *'I set that limit (...) because they impede the lesson and distract other pupils'*. So the freedom he would like to give to his pupils is not unlimited and also not limited to the degree that they bring harm to themselves, as he said before, but also to their fellow pupils or the teacher. This reveals that the actions of an individual pupil also have impact on the community of the classroom. Because education is both a personal and a community activity, this places constraints on the individual freedom of its participants.

Chapter 2 explored the issue of the character of learning, which is both from a social-constructivist and biblical-theological perspective seen as an idiosyncratic (or rather: personal) and social process. The struggles of student teachers with developments in education which focus on the individual, as they appeared in this section, underscore that it would be important to keep a balance between learning in community and individual learning. Because of the fallible character of our knowing, 'community is valuable in itself in its capacity to step in where individuals fail' (Levisohn, 2009, p. 104). It is precisely in community that a person flourishes and a person can be a person only in community (Levisohn, 2009; Palmer, 1993; Verboom, 2005). This implies a relational understanding of human being, which also entails that being a person is different from being an individual. A person is not a static entity. It is only in communion that being is itself and exists at all. Transcending the boundaries of the self is what truly gives freedom. 'Thus communion does not threaten personal particularity; it is constitutive of it' (Zizioulas, 1975, p. 409 in Meek, 2011, p. 29). An essential principle arising from this, that connects accounts of knowing and the community of the classroom, is particularity in relatedness. In the next section I will give a brief outline of this principle and its implications for education.

5.2.5 On community; particularity in relatedness

Persons only exist in relation (Kater, 2010, p. 258). But that does not detract from the uniqueness of each person. Relationality and particularity are mutually constitutive. 'Particulars are neither disparate and meaningless, nor submerged and lost to a relational homogeneity'. This 'relation in otherness' is how Meek represents Gunton's (1993) interpersonal account of personhood (2011, p. 336). The same applies to a healthy account of knowing, of which Gunton argued that accounts of knowing in modernity overemphasized the one, absolute understanding of truth, in praise of universality, and devalued the particular. The postmodern reaction, which tried to recover the particular, often lost the ability to affirm the universal. Both threaten truth and lead to meaninglessness (Meek, 2011, p. 340, 341). Instead an account of knowledge is needed that preserves the rights of both particular and universal). Gunton points out Polanyi's epistemology as an apt alternative (1993, in Meek, 2011, p. 341). Polanyi's account of knowing as subsidiary-focal integration also rests on particularity in relatedness. 'Pattern and subsidiaries imbue one another meaningfully in different ways' (Meek, 2011, p. 348).

This principle underscores that our way of knowing is so important as it influences our way of living. The way we interact with the world in knowing it becomes the way we interact with the world as we live in it. 'Our epistemology is quietly transformed into our ethic' (Palmer, 1993, p. 21).

Several student teachers experience a friction between individual (particular) and community (relation) in education currently. Downgrading authority and a focus on the individual pupil in education not only influence the position of a teacher but also affect the role of the community or group, George reflects. It is more difficult to work with a class as a group now as she would like, Meg says. She says a group provides the right context to teach pupils things like listening and waiting for their turn. This relates to Meek's viewpoint that the normative dimension of knowing fundamentally requires a context of interpersonalhood (2011, p. 80, 81). The current trend in education is contradictory to the importance of a group, while group processes are more than ever key to pupils this age, Meg thinks. They are very much focussed on the opinion of their peers. *'Despite we are all saying: oh, you are all individuals, learning, education tailored to their needs, everyone is different, (...) precisely the group process is; is no one privileged, played favourite, how do they deal with my behaviour, how consequent are the teachers?'*

George too identifies a contradictory status quo in education; on the one hand there is a focus on personalised, individualistic, custom-made education but on a social level the group is still very important he says, youth is *'addicted to confirmation'*. This creates a tension between individual and community. Like George said: *'I don't think we want to create a kind of cyborgs, sitting behind their computer, (...) because we want to educate them as humans thinking for themselves, who are individuals but at the same time are also able to live in a community'*. He also sees a certain contradiction in education when it comes to what is good. *'Although we are very eager to educate them as individuals, we are still busy to educate or form them as a community'*. On the one hand efforts are made to get rid of a framework while on the other hand the presence of a certain framework is implied or even asked for by the pupils themselves. As Meg says, they do like explanation by the teacher in the end.

The tensions these student teachers experience between individual and community are understandable if we consider and think along with Charles Taylor's view on identity for a moment. He says the basis of identity is formed by an inescapable framework, on the basis of which we constitute values and which incites our actions. Individual identity presupposes living within a community and its shared values and tradition, to which we are connected and solidary. Nowadays, modern identity constitutes of what an individual assumes, everyone is equal and has to shape his or her own life. One should determine one's own identity in freedom. But to be oneself, an individual needs the acknowledgment of others. *'We define this always in dialogue with, sometimes in struggle against, the identities our significant others want to recognize in us'* (1991, p.33). Identity and personal worth can only exist against the background of a horizon of significance, of things that

matter (p. 37, 40). This is the valuation system of a community, historically grown. This is not a chosen but a given framework (Cuypers, 2017, p. 145). 'The search for one's own identity or profoundest individuality involves much more than—and even something fundamentally different from—a rational or purely autonomous choice. After all, we cannot choose our identity. Our identity has been largely preformed and involves visible as well as invisible loyalties (...) (Pollefeyt, 2020, p. 119). True authentic autonomy requires the normative impact of 'the generalized other' (Mead, 1934, in Cuypers, 2017, p. 145). Persons cannot develop in a vacuum. We are shaped by communities in fundamental ways. This reminds of what came forward in the discussion of Polanyi's ideas about tradition (sections 2.4.4; 3.3.1). Knowledge depends on the prior existence of a tradition and no human mind can function without accepting authority, custom and tradition. No one can operate without a fiduciary framework. It turns out that several student teachers find themselves torn between two world(view)s at this point and could be helped by a healthy epistemology, addressed during the teacher education course at Driestar.

Now it seems, returning to the question in section 5.2.4 whether it is authority or a liberalist conception of freedom that threatens an individual most, in the first place it's not an individual but a *person* who is threatened by a false idea of freedom that keeps one captive within oneself and is coercive really. Transcending the boundaries of the self however leads to space for otherness, the Other and gives real freedom. A freedom in obedience in which we submit to something or Someone larger than ourselves (John 8:31, cf. Palmer, 1993, p. 65, 67). A freedom of autonomy in community, particularity in relatedness.

5.2.6 Summary

Recapitulating, in sections 5.2.1 and 5.2.2 I discussed perspectives on meaning I observed with the student teachers. In sections 5.2.3 to 5.2.5 I discussed 'freedom' as related to authority and community in education, which emerged as an important theme related to meaningful learning.

Looking at the student teachers, I observed mixed conceptions of meaningful learning with them. On the one hand they stressed personal choice of pupils, freedom, agency and responsibility, on the other hand I noticed references to a certain framework in their speaking, pupils need a compass in life or authority from a guide in relationship. At this point the person of a teacher (educator) appears to be important for the student teachers when it comes to meaningful learning.

Meaningful learning further appeared to be a stratified, dynamic concept in the conceptions of students, in which I observed diverse dimensions. There appeared to be movement of meaning as well in the students' conceptions, in the sense of added from the outside and answered from the

inside. Meaning could be said to arise in a personal encounter with objective reality. The development of meaning fully includes as well as transcends the person.

Different valuations of meaningful learning were gently appearing at different levels, at the level of conceptions versus experiences, explicit versus tacit and religious versus professional beliefs.

Dissonances between different beliefs of the student teachers could be important to consider in further thinking about the relation between epistemological and religious or worldview beliefs. The literature at this point revealed that in order to be challenged in their beliefs, teachers need a horizon against which they can evaluate these beliefs, provided in a professional discourse of teacher education.

What additionally emerged from the cases of two student teachers was the connection they made between meaning and aim in education and the need they expressed to this end for a notion of self-transcendence. At this point student teachers experienced tensions between their ideals and ideals of current education in the Netherlands, represented in educational developments which focus on the individual. It seems the existential and normative dimension of meaning and knowing, as discussed in the literature review, is specifically at stake in the tensions they expressed.

A few things could be at risk in Christian teacher education, if the focus is on freedom to the detriment of framework. In the first place, disappearance of the normative dimension of knowing could lead to a loss of community and hinders knowing and learning if that is understood to have a social character. An atomistic orientation towards individual aims leads to a loss of social relationships and isolates us from each other (Taylor, 2011, p. 647, 648). For Christian (teacher) education, this could set under pressure its principle of human beings as essentially relational, as discussed in chapters 1 and 2 (sections 1.4; 2.4.2; 2.4.4). Secondly, a healthy (epistemological) development of persons includes notions like horizon of significance and generalized other and the ability to self-transcend. A change in view on authority not only affects the position of a teacher but also influences thinking about knowledge and meaning. Richness of meaning may fade if it becomes individually interpreted, in absence of a framework. As discussed in chapter 2, a subjective focus lacking telos is untenable for thinkers like Polanyi, whose ideas have been argued as significant to consider from a point of view of Christian education, as they voice important Christian notions.

Essentially, the findings within the sections of part I of the chapter can be captured with a struggle or friction between freedom and framework. This concurs with the reflection of Kozyrev and TerAvest (2007) on the history of European pedagogy as the history of struggle between two paradigms. 'The first is the one of commitment and solidarity with 'thy neighbour'. The other paradigm is the freedom of the autonomous and self-defining person. According to the first paradigm the focus is on

commitment to the Truth at the expense of personal freedom. The second paradigm focuses on the autonomous person. In that case the development of personal autonomy becomes the priority of education' (p. 247).

The history of struggle appears to continue for student teachers in teacher education at Driestar currently. Because of the friction between the powerful worldview of individual choice on the one side and the tradition worldview on the other side, developing a balanced, healthy epistemology could be complicated. The concepts of person-community, immanent-transcendent and personal-universal I observed to be viewed as bipolar rather than mutually constitutive, resulting in a dualism of either-or.

Where the focus appears to be subjectivist when it comes to meaning, the scales seem to be tipping to the opposite side when it comes to knowing. Or do the two have more in common than it seems at first sight? This may reveal more of a dichotomous mode of knowing in Western societies, which also does not go by Christian education. In part II of this chapter I will discuss its manifestations.

5.3. Part II Perspectives on knowledge

In this part I will discuss two issues that appear to be interrelated and specifically challenge student teachers in Christian education. The sections discuss a view on knowledge (5.3.1) and on faith-learning integration with student teachers at Driestar (5.3.2).

5.3.1 'Abstract Christianity'; knowledge as information

Esther Meek (2011) portrayed a defective default mode of knowing which has deeply settled in Western culture as 'a subcutaneous epistemological layer' (p.5), namely a thinking in dichotomies. This she built on Polanyi's thinking of a false objectivity that rigorously attempts to eliminate the human perspective from knowing the world, previously discussed in the literature review. Many of the issues I will discuss in this section of the chapter can be related to this default thinking. Several of the dichotomies appeared in the interviews and resulting portraits when it comes to knowing.

A first prominent dichotomy that appeared is the separation of theory and practice, consistent with developments in education in the Netherlands outlined in chapter 1 (e.g. Bulterman-Bos, 2010; Van Oers, 2009). George thinks it is important that teachings have practical value. *'I try to give a very clear practical situation first and then return to the theory (...) if you first succeed to make obvious the practical implication of something they {the pupils} will remember things much better'*. Meg, to continue, says that there was too much focus on theory in de pedagogical-didactic programme of Driestar. She didn't learn anything about daily practice. All those theories are of no use, practical things is what starting teachers need. The theme useful-useless is also one of the important themes in Dean's thinking about meaningful learning. Useful for him as well is connected to practice, *'things in teacher education have to align with what I need in teaching practice'*. Theory has to be applied in order to get meaning and be useful, that's how he thinks his students learn best and what he prefers in teacher education as well. Meaningless are things that he's never going to use, they are not relevant and a waste of time. The first thing that comes to Grace's mind when thinking about meaningful learning is something that has practical value, practical tools like games.

The dichotomy of theory versus practice has diverse consequences. A first thing that stands out is that practice becomes related to usefulness and need (and theory to useless as an implication). Dean implies this when he talks about meaningful learning as *'be of any good, effective, can make something of it, need, use(less), relevant, win-win, waste of time, lost its value'*. These recall an instrumental paradigm prevalent in Dutch society and educational policy as well (chapter 1). This paradigm focusses on usefulness, economic perspectives and measurable results (Bulterman-Bos & De Muyck, 2014). If *need* determines the value and meaning of knowledge, does that make it a

matter of supply and demand? This could be indicated as a utilitarian view on knowing. In what context has this view developed and what can be its consequences?

It is important to realize that epistemological beliefs of persons are not developed in a vacuum, for if we think there is a healthier way to knowing and want to restore it we need to know the 'place of effort' (Wierdsma, 2001, in Boonstra & De Caluwé, 2007, p. 17). As I have underscored several times throughout this thesis, culture significantly influences education, amongst other in the shaping of epistemological presumptions (Meek, 2011). One way I can see teacher education at Driestar is contributing to the reflection of an instrumental paradigm is the current curriculum on what is called 'learning environment and organisation' in which an instrumental model of teaching is used as a standard format for lesson development. This is the model of didactical analysis, developed by Van Gelder, Oudkerk Pool, Peters & Sixma (1973). It is actually a closed system in which development of knowledge is seen as linear and in which every learning task can be divided in teachable and testable skills (Bulterman-Bos & De Muynck, 2014). Taylor (1991) has linked the development of instrumental thinking to the disappearance of social structure and order. He identified a danger of assessing things on the basis of efficiency instead of on criteria which really are at stake. If an instrumental paradigm is reigning in society and education subsequently, this influences the view on meaning and may lead to a disenchantment of the world (Weber). A functionalist view may influence Christian notions of knowing as loving, longing and wonder as well (section 2.4.2). Another implication could be that it leads to fragmentation, not only outwardly but inwardly as well. An instrumental attitude towards our affections for instance leads to inner division and separates reason from affect (Taylor, 2011, p. 647). Changing culture at this point is a very complex issue for which a quick fix solution would not be appropriate. But gaining insight and critical awareness of cultural influences through reflection in teacher education at Driestar at this point could be a first step.

Another consequence of the theory-practice dichotomy that stands out is that students make a distinction between theory and application, the latter is then associated with practice¹⁷. Dean says that theory has to be applied in order to get meaning. Meg thinks that reproduction of words, just factual knowledge, does not have any meaning to her pupils. So she tries to make them apply those words with a clear aim. If meaning is closer to the pupils, that helps in remembering, Meg says. Jack says something similar, learning has to be practical, pupils have to be able to touch it and become owner, so that what they learn is not far away from them anymore. The student teachers associate practice with something closer to pupils (and themselves) and thus more meaningful than facts, which they identify with theory. This resonates with the analysis of Van Oers (2009) discussed in

¹⁷ The connotation practice has in this context, is something at the experiential level, close to the workplace, hands-on, practicing micro teaching for instance in the context of teacher education.

chapter 1, that the tendency to disconnect knowledge and practice has led to a basic learning model of 'applying' in teacher education, which creates a detachment of knowledge and practice. This model reinforces dichotomous thinking, which leads in particular to thinking about facts as abstract information.

The students' preferences of practice over theory show that a theory-practice gap still exists in teacher education, as has been its problem since long (see section 2.5). Other than the literature on teacher education does, this gap could be ascribed to a deeply settled dualism as well. For it is understandable that student teachers prefer practice, if theory has become detached from practice and consists of dispassionate and impersonal pieces of information. This is a problem resulting from the dominance of objectivism as the former default mode in western thinking on knowing. An epistemology of knowledge as theoretical has marginalized the personal as non-epistemic and forces a separation between theory and practice (Meek, 2011, p. 370, 371). For a long time the idea has reigned that science, theory, and the provable deserve a higher status than practical knowledge, experiences, craftsmanship and intuition (Bulterman & De Muynck, 2014). As discussed in section 2.5, this has caused a dislike of theory with teachers (Korthagen, 2010). What we see now is an opposite movement in teacher education, in which practice is more appreciated by the students and even risks to become unhitched from theory. The idea that the two are intertwined has become estranged. Knowing is action and theory is always embedded in active interpersonal context, is bodily lived (Meek, 2011, p. 413), hence theory is part of practice (MacIntyre, 2013).

The disconnection leads to the idea that impersonal theory has to be applied in order to become practical and personal. Actually the real problem is bypassed this way, namely the *epistemology* behind a dichotomous thinking that theory has to be applied in order to become meaningful; a view of knowledge as information. Interventions in classroom to replace the passive, depersonalized mode of knowing with active formats like discussions and experiential learning may still leave the underlying problem unaffected. Because 'where students are not re-formed in a positive alternative epistemology that challenged the theory-application dichotomy, these strategies will continue to be appropriated as "application" and thus opposed to "theory", thus perpetuating the default (...)' (Meek, 2011, p. 133). The 'constructivist fallacy' (Mayer, 2004, section 2.3) of mistaking active teaching for active learning may thus actually perpetuate this dichotomy. Constructivism this way appears not to be an appropriate alternative for the development of a healthy epistemology.

A view of knowledge as information has several consequences for teaching and learning. If knowledge is only information this means that it can just as well been found on the Internet as it can be learned from a teacher. That gives a different view on the position a teacher has, a view Dean expresses when he says that '*every pupil has the world in his/her pocket, can Google any question*

and find a decent answer if he looks up three sources (...) you're not the best source for students to learn, certainly not. This reminds of Biesta's fear discussed in chapter 2, of a teacher as a resource that can be replaced by any other. Although Biesta mentions his fear in the context of a constructivist focus in education, could it be that an objectivist view of knowledge as information actually has the same consequence, leading to a view of teachers as replaceable resources?

Another consequence of this view can be seen in the degree of confidence in theories. The status Marcia's (1966) developmental theory receives in Dean's thinking appears to reflect a great trust in science, *'Marcia taught me'*. A longing for certainty and a trust in scientific objectivity I can further see reflected in Jack's articulation of his thinking about theory and practice. Besides his appreciation for things that have practical value, what he values in teacher education is *'very dry, bone dry teaching material, which has been so proved, which has been fixed for years, that's just how it is'*. He says you first need to have a foundation of theory before you start to *'huff and puff'*. Later on in the first interview he says *'A lot of people like us have a need for hardcore subject matter, so that we don't have to study three books for the test' (...)* *'pass hard theory in review {during the lectures}. That's meaningful to us'*. In the final interview he says when talking about continuity and change: *'There are certain things, which are simply proved, that's not going to change any more. And those I would like to hold on for ever (...)*'. Jack's language seems to be close to an objectivist view of knowledge, in which knowledge is equated with unchangeable and solid facts. In anchoring one's view in theory consisting of this kind of knowledge, an unshakable foundation is assured. Truth is therefore viewed as unchanging and impersonal. There does not seem to be awareness of theories as belief laden and non-neutral with Jack.

But what if 'to learn is to face transformation' (Palmer, 1993, p. 40)? I wonder if the idea of knowledge as transformation would make sense to the student teachers. Is that an idea they have been introduced to in teacher education and have been challenged on in their thinking? The pain and effort learning as transformation may cause, diverges from a view that learning has to be a pleasant experience. Pain and effort cause a feeling of disequilibrium instead (Wolterstorff, 2002), which may be resisted for reasons of self-protection. From the literature on teacher beliefs (section 2.5.1), we know that resistance to change often occurs. 'Sometimes there are things we resist knowing because we feel threatened to lose ourselves in the grandeur of the discovery or its dissemination, or the rejection of others, or we can find change required of us by the discovery that we do not welcome. Similarly, we can be so "married" to preconceived notions that we can feel the attempt to move beyond them as alienation, a threat of loss of sense of self' (Meek, 2011, p. 317). This resistance to transformation can occur and be fostered in several shapes. Objectivist education on the one hand can be a strategy for avoiding our own conversion. 'We want to know in ways that allow us to

convert the world- but we do not want to be known in ways that require us to change as well' (Palmer, 1993, p. 40). The opposite, a subjectivist theory of knowing which is often proposed as a reaction, actually has the same avoidance strategy. In classrooms where a private self reigns, truth is reduced to what the self sees, wants and feels. 'If private knowledge is the measure of all things, I can never be drawn into encounter with realities outside myself (...)' (Palmer, 1993, p. 55). So both opposing movements of objectivist and subjectivist education appear to have similar consequences for knowing.

Some students however shared experiences that are reminiscent of the idea of learning as transformation. Grace acknowledges that learning can be annoying sometimes, when she has to do difficult assignments, which she is inclined to postpone because she is not looking forward to them. But looking back she realised that they were meaningful. They helped her to gain confidence and stimulated personal growth, she experienced. Meg observes that while nowadays everything has to be pleasant, obstacles are also necessary. You need to persevere and fight for something, she says. Too much pampering of pupils, as happens at her school, is not beneficial for their formation, she thinks. Her thinking at this point has developed because in her own life Meg experienced something that can be characterized as a paradigm shift as well. When she lost herself in a bad relationship, as she articulated it, and was tormented by a feeling of guilt, she started to search for forgiveness. This was the reason she started attending church. She wonders if pupils also first need to experience something difficult before they start to search for meaning. *'Maybe it works like that, if things go well you don't need God'*. Something of the pain and difficulty that may come with learning shines through in her case.

Although the conceptions of Jack and Dean reveal a view of knowledge as information, I observe examples of learning as a paradigm shift with them as well. Dean's encounter with Marcia's (1966) theory led to a qualitatively transformed world (see also 5.2.2). Jack spoke about a turning point in his life, *'I always call it turning point 30. Life becomes serious. Then you're married and things sometimes don't go so well and then you think, things really get meaning.'* That these two views of knowledge appear together in their cases, indicates something of the complexity of epistemological beliefs. What further stands out, specifically in the cases of Meg and Jack, is the role life experiences have played in their development and transformation. Flanagan (2019) has pointed out the significance of their role as well. Life experiences may constitute an important starting point to develop epistemology in teacher education at Driestar.

So in summary, in the dichotomy of theory and practice discernible in the thinking of students, a focus on usefulness appeared, which may present a tension between an instrumental, utilitarian

view on meaning in surrounding professional culture and Driestar's ideal to turn against an economization of higher education and maintain a person-centred focus instead (section 1.4.5). A valuation of practice and application over theory appeared, which reveals a deeply settled dualism in educational epistemology, kept intact by an objectivist-subjectivist binary. A view of knowledge as information presumes that education is neutral.

But a view of knowledge as information has more profound consequences. I will turn to a couple of related dichotomies now, which are closely intertwined. These are the dichotomies of subjective-objective, believing versus proving, so faith as opposed to reason. I can see these reflected in Dean's thinking about truth. *'Truth is what someone holds as true (...) so it depends also on your paradigm, right, and what you have experienced'*. But truth is not always subjective he thinks, *'look, there's a mug over there, that's true. So things you can prove are true. They are real. You can objectively say that. So facts are truths, deeply.'* Later on he says *'some things you cannot see but only feel, God exists and you have to feel that, I think'*. When I asked him if that means that there are things you can't prove but which still are true he said: *'some things are subjective in a sense, some people believe them and others don't. So to people who don't believe it is subjective. But to people who do believe it is an absolute truth. And it's not subjective, because they know God exists and they know that with their hearts, and they know it fully'*.

There are two interesting issues here. In the first place Dean's words reveal something of what Polanyi called the commitment aspect of knowing (Polanyi, 2013, p. 303, 304). We always speak of facts, knowledge, proof, within a commitment situation, 'truth is something that can be thought of only by believing it' (p. 305). Polanyi proposed to speak of personal instead of objective and impersonal in order to overcome the objectivist dilemma, presented in the correspondence theory of truth, which defines truth as coincidence between one's subjective belief and the actual facts. Instead he argues that the 'actual facts' are accredited facts, as seen within the commitment situation, while subjective beliefs are the convictions accrediting these facts as seen non-committally, by someone not sharing them (2013, p. 304). This flows from his idea that all knowing takes place within a fiduciary framework (section 3.3.1) .

Secondly, Dean points towards an opposing thinking about belief as either subjective or as an absolute truth, which presents Christians' own powerful version of dichotomous thinking. Absolute truth then is considered as a complete set of rational propositions about everything, or alternatively there is no truth at all, only relativism, subjectivism or scepticism. 'Many Christians are convinced that if you do not believe in "absolute" truth, you cannot be a Christian' (Meek, 2011 p. 11). This while to have faith in an absolute truth actually is a contradiction in terms. For absolute truth with its

character of detachment and distance opposes the love and relationship inherent to Christian faith, most clearly revealed in the incarnation of Christ.

Similarly, a disconnection prevails between truth as propositions and a personal relationship with Jesus (Meek, 2011, p. 62). Thinking in an either/or of reason opposed to faith, concurs with a tacit epistemological difficulty Billingsley (2017, in Cooling, 2020, p. 409) found in research with pupils as well. The thinking of some student teachers at this point seems not to differ much from these pupils' thinking.

This pattern of thinking reflects and strengthens a dualism which has been observed in Dutch Christian education as well. That is, a separation between knowing and believing, in which knowledge is made an object and placed outside belief, so that only things that can be measured can be known, and God we can only believe (Van Vlastuin, 2019). This easily leads to what George characterised as 'abstract Christianity'. In the next section I will discuss what dualism works out in the thinking of the student teachers at the point of integrating learning and faith.

A key insight from this section however is that thinking about knowledge as information rather than transformation appears to be persistent with the student teachers. From the literature we know that the beliefs of student teachers have been developed in the many school years before they enter teacher education. Addressing these beliefs should thus take a major role in teacher education. The findings of this study suggest that this is not yet the case at Driestar. There would therefore seem to be a definite need for development of the curriculum at the point of addressing students' epistemological beliefs. A related question that could be raised is in what view of knowledge the students have been educated in teacher education. Is knowledge change or information in teacher education at Driestar? This is an important issue for future research.

5.3.2 Worlds of difference: connecting the 'sacred' and the 'secular' in Christian education

The dichotomous default mode of knowing present in Western culture also leads to a difficulty which becomes especially visible in Christian education. I am referring to a difficulty in connecting the world of faith to the world of the classroom, a struggle to connect 'sacred' and 'secular'. Often this leads to a separation between earthly and spiritual, in which the latter is higher valued. It also leads to a dualistic distinction between knowledge of reality or creation and knowledge of God. This distinction illustrates a dichotomy between knowing and believing, which implies that knowing God has nothing to do with secular knowledge, unlike all knowing is knowing God (section 2.4.2).

A view of knowledge as information rather than transformation lies beneath, as discussed in the previous section. Attempts to integrate faith and learning have received attention from theologians

and Christian educators in the Dutch context and abroad, for a long time already (section 2.5.2). Still, it appears from the portraits that different student teachers at Driestar struggle with the point of 'doing God in education' (Cooling, 2010), in diverse ways.

There are two prevailing approaches to faith-learning integration (section 2.5.2). The first is characterized as the formation of Christian minds and assumes that education can be religiously neutral. This approach actually maintains the sacred-secular divide. The cases of Jack and Dean show resemblances with the first approach. Both emphasize the moment of the daily devotion as the moment to share their faith. Jack makes a distinction between the '*normal lesson*' and the daily devotion or teaching English and teaching RE (see his portrait in 4.5). Jack also uses practical examples in his daily devotions, '*but then you're talking about the daily devotion again(...) and then, yea, then the lesson starts and how do you continue?*' Jack indicates to struggle with this question. Dean expresses his trouble to connect his worldview to the lesson content as follows: '*Yea, that's difficult. I teach according to the curriculum and it says little about it. If I would explain grammar with help of Biblical examples, I think that's not respectful*'. (...) '*You could use Christian texts and Christian songs but I don't see how I can do that at the level I teach at*'. Facilitating discussions about faith in class is a specialist task, '*I think that's for the RE teacher*'. The daily devotion is also for Dean the appropriate time to express that he is a Christian teacher and to bring the Christian faith to the pupils' lifeworld. These students struggle how to integrate their Christian worldview in the subject content. The reflections of these two student teachers resonate with a perceived discomfort with the idea of introducing Christian ethos in a particular subject, which teachers in research in English church schools designated as 'weird' (e.g. Cooling & Green, 2015, p. 104). However, where some of the English teachers doubted whether the approach at hand would be 'Christian enough' (p. 105), with the Dutch teachers there is rather a concern of being 'too (explicitly) Christian', I would argue. This may be exemplified with two observations from the research data.

A first observation comes from the school of Dean. Dean wonders if it necessary to connect teaching material to Christian faith. His hesitation is connected to the message he was told on his appointment: '*In the first place you're a teacher of English and besides you may share something about faith in the daily devotions. But it's not supposed to take too much space as we are still a school and not a church*'. Although this thesis has not investigated prior theological assumptions, it could be argued that this school views its primary function is to educate rather than evangelize. Religious *formation* is then confined to prescribed contexts, like daily devotions. Neutral *education* happens in the continuing lesson. Remarkable is that the idea that all education is formation and that there is no neutral education does not appear. This could imply that a divorce between sacred and secular has been the message when Dean was appointed, which is important to notice, for culture

and context influence a person's beliefs. It is possible that his school context as a microsystem has played a role in inducing or sustaining Dean's paradigm. The occurrence of a 'conflict in context' (Meek, 2011, p. 124) may have been hampered this way, which otherwise could have stimulated a paradigm transformation. This shows that the prevailing (epistemological) paradigms in Christian secondary and vocational education, as the context where student teachers spend much of their time, are also important to include in the curriculum at Driestar, when examining the students' beliefs.

A second observation comes from the evangelical secondary school George teaches at. His school seems to maintain the opposite view of Dean's school, as it is founded with the idea of '*using the Bible in every lesson*' which for George is '*a beautiful idea, but the Bible is not a textbook*'. George has difficulty with this idea, because he thinks '*abstract Christianity*' is not always effective. He describes abstract Christianity as a perfect knowing how to biblically justify why something is true or not, which has little connection with everyday life. He is reluctant to overwhelm pupils with comments about faith, as he thinks that is in the end an '*empty form of religion*'. In this respect I unearth a concern of a 'too Christian' approach with him. George's reluctance concurs with findings of research among secondary school teachers in Christian education in the Netherlands (Bertram-Troost, Van der Kooij, Miedema, Versteegt & Van Nes, 2017). These teachers had reservations to evangelize and were careful in explicitly transmitting their own view. Evangelizing is not the task of school but of parents and churches, many teachers think. 'School as an educational institution cannot, in this perspective, be combined with a too controlled offering of worldview or religion' (p. 174). In George's case the *school's* view is that Christian formation requires telling students Christian truths in all subjects of the curriculum, which for him is over the top.

Although the effects are different at both schools, the underlying positivist approach to Christian faith (as transmission of Christian content) appears to be common ground. Students react differently to this approach in their search for ways to integrate faith-learning. I observed two types of responses. The first type I could see with George and Grace.

Instead of explicitly leveraging in Christian content, George's focus is more implicit on attitude. He would like to offer his pupils specific clues of what it means to be a Christian. But in his '*real teaching*' as he formulates it, he does not do a lot with it. '*What it is like to be a Christian teacher and to give that meaning during the lesson, that's really difficult for me*'. On the one hand George struggles with a few essential aspects of dualism, namely a view of knowledge as information and a separation between sacred and secular, encapsulated in his expression of '*abstract Christianity*'. On the other hand he struggles to find alternative ways of integration. He appears to be more focused

on the second approach of faith-learning integration, aimed at attitude and lifestyle (section 2.5.2). The same applies to Grace. The slogan of her school is 'shining in His light' and without mentioning the word God it is also possible to make that brilliance visible, is Grace's thought. How do you handle with your neighbour, how do you live as a Christian, is her approach. *'My attitude is a more important reflection of my belief and identity than everything I say'*. She hopes to impress her pupils by showing movies which are not explicitly Christian but in which Biblical values are implicitly expressed. In this way she hopes to bypass the pupils' defensive attitude towards faith.

For while some of the student teachers are focussed on the daily devotion as the particular moment of doing God in education, pupils in Christian secondary education seem to have a different opinion about this. Grace adds an interesting perception from the point of view of her pupils, which may actually be a consequence of the discussed dualism in Christian education. She notices that the daily devotion is a world apart to her pupils, which does not belong to their lives. She links this to habituation; pupils are so used to daily devotions that they do not react to questions the teacher asks, only sit there, hoping that it quickly passes and the lesson starts, so that everything goes back to normal. When it comes to God, pupils put on armor, Grace notices: *'Well, it's about God, so I keep quiet.'* She says that her pupils are not impressed any more by reading the Bible. The central problem of the most common approaches of faith-learning integration in Christian education is that students experience the Christian perspective as forced, or added on (Hull, 2005). This seems to resonate with the experience of Grace's pupils on the daily devotion, although her articulation *'a world apart'* gives ground to fear that the divide has become even stronger.

A second response I observed with Dean. While he deters the paternalistic, prescriptive way of teaching in Reformed Christian education, *'(...) I just indicate how I do things and why I do them, but I don't, I don't tell them {the pupils} what they should do. And I think that's quite a thing that goes wrong in Reformed education, that often is said: No, you should do this, you should do that (...)'*, he uses expressions that still may reflect a view of teaching as telling Christian truths (Cooling, 2018, p. 120) about faith integration. When talking about the formation of his students he would like to *'tell them how God would like them to live'*, or *'project Biblical values towards them'* and he thinks *'the transmission of Christian faith, apart from curriculum related things, is something very beautiful and really gives meaning to your profession. It gives a more beautiful aim in life, a more Christian aim I think'*. The word 'transmission' brings to mind a view of knowledge as information again and the idea of Christian faith as set apart from the curriculum, so that there appears to be a distinction between secular and Christian aims in education. It could be that Dean has never encountered alternative language or a holistic view of how the Bible can permeate the whole curriculum instead of giving his students 'information' and then leave the choice up to them. At this point a tension between the

worldview of religious tradition and the worldview of individual choice shines through again, concurring with what Green (2009, p.224, p.273) in her thesis designated as conflated assumptions within the faith habitus. On the one hand there is the expert who imparts religious truth with authority, on the other hand there is the individual who weighs up autonomously the truth that (s)he has been presented with and chooses to accept or reject it. This conflation was found in Dutch research with Christian teachers as well (Bertram-Troost, Versteegt, van der Kooij, Van Nes, & Miedema, 2015). Out of love for pupils, teachers would on the one hand like to see their pupils start believing in God, on the other hand they are influenced by the importance attached to 'autonomy' in today's society and want to apply that in their classroom pedagogy (p. 84).

What appears to be core in these observations and reactions is a pervasive dualism. A cultural context in which religion has been more and more relegated to the private rather than public sphere and which represents a denial of the validity of the sacred (Grace, 2004) may be one reinforcer of the consequent sacred-secular divide.

How else can we understand this struggle of Christian teachers to integrate faith and learning?

In their struggle to connect the worlds of sacred and secular, I can see something reflected of what John Hull wrote in his book on Christian adults' learning (1985). He noted that a particular challenge to Christians who practice their faith in a pluralized society is inner fragmentation. Modern people live life divided in different roles. 'The distinctive thing about modernity is that the segments of life and society within which each role is acted out have become largely isolated' (...) Each of these is a world, having its own rules, its own pecking orders and its own morality' (Hull, 1985, p. 27). The various life-worlds are often arranged in a hierarchy of meaning. 'The world of religion and church tends to become but one of these worlds' (p.28). Worlds can be so separate that people make little attempt to connect those worlds and act in very different ways and on very different belief assumptions when moving from world to world. People are often only vaguely aware of this, which reminds of Polanyi's *tacit knowing*. A consequence is that the world of Christian meaning becomes one of many. 'Its meanings only have meaning within that world to which they apply and it does not occur to many Christian adults that they might apply or can apply to other worlds' (p. 29). Living life in separate life-worlds is strikingly illustrated with Dean's saying there is no difference between teaching a subject at a Christian or a public school, '*except that your approach of the students is different, is more Christian. But then you also have to deal with pedagogy, so sometimes you need to be professionally angry*'. The scattering of life-worlds has only become more profound ever since Hull wrote his book. Identity nowadays is characterized as fragmented (Bauman, 2009). The current generation is even characterized as generation f(ragmentation) (Hansen-Staszynski, 2016), which presumably cannot be seen in isolation from the development of previous generations. Within the

lifeworld of the experientially Reformed also belief assumptions may be present that diverge from a wholistic way of knowing and reinforce dichotomous thinking instead, leading to fragmentation and pulling things apart.

An example of such a belief assumption is a sharp distinction made in experientially Reformed praxis between objective knowing and subjective experience of faith, in which the latter is the real knowing, as outlined in chapter 1 (section 1.4.2). This may lead to a specific Christian variant of the dichotomy between 'theory' and practice or application (section 5.3.1), with a focus on application as sharing experiences or practical examples of faith in the daily devotion, as I observed in the portraits of Jack and Dean. It could be that experience or embodiment of faith is what moves these students in making this distinction. But Dean uses the word 'application' or 'applicable to someone's life' several times. 'To apply faith' is also a very common expression and way of thinking in Dutch Reformed circles, which is used in the structure of sermons for instance, so that first the 'theory' of Scripture is preached and then an application for the life of a Christian is made. Esther Meek characterized this as a common Protestant Christian presumption of belief coming first and then application of belief, discipleship not as truth but as *application* of truth (2011, p. 62).

This could be an important epistemological belief in which these student teachers have been raised and may help understand why Jack and Dean stress the sharing of practical examples or experiences of faith.

Living life in separate life-worlds for teachers in Christian education can easily lead to a divide in thinking about meaning as well. The meaning of things concerning education, curriculum content, pedagogy, teaching and learning, are accepted as ever changing, for they belong to the 'secular' so their change is 'neutral', while there is a sort of fixed framework for the 'sacred' things, in which change is opposed to good.

This I can see specifically reflected in Jack's portrait. He sincerely struggles with issues of continuity and change. For Jack there is a difference between the formation of pupils, which has a fixed framework, and pedagogy, which is subject to change. For Jack scriptural preaching is something that should not change either, in connection with a fixed liturgy. But education can't stay the same (*'education is no ministry of the Word'*). *'There are certain things, which are simply proved, that's not going to change any more. And those I would like to hold on for ever, and around those there's movement. Can things get a different meaning. But if it concerns spiritual aspects, Scriptural aspects,*

then it has most impact so to speak'.¹⁸ Change in the latter aspects causes struggle and fear with Jack. *'That's how I face life. There's something like Scripture, and that's the core of everything so to speak, and everything outside that changes anyway'*. A tacit epistemological difficulty appears here, in the shape of a different evaluation of epistemological and theological assumptions or professional and religious epistemological beliefs.

How might we understand Jack's assumptions? They can be understood from a view of knowledge as information, which I discussed in the previous section. The language he uses, *'certain', 'proved', 'cast in stone', 'not going to change'* is close to a positivist paradigm, in which objectivity, a commitment to certainty and an absolute understanding of truth are central.

A possible reason behind such view can be to avoid the risk of failure in knowing (Meek, 2011, p. 20). A focus on knowledge as information can hinder the occurrence of transformation, I stated in the previous section. Hull's book (1985) on Christian adults' learning contains a similar message, still relevant today. Hull conveys that, because the desire to be right is important in the life of most adults, a fear of being wrong prevents learning. Various possibilities are discussed for ways in which we defend what we take to be knowledge. The occurrence of cognitive dissonance for instance, which also played a role in the literature on teacher beliefs (section 2.5). The different nature of diverse beliefs could also play a role. As discussed, beliefs vary along a central-peripheral dimension and the more central a belief, the more it will resist change. The more connected to other beliefs, the more central a belief is. Beliefs concerning identity and shared beliefs are more central and thus more resistant to change, as are religious beliefs. Grace for instance experienced that it can be more difficult if the meaning of religious or worldview beliefs changes, because it can be frightening. *'I'm at least constantly a bit navel gazing, like: is it good, this, what is shifting inside me, is that correct? And is it corresponding with the Bible?'*

Religious beliefs may be protected against change in a sub-system. The way Jack speaks about spirituality could be characterized as faith in a religious sub-system. Jack articulates the superordinate character of religious beliefs as: *'Within the spiritual domain it's really important to me, yes, to me that's something really big. If things apparently turn out to be different than I thought. It frightens me more, I have to struggle with myself or reflect more compared with the things of everyday life'*. But I would not do justice to Jack if I would only mention this aspect of his view, for that would be one-sided. Because Jack also demonstrates a change in what seemed to be an

¹⁸ Scriptural meanings seem to be fixed in his view, there is a considerable group of Dutch Reformed who are really wary about the so-called 'new hermeneutics', too much room for interpretation, a new perspective on Paul e.g.

impermeable belief. When speaking about that change he says: *'in the beginning I was very much like that, things have to look so and so, otherwise it can't be real {real faith}'*. He then tells about Christians who dress or express themselves¹⁹ in a different way than he would like to see, but he was positively surprised by their spirituality, while people who looked exactly as he would like to see were not spiritual at all. Such experience *'even entails a change in view on Scripture. It is that large. It brings a wholly different meaning, also to things you read'*. Even his paradigm seems to have shifted here. Jack is aware of the importance of dialogue in these issues. At first he thought his way of thinking was the only right way, until he started talking with people in an honest and open way. Then something can get new meaning, he says. This could also be understood as the occurrence of more hermeneutic awareness and critical openness with Jack. An awareness of his own assumptions and an evolving worldview due to changing life experiences (Flanagan, 2019). Personal encounter and dialogue appear to be key words in his experience of gradual transformation.

The findings in this section suggest that a sacred-secular divide still exists in the conceptions of student teachers at Driestar. A view of knowledge as information and a positivist approach of Christian faith appear to lie underneath. This leads to serious tacit epistemological difficulties and can have an important impact on the formation of a personal worldview. It is therefore suggested that addressing faith-learning integration in Christian teacher education should rather take place at the level of epistemology than at the level of pedagogy or didactics, which has been the main focus so far. The role Christian secondary and vocational education plays in maintaining a sacred-secular divide also deserves further attention, as it constitutes the work context for most Driestar students. As a possible consequence of a dualism in faith-learning, an observation was that the daily devotion became a world apart for pupils, which is a relevant finding for Christian secondary education. Two student teachers as a reaction exposed that they rather focussed on attitude in faith-learning integration and expressed to be careful in explicitly transmitting their own view towards pupils.

5.3.3 Summary

This chapter addressed research question four, what conceptions about meaningful learning reveal about Driestar student teachers' epistemological beliefs. In part I of the chapter I have discussed their perspectives on meaning. In part II of the chapter I have discussed their perspectives on knowledge and on faith-learning integration.

¹⁹ See chapter 1, section 1.4.2 about sanctification of life and its particular expressions with the experientially Reformed.

The findings in this chapter indicate that for student teachers at Driestar a friction appears between the worldview of religious tradition and the powerful worldview of autonomy and individual choice in education. This friction impacts on their epistemological beliefs in several ways.

Meaningful learning appeared to be a complex, stratified concept with different related dimensions in student teachers' conceptions. Their conceptions could be characterized as paradoxical and fragmented. Paradoxical in diversity of emphasis on immanence and transcendence. The transcendent seems to have disappeared from their explicit conceptions but could be unearthed in their experiences. Paradoxical on freedom and framework, as a need for freedom and agency as well as authority in relationship was expressed. The emphasis again was diverse with the students.

A strong theory-practice divide further emerged in the students' thinking. Explicitly reflected *conceptions* of meaningful learning at this point revealed an epistemological view of knowledge as information. On the other hand, several student teachers shared *experiences* that reminded of the idea of learning as transformation. Reflection at this point and creating awareness of a view of knowing as transformation, as an alternative to prevailing assumptions, is recommended as a crucial task for teacher education at Driestar. Exploring the students' life experiences in the curriculum can provide a key starting point. It is further considered essential to critically reflect on the view of knowledge student teachers are currently educated in.

The conceptions of the student teachers appeared to be fragmented on the relation between religious and professional epistemological beliefs. A dualism between theological and pedagogical assumptions appeared to be profoundly present, consistent with what is characterized in the academic literature as 'values schizophrenia' (Ball, 2003, p. 221). A view of knowledge as information was observed to lead to a sacred-secular divide in thinking about faith-learning integration. A distinction in meaning was revealed as a consequence, namely a different evaluation of the worlds of sacred and secular meaning (most evident in the case of Jack). Taking into account that student teachers live in a pluralized society with fragmented life-worlds was suggested to help understand why the world of Christian meaning has become one of many. Fragmentation can be strengthened by a culture that relegates religion to the private sphere and by a mechanism of cognitive dissonance, given the nature of religious beliefs. Another understanding was found in experientially Reformed thinking, which distinguishes between knowing things cognitively and experiencing them subjectively, making a distinction between truth and application, which presents a Christian version of a spurious dichotomy between theory and practice.

Currently there appears to be a limited understanding of theology, as theology does not appear to impact the thinking of students in Christian teacher education at Driestar. Thinking through the

meanings of Christian faith for the world of the classroom is therefore recommended for Driestar, in cooperation with Christian secondary and vocational education, which constitutes the workplace of the students. The tensions students currently experience between worldviews can be a source and reason for theologizing (De Muycnk, 2021).

In conclusion, the relation between religious and professional epistemological beliefs appeared to be complex with student teachers at Driestar. On the one hand a strong separation between religious and professional beliefs, a sacred-secular divide, existed within the conceptions of student teachers. On the other hand the two types of beliefs at points appeared to reinforce each other. Fragmented, isolated clusters of epistemological beliefs appeared to coexist, consistent with the literature on teacher beliefs.

The findings also suggest that epistemological beliefs at the explicitly reflected level diverged from what could be observed at the level of experiences or tacit assumptions. The friction between the worldviews of tradition and individual choice revealed itself in a transmission model of learning for faith issues and a constructivist model of learning for classroom pedagogy. Students differed in preference of model, explicit and implicit reflection and degree to which they felt comfortable with the model prevailing at their school. All students experienced something of a quest at this point.

The findings in this chapter point towards a dichotomous mode of thinking with the student teachers at Driestar. Developing a wholistic instead of dualistic epistemology therefore appears to be an important challenge for teacher education at Driestar. Furthermore, it could be questioned if notions discussed in chapter 2 as essential for Christian education, such as all knowing is knowing God, knowing is essentially relationship and relationship is knowing, are vivid at Driestar or whether they have been tacitly replaced by secular notions, under influence of governmental pressure, educational innovations and similar. Introducing and developing Polanyi's relational epistemology for teacher education, of which the theoretical relevance has been established in chapter 2, is therefore recommended. His epistemology, which reintroduces the person as central in the epistemic process and keeps knowing and being together, could be helpful for Driestar to remain faithful to its person centred mission.

What does it all mean for the role of worldview in thinking about meaningful learning in a specific context of Christian teacher education? In the next chapter I will focus on the relation between personal and institutional worldview in discussing the student teachers' conceptions. From the current chapter it appears that creating awareness and paying attention to life experiences already seem to be important issues with respect to the student teachers' personal worldview.

Chapter 6 Worldview and Driestar students

6.1 Introduction

In chapter 2 we saw that teachers' epistemological beliefs stand in relation to other beliefs, like worldview beliefs. Little is known about how they are related but chapter 5 revealed some of the ways in which they are complex. A worldview can be defined as a fiduciary framework of basic commitments (following Polanyi and Cooling).

A distinction is commonly made in the literature between organized or institutional versus personal worldview. The relation between 'organized and personal' in the context of the teacher education institution is a specific findings area considered in this chapter, especially with regard to the ethos of Driestar University. Questions raised in chapter 2 concerned how coherent a worldview looks with student teachers when they are talking about their conceptions. Is their *personal* worldview based on an *organized* worldview (Blokhuys, 2011; Van der Kooij et al., 2013) or would it be better to talk about 'bricolage' (Casson, 2011) because of the eclectic and idiosyncratic character of their worldview (Van der Kooij et al., 2015)? Is worldview 'always a work in progress' (Nagle, 2004, p. 18) or is it static?

This chapter explores findings from the portraits with respect to the fifth research question:

What do Driestar student teachers' conceptions about meaningful learning reveal about personal and institutional worldview?

The discussion is broken down as follows: What do their explicit and implicit conceptions about worldview reveal about their personal worldview (sections 6.2 and 6.3)? What about the institutional worldview of Driestar University (sections 6.4 and 6.5)? I will summarize the chapter and evaluate to what extent and in what ways the curriculum has influenced student teachers' thinking as well as draw implications for the teacher education curriculum at Driestar from both chapters 5 and 6 (section 6.6).

6.2 The student teachers: above the waterline

In this section I will address what students' explicit conceptions about worldview reveal about personal worldview.

The student teachers use words like *foundation*, *basis*, *underlying*, when talking about a worldview. Some of them strongly relate that to something unchanging (e.g. Meg, Jack). Dean also mentions that

a worldview changes not but does not further elaborate at that point. In this sense, in their *explicit* utterings these student teachers seem to talk about worldview as organized, coherent, and as one basis or foundation that underpins their life. It has a more static than dynamic character in their view. In the academic literature, a similar view is described in the context of Dutch conceptions about the Christian identity of schools as a one dimensional view of identity (or worldview²⁰) namely: religious (De Wolff, De Ruyter & Miedema, 2003). Within this view, the identity of a Christian school is defined by abstract basic beliefs and values and is relatively static. De Wolff et al. indicate that 'Orthodox Protestant authors emphasise the relatively static character of identity, for instance by writing about identity in terms of 'the foundation' of the school (cf. Golverdingen, 1996)' (2003, p. 208). The student teachers have comparable conceptions of worldview in this regard.

Jack sees a worldview as a foundation, something you stand for. That foundation has a static character for him, *'the foundation should stay where it is'*. On top or around it things can change. Fundament is a synonym he uses for foundation. *'We have got a fundament, and I am convinced that our fundament is very solid. Our theology, our Bible comments, our exegesis (...)'*. He also talks about worldview as the spiritual, part of the fact that you give meaning to something. Worldview and meaning should go hand in hand, he says, your worldview should be your meaning.

To talk about worldview as a foundation is what I heard other students do as well. Meg sees a worldview as underlying too, a deeper meaning or a foundation, otherwise everything would be meaningless. *'We're all on the world for a reason, (...) to me that would be faith, maybe not in the same way as at a Christian school, but to which I cling if there are things where I can do nothing about, to which you can do nothing yourself, you know, that's really a foundation'*. People need meaning which has a stable value, Meg says, *'because we all try to get control of everything but we can't control everything'*. Faith is something of stable value for Meg. She thinks that foundation shouldn't change, otherwise it is no longer a foundation. *'If you are aware that there's a fundament, and that the fundament, yes that's what I mean, that there is a certain purpose or aim in your life and things do not always go as intended but it should be a continuous striving to reach that {aim} and that shouldn't change I think, because then it's no longer a fundament. Of course more superficial meanings exist, which can change (...) if the basis just stays the same'*.

A basis is the word Grace uses as well to refer to worldview. She further develops this basis as *'how you see life, your view on the relation with God and other human beings'* and notices that this basis can be very different between people. As a Christian the basis of faith remains the same but the way it is fleshed out can change immensely *'the whole vision changes (...) you grow towards a, whether it*

²⁰ The terms religious identity and institutional worldview are used interchangeably in the articles on Dutch Christian schools (e.g. Bertram-Troost et al., 2018).

is that you receive more insight or change with the times'. Here she seems to illustrate a distinction between personal (*fleshed out*) and organized (*basis*) worldview. For Grace something that contains a worldview element is more meaningful than if it is not present, it has more value for her, she says. It is noticeable that the only thing Dean explicitly says is that he sees a worldview as something you support, and as something that doesn't change. George finally sees a worldview as something underlying. Interestingly, he thinks that worldview is not leading in meaningful learning, but that it gives '*a sense of urgency*'. He says: '*We've all got an opinion about who God is, how you can live your life as a Christian and serve your neighbour. If you think about that, it automatically influences your teaching*'. To him that means being a good Christian in current society, which he also wants to invite his pupils to.

George appears to be unwilling to give a too large role to worldview, '*not leading*'. I would argue this should be seen in context of what I discussed in the previous chapter, about George's anxiety for using the Bible in every lesson (section 5.3.2). This is the vision of the secondary school he teaches at, which he is reluctant to adopt as he fears it is leading to an empty form of religion. At this point I can see a friction between his personal worldview and the institutional worldview or formal identity of the school he teaches at, which corresponds with challenges reported in previous research into the relationship between school identity and teachers' personal worldview in the Netherlands (Bertram-Troost, Versteegt, Van der Kooij, Van Nes & Miedema, 2018).

What is remarkable is that what George articulated concurs with the criticism of James K.A. Smith on worldview, as too cognitive and too far away from the heart (see chapter 2, section 2.6.4). This critique is directed at a propositional view on worldview, which sees knowledge as information. Instead, Smith focusses on formative practices, which shape a person and aim at a certain telos in life. This formation through practices is also intended in the widely used concept of *habitus*. From what George emphasizes repeatedly when touching upon worldview, his focus on attitude, connection with everyday life, lifestyle, how to be a Christian in society, an implicit rather than explicit focus (*'actions speak louder than words'*), it seems he feels more at home with this *habitus* orientation and is more aimed at the level of formation through practices. An example of a similar focus, to bypass the explicit or rational and focus on implicit formation, I discussed in the previous chapter with Grace as well, as she noticed resistance with her pupils if worldview was too explicitly present. Pupils at George's school report that a too explicit focus on worldview in education gives a feeling of getting swamped with well-meant comments about faith. The 'bypasses' these student teachers have developed reveal a degree of uneasiness with the idea of worldview as telling Christian truths.

Noticeable is further that both George and Grace appear to be critical towards the Reformed tradition, which is an important aspect of organized worldview. What people thought in the past has become less relevant for application in the here-and-now. *'The Canons of Dordt²¹, I don't know what we should do with them now'*, George says for instance. Grace regards a search for meaningfulness as a starting point to talk about worldview nowadays. She says that Luther's big question was: how do I get a gracious God? That was the question at that time. Nowadays we still give answers to that question. But instead we should come with answers to the questions of current time, in her view. Now there is hardly anybody who is searching for God looking for an answer to Luther's question. They come with questions like: what's the use of it? What's the meaning in my life or how can I live a meaningful life?

My insights and how I experience faith make a world of difference with what is going on in the Reformed world, Grace says. *'In the past I used to read large parts of the Bible with such glasses that I actually dismissed them, for example in the Old Testament, the prophets are full of social justice and I think that in Reformed circles that has been a poor child really and then I think; why didn't I see that earlier?'*

In the past her focus was on the conversion decision, the relationship with God was most important. If that was secured you were finished, she says. Now she sees the journey of faith as only starting then, it is a challenge to reflect something of God to the world around you. She values it as a positive change in meaning. It was something that happened inside but also came to expression in the decision to change between churches. A worldview is something very basic in life, you have been brought up in it in most cases, and that makes you think whether you're not giving up on something you don't want to let go, Grace says. *'Am I not throwing away the baby with the bath water?'* She says she isn't troubled by that fear any more but closely monitors if it's okay what she does. *'I think now I embrace something that had been abandoned too much in the worldview of my youth'*.

If I examine Meg's conceptions about worldview, what is remarkable is how she connects worldview to meaning and value. To her a faith or worldview is something of deeper meaning and something of stable value, *'a stable value in the world which is aimed at the good, happiness, charity, health'*. Her view here seems to be value-laden and relational. On the other hand, she also says that worldview is a foundation that shouldn't change. There seems to be a certain dissonance here between these different views. A similar dichotomy becomes visible when, on the one hand Meg connects worldview to aim in life, a purpose or a reason for being in the world (a telos), consistent with the literature (De Ruyter, 2002; Van der Kooij et al., 2013), with a transcendent character. On the other

²¹ One of the Three Forms of Unity, which besides the Bible are sources of authority and leading in the spirituality of the experientially Reformed.

hand she connects worldview to something to cling to (an anchor), if there are things which she cannot control. Worldview as something to cling to or an unchanging foundation sounds more propositional than relational. If this 'unchanging foundation idea' is a widespread idea of worldview within Christian (teacher) education, it would be important to address that there can be a risk in this view. For it may overlook the personal element and fiduciary character of all knowing. It is leaning towards a worldview as a scientific theory, an objective truth, instead of a worldview functioning as a lens and fiduciary framework (Polanyi).

A foundational view may have consequences for thinking about meaning as well in particular (sub)cultures, in a way Jack articulates as follows: *'I think the meaning of a lot of things is fixed before you start to think about it yourself and is blindly adopted by the world at large (...) the power of the past is still very clearly present in some societies, in which things are like they are, have meaning because they have always had so much meaning and you're not allowed to touch them. That's socially determined, culturally, give it a name, locally of course, where you come from'*. These words reveal something of a static, fixed tradition, in which there is no space for personal meaning.

With Jack a certain risk of propositional thinking about worldview also seems to be present, although this observation can be enhanced by his language. If I consider his language with respect to worldview, he uses words like *'foundations, really cast in stone, the heart of the matter often stays the same, certain things, which are simply proved, that's not going to change any more, to hold on for ever, our fundament is very solid.'* My impression of what he is doing, is that he objectifies an organized worldview, (Reformed) Christianity in his case. He seems to give it a character of absoluteness and epistemic certainty. What Jack also appears to do is to equate (organized) worldview with Scripture. In this way he overlooks that there is a hermeneutical element in the step from Scripture to worldview and seems not to be aware of the concept of a personal worldview. For Jack, touching worldview appears to be touching the Bible. That might be the reason why he is keen on giving worldview a foundational, unchanging character.

On the other hand, when Jack talks about his personal life experiences, he apparently takes another perspective. He says: *'There is more than my exclusive truth, that's difficult to accept of course but (...) at a certain moment you know: there's more than my truth. (...) There's more to the horizon than only my thoughts, my perception, my meaning. (...) I stand for 'my truth'. But how far can I impose that opinion on others?'*

It is really difficult to understand what is going on in his thinking at this point, for he is also able to relativize the Dutch Reformed tradition. If you look at the world at large, Jack realizes it represents only a small margin, *'do we claim the only, exclusive truth?'* He also acknowledges that different

houses of different quality can be built on the same foundation and that there is flexibility in the truth of the foundation, which could be interpreted as referring to different personal worldviews stemming from a shared basis. But then he seems to make a restriction again, as he says that a Biblical foundation is the line of the writings of the forefathers, which he hears reflected in the sermons in church, fundamental to him. Although Jack speaks about the importance of dialogue, he seems to opt for pillarization in this respect, *'I can live with it {differences in expressions}, but don't ask me to imitate it. You know, you want, and that's typically human, you're going to stay there where you feel a bit at home'*. At this point we are reminded of the literature on beliefs, as I observe something of emotional attachment to certain beliefs with Jack, which can be particularly strong with religious and shared beliefs. So with Jack I see on the one hand a degree of fundamentalism but on the other hand also openness, dialogue and awareness of other traditions. They thus appear not to exclude each other in his case.

So far I have discussed that, from what the student teachers explicitly say about worldview, some of them seem to relate worldview only to organized worldview, which receives a coherent, predominantly static character, functioning as a foundation, which is consistent with what is called a one-dimensional view in the academic literature. Other students teachers turned out to feel more at ease with a habitus or practices oriented view. Different degrees of identification with the organized worldview of Reformed Christianity appeared. I have also discussed the nuances and dissonances I can see with several student teachers. Now that I have discussed the more *explicit* sayings of the student teachers about worldview, it is also important to look at what their *implicit* assumptions reveal about their personal worldview, in the next section. As earlier we have recognised that knowledge and beliefs mainly have a tacit character (e.g. chapter 2, section 2.4), which is why the research methodology aimed at eliciting and revealing these assumptions as well.

6.3 The student teachers: below the waterline

Although most student teachers speak about worldview as a foundation, it does not seem to permeate in all 'layers of soil'. What is striking in this respect is that the student teachers do not really seem to be aware of a worldview as a lens and framework on all beliefs.

I have discussed in chapter 2 (section 2.5.2) that the relation between faith and pedagogy is considered as an often neglected but important aspect in Christian education (e.g. Green, 2015; Smith & Smith, 2011; Smith, 2018). I will not contradict the importance of pedagogy in thinking about faith-learning integration, but could it be that one step is apparently missed in thinking about this issue? I am referring to epistemology and wonder if its importance may be underestimated,

specifically in Christian teacher education. A view of Christianity as an approach to knowing seems to be limited with the student teachers, as became clear in the previous chapter. While considering epistemology is key if a change in pedagogy is desired. 'The way we teach depends on the way we think people know; we cannot amend our pedagogy until our epistemology is transformed' (Palmer, 1993, p. xvii). This is what the literature on (personal) epistemology and its influence on theories of learning and pedagogy subsequently also revealed, as discussed in the review. With the student teachers I observed that worldview is hardly permeating towards the level of epistemology. Dissonance appeared between worldview functioning as a lens on ontological assumptions compared to epistemological and pedagogical assumptions. I observed this dissonance in several portraits. In chapter 3 we saw that when it comes to metaphors about teaching and learning dissonance is a key word, for researchers found dissonances between teachers' epistemological views and their practices (Olafson & Schraw, 2006; Wilcox-Herzog, 2002). Olafson and Schraw contended that blending beliefs from different worldviews with teachers seems to be more a matter of naivety than reflective selection (2006, p.79). Therefore it might be even more important to address teachers' epistemological beliefs in Christian education, which are currently not structurally addressed in Driestar's teacher education curriculum and student teachers seem to have difficulty to recognize or express their epistemological beliefs. George honestly reflects that what knowledge is and how the transfer of knowledge takes place is a question he has never thought about. *'I don't know how to make that reality in my own teaching as I have thought so little about it'*.

In Jack's case I observed that his pedagogic practice is not necessarily flowing from his beliefs about a pupil, his anthropology. Jack on the one hand in his pedagogy advocates pupil agency, he speaks about giving the pupils responsibility, let the pupils decide for themselves. In his ontology on the other hand he takes total depravity as a principle for his image of man. When I asked him what the consequences of this principle are for teaching, he said that pupils need to work under continuous monitoring and that a certain coercion is necessary, because pupils can't handle agency, so in education we should not expect that either. *'We know it will go wrong, so let's act in advance'*. Actually he contradicts here what he said earlier about pupil agency. A dualism becomes visible between a negative theological view and a positive pedagogical view on pupils or a discrepancy and tension between theoretical and espoused image of man, acknowledged as prevailing in Reformed thinking (De Muynck, 2011b; Spruyt, 2018). Another instance of a certain schism comes up when talking about freedom. Jack is convinced his pupils can't handle freedom in a good way because of their developmental stage. In fact they can't help it, he says, so a teacher needs to give them space to develop on the one hand but limits are necessary as well. *'But here we are purely talking about the adolescent brain'*. But, Jack wonders, how come that adults can't handle freedom as well? *'I think it's*

genetic, Adamite²², I don't know'. Here he shows to apply a neuroscientific and a spiritual explanation separately to the same phenomenon, which may further strengthen a disconnection between his ontology and pedagogy. This example also reflects something of a view of theory as neutral again, an epistemology of knowledge as information. For 'in fact' pupils can't help who they are Jack says, because of the status he attributes to a particular neurodevelopmental theory offered in teacher education. As an implication, this may reveal that it is an essential task for Driestar and broader Christian teacher education to discuss underlying assumptions of theories that are offered in the curriculum, as student teachers otherwise accept or interpret them as 'neutral'. Epistemology is also related to the connection between pedagogical and theological knowledge. Jack at this point appears to double-speak, without being aware of the tensions between his diverse beliefs.

Interestingly, Meg's pedagogy seems to be more in line with her anthropology. This is intriguing because she was not raised in a Christian family, so I would have expected a more positive view on humankind than she expresses. She says about her pupils: *'They are persons with characters, and those characters aren't always that beautiful'*, they *'do not naturally know what is good, or sensible, or appropriate or meaningful'*. Meg likes to give pupils responsibility but *'that is not a magic word, just tell the pupils and they will act likewise'*. When it comes to learning she says: *'It is not a matter of course. It doesn't come from within, like: I should do some learning because then I will pass my tests or (...)'*. Therefore she has difficulty to deal with current pedagogical developments at her school towards personalised learning, as discussed in the previous chapter, which take a very positive view on humankind. Meg's pedagogy at this point seems to flow from her ontology.

In Dean's case, on the one hand his reasoning appears to be consistent on diverse aspects of worldview. In section 5.2.3 I discussed his focus on freedom and his language that seemed to be close to liberalism. In his thinking about authority and morality for instance, he seemed to have a subjective focus. Subjective elements could also be recognized in his focus on individual freedom, choice, responsibility for one's own deeds, people should build their own ethos and give their own meaning. In his view on mankind he focusses on subjectivity as well, *'I think every human being is unique, makes his/her own choices and happiness is different for everyone'*. While Jack sees an ontology of total depravity as *'that has nothing to do with being the voice of doom'*, Dean thinks talking about young people living in a fallen world is a bit pessimistic *'just as if there's a permanent thundercloud above our school'*.

²² Jack here refers to original sin, a Christian belief that in Adam all mankind has fallen in sin. The idea is that we are not sinners because we sin, but that we sin because we are sinners (Sproul, 2017).

Dean especially seems to oppose a transmission view of faith, as he has often met in Reformed circles. In that sense it is understandable that Dean as a reaction emphasizes subjectivism and insists on freedom and exploration when talking about religious or worldview aspects. Earlier experiences in the biography and socialisation of students could therefore be important to take into account. There is *'a multi-interpretable truth when talking about the Bible'* he says, *'the Bible is not a handbook'*. When discussing differences within Christian tradition, Dean explains to his pupils what his point of view is and tells what others think: *'Mine isn't better, I don't possess the truth, they neither (...) pick for yourself'*. To love your neighbour for Dean entails respect, also respect in interpretation. *'Look, our pastor sometimes says things with which I don't agree. He's entitled to say so but I see it differently. But the perfect church doesn't exist, for nobody. So'*. When talking about differences in worldview between students at Driestar he says *'there are essential differences but so what. I don't care about that. Someone is also free not to believe, he or she should know that him or herself.'* If people have a different point of view *'who are you to criticize someone for that?'* A possible understanding of Dean's thinking at this point could be found in the influence of current culture on Christian teacher education as well, captured by the sociological concept of individualization. *'It simply implies that people tend to assume that their lives are not predetermined by birth and social origin, and that each and every one has the right and also the responsibility to shape his or her life according to their own wishes and life plans'* (Schweitzer, 2007, p. 90). This development has consequences for thinking about religion too. Individualized religion leads to a distinction between one's own faith and the faith religious institutions maintain. It leads to the conviction that it is right to have one's own religious convictions and one can openly disagree with official religious traditions or deviate from them. The relation between a believer and the religious tradition becomes voluntarily, reflected in *'the right to bricolage'* (Casson, 2011). *'Adolescents are convinced that everyone has the right to choose their own faith and that no-one is allowed to interfere with such choices. They do not even find it necessary to state reasons for this view; they just take it for granted'* (Schweitzer, 2007 p. 91). Although both Schweitzer and Casson worked with adolescents in their research, in this case it seems these observations can be extended to early adulthood as well.

So up to this point Dean seems to favour a religious subjectivism. When talking about education, on the contrary, he seems to have a more positivist view. He agrees for instance that not everything in education can be measured, but he says: *'I think if you really want to make progress and make education more effective, you should look for things you can prove. As much as possible'*. This ties in with what I discussed before in chapter 5, about his instrumental language when talking about education, with a focus on what is effective and useful. In his, what seems to be nearly absolutisation of Marcia's (1966) theory on identity development, also a more positivist view shines through.

Furthermore, on the one hand he says someone is free not to believe, on the other hand he says '*I think we could witness more*' when he talks about the mixed student population at Driestar, which seems to be conflicting with his freedom focus. In the previous chapter I discussed a similar conflation in his language when he spoke about the formation of his pupils, which revealed a view of *knowledge as information* (section 5.3.2).

When looking at all aspects of what the student teachers shared during the interviews, their personal worldview seems to have a much more eclectic or idiosyncratic character, instead of a coherent or organized. It seems to be a matter of 'bricolage' or fragmentation, reminiscent of their scattered life-worlds, facilitating dissonances and contradictions in beliefs as discussed in chapter 5 (e.g. section 5.3.2). There appears to be incongruity in the thinking of some of the student teachers with respect to epistemology, ontology and pedagogy in the context of Christian education. The tension between the worldview of individual construction in education and the tradition worldview of Reformed Christianity could play a role at this point.

In the previous chapter I argued that exploring the students' life experiences in the teacher education curriculum can provide a key starting point for a change in view.

When examining the student teachers' personal worldviews, life experiences again seem to be important in their development. Dean's roadside experience, Jack's return from Defence to civil society and his reflections on 'turning point 30', Meg's suffering in a relationship and Grace's church switch can all be designated as life experiences which played a role in transformation. This concurs with the way Sire (2015) defined a personal worldview as somewhat fluid, in which life experiences in the shape of crises or sudden realizations lead to shifts. I support Flanagan's suggestion to speak about personal embodied worldviews, and considering narrative, lived aspects of worldview as essential. What I also noticed is that existential *experiences* appeared to be in the foreground in several cases, specifically with Dean, rather than existential *questions*, which Van der Kooij et al. (2013; 2017) incorporated as essential in worldview description. Further research at this point could help in gaining insight in the role of and relationship between existential experiences and existential questions within one's personal worldview.

Life experiences further appear to be important in what student teachers value as meaningful, as demonstrated in chapter 5, and in their vision on education. The teacher education curriculum does not seem to play a significant role at this point, for students mainly refer to sources outside the institution. A limited impact of many teacher education programs has been established as a problem in the literature as well (e.g. Korthagen, 2010, section 2.5). One of the causes that has been suggested is too much focus on formal knowledge and not enough support of developing practical

wisdom or phronesis. A lack of vision on good teacher education as discussed in the literature (Biesta et al., 2015; Korthagen, 2019) may only strengthen this limited impact. A critical reflection on the curriculum and incorporating the importance of life experiences could be first steps in helping the curriculum more appeal to student teachers.

6.4 The institution: between insiders

(...) it's more what a teacher conveys as a person, that reflects the worldview of an institution (...).

Dean

In the following two sections I will explore the reflections of the student teachers on the institutional worldview of Driestar Christian University. Several 'insider perspectives' will be given in 6.4, 6.5 will add an 'outsider perspective'. In terms of the literature, these student teachers' experiences illustrate that (institutional) worldview is not so much embodied in what you claim but rather in what you live (Belcher & Parr, 2011). Furthermore, in an institution like Driestar diverse students come together, each bringing their own personal worldview. This expresses something of the dynamics an institution encounters, as we saw already in the previous section how diverse the character of these personal worldviews was. Religious institutions as well as individuals within any one 'religion' may have different and sometimes contradictory positions on a range of matters of faith and practice (CoRE, 2017, p.20). This is what I encountered in the interviews as well and have portrayed for several students.

In chapters 2 and 5 I discussed two approaches to faith-learning integration (sections 2.5.2; 5.3.2) and experiences of the Christian perspective as 'added on'.

In the teacher education course at Driestar, George is also faced with an 'added on' feeling. *'There was a daily devotion and we sang a song but that's it. To me it was like: right, we've ticked it off, next item'*. George's choice to study at Driestar University is mainly based on its quality of education, he says, and he compromises with Driestar's identity. It is not always lived through, is George's experience, *'it is known as a Reformed University, if I'm honest you can only notice that in appearances'*. But then he nuances, *'well not only in appearances, there are teachers who have a heart for their job and their subject, and some of them know very well to connect their being Christian to the lessons they teach, but in many cases I think the obligatory devotion at the beginning and end of a day was something that goes with it. It, it was a must. With a test, if you had your first test they always read from the Bible and prayed, yea, I do always pray myself for a test so I don't need that. To me that's more like, it looks like something that has to be ticked off, otherwise we get trouble, so to speak (...)'*. But there were positive exceptions: *'Mrs. B. for instance, she knows very well how she can*

connect something she finds in the Bible to the lesson content and to the subject, I thought that was a beautiful way of drawing things together'. As we saw in chapter 5 as well, to connect faith and lesson content is something George also feels embarrassed about in his own classroom. He knows quite well how to shape being a 'normal teacher', but being a Christian teacher and giving that meaning during his lessons is difficult for him. So that makes him a bit hesitant to critique other teachers for that, he says.

Dean also saw the worldview of the institution mainly reflected in the daily devotions. He says that during the lectures it was actually impossible to address worldview. A few times worldview featured in literature lectures. *'But I think it's more a sort of witnessing, it's more what a teacher conveys as a person, that reflects the worldview of an institution. (...) So you've got the daily devotions and how the teacher positions him/herself, so to speak, and how (s)he acts, and that extends to really small things'*. This concurs with Beth Green's finding (2009) at a bible-based ethos college, that students did not view the Bible as relevant to the wider curriculum but only to prescribed contexts, like daily devotions, and reveals something of a sacred secular divide in student teachers' thinking, as we met in chapter 5 as well. What these findings also reveal is that the *person* of a teacher (educator) seems to be very important in the thinking of several student teachers when it comes to the reflection of a particular worldview, in an organized setting like an institution. In Dean's portrait and related discussion in the previous chapter this came to the fore in his valuing of relationship and *personal authority* (section 5.2.4). Also in the examples of brokenness within a Christian institution that featured in Dean's portrait, in the shape of conflicts and incidents, the person(s) seemed to be key; *'(...) especially the teacher educators, should be a sort of landmark at this point and they should not make mistakes, but they are all human beings, it is difficult to live as an example. I can say that myself as well'*. Dean sets a high standard for teacher educators but at the same time acknowledges that no human being is perfect. He points out the high calling a Christian institution has concerning its ethos, especially if not all the students share this particular ethos or worldview. *'I think you fail in being an example this way, particularly because non-Christians are in this University as well, I think it's a shame. (...) I think you should be ashamed of yourself if you say 'we are a Christian University' and then you get a quarrel among the teachers'*. This raises the question what could be the role of renunciation, reconciliation and forgiveness in Christian teacher education. In this case, it seems attitude and a lived Christian ethos are considered as the most important reflections of the institution's worldview.

Just as in the literature a difference is made for individual persons between organized and personal worldview, for institutions based on a particular worldview also different characterisations of that worldview can be given. The essence of this difference is captured by Grace, when she reflects on the

worldview of Driestar as a Christian institution. She notices *'an essential difference'* between her and a lot of fellow students and teachers. She says: *'what is read from the Bible and said with the daily devotion, I generally agree with, but that is the formal part. If you look at the expressions, then it feels very different'*.

Grace makes a distinction here between the formal part of an institutions' worldview and the way it is expressed or lived out. She refers to something that can be found in the literature on worldview and the identity of institutions as well. De Muynck (2008) in his research on teachers' spirituality discussed that the adjective 'Christian' is not interpreted uniform (p.21) and found that teachers experienced differences not so much in formal identity as in lived identity (p. 200). This is reminiscent of the distinction between formal and experienced ethos in education, as discussed in chapter 2 (section 2.6.3).

Grace shared a few more illustrations of formal and lived worldview. She talks about fundamental differences she experiences mainly between her and her fellow students, sometimes also between her and her teacher educators. She explains these differences as: although you agree in principle, basically, how you express your worldview and experience it in life is different. She does not feel condemned, experiences room for her opinion, but she says that if you go very deep into something, *'the fundamental values in life'* she is not on the same wavelength with others. There it stops. She says: *'I am accepted, there is room for my opinion but if you go in depth people opt out, disengage, because there is too much difference in thinking so we can't get along the same lines'*.

What she meets at Driestar is that people formally agree with what she believes but show through their attitude that they think it is too easy. She mentions as an example that she had to share important aims and values in life with a fellow student teacher. For Grace the aim in life is that God has made her to reflect His love, that is daily practice for her and *'a cork on which her life floats'*, as she articulates it. She says that if you live from God's love you can't be legalistic at the same time, that excludes each other in principle, but it is precisely what she meets at Driestar. In principle people agree with her but at the same time she sees a lot of people lack certainty of faith, thinking as if they have to earn a place in heaven by good works and showing through their attitude: *'I do my utmost, I think I'm doing fine as I'm more decent than you are, but still I have to await if I reach heaven'*. She says fellow students reflect that they think she is not as decent as they are, they are a step further than her. She notices that in discussions, in which they perfectly know everything, to the letter of the law. She feels an attitude of: you're wrong because now you violated an important rule. These rules concern certain utterances, like your clothing or Sunday spending²³. Grace says that to

²³ See chapter 1, section 1.4.2.

look or act decently is not the way to express faith to her, but instead to try to give the love of God to others. *'I have had enough of that decent life, now I want to be of meaning'*.

Grace says that on the one hand you look at the same Bible and the same God but you look at them from a different side, interpreting them different. In the meantime she has got used to it. *'I've never thought exactly as in church so to say, so I've always been a kind of dissident'*.

It's relevant to look in more detail at what Grace is trying to say. There are three issues I will discuss in response to this situation. The first, larger, issue addresses some contradictions that appear in her speaking.

On the one hand she says that there is agreement *in principle* between her and her fellow students, on the other hand she talks about *fundamental* or *essential* differences, if you go *in depth* there is too much difference. So I wondered where the principles should be placed, in depth or not. Grace places the differences at the level of utterances, which reflects how someone expresses or experiences worldview. So are the utterances made fundamental with some of her fellow students? Or are the utterances inseparable from the fundamentals, so that differences at the level of utterances are experienced as if it were differences in fundamental issues?

I will explore two possible ways to look at these questions, to test out these emergent findings against my thoughts. The first one addresses the possibility that *utterances are made fundamental*.

It is remarkable that Meg illustrated this possibility in the third interview. She was talking about worldview as a basis with overlying values or more superficial meanings 'on top' of it. *'(..) Imagine we would all come to Driestar wearing a jeans so to speak, that doesn't matter in principle, if the foundation stays the same'*. She said she understands there are certain agreements you make together, about clothing or a way of life for instance, which are done out of a foundation and strengthen it as well. They constitute the expressions of a foundation. But Meg also notices in conversations at Driestar that at this level in particular conflict is arising in church. There is more conflict within the church than between outsiders and the church she said, because outsiders do not know all the differences. Meg understands things can be threatening to churches, *'because someone starts to treat the utterances of the foundation, not the foundation itself, in a looser or stricter way or is critical towards them'*. But in these conflicts it seems that the utterances are treated as the foundation, maybe out of anxiety, to protect the foundation (cf. section 5.3.2). This recalls what Flanagan (2019) argued in relation to the nature of worldview, that it may only come to the surface when deeply held views are challenged and then lead to intense conflict. *'The unconscious nature of worldviews can surface in response to perceived threats: challenges to the individual's own values, norms, beliefs, views of knowledge, etc'* (Flanagan, 2019, p. 11).

It could be that these utterances reflect either purely constructed meanings, or abstract, impersonal meanings receiving epistemological absolute authority within a certain tradition or (sub)culture²⁴. Both lead to superficial differences (which can be experienced as fundamental though), so that deep meaning and the fundamental stays hidden, while people think -and can be convinced- they are talking about fundamental issues or meanings. This creates 'worlds of difference' between insiders of a particular worldview, leading to conflict and discussion. So sometimes it seems to be preferable to be 'an outsider' to have a clear view of the foundation and not be hindered by these differences.

For a second view of what can be going on I will turn to Polanyi again, namely to his view of reality as consisting of a hierarchy (1966, p. 35). Dead matter requires more and more human meaning and responsibility via ascending levels. Polanyi illustrates this with the example of human speech: at the lowest level it consists of sounds corresponding to the laws of physics, but via the limitations of words, grammar and the mutual relation between sentences complex meaning arises. The operational principles get direction from the higher levels (Bulterman & De Muynck, 2014, p. 112; Polanyi, 1966, p. 36). This multidimensional worldview proposes that every level has its own value but comes into its own via the guidance of the higher levels. The higher levels require a more personal interpretation, they are ambiguous and value-laden. They require a judging which comes from expertise or 'connoisseurship', as Polanyi calls it (2013, p. 54). At the higher levels it is more difficult to gain consensus. At this level a profound truth can be the opposite of another profound truth. 'The higher levels can also refer to personal development or to the fundamental questions of life. Where at the lower levels objectivity may seem to exist because it is easier to reach agreement about how we look at reality, the higher levels are value-laden' (Bulterman & De Muynck, 2014, p. 118). A possibility is that the '*formal part*' of the institution's worldview Grace is talking about can be placed at a lower level in this multidimensional view, it is situated more on the surface, so that it is easier to reach agreement on this level. The expressions or utterances on the other hand should be placed at the higher levels, which Grace describes as '*going very deep into something*' or '*fundamental values*', on which it is much more difficult to attain agreement. The more deeply held the view, the more intense the possible conflict (Flanagan, 2019). A possible implication for Driestar could be that it is important to stimulate *worldview consciousness* with the student teachers, as Flanagan (2019) argued as well. 'To examine worldviews, teachers need to wrestle with philosophical questions of life which can enhance their own teaching and learning' (2019, p. 11).

²⁴ The experientially Reformed may be especially vulnerable to this, see section 1.4.2, e.g. stadia in the journey of faith which are seen as a 'golden standard', an emphasis on knowledge about conversion and a strict use of certain expressions.

So in summary, on this first issue about what appear to be contradictions in Grace's words, I have explored the two possible understandings of utterances which are made fundamental and Polanyi's model of reality as multidimensional, where the higher levels require personal interpretation and personal worldview and values seem to be specifically at stake.

The second issue I want to briefly mention as a possible understanding for Grace's reflections on formal versus lived worldview is the idea about worldview she seems to have learned in life and through experiences. This view depicts worldview mainly as a matter of: you have to obey, follow the lines and rules, think exactly as, look and act decently, to use some of her words. So it is a propositional, positivist view against which she opposes, which reveals a transmission view of faith and an overly cognitive approach of humans as 'brains-on-a-stick' (Smith, 2016, p.3).

The third issue addresses a point at which I started to feel uncomfortable. This feeling arises when Grace says she is not feeling condemned by her fellow students but still feels an attitude of disapproval, being less decent or even wrong. This feeling also arises because George shared something similar about his experiences at Driestar.

George told me that he went through a certain development in his thinking (or personal worldview) which he felt being judged for. What he missed at Driestar was the space for dialogue, the openness of his fellow students and guidance of the teacher educators in facilitating dialogue. He experienced a '*conventional point of view*' was parroted, narrow mindedness and the tendency to pigeon hole someone, although he says this is more a feeling than that he is able to refer to a concrete memory. Probably this feeling is related to the same attitude Grace refers to; formally people agree but in their attitude they convey a different message. This may be understood from what I discussed in chapter 2 about formal and experienced ethos (section 2.6.3). The feeling with these students underscores once more the importance of critical openness, enabled through worldview awareness, both with student teachers and teacher educators at Driestar.

A recurring issue in this context is the mention of discussions that take place among student teachers at Driestar, specifically among students from '*established churches*' as George articulated. He possibly refers to the same discussions Grace designated as discussions '*in which they perfectly know everything*'. This '*perfectly knowing*' again seems to convey a view of knowledge as information occurring with Christian student teachers, as well as a view of learning '*as an exercise in transmission and persuasion*', based on apologetics rather than hermeneutics (Cooling, 2021, p. 46). Meg also referred to these discussions. She told her fellow student teachers to stop arguing because she didn't understand their discussions. '*As an outsider I don't understand anything of this. You've all got the Bible as a basis, as a foundation, why is there so much conflict in church. Why?*' Sometimes she is

even deterred by how people stand in their faith, because people can be so very convinced that their conviction is the truth but nobody possesses the truth, she says.

A possible understanding for what Meg as both Grace and George experienced in these discussions could be a lack of epistemic relativism existing within Christian (teacher) education. Presence of this kind of relativism 'leads to an awareness of the fallibility of the interpreter and a degree of epistemic humility in holding the interpretations we are personally convinced by' (Cooling, 2021, p. 48). A lack of humility also hinders a view of truth as troth (Palmer, 1993), which refers to a person entering a covenant with another person. Truthful knowing weds the knower and the known, leading to covenant epistemology (Meek, 2011; Palmer, 1993, p. 31). Especially in a Christian institution an awareness of truth as an incarnation that lives instead of a concept that 'works' would be essential. 'The 'Word' our knowledge seeks is not a verbal construct but a reality in history and the flesh' (Palmer, 1993, p. 14).

A different understanding of these discussions could be that they are a sign of a healthy tradition, which contains a degree of conflict (Mitchell, 2006). A dynamic tradition acknowledges the possibility of internal disagreements. But often in conflicts the underlying assumptions are not made explicit or there is no awareness of them. The latter seems to be essential to address in the teacher education course. The relation between one's personal worldview and the formal identity of Driestar apparently causes challenges for some student teachers and plays a role in group dynamics. Religious diversity therefore should somehow be addressed in the curriculum.

Still, there are differences in how student teachers experienced Driestar's ethos. Jack for example thinks *'the whole width of the Christian community at large does feel at home there'*. There's no iron regulation like; this is how we do things at Driestar. There is room, within the pluralism of churches, he thinks. Up until now I have primarily explored 'insider' perspectives of student teachers who would recognize themselves as practicing Reformed, Protestant or Evangelical Christians. But what about the student teachers who do not belong to a particular denomination? How did they experience Driestar's worldview?

6.5 Between in- and outsiders; structure, language and social community

An interesting 'outsider' perspective of Driestar is given by Meg. What she valued at Driestar is that its worldview, as she experienced it, added to what she was learning. *'You give everything a bit of something extra. Cause the kind of talks I have with you, I don't have them outside {Driestar}', 'there's more meaning in it than in the things that keep me busy in daily life'*. At these words of Meg I was reminded when I read Polanyi saying that we do not become converted to a philosophy, religion, or

political party by having its truth demonstrated to us in a logical or objective way. Rather we see that the particular party, religion, epistemology or worldview holds possibilities to attain richer meanings than the one we used to get along with. Religion does not offer certain rewards. It can only offer what it is in itself, a greater meaning in ourselves, our lives, our grasp of the nature of all things. A religion exists for us only if it carries us away, it is not a hypothesis at all (Polanyi & Prosch, 1977, p. 180).

But in reflecting on the worldview of the institution Meg is also talking about moving between different worlds. *'This is a world to which I do not belong. As soon as I get out of the door, I'm in my own world again. (...) There's a certain structure here that I do not know'*. She mainly experiences differences with her fellow students in that they are *'being raised with the Bible, know the songs, know the pastors in church, are talking among themselves about all kinds of people I don't know, the schools they work at. Yea, that's really a world of difference to me'*. She also notices that the language used at Driestar stands in between the two worlds. *'I could write a book about it, I thought; what kind of language is this? That's a very different language than I'm used to'*. All these experiences make her say; *'I do not always feel at home. I'm always reserved'*. It's not that she doesn't feel accepted or welcomed. It's rather a feeling of not belonging, she doesn't feel part of the 'Driestar world'.

It is remarkable that some of her fellow student teachers are aware of this feeling. Grace for instance said she thinks one of her fellow students who doesn't go to church feels less accepted. Jack mentioned about his non-Christian fellow students, *'they feel not 'like us'*. He attributed this 'not like us' feeling to prejudices and vocabulary used at Driestar, the latter is what Meg mentions indeed. In contact with these students, Jack tries to tear that feeling down, because he sees it as a duty for Christians to try to overcome us-them thinking. His experience was that the non-Christians perceived the atmosphere at Driestar as good, especially the hospitality, which is what Meg actually confirms, she does feel welcomed. But more seems to be necessary for a feeling of belonging.

With respect to the background of Meg's outsider experience, for a sociological understanding we could look to the field of intercultural communication first. One of its areas concerns intergroup communication and the establishment of a group identity. *'Language and communicative features are important devices for creating an us and them'* (Giles & Giles, 2012, p. 142). Intergroup boundaries limit the ability of a person to become a genuine member of the group. Language also seems to be important from a philosophical perspective. The role of tradition in language is acknowledged by philosophers like MacIntyre and Polanyi (2013). Language requires an underlying tradition and sustains a community of people participating in that particular tradition. *'Different*

vocabularies for the interpretation of things divide men into groups which cannot understand each other's way of seeing things and of acting upon them' (Polanyi, 2013, p. 112). Language and culture are acquired a-critically and serve to frame the particular worldview of their adherents. 'Thus, the language and culture by which a person critically reflects upon the world are indwelt a-critically and provide the intellectual resources available to the individual as well as the limitations which constrain him' (Mitchell, 2006, p. 109). At this point creating awareness and eliciting what has been accepted as an implicit or acritical frame again seems to be key.

Language appears to be an important means to bridge the gap between the worlds of in- and outsiders. But I wonder if a change in language alone is enough, for with Polanyi I agree that if the framework is radically different, conversion from one tradition to another requires an act of commitment and is a step of faith (Mitchell, 2006, p. 118).

6.6 Summary

Eye-openers: lenses of awareness

In this chapter I discussed what the student teachers' thinking about meaningful learning revealed about the contribution of personal and institutional worldview with student teachers at Driestar. I will resume the essential features in this section and connect them to implications for the teacher education curriculum.

- *Personal worldview: fragmentation*

In the first place, different conceptions of worldview appeared with the student teachers. The views of some student teachers reflected a foundational view, other students teachers turned out to feel more at ease with a practices oriented view. Differences appeared between the personal worldview of student teachers and the organized worldview of Reformed Christianity.

As regards the student teachers' personal worldviews, these seem to be fragmented. Fragmentation could sustain dissonances found between student teachers' epistemology, ontology and pedagogy for instance. This confirms findings from chapter 5, in which we saw that an objectivist epistemology on the one hand and a subjectivist pedagogy on the other appeared together in some cases. The student teachers seem to build their own personal bricolage worldview in which Driestar's institutional worldview does not appear to be that important. Further research could identify in how far the worldview of the secondary school they teach at plays a role in the development of the student teachers' personal worldviews. The findings in this study suggest that there are good reasons for the concern of scholars about the large impact of the system on Christian education, creating a tension between (sociocultural) context and specific identity (see 1.5).

- *Personal worldview: awareness and addressing life experiences*

As the evidence in chapters 5 and 6 suggests, creating worldview awareness appears to be a major task for Christian teacher education, as students enter the curriculum with settled beliefs and seem to be limited in understanding of worldview aspects which form the fiduciary character of all knowing. This finding is consistent with research which revealed that teachers in secondary education aren't really aware of issues like worldview (De Muynck, 2011a).

Eliciting the student teachers' beliefs and challenging them on these beliefs can help in creating awareness and bring to the surface conflicting assumptions. The literature at this point revealed that in order to be challenged in their beliefs, teachers need a horizon against which they can evaluate

these beliefs, provided in a professional discourse of teacher education. At this point the curriculum could be improved.

The evidence in this chapter strengthens the finding from chapter 5 that reflecting on the role of life experiences and thinking about worldview as personal embodied seem to be important starting points for reflection in teacher education.

There seems to be more awareness at times of the 'lens level' of a worldview in religious issues than in educational, specifically epistemological issues. This underscores the importance of addressing epistemology in the teacher education curriculum at Driestar.

- *Institutional worldview: dialogue on religious diversity*

The challenges identified in chapters 5 and 6 between teachers' personal worldviews and the formal school identity of their secondary schools appear with respect to the institutional worldview of Driestar as well. The differences between personal worldviews and the institutional worldview as it is experienced causes feelings of not being fully accepted with some student teachers. Several student teachers indicate to be longing for more openness and dialogue on religious diversity. Openness and dialogue could add to the positive experiences of student teachers who do not share Driestar's worldview. Characteristic of Driestar has always been its double position between its constituency and the churches on the one hand and its mixed student population and the secularised world around it on the other hand (see 1.4). On this matter dialogue and openness are also important, they could help to prepare Christian student teachers for participation in a plural society and develop a strong professional identity and critical reasoning skills.

From an outsider perspective on the institution there seems to be a difference between belonging and feeling accepted. Outsider reflections show that different worldviews can even be experienced as different *worlds*. Language turned out to be important to consider in this respect. This could be an important realization for Driestar, as it is expected that religious plurality among student teachers will only increase in the future.

- *Institutional worldview: the person at the centre*

When looking at the student teachers' experiences of the institution's worldview, it further seems to be true that a worldview is not so much what you claim as what you live. Despite the attention paid to pedagogy and didactics in thinking about faith-learning integration, what appears to be important to student teachers at Driestar is the person of the teacher (educator). Attitude and a lived Christian ethos of the *person* of both teachers and fellow students appear to be very important in the thinking of several student teachers when it comes to the reflection of a particular worldview, in an organized setting.

- *Teacher education curriculum: a need of community and personal authority*

From chapter 5 could be added that community and personal authority appear to be important for the student teachers. It is recommended to keep a balance between learning in community and individual learning in teacher education, as for a healthy identity development a community is necessary. It is important in this respect to evaluate whether Driestar's person centred view is sufficiently made a theme in the current curriculum. Currently the focus is largely constructivist within teacher education. It is recommended to evaluate in how far the teacher education curriculum at Driestar has been influenced by this dominance and whether this complies with its aspirations and vision.

As to personal authority, in chapter 5 I observed a need with student teachers to restore confidence in the craft of teaching. A shift to coaching and learner centred education, as reported in recent literature (section 2.5), is still not being valued by all student teachers. A longing for authority could be inherent to the normal needs of the beginning professional; however it is recommended to reflect on this issue with respect to curriculum developments at Driestar.

Further it could be good for Driestar to reflect on its communication towards student teachers, in view of Dean's experience of decisions as 'imposed' (5.2.4). The challenge for Driestar is to make true the trust aspect of authority, to be trustworthy and find a balance between listening to the students' voices on the one hand and setting a clear framework on the other hand.

- *Teacher education curriculum: the importance of epistemology*

What further is remarkable is that student teachers refer to experiences at Driestar that appear to reveal a lack of epistemic humility. This lack of epistemic relativism may connect to the observation I made at the end of chapter 5, about religious meaning protected in a sub-system as an absolute truth, which actually contradicts the transcendent character central to Christian faith. It might be that the Dutch Reformed tradition is more positivist in its epistemology than confessed, reflected in a focus on truth claims and certainty instead of confidence. A persistent view of knowledge as information, as has been demonstrated in chapter 5 as well, may enlarge this finding. An essential task for Driestar and broader Christian teacher education in this respect would be to discuss underlying assumptions of theories that are offered in the curriculum so that student teachers are challenged in their views of theory as neutral. There appears to be a limited understanding of and familiarity with epistemology with student teachers at Driestar. Philosophy of knowledge is currently not addressed in Driestar's secondary teacher education curriculum. However, the way we think about knowing also influences our view of person and community. Developing a basic philosophical skilfulness with students and addressing accounts of knowing is therefore strongly recommended for

teacher education at Driestar, if Driestar wants to stay true to its person centred mission and ideal of knowledge.

Further, reflection and discussion among students and staff on the complexities of the worldviews Driestar is working with is recommended. The personal worldview of students, the prevailing constructivist worldview of education in general and the religious institutional worldview of Christianity, which is propositional and revelatory, challenge Driestar to respond. Developing Polanyi's ideas for teacher education at Driestar could help in the friction between worldviews.

To end with, we teach a way of being in the world (Palmer, 1993). Our epistemology's images of knower, known and their relation are formative not only in thinking but in acting as well. 'The shape of our knowledge becomes the shape of our living' (1993, p. 21).

Chapter 7 Conclusion

7.1 Introduction

Meaningful learning cannot be addressed in isolation. The question what meaningful learning is appeared to be related to one's view of knowledge and shows that epistemology, what it is to know and the nature of knowledge, is closely related to the philosophy of education. Teachers' epistemological beliefs are related to their theories of learning and their classroom pedagogy consequently. So addressing epistemological beliefs is inherent to a study after meaningful learning. In this study meaningful learning was considered from a specific context, namely a Dutch institution for Christian teacher education, Driestar Christian University.

To speak about Christian education infers education that is based on an organized religious worldview, that believes something about the nature of reality and being. One would expect its view of reality and being is also connected to its pedagogy and epistemology. Scholars are concerned about the question how far this is currently realized, as competing paradigms in society put under pressure the embodiment of a specific worldview in education. There are tensions for teachers but more research is needed. There has been a focus on pedagogy in existing research on the relation between faith and learning but the relation between religious and professional epistemological beliefs is not well researched. This study was designed to attend to the relation between worldview and epistemological beliefs and examine in how far the context of a Christian institution plays a role in the thinking of student teachers.

Portraits of student teachers were presented in the framework of a nested case study design, because the specific context of Driestar University mattered. As meaningful learning can be situated in a paradox between universal and personal, speaking to both the person and the field was considered essential in the methodology developed. A fusion of personal and universal lies at the heart of Polanyi's notion of personal knowledge, which in this study was considered as a very helpful concept.

The primary research question developed for this study was:

How does worldview play a role in the conceptions about meaningful learning that student teachers at a Christian University have developed?

This question broke down in the following questions:

1. What is meaningful learning in the context of secondary teacher education?
2. How could the concept of a worldview help in our understanding of meaningful learning?

3. Which conceptions about meaningful learning do student teachers bring to the fourth year tutor group?
4. What do Driestar student teachers' conceptions about meaningful learning reveal about their epistemological beliefs?
5. What do Driestar student teachers' conceptions about meaningful learning reveal about personal and institutional worldview?

This concluding chapter presents the integration of the empirical and theoretical findings of the research in order to address these questions and offer a small step forward in thinking about meaningful learning. This is followed by a discussion of the limitations of the study and the implications of the findings for further research.

7.2. Epistemology and Driestar students

In this section I will address research questions one and four. First I will summarize what the literature review has revealed about meaningful learning in the context of secondary teacher education. Secondly, what Driestar student teachers' conceptions about meaningful learning, as they appeared in the portraits (chapter 4), revealed about their epistemological beliefs.

The literature reviewed places meaningful learning in education as mostly considered from a constructivist perspective, in which it is also rooted as a concept. In Dutch literature a constructivist paradigm is particularly predominant. Constructivism has had substantial influence in education, as an alternative to the traditional objectivist view in education. Constructivism roots meaning in experience and puts forward as the central purpose of education to empower learners to take charge of their own meaning making. It has been critiqued by educationalists primarily at the point of mistaking a constructivist theory of learning for a theory of teaching or a pedagogy. It has been criticized for risking an individualisation, a lack of purpose and an immanent rather than transcendent focus in education.

Michael Polanyi's work offers an alternative view to both objectivism and constructivism and is significant in the context of Christian education. Knowing with Polanyi is essentially personal, for he reintroduces the person as required and essential in the epistemic process. By characterising knowing as indwelling a fiduciary framework, Polanyi implies that knowing depends on tradition and authority as well. Knowing is inherently interpersonal and needs the person in community. Within the epistemic literature, a belief in authority as the source of knowledge turned out to be viewed as naive, whereas belief in personal experience and reason as the source of knowledge are deemed more sophisticated. Polanyi's epistemology at this point actually epitomizes a countermovement.

Knowing as interpersonal further implies a reciprocity between knower and known and an experience of knowing as being known. Knowing in this way essentially is transformation and a coming into meaning of previously unrelated particulars. This process never bypasses the knower but is principally personal, so that there is always a personal dimension to the encounter with knowledge. The personal with Polanyi at the same time has a universal pole and so transcends the subject(ive). Polanyi's view on meaning is teleological and puts focus on reality as initiating and inbreaking. At this point it clearly diverges from a constructivist focus on meaning as constructed and imposed on the world, which presents problems for worldviews that do not see knowledge as exclusively understood as a human construction.

In depicting knowing as subsidiary-focal integration and therefore rooted in the tacit dimension, a Polanyian epistemology proclaims that what it is to be human is to live with paradoxes. It presents a view of knowing as simultaneously rooted and free, both immanent and transcendent.

A Polanyian epistemology to some extent could be characterized as constructivist, if speaking about knowledge as constructed in the sense that knowledge comes into personal meaning. But a coming-into-meaning indicates a movement that is initiated outside, rather than imposed on the world from inside. This is considered an essential difference. Furthermore, as it is a *relational* constructing in an interrelation between humans and the created world (Wright, 2013), the term *relational* epistemology better covers the essence of Polanyi's thoughts. A consequent Polanyian pedagogy is distinct from a constructivist pedagogy in the sense that a Polanyian view on knowing as indwelling entails a "master" aspect of teaching, a coming into meaning by following the personal example of a "master", in the tradition of a community. A constructivist focus on learning instead of teaching jeopardizes both personal and interpersonal aspects of knowing however, in focussing too much on the subject(ive). In that light I suggest to speak about meaningful knowing or meaningful educating instead of meaningful learning as more consistent with a Polanyian epistemology.

This literature review has added to providing conceptual clarity of the term meaningful learning. Further Polanyi's epistemology of personal knowledge has been highlighted and evaluated as deserving more attention and further development, specifically in a context of Christian (teacher) education, as it resonates with essential Christian notions. It provides a valuable new perspective to develop clear vision and professional discourse in teacher education, which up to now is found to be lacking.

7.2.1 A paradox between immanence and transcendence

The conceptions of the student teachers on meaningful learning, as discussed in chapter 5, demonstrated the complexity of the term. It appeared to be a stratified concept with different related dimensions. Student teachers circled around the relation between personal and universal aspects of meaning. The emphasis was diverse. Some students appeared to focus on meaning constructed inside and rooted in experience, others on meaning added from outside. At the same time reciprocal aspects of meaning were identified by the student teachers, referring to an encounter between immanent and transcendent, so that meaning came into existence where outside and inside met. Meaningfulness was experienced as emerging in a mutuality and a shared space between teacher and pupil.

The research of student teachers' conceptions revealed a movement of meaning, in which meaning initially appeared to be added from the outside. The student teachers in their encounters in teacher education appreciated something from the outside that was added rather than only a confirmation of what was already present (cf. Biesta, 2014).

But the student teachers spoke about an answer as well. Their conceptions also revealed a reverse movement, from the inward outside, so that meaning could be said to arise in a personal encounter with objective reality. Meaning does not bypass the person.

This fusion of personal and objective seems to confirm Polanyi's epistemology and could be said to encapsulate meaning as a gift and answer. Building on this, meaning as a gift requires a capacity to receive, which indicates the importance to leave and make space for meaning. This could point out that there is a passive component to meaning as well, rather than only active construction of meaning, currently the focus in education. In the moment of insight there is a shift in the act of creation from active to passive (cf. Loder, in Meek, 2011, p. 418); the knower is being known in an act of transformation.

What further emerged from the cases of two student teachers was the connection they made between meaning and aim in education and the need they expressed to this end for a notion of self-transcendence. At this point student teachers experienced tensions between their ideals and ideals of current education in the Netherlands, represented in educational developments that focus on the individual.

Resuming, the conceptions of the student teachers on meaningful learning went back and forth between an immanent focus on the one hand and a longing for communal and teleological aspects of meaning on the other hand. This paradoxical movement remarkably concurs with Polanyi's notion of

personal knowledge, capturing both personal and universal aspects of meaning. These findings therefore suggest it could be relevant to introduce and develop Polanyi's ideas for teacher education, of which the theoretical relevance has been established in chapter 2.

Speculating about the broader context of education, it could be asked if the paradox in this section reveals that there is a marriage between Christian theological and educational tensions, as Taylor (2007) stated that a secular context conflicts per definition with a Christian theology. The polarities I see with the student teachers can be nuanced if I take into account that constant tensions for Christianity have old roots, as is the case with the question of the relationship between immanent and transcendent. An interesting question would further be if other teachers outside Christian schools have their own version of conflicts, or whether it is inherent to teaching and education that there are conflicts and tensions between the ideals of people, a particular tradition and cultural pressures (Bakker & Montessori, 2016).

7.2.2 A paradox between freedom and framework

In their conceptions of meaningful learning the student teachers struggled with freedom and framework in education. A friction appeared between the powerful worldview of individual choice on the one side and the tradition worldview of (Reformed) Christianity on the other side. On the one hand the students stressed agency and personal choice of pupils, on the other hand they noticed that a certain framework is necessary.

A struggle with freedom and boundaries may be inherent to the complexity of education, but can be amplified by cultural influences, particularly in societies which have their roots in liberalism. Liberalism stands for a focus on the individual and a negative freedom; a freedom from authority, religion and tradition. The emergence of the theme 'freedom' with the student teachers has therefore been associated with dominant views in current culture as well.

Moving away from authority and a focus on individual autonomy appeared to have consequences in various areas of education, as demonstrated in chapter 5. It was remarkable in this respect that in multiple cases of student teachers a need for authority in education was expressed, to protect the person of both pupil and teacher. The pupil, because freedom and individuality were found to threaten both the person and the community of the group in education. The notion of the person in relation and a balance between learning in community and individual learning were found to be essential, reflected in the notion of particularity in relatedness. The teacher (educator), as a need was observed with student teachers to restore confidence in the craft of teaching and a longing was expressed for a teacher (educator) as authority and expert, although perceptions of authority

differed. Specifically authority in relationship was given due weight, entailing a trust aspect of authority. The person of a teacher (educator) appeared to be important for the student teachers when it comes to meaningful learning. This study therefore suggests that within the complex task of teacher education, attention for pedagogy, didactics and similar may not lead away from the importance of the personal authority of a teacher (educator). A thought for teacher education is to (re)introduce the teacher as framework and guide, as compass and initiator in the world.

A change in view on authority not only affects the position of a teacher but also influences thinking about knowledge and meaning. A focus on freedom at the cost of framework may cut off knower and known (self and world) from their transcendent source. A fragmented view of the self can be its consequence, also with student teachers in Christian education. 'When education divorces self and world from their transcendent source, they become locked in an endless power struggle to create each other in their own image (...) we finally understand ourselves as fragmented as a consequence' (Palmer, 1993, p. 12, 13). Inner fragmentation, strengthened by living in scattered life-worlds, easily allows for dissonances in beliefs.

7.2.3 Information, fragmentation, transformation

A major finding of this study further was that a view of knowledge as information appeared to be a widespread idea with the student teachers. This view led amongst other to a separation between theory and practice. The findings in chapter 5 demonstrated that a theory-practice dichotomy remains a core issue for teacher education. It has been its central problem since long (chapter 2, section 2.5) but resurfaces in the reflections of all the student teachers. Conceptions of meaningful learning at this point revealed an instrumental and functionalist focus on usefulness and efficiency. This focus reflects a paradigm prevailing in Dutch society and educational policy and illustrates that culture significantly influences education, amongst other in the shaping of epistemological presumptions. It has been established that an instrumental focus and policy exerts great influence in teacher education (e.g. Biesta et al., 2015). If an instrumental paradigm is reigning in society and education subsequently, this could lead to a flattened view and loss of meaning, in addition to a risk of inner fragmentation and a loss of the idea of knowing as loving. To be kept captive within oneself could be a further risk of this paradigm in education. It is suggested Christian teacher education should in this respect take notice of Biesta's concern of making the universe immanent to our understanding (section 2.6.4). For an 'interruption of immanence', an order of movement in meaning as initiated from the outside before being answered from inside, could be more important than evaluated at first sight. Probably desires for 'useful' 'need' and 'functional' in education should therefore be interrupted 'and that what students really care for, even if for one reason or another

they may not acknowledge it, is the awakening of the inner life through the nurture of imagination' (Phenix, 1964, p. 346).

A further consequence of a view of knowledge as information was observed in student teachers' view of impersonal theory which had to be applied in order to get meaning and become practical. At this point a constructivist pedagogy with active formats is often introduced in education as a solution. The real problem in this way is not identified, namely the *epistemology* behind a dichotomous thinking of theory which has to be applied in order to become meaningful, which reveals a persistent remnant of objectivism, that surfaced in the conceptions of the student teachers as well.

An alternative view is that of knowledge as transformation. Transformation implies pain and effort to change beliefs to which one can be so attached that resistance to change often occurs, as the literature on teacher beliefs revealed. However, promising is that experiences of transformation were observed in the cases of student teachers, in which life experiences in particular appeared to play a role. But to create awareness with the student teachers of the *process* of transformation and what it means for their *thinking* about knowledge and knowing, these life experiences should be highlighted and addressed in the teacher education curriculum. Eliciting and challenging the student teachers' epistemology is crucial, especially since another noticeable finding was that at several points dissonances or dualisms were observed in student teachers' thinking.

Another dichotomy that became visible was that of reason opposed to faith, a view of knowing as an absolute truth and believing as subjective, which revealed a Christian version of positivism (Cooling, 2018). The student teachers did not show awareness of educational theories as belief laden and non-neutral. This dichotomy of knowing versus believing also played a role in a sacred-secular divide that surfaced in the conceptions of student teachers and they expressed a struggle to integrate faith and learning in their practice of Christian education. Polanyi's ideas of knowing as tacit and based not on certainty but on a fiduciary framework of lived confidence did not appear to be close to the thinking of the student teachers. The gap may be thus large that using Polanyi in the profession or practical space of the teachers will be causing complications. Challenging a view of Christian faith which is not experienced as indwelt but as added on, related to a pervasive dualism in Western epistemology, is anyway considered as a crucial task for Christian teacher education.

The findings also suggested that epistemological beliefs at the explicitly reflected level diverged from what could be observed at the level of experiences or tacit assumptions. Fragmented, isolated clusters of epistemological beliefs appeared to coexist, consistent with the literature on teacher beliefs. The friction between the worldviews of tradition and individual choice revealed itself in a

transmission model of learning for faith issues and a constructivist model of learning for classroom pedagogy. Students differed in preference of model, explicit and implicit reflection and degree to which they felt comfortable with the model prevailing at their school. All students experienced something of a quest at this point.

Speculating with respect to the specific context of Driestar, a 'dynamic triangle' of knowing could be helpful. As explained in the introduction chapter, the name *Driestar* indicates a star with three tips, representing family, church and society, as three pillars of civilization. These three pillars may be under pressure in an unhealthy epistemological environment. If there is limited view of a normative dimension to knowing in Christian education, this could have severe consequences. Faith may lose its transcendent yet personal character as an utter consequence, and could either become something objective and abstract or something subjective. Therefore a restoration of the triangle (or triad, cf. Meek, 2011) of a threefold dimension to knowing, namely normative (transcendent, reality as breaking in), world and lived body (self) could be essential to develop a healthy epistemology for Christian teacher education at Driestar.

7.3 Worldview and Driestar students

In this section I will address research questions two and five, concluding how the concept of a worldview could help in our understanding of meaningful learning and what Driestar student teachers' conceptions about meaningful learning, as they appeared in the portraits (chapter 4), revealed about personal and institutional worldview.

Addressing the question how worldview could help in our understanding of meaningful learning appeared to be a complex and difficult question, to which I will offer a qualified insight, not a comprehensive, universal account.

In the first place, the literature review demonstrated that in the context of teacher education, meaningful learning is related to epistemological beliefs. Epistemology is closely related to the philosophy of education, specifically in the shape of teachers' personal epistemology. Knowledge is not a matter of facts but is belief laden and to make meaning from knowledge requires personal judgment or interpretation, which relies on commitment and beliefs or in other words a worldview (Cooling, 2012). Every choice a teacher makes is value laden and therefore in the end related to worldview. Teachers' epistemological beliefs in the literature were considered to influence their theories of learning and their classroom pedagogy consequently. So addressing these beliefs was considered inherent to a study after meaningful learning and attention for the impact of the personal worldview of teachers on their profession as very important. Critical reflection on their personal

commitments is important for teachers in order to examine their worldview and enhance their teaching and learning.

Regarding the definition of the concept, research on worldview by Van der Kooij et al. (2013; 2015; 2017) was considered relevant at the point of their distinction between organized versus personal worldview, specifically because this study took place within the context of an institution with an outspoken worldview. This distinction was helpful to explore the relation between the personal worldview of the student teachers and the institutional worldview of Driestar as formally expressed on the one hand and experienced by the students on the other (which related to adjacent concepts like ethos and habitus).

What was not included in the characterization by Van der Kooij et al. but was considered as essential in speaking about worldview was to include epistemology as an aspect of worldview, as was the case in the methodological literature and turned out to be indispensable in the literature on teacher beliefs (e.g. sections 2.5.1, 3.3.1). Furthermore, including narrative aspects of worldview and a characterization of worldview as a way of life was considered essential as well. Humans live out their values and beliefs and specifically this view of worldview was considered valuable to understand meaningful learning. Attention for the lived aspect of a worldview has increased more and more and has helped overcome its previously cognitive emphasis.

Attention for the lived character of a worldview has further led to an understanding of worldview as a personal, embodied heart-orientation in which life experiences play an important role (e.g. Flanagan, 2019; Naugle, 2004). In the literature general agreement was found on worldview functioning on a tacit level as a lens, *indwelt* (Polanyi) or inhabited (Cooling) rather than possessed. To see a worldview as a fiduciary framework, following Polanyi's expression, was further considered helpful, as it conveys the trust and belief in which all knowing is rooted.

7.3.1 Between personal and institutional worldview

In the first place, the findings in chapter 6 demonstrated that in the *explicit* conceptions of several student teachers, worldview received a coherent and static rather than dynamic character. This could relate to a view on meaning in particular subcultures, in which there is little space for personal meaning, as the meaning of a lot of things has become fixed in a static tradition. A risk of propositional thinking about worldview as an unchanging foundation was observed, if this would be a widespread idea within the Christian educational community, to overlook the personal element and fiduciary character of all knowing. In one case, a foundational view was observed together with

openness, dialogue and awareness of other traditions. They thus appeared not to exclude each other in this particular case.

Two student teachers appeared to have developed a way of thinking about worldview that revealed uneasiness with the idea of worldview as telling Christian truths. They indicated to focus on implicit formation of their pupils through their attitude rather than explicitly including the Bible in every lesson, which by one of them was depicted as 'abstract Christianity'.

As regards the student teachers' *implicit* conceptions about worldview, a key word appeared to be dissonance. The personal worldviews of student teachers were observed to be fragmented. This became visible amongst other in dissonances between their epistemology, ontology and pedagogy, without awareness of tensions between their different beliefs. It turned out that worldview was hardly permeating towards the level of epistemology and that student teachers appeared to have difficulty to recognize or express their epistemological beliefs. Epistemology is considered essential as it is also related to the connection between pedagogical and theological knowledge. A dualism became visible between a negative theological view and a positive pedagogical view on pupils in one case. The findings in chapter 6 underscored the importance of creating worldview awareness with student teachers in teacher education, as they appeared to have limited understanding of the worldview aspects which form the fiduciary character of all knowing.

The findings in chapter 6 furthermore demonstrated that the student teachers built their own personal bricolage worldview, in which Driestar's institutional worldview appeared not to be that important. Reflecting on the role of life experiences turned out to be key, as they appeared to be important in what student teachers valued as meaningful. Exploring life experiences could help in gaining insight in the role of and relationship between existential experiences and existential questions within one's personal worldview.

As regards institutional worldview, in several cases a friction was observed between the personal worldview of the student teacher and the institutional worldview of the secondary school they taught at, as well as that of Driestar. If differences were experienced, they mainly turned out to appear between formal and lived worldview. Openness and dialogue on religious diversity were considered important in this respect. The dynamics when different personal worldviews meet in a particular institutional context was also illustrated in this study, as student teachers experienced contradictory positions on a range of matters of faith and practice. These created 'worlds of difference', leading to conflict and discussions, which suggest a lack of epistemic humility with student teachers in Christian (teacher) education.

Several student teachers further experienced or reflected a sacred-secular divide in their thoughts

about the institutional worldview of Driestar and did not view the Bible as relevant to the wider curriculum but only to prescribed contexts, which demonstrated a form of dualism.

From an outsider perspective on the institution, an important finding was the experience of a difference between belonging and feeling accepted. This outsider reflection showed that different worldviews can even be experienced as different *worlds*. Language turned out to be important to consider in this respect.

A major finding of this study finally was that for student teachers institutional worldview turned out to be reflected in particular in what a teacher (educator) conveys as a person, his or her lived ethos. This reveals something of the high calling of teachers within a Christian institution.

7.3.2 Summary

In this section I will conclude what this study has revealed about its primary research question: how does worldview play a role in the conceptions of meaningful learning that student teachers at a Christian University have developed?

This study focussed at the student teachers' current understanding of meaningful learning and how their personal worldview and the context of the particular institution played a role in their thinking. The significance of this thesis lies in the light it sheds on the relationship between religious versus professional beliefs, specifically the role of epistemology and its relationship with worldview with student teachers in Christian education and the implications this has for Christian higher education institutions working in secular environments.

The study revealed that student teachers' conceptions are paradoxical and fragmented. Paradoxical on issues of immanence and transcendence, so that despite a focus in education on immanent aspects of meaning, student teachers appeared to be longing for transcendence and a broadening of horizon. Paradoxical on freedom and framework, as a need for freedom and agency as well as authority in relationship was expressed.

They are fragmented on the relation between religious and professional epistemological beliefs. A pervasive dualism in epistemology emerged in the thinking of student teachers. This became apparent in a view of knowledge as information. Conceptions of meaningful learning at this point revealed an instrumental and functionalist focus on usefulness and efficiency. A view of knowledge as information was further observed to lead to a sacred-secular divide in thinking about faith-learning integration. A dualism between theological and pedagogical assumptions, or *religious* and *professional* epistemological beliefs appeared to be profoundly present. A dissonance was found as well between *explicit* epistemological beliefs and *implicit* beliefs that could be inferred from the life experiences the student teachers shared.

The relation between religious or worldview beliefs and professional epistemological beliefs is complex. On the one hand a strong separation between religious and professional beliefs existed within the conceptions of the student teachers. On the other hand the two types of beliefs appeared to reinforce each other, when the rationalist pattern of thinking of the experientially Reformed in subject versus object appeared to permeate into the students' professional epistemological beliefs. The pattern, which is strongly present with the experientially Reformed, could be reinforced by cultural influences, so that dominant culture at this point closely aligns with their subculture. However the direction of influence is difficult to entangle.

The student teachers' personal worldview appeared to play a role in particular in thinking about meaningful learning, in the role of life experiences. The question is whether student teachers are explicitly aware of this role. I could infer the influence of personal worldview from what the student teachers shared but they appeared not to be worldview-aware themselves. Creating worldview consciousness and thinking about worldview as personal embodied therefore appeared to be important starting points for reflection in teacher education. There appeared to be more awareness at times of the 'lens level' of a worldview in religious issues than in educational, specifically epistemological, issues. This underscored the importance of addressing epistemology in the teacher education curriculum at Driestar. Organized worldview appeared to be more at the background, as regards the primary question. Mixed reactions were observed towards the tradition of the experientially Reformed, which largely shapes Driestar's institutional worldview.

This study has illuminated and furthered the development of thinking around Christian education in a specific context. The major findings of this study illustrated a friction between the worldview of religious tradition and the worldview of individual choice, which presents a challenge both for student teachers and for the institute of Driestar. For student teachers, in how they negotiate their own sense of worldview, wider society and the community at Driestar. This study revealed that there is an unsettled situation in that negotiation, that there are unresolved tensions between them and that this has implications for everyone, albeit some student teachers seemed to be able to reach a reflexivity about this, a more integrated intellectual approach, while others remained more disjointed. For the Christian institution of Driestar, in forming student teachers in a context of particular political and educational trends in Dutch society. This raises questions about ethos, curricula and pedagogy in Christian teacher education.

7.4 Limitations and suggestions for future research

I consider there to be limitations at different methodological points in this study. The subject of this study addressed philosophical and abstract concepts, like meaningful learning and worldview. At this point I noticed that my interview questions were too abstract at times. Using a narrative approach instead could have elicited more or different stories. At the same time I wondered whether we have educated students in the Netherlands in a more conceptual way, as when I tried to elicit stories, it appeared to be difficult for the student teachers to express themselves in narratives.

Secondly, in the discussion of my methods, metaphors and vignettes received a too large place in retrospect. At this point I have underestimated the power of using interviews, in creating awareness with and eliciting assumptions of the students. Next, a limitation of this study is that only language

students of Driestar participated, while we offer curricula in other subjects as well. The generic programme student teachers receive is the same for all students but the subject curricula will vary. This links to another limitation, namely the generalisability of a case study, which is a contested issue. As argued in chapter 3, a case study elucidates the unique features of a phenomenon in context and aims not to represent the world, but to represent the case. The intention to represent a population is irrelevant to a case study (section 3.4). The portraits speak over the limits of the case, as they address universal human experiences, albeit from the context of the person in a particular geographical and religious setting. At this point I felt faced with a balancing act between on the one hand avoiding making too large claims and meaningless conclusions on the other hand.

The focus of this study has been on student teachers' own conceptions. In future that focus could be broadened in diverse ways and by diverse perspectives. One possibility would be to include the context of the secondary and vocational schools the students teach at. Observations of their teaching practice could then be studied as well, to observe their actions as 'truth done' and evaluate the consistency between their beliefs and practice. At the same time the role these school contexts play in student teachers' developing worldview could be addressed. At this point, the current study gives rise to consider further research after the influence of the workplace context on the thinking of student teachers in maintaining a sacred-secular divide.

Another option would be to broaden this study to an ethnographical study of Driestar by including diverse departments, like the primary teacher education department, the educational advice centre as well as include the perspective of managers and teacher educators, in order to compare their different perspectives. The focus could also be broadened to the experiences of students in Christian ethos teacher education in other settings, in how they negotiate meaningful learning in their varied secular and religious contexts.

It would be valuable to study how Polanyi's epistemology could be developed for teacher education broadly and to help overcome particular dichotomies in the Dutch Reformed tradition specifically. The relation between theological and pedagogical assumptions at this point deserves further reflection. A number of specific suggestions for Driestar, on the basis of what has been argued before, could be:

- To develop a module on worldview with corresponding assignments for use during group-sessions. An introduction to critical realism in this respect is highly recommended for student teachers at Driestar. This module could further contain specific lessons or a master class about Polanyi. The resistance of beliefs to change and the importance of attention to epistemology should also be covered in this module.

- To reflect on the implications for its pedagogy, coming forth from the discussion on belonging versus being accepted, in the encounter with non-Christian students.
- Consideration of the development of post-graduate courses.
- Reflection on the policy of Driestar as an institute, in collaboration with Driestar's research centre and advisory centre.

What is considered essential for the teacher education curriculum is to develop a healthy epistemology. This implies to both critically reflect on the epistemology student teachers are educated in as well as address student teachers' epistemological beliefs. To make students aware of their tacit assumptions, their fiduciary framework as the lens they use. These could be elicited by using metaphors, as was done in this study. I am hopeful about the possibility of eliciting student teachers' tacit assumptions, given the experiences in this study. Mere participation in interviews made the student teachers in this study aware of issues they had never thought of before. Addressing epistemology is suggested to be a task for teacher education, for once teachers have entered into the teaching profession, they are swallowed by the demands of everyday practice and schools are too busy with governmental demands to be able to profoundly pay attention to these notions.

Epilogue

Looking back, I could never capture the experience of writing a thesis on meaningful learning better than with Rilke's words (2001, p. 28).

'For they are the moments when something new has entered us, something unknown; our feelings grow mute in shy embarrassment, everything in us withdraws, a silence arises, and the new experience, which no one knows, stands in the midst of it all and says nothing'.

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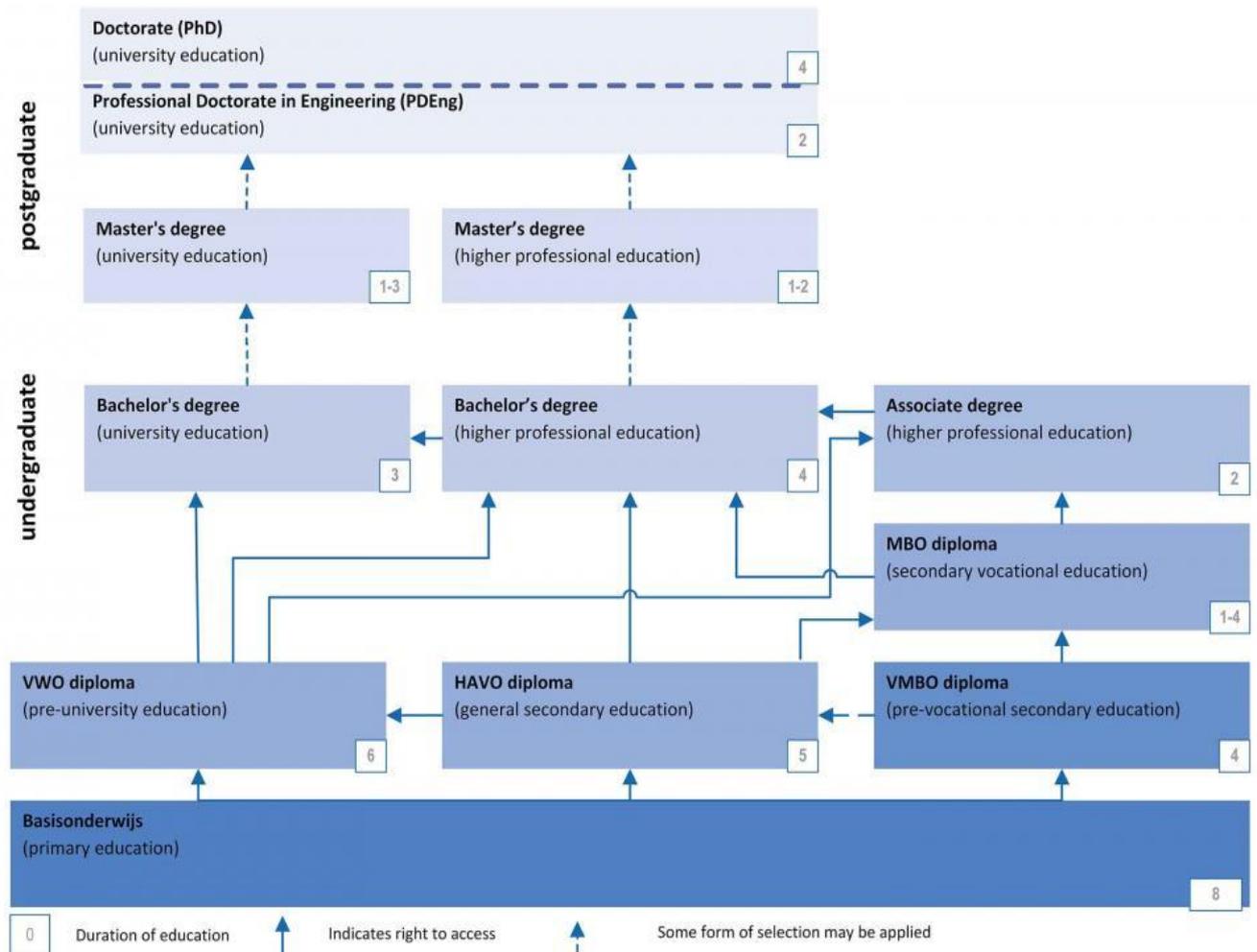
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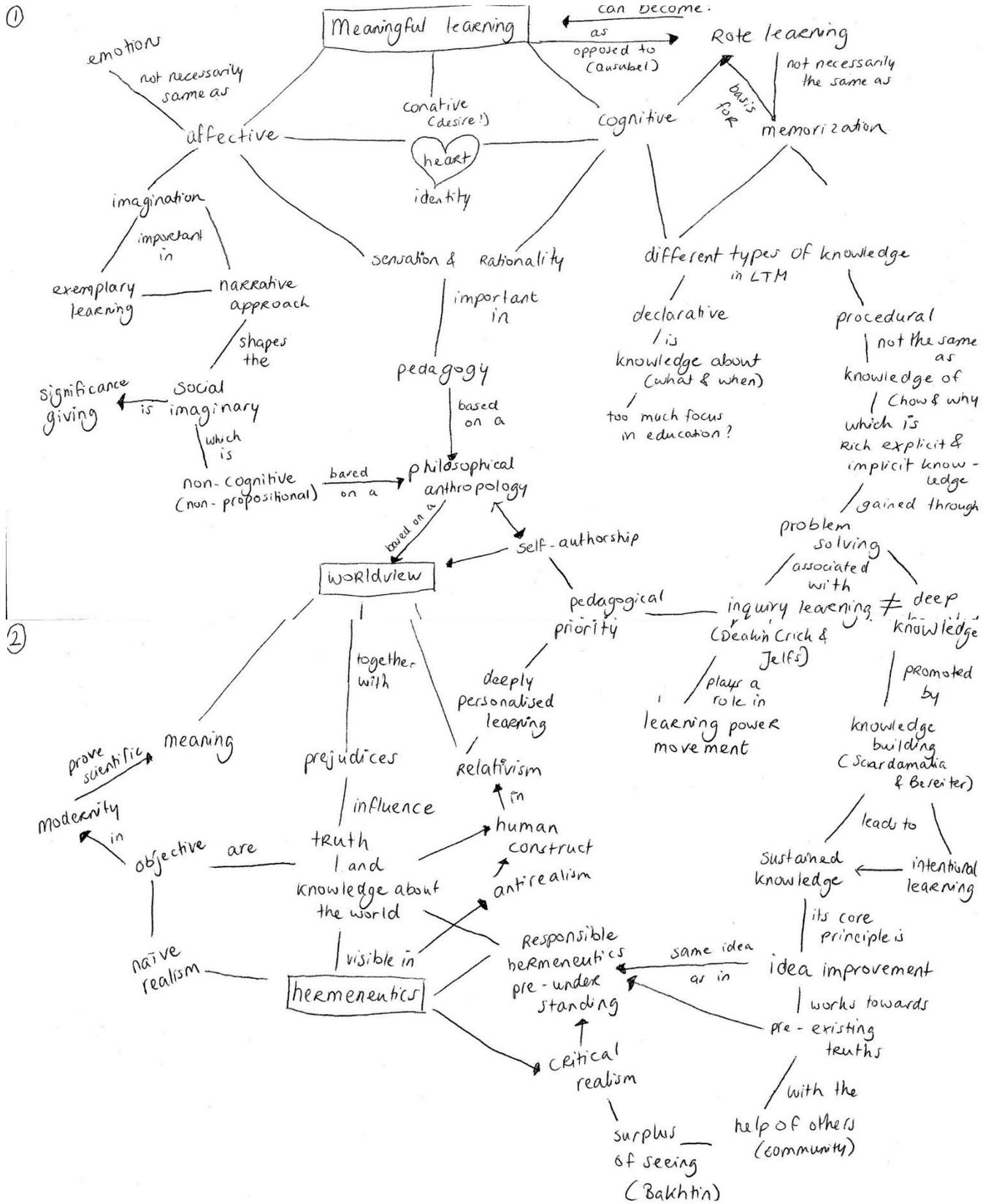
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Appendix A Overview of the Dutch education system

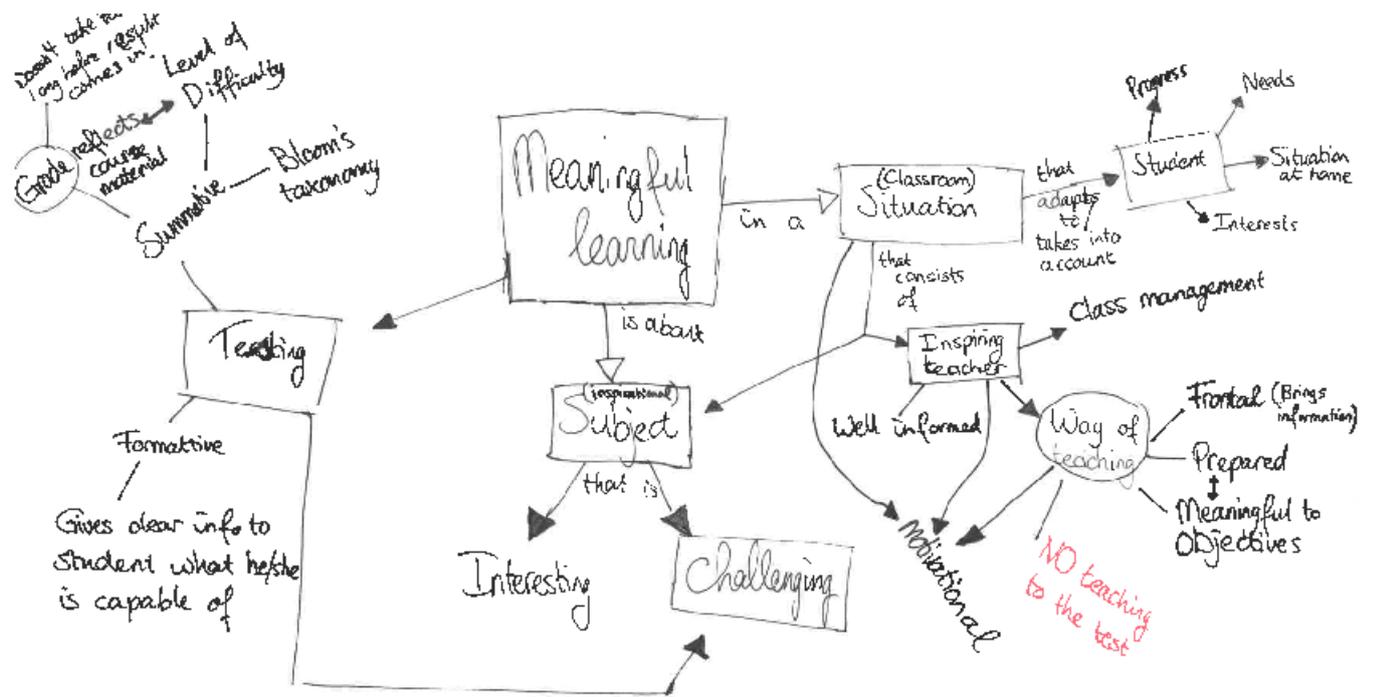


Source: <https://www.nuffic.nl/en/education-systems/netherlands/chart-dutch-education-system>

Appendix B Concept map of meaningful learning



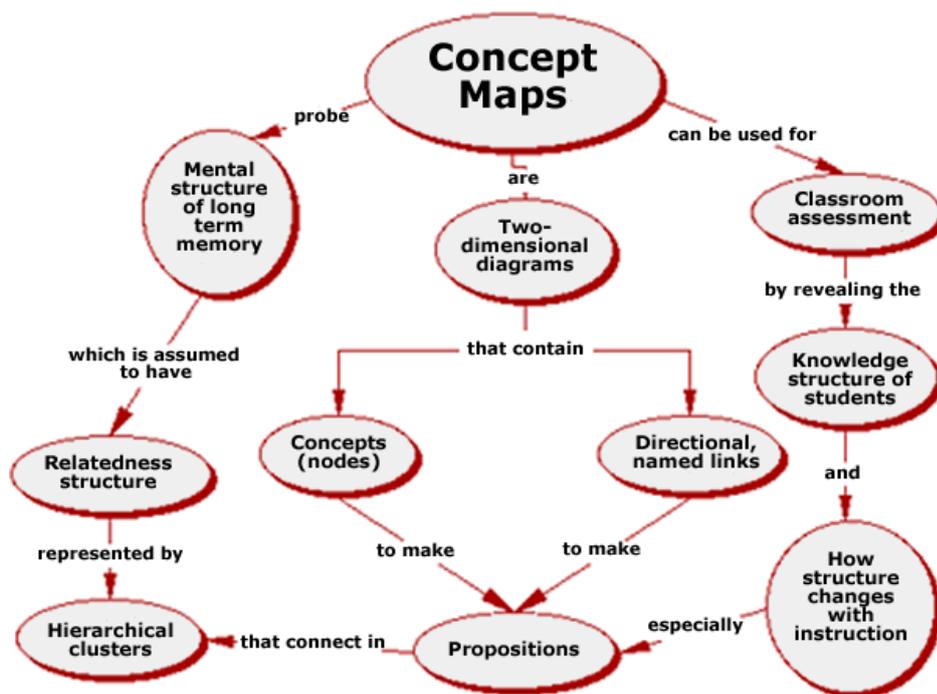
Appendix C Example of a concept map



Concept map George

Appendix D Concept mapping assignment

- What are your thoughts with the concept of 'meaningful learning'?
- Draw a concept map of your thoughts. This is something like a mindmap, the only difference is that you try to indicate connections/relations between thoughts by means of arrows. Beside the arrows you can write down the connection between these thoughts by means of verbs. An example of a concept map can be found at the bottom of this page. You can draw your concept map with pencil and paper. Feel free to use the computer if you prefer to do so.
- There's no right or wrong, you don't have to search for information for instance. It's just about your **first thoughts** when seeing the concept of 'meaningful learning'.



Appendix E Vignettes

A summary of the three epistemological paradigms (Olafson & Schraw, 2006). I used a slightly adapted version in this study, as I entered a fictive teacher name in in each vignette to make it less abstract. I used Dutch translations of these vignettes during the interviews . The headings indicating worldview were not included to the vignettes the student teachers read.

A.1. Realist world view (Vignette 1)

Peter:

‘There is a core body of knowledge in my classroom that each student must learn. Some of it is factual, but some of it is based on broad concepts and principles that everyone agrees on. This knowledge does not change much over time and represents the accumulation of important truths and understanding in my discipline. It is important for students to acquire this knowledge exactly as it is. The best way to acquire this knowledge is through an expert like me because I have a much better sense than they do of what is important to learn. It is unlikely that students could really create this knowledge on their own, so learning it from me quicker and more efficient. For this reason, it is important to me to assume a take-charge attitude so students can learn as much as possible. It is important to me that everyone comes away from my class with the big picture. It is my job to present the big picture clearly.’

A.2. Contextualist world view (Vignette 2)

Annette:

‘Students are encouraged to develop their own understanding in my classroom so knowledge is personally useful to them. However, the fact that students are expected to construct their own understanding does not mean that all understandings are equally valid. While I believe that knowledge is subject to interpretation, I also believe that some conclusions are better than others. Students need to understand how to gather and evaluate evidence so they can distinguish good from poor arguments. I can teach them some of these skills, but some they will have to learn by working with other students, or on their own. I believe that each student will bring a unique and valuable perspective with them. I try to structure my class so that students will pool their resources and come to the best understanding possible’.

A.3. Relativist world view (Vignette 3)

Hans:

'Students in my class need to understand that there are a variety of different ways to understand things. Knowledge comes and goes, and what the so-called experts consider the truth today will be viewed with suspicion tomorrow. Even people who spend years studying a topic disagree about what things mean, and in the long run, one opinion is as good as another. This means that students have to learn to think for themselves, question the knowledge and authority of others, and evaluate how what they know affects their life. Knowledge has to be used wisely so no one is left out or exploited by society. For these reasons, I do not believe that I can really teach my students what is important, since they all need to know different things. They have to figure it out on their own, taking into account the events that shape their lives, even if the uncertainty of living in a world with conflicting views of truth bothers them. What I know and believe should not really influence my students. My job is to create an environment where students can learn to think independently and take nothing for granted'.

Appendix F Interview guide first interview

- Introduction, ask permission for recording interview.
- Short explanation research and interview procedure.
- Start with concept map, elaborate on map, meaningful experiences in teacher education
- Metaphors, let them choose a metaphor
- Explanation metaphor
- Development metaphor, important influencers, role teacher education
- Aims education, move to worldview (use vignettes)
- Tensions, ideals and practice

Questions I had formulated ahead

- How do you give meaning to what you're learning, experiencing?
- What's your vision on education? Who or what has been important in the development of that vision?
- How do you think your pupils/students learn? What is knowledge?
- What's the role of others in what is personally meaningful to you? (others is very broad, family, teachers, fellow students, etc)
- How do you see the relation between worldview and meaningfulness?

Justification of my choice for this guide and these questions

What I hope to elaborate on is their view on teaching and learning that is expressed by the metaphor, and connect that to what they have written in their concept map. I would like to know how that metaphor has developed over time and if there are certain experiences and/or persons that have played a role in that. This will be helpful in order to connect to questions I have asked in the literature review, like how do public and cultural meanings become transformed into personal sense, how are personal meaning and values shaped by others and environment. I will ask whether and how the teacher education at Driestar has contributed to this development. How do the students give meaning to the curriculum and can they mention a meaningful moment they have experienced in the past years in teacher education? I would like to continue with their view on the aims of education (based on worldview). Then I would like to focus on tensions between ideals and practice. What does their classroom practice look like, does the metaphor they chose permeate into practice?

Appendix G Procedure and reflective memos pilot study

Before I started with the pilot I have asked permission from the manager of secondary teacher education. He approved and we also agreed that students would receive a gift voucher after participation. We also discussed which students I could ask to volunteer. I thought about asking an experienced student and a student who is not teaching yet but has been doing internships during the course. I thought it would be interesting to see whether that would make a difference in kind of data and help me to make a better grounded decision in purposive sampling of cases for the final data collection. I have asked a colleague tutor whether he knew students from his previous third year group who would be willing to participate. He mentioned two students and told that both students were teaching and one of them did not have a religious background. I decided to start with asking these two students as religion might also be an interesting given with respect to the final data collection and the role worldview has in my research questions.

I have sent these students an email and explained in short what my research was about and what would be asked from them. I attached the participant information sheet which was created for my ethics approval (Appendix P). They were both willing to participate and I sent them a second email with the concept mapping assignment (Appendix D, in Dutch or English if preferred). I planned an in-depth interview and asked them to send their map before the interview and bring it to the interview as well. I also added the consent form (Appendix Q) already so that they could read it and knew what they would have to sign at the interview. One interview took place at Driestar University and one at the student's home.

After I had interviewed these two students and transcribed their interviews I thought it would still be valuable to have an extra interview with another student, as these two male students were quite similar in age and teaching experience. I decided to ask a third student, a female, who had only been doing internships during the teacher training curriculum and hadn't applied for a teaching job yet to try out if that would be relevant or make a difference with respect to the research questions.

Reflective memos interviews pilot

15 12 2016 interview 1 pilot, Gouda

Afterwards:

I was very aware of my pitfall, which I know from earlier interview training is asking suggestive questions, so I noticed that I had to search for the right words sometimes or reformulate a sentence.

I had the idea that I had to react quite neutral towards the answers of the respondent (read that in a book on qualitative interviewing (Evers, 2007)) like humming and saying 'oké, yes' in order to be open and let the answers come from the respondent, not guide them in my direction or give socially desirable answers because of my reaction. But that doesn't really fit me, do I have to continue to do so? I'm more inclined to give a certain 'value' to what a participant tells, like 'that's beautiful'. Would that influence the answers a participant gives in an unwelcome way? I think this is also depending on the research paradigm, there are approaches where it may be essential to share common experiences, feeling etc. (narrative/biographical, e.g. thesis Trevor sent).

Themes: am I open enough? Not directing towards themes I would like, expect to hear?

Questions: enough probing questions, elaborating a topic?

19 01 2017 interview 2 pilot, The Hague

Beforehand: do I have to introduce themes which participant doesn't mention in concept map? If so, when do I introduce them?

Afterwards:

This interview took place at the student's home, so I had less influence on the positions. Sitting straight opposite each other is not a good idea, remember and ask for another setting if it would happen again.

I think this student had strong analytic skills, more difficulty with verbal expression. Had to search for words, quite some repetition. Do I use the right methods then?

Am I not too directive on themes?

I knew that this student doesn't have a Christian background, but he didn't touch upon that related to our teacher training at Driestar. He didn't even mention it. So I didn't touch it either but was doubting whether I would have to do so, because he didn't know that I knew. I didn't want to embarrass him. I supposed that we would touch it naturally, so I have to think about how I deal with this in my final data collection .

Metaphor -> seemed to elicit a new topic, as to what this student would like to be more like, to do more but hesitates to do so. Worth considering in evaluating use metaphors.

Very general impression: this student was more aimed at teaching his subject, content than on broader things like formation. Knowledge and skills come first, formation is something for later on was his idea.

23 03 2017 interview 3 pilot, Gouda

This student has been in my tutor group two years ago, so I knew her better than I did the other students. This felt actually not as a disadvantage. Maybe it was even helpful in getting deeper, reaching a deeper level because there was a certain trust between us already. She is originating from South-Africa so it was easier for her to do the interview in English. I noticed that it made me work on two 'levels' actually, I had to translate and focus on the content of what she was saying at the same time, so I had to work quite hard. I had to start the interview in a different way, as she had not been able to finish her concept map completely beforehand. I took a glance at what she had drawn already and wrote down a few key words. Then I started with asking after her thoughts with meaningful learning.

I noticed that I was more free in this interview, I thought I had to try out things and see it really as a pilot, so I felt some more courage to ask more contrasting questions e.g., 'this is interesting what you say, it seems to contradict each other, can you explain...'. In the first interview I struggled with being 'neutral', I think I have put more of myself in this third interview.

I had the impression that she was sometimes looking for my approval on what she was saying so I have stressed several times that it was not about the right answer, no good or bad, but that I was looking for her conceptions and thoughts. By the end of the interview we hadn't really hit on worldview, identity etc. and after the experience of the second interview I thought, let's give it a try and ask her whether she thinks there's a relation between meaningfulness and spirituality. So I brought in this topic, and actually I think she had some interesting thoughts about it, without God there would be no meaning is one that I remember.

What was interesting in this interview is that some new themes seemed to be arising. She started actually with the emotional side of meaningfulness, deep feelings. Interesting question is whether it matters that this interview was done with a female student while the other two were males. Or would it be more a matter of personality?

Another theme that was more pronounced in this interview was the pain that can come with meaningfulness. She mentioned something like *'it was terrible, but I learned a lot'*.

Themes that were recurring also in the other two interviews were recognition with others, I'm not the only one who has got difficulties and experienced this, and relevance of knowledge.

She choose facilitator as a metaphor, and when I asked if that would have been the same at the start of her teaching career she said no. She couldn't think of a metaphor for that time but described it as 'surviving'. In the vignettes she saw useful elements in all three descriptions and she explained what appealed to her and why.

Example of a case description from the pilot study

Case description interview 1 pilot

Harry (fictional) is a 30 year old teacher in vocational education, whose desire to become a teacher started at a young age. He has clear ideas about teaching and teacher education.

He thinks it is important to know his students well. He sees teaching as formation for life and thinks it important to add extra's to the curriculum. That helps students to see connections, which is important for meaningful learning. To him, a teacher's uniqueness is important and he would like to make himself distinctive from other teachers, he even words this as his vocation. It is precisely that which is often not measurable which makes education meaningful. Teachers can make a difference and are the ones to show direction to the students. He thinks there are some universal truths within a certain framework, like what the Bible says and the standing in a wider context of a tradition, but within that framework he values the process of students development of opinion, critical thinking and arguing. Knowledge consists of facts, can be elementary, and it is important that students see things in connection, compare and relate knowledge, can give examples and see the picture. Students learn by rehearsal on the one hand and group conversations and discussions on the other hand, both are meaningful in Harry's opinion. Others are important in learning as well.

Harry notices that his students have difficulty to see the relevance of their curriculum. They like the practice of their internship and have difficulty with the theory at school. The subjects at school are aimed at their future jobs, so Harry wonders why they don't see the meaningfulness of these.

Interestingly, Harry has got the same experience in and reflection on teacher education. He prefers discussing teaching practice by means of peer supervision and videos for instance over reading articles and theory. He thinks practice should be the core element of the curriculum in teacher education. Examples from teaching practice and an experienced teacher educator are important in his eyes. The person of a teacher educator can make a difference in meaningfulness. Besides he values a certain choice in the curriculum, which raises the motivation he thinks.

Reflections about meaningfulness

Level of self, person: use your unicity as a teacher, add something extra to the curriculum, make yourself distinctive, vulnerability, recognition, critical reflection, leave comfort zone.

Interestingly, he sees adding extra's, formation, important and thinks that is meaningful to his students. But for the teacher education curriculum he doesn't see that, mentions relevance and practical elements.

Relation between identity and meaningfulness; formation, vision on life. Daily devotional; essential elements when talking about meaning, stress possibility of salvation every day. Struggle to connect identity to content of the lesson. So worldview seems to be related more to topics that clearly have to do with identity, like daily devotions and ethics, more difficult to use it with more 'pragmatic' content, like with language teaching he mentions inviting the 'Federation against cursing' as an example.

He values vulnerability with his teacher educator, thinks that contributes to meaningfulness but hesitates to be vulnerable in classroom about identity.

Classroom environment/teacher education: discuss teaching practice, person of teacher educator important, experienced tutor, relevance of curriculum elements, deep probing, use connections; 'coat racks'.

Reflection on the methods

In this interview the vignettes elicited quotes about worldview, like '*this is postmodern*'. Using a metaphor helped to make a distinction between subjects, this teacher perceived himself in a different way when teaching different subjects. In one subject he felt more like a facilitator, he used a more 'clean', pragmatic way of teaching as he said. In the other subject he felt more like a shepherd-guide, because of the content of that subject which concerned more ethical topics.

Appendix H Interview memo

Notes interview 2 student 5, 27-3-18

It was hard that time was a constraining factor, the student arrived ten minutes late and we had only an hour left. I felt I had to make a choice which questions to ask and which not. (...)

I thought it was really difficult to leave issues which I certainly would have elaborated on if I was not conducting an interview. In a sense I felt like falling short towards her. She told me quite personal and substantial issues, but at that moment I was not her tutor or psychologist but her interviewer. Her search for forgiveness really affected me and I would have liked to elaborate on it. I doubted whether I should send her an email after the interview, but decided not to do so. I thought it would complicate the relation interviewer-interviewee.

I discussed this issue with my second supervisor and we have discussed that my decision was justifiable, but that I could come back to the issue if it would be addressed again during the third interview.

After the third interview she thanked me for the interviews and said she would miss these kind of conversations. At that moment I told her that I was personally touched by what she told me and we talked a bit more about her experiences.

Appendix I Memos

Student 1

02-01-18 Interview (iv) 1. Literature, books and movies can also play a role in meaning giving. Palmer (To know as we are known, p. 19): Students are formed by the reading they do, by the views of self and world such reading presents. Texts contain images of self and world in which our students are formed.

Student 2

23-11-17 p. 6 iv 1. Need for framework, fundamental certainties.

p. 13 iv 1. How does he see a worldview? - The Word - 'to fall' - 'to talk about something' - 'openings' - 'speak to each other'

Student 3

Iv 1 p. 16. 'Allergy' to structure, imposing, direction.

To be of use-> keyword

17-12-18

Memo while reading again and completing codes second interview:

What is striking: one the one hand a maximum of freedom for pupils, on the other hand clear rules, authority teacher, I decide. On the one hand freedom, on the other hand: nobody wants, everybody thinks.

14-1-19

Meaning is rooted in experience: p. 12 iv2, you are what your experiences are

Life is a learning path, the basis is refined by experiences (p. 8 iv 1)

Student 4

7-12-12

If a teacher has a lot of expertise in a certain area, you're more inclined to accept things. Also in other interviews -> Grace. Article about authority and master-apprentice, Polanyi, Mitchell (2006).

14-12-17 p1 iv1. Meaning seems to come from the outside inwards here.

Student 5

29-1-18 p. 11 iv 1 meaning = to add something

p. 11 iv 3 There is a difference between feeling welcomed, accepted versus belonging, being part of

p. 17 iv 3 Time: meaning may also come at a later moment

Appendix J Case description Grace

Grace is a 55 year old teacher of English in secondary education, at a preparatory secondary vocational education level. She has been a teacher in primary education for many years, but changed to secondary education mainly because of the growing administration load in primary education. The first thing that comes to her mind when thinking about meaningful learning is something that has practical value. If she uses practical tools in her classroom she notices that students enjoy them and she thinks they help in remembering, they function like a learning 'coat rack'. She also sees a certain amount of pleasure with her pupils when using these tools and that also reinforces learning in her opinion. She recognizes this from her own experiences in teacher education as well, she says she even remembers details from the context in which she used a particular practical tool, like a game, although she doubts whether she also remembers the content better.

Grace mentions that learning can also be annoying sometimes, when she has to do difficult assignments, which she is inclined to postpone because she is not looking forward to them. But looking back she saw that they were meaningful and she learned a lot. This has also a relation with her self-concept and personality, she says she thought she was better at reproducing than at other levels of thinking and what she has learned in teacher education is that she is able to do more than reproduction, she learned to have confidence and went through a growth in personality as she formulates it.

She also mentions the lessons of one of her teacher educators, in which she was told to do assignments on literature which she didn't like. But it was meaningful to her to do them as they broadened her view, she had to talk with other students, that made her go deeper and see new perspectives. She also learned to have more understanding and empathy for others by means of discussing literary books.

Opening new perspectives is a recurrent theme for Grace, she really enjoys it if someone is able to offer her a new perspective. This might be related to her youth in an agricultural subculture, in which her world was quite small and narrow minded. Because she has a lot of life experience already she notices she gets used to things, when talking about worldview and meaningfulness at Driestar she says it makes less impression on her because she has a similar worldview in basic beliefs as is lived out at the Driestar, so it is difficult to offer her something new in the sense of a new thought.

She does think that worldview is important though, it is the fundament from which you act, 'if something contains worldview elements it becomes more meaningful, has more value' she says. But she applies this to her own pupils, and gives an example from her teaching practice in which she chooses particular movies to show her pupils, which contain a lesson and touch upon worldview. She words it as 'I think it is important that they are impressed', and says she wants to teach these things subconsciously, as she presents the pupils they are watching the movies for their level of English.

When talking about learning with others she also mentions that it is important to have mutual sympathy. She talks about one of her teachers who gives something of herself during her lessons, and that helps in learning, she is more inclined to accept what that person says. That's what she wants to do in her own teaching practice as well. She mentions other examples of teachers whom she wanted to identify with, because she admired them for the way they knew their subject for example. She would like to know a lot about English and appreciates depth of thinking.

She thinks that you learn more from people who are similar to you, if there is a degree of affinity. It is not a prerequisite for learning, but it helps, otherwise you have to 'translate what the other does to your way of behaving'.

Teachers do have an important role in her story when talking about her vision on education. Her 'subjective educational theory' has been influenced by teachers at her primary school. She mentions two teachers who were nice and friendly. One of them taught her a lot and gave her appreciation, that gave her a positive feeling. He did not make a distinction between pupils, which was important to her as she felt a bit behind because of her agricultural background.

What she finds important in her own teaching practice when talking about her vision is that pupils learn things on the one hand, like vocabulary, but she also wants to show them something of her personality, how she takes her place in life, not only with the daily devotion but also in 'the usual things'. She wants to show them that she sees them as real human beings, not learning machines, and values a good relation with her pupils. She also wants to help them in this specific developmental stage of adolescence and help them develop towards adulthood. Therefore she chooses the metaphor of a shepherd-guide.

She thinks her students learn best in very diverse ways and she also gives them the opportunity to find out in which way they learn best. This is why she chooses facilitator as a metaphor as well, she facilitates ways of learning to treat each pupil as unique. A good classroom climate is also important for learning in her opinion.

A third metaphor she chooses is a craftsman. She would like to continue studying to be able to teach at a higher level in the last classes of secondary school. She loves the way students at a higher level ask questions, she appreciates it as they come with their own thoughts.

In reflecting on the vignettes she starts to talk about continuity and change in reflection on vignette 3. Things don't stay the same, she says. A vision develops, also in church. You are getting more insight and adapt to your time. The fundament stays the same but the way you live it out can be very different. So it is with knowledge, in her opinion. She talks about a development at her school towards personalized learning. She doubts whether that will work for the pupils at the level she teaches, 'because you have to oblige them to do something, otherwise they do not feel like it'. It would be different for students at a pre-university level, she thinks they could do with a teacher as a coach. Grace rather wishes that students discover for themselves why they have to learn something, but she notices a tension in dealing with that at her pupils level. They need someone who says: 'you have to do this', while at home in her own family she hardly ever uses the word 'you have to'.

Appendix K Questions and themes second round of interviews

Significant moments

- If you look back, what have been significant moments during your teaching career? Can you narrate them shortly, tell them as concretely as possible?
- What do they tell about your vision on your pupils and on knowledge?
- Has this vision changed due to these important moments?

Crisis

- Thinking about meaning and worldview is something that often emerges at crucial or critical moments. If you look back upon your life until now, have there been such crucial moments?
- Has the role of 'meaning' changed, have other things become meaningful after this moment/these moments?

Ethics

- When talking about norms and values in classroom, which ones do you consider to be important to teach your pupils?
- Sometimes when speaking about norms and values people also talk about 'the good life', what would you like to tell your pupils about the good life, how would you define that?

Reflective notes about implications of reading literature on worldview for the second round of interviews

- *Expression of worldview (wv) by means of stories, narrative -> ask for important moments in teaching career, ask to tell them in a short story, what do they tell about vision on pupils, knowledge and so on. Has that vision changed due to these important moments?*
- *Existential questions - > normally, people often not aware of their answers to existential views. Crisis can evoke thinking about these questions, can cause shift of wv. Ask for critical or determinative moments if they look back on life in general? Or as a teacher on teaching life? Has the role of meaning changed, have different things become meaningful due to these critical moments?*
- *Existential questions -> according to Van der Kooij et al (2017), ontological, teleological and ethical questions need answering to be able to speak of a worldview. Talking about meaningful learning addresses teleological question, meaning in life. Ontological questions could be touched in stories about important moments in teaching life, vision on pupils, nature of human beings. How best address ethical questions? Am I not going to broad when asking for answers to these questions, how best connect them to education? Wat makes my life a good life to live-> ask something about vocation? Think about that. Looking back to the first interviews, ethical questions (morality) were touched upon in interview with Dean.*
- Ask participants to comment on themes first interview, do they have questions, want to say more about them, how are they meaningful, what further memories do these themes prompt?

Example of themes I could send to Grace, based on the analysis of the first interview and her case description.

New perspectives:

It seems that opening new perspectives is one of the themes that comes up when you talk about meaningful learning. You mentioned the lessons of one of your teacher educators, in which you had to do assignments on literature, which you didn't like. But it was meaningful to you to do them as they broadened your view, you had to talk with other students, that made you go deeper and see new perspectives. You told me that you really enjoy it if someone is able to offer you a new perspective. Do you think this can be related to your youth? You told me you were raised in an agricultural subculture, in which the world was quite small and narrow minded.

Former teachers

Your teachers from the past seem to have had quite some influence. You mentioned two teachers in primary education, who were nice and friendly. One of them taught you a lot and gave appreciation, that gave a positive feeling. He did not make a distinction between pupils, which was important to you because you felt a bit behind because of your background. How do these experiences influence the way you approach your pupils?

Practical value (introduce)

Do things always need a practical value to be meaningful? Or is there more than practical value to things?

Worldview and impression (introduce)

You told me that you show movies to your pupils which contain worldview elements, you think it its important that they are 'impressed'. Can you explain what you mean by that and why is that important to you?

Final themes second interview

Grace:	New perspectives	Educational past	Practical value
Jack:	Fundamental certainties	Language	Continuity and change
Dean:	Freedom	Useful-useless	
George:	Authority and expertise	Connectedness	Integration
Meg:	Freedom and limits	To add something	World of difference

Appendix L Reflection on the second round of interviews

May 2018

It's interesting to see how the portraiture methodology develops. Grace, for instance, came back to what she said in the first interview about her perception of Driestar's worldview. In the first interview she said that in general she agreed with the worldview as experienced at Driestar, but when she read that in the themes I sent her in preparation of the second interview, she said that there's actually a fundamental difference between her worldview and what she experienced at Driestar. I've written a bit about the content of her comments in my ISREV paper. She also commented on my interpretation of the theme that emerged from the first interview, on *New perspectives*:

It seems that opening new perspectives is one of the themes that comes up when you talk about meaningful learning. You mentioned the lessons of one of your teacher educators, in which you had to do assignments on literature, which you didn't like. But it was meaningful to you to do them as they broadened your view, you had to talk with other students, that made you go deeper and see new perspectives. You told me that you really enjoy it if someone is able to offer you a new perspective. Do you think this can be related to your youth? You told me you were raised in an agricultural subculture, in which the world was quite small and narrow minded.

During the second interview, she said she wasn't sure there was a relation between this theme and her youth, it was too long ago and she has been influenced by so many more people in the meantime. This is an important point to reflect on, as here epistemic humility may come in sight, I can be wrong in my interpretation of a participant's story. I think it's also related to Bakhtin's notions of *dialogue, polyphonic meaning-making* (Harvey, 2015). At this point I have to think carefully and critically about how this is all resonating with my knowledge paradigm and what I wrote in my methodology chapter: *I check the validity of my interpretation with the student and also against the literature. So I wouldn't go as far as Harvey (2015) does in talking about 'co-construction' of the data. I would rather call it a justification of my interpretation. I think it is inevitable that my perception as a researcher will be reflected in the portraits, as it will reveal something of my biases and experiences (Hackmann, 2002). 'Since humans cannot rid themselves of their particularities, our knowledge of reality will always be colored by the particularities in which we live and which serve as the lens by which we view reality' (Mitchell, 2006, p. 122). But I will not deliberately weave my voice into the portrait, in the way Lawrence-Lightfoot used this method. In this research I will try to be as faithful as possible to the perceived meaning of the student.*

In general all participants agreed with the themes I constructed/themes that emerged (I have to think about my language here!) from the first interview. Sometimes they were surprised by reading their own utterances, *'did I really say that'* or *'am I always that unclear'*. Some of them mentioned that it's actually thinking out loud what happens during the interviews, I asked them questions which they've never thought of before. Several students said at the end of the second interview that the interviews helped them to develop their own thoughts, it all started to fall into place. In the first interview their thoughts about meaningful learning fanned out and now they started to see connections and line in their thinking.

In the document to prepare these second interviews I wrote about narratives and asking for stories to elicit worldview elements. My perception is that some participants come up with stories easier

than others, some students used more abstract, reflective language and others had no difficulty to come up with stories or examples.

Today I actually had a third interview with one of the participants, earlier than scheduled. This student has had his final assessment at Driestar already and has graduated so that's why he wanted to have the third interview now. I made a first draft of themes from all participants' interviews, 'synthesized themes' (Harvey, 2015). I didn't have much time for it so I discussed with Bram whether a first draft would do. He said it wouldn't be a problem if I would have used five themes in this interview and it turns out that there are actually six themes. Interviewing people sometimes has practical limits. I decided to see it as a pilot of the third interviews. It worked out well, it was really interesting that this student even started to make connections between the themes that I had given.

I drafted a document with five themes that emerged from the first two interviews with all participants. I shortly introduced the themes and gave examples from the interviews to illustrate them, sometimes paraphrased, sometimes a quote. I used pseudonyms and carefully selected quotes so that other participants would not recognize their fellow students. I asked in what ways these themes were meaningful, whether the participant wanted to share memories or experiences prompted by these themes or comment on them. Actually the interview developed quite easily.

It's nice to mention that as a final reflection on all three interviews, this participant mentioned that these interviews were actually a kind of meaningful learning.

Appendix M Document with themes third interview and example of a theme-paragraph

In which ways are these themes meaningful? Do they evoke further memories or experiences?

Theme 1 Time: continuity and change

Theme 2 Connectedness: different worlds

When talking about meaning the theme 'connectedness' comes to the front with several of you. Connectedness with the lifeworld of pupils (Meg, Dean, Jack, George). *'(...) especially connection to their lifeworld is very important to me, (...) everything we do, needs to be in the here and now of a pupil'. (Jack)*

Connectedness also entails a certain meaning, without connection there is little meaning (George). George thinks it is important that there is a connection in the lesson between the preparatory assignments and the lecture for instance, between content and aims and test.

Connectedness also emerges when talking about worldview and identity, the daily devotions at Driestar for instance and the connection to the content of the lectures. Some of you miss that connection and experience the daily devotion as something separated, on its own, which has a more 'obligatory' character. *'There was a daily devotion and we sang a song but that's it. To me it was like: right, we've ticked it off, next item'.*

At the same time several of you also struggle to connect subject content to worldview. It is something that mainly comes to the fore in the daily devotion and in attitude, comings and goings as a teacher.

'Yes, purely talking about the daily devotions. Really in the lesson content, that's actually impossible, for that lesson was very specifically about a subject, so then it's often impossible'. (Dean)

'But what it is like to be really a Christian teacher and to give that meaning during the lesson, that's really difficult for me'. (George)

The connection with each other, as student teachers and teacher educators, was also not always experienced during the teacher education course when talking about worldview. One of you talked about 'a fundamental difference'. *'What is read from the Bible and said with the daily devotion, I generally agree with, but that is the formal part. But I feel, I notice a fundamental difference in how you experience things, so to speak, with a lot of people, students and also teachers, who look from a different angle than I do'.*

'I am accepted, there is room for my opinion but if you go in depth people opt out, disengage, because there is too much difference in thinking so we can't get along the same lines'.

Theme 3 Freedom and responsibility

Theme 4 Broadening of horizon

Theme 5 Practical value

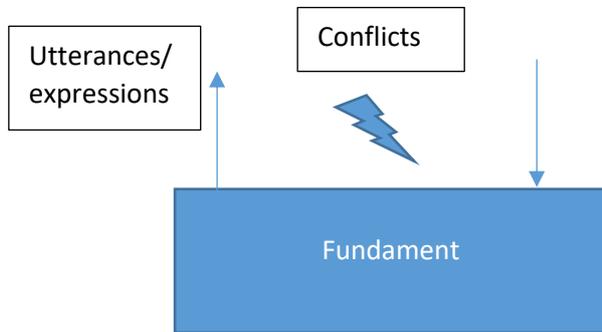
Appendix N Reflection on the third round of interviews

Oct. 2018

Key points:

- Seem to be sort of 'layers' in meaning giving, connected to age e.g., developmental stage plays a role in how someone reflects, values developments in society (digital communication e.g.), how broad their view/horizon is.
Some students start to talk about worldview in terms of time periods: the worldview of my youth (Grace), a radical change in wv 20 years ago (Jack).
- Contradictions in interview: Meg tells different things when talking about concrete experiences with Christian students compared to when talking in a more reflective view about the church in general (individual-general description). Maybe connected to previous point about layers in meaning, active construction of meaning can be different then sort of stable, underlying meaning giving. Role of narratives? Ethos as intended and experienced, formal and lived?
- Jack uses different explanations for the same phenomenon: he explains difficulty of youth to deal with freedom in a developmental-psychological way, with adults he says it's 'Adamic' (so related to our sinful nature, fall in Adam).
- Individual-community may be additional theme: contradictory status quo in education, on the one hand focus on/development towards personalised, individualistic, custom-made education but on a social level the group is still very important, youth is '*addicted to confirmation*' (George).
- What's the role of memory? People tell me things based on traces of their memory. Can be selective.
- Nuancing, refining worldview compared to first interview. Jack seemed to hold a very positivistic point of view in the first interview, his language (hard, solid f.e.) is still referring to a more positivist view but his explanation nuances his language I think. Jack: '*We have got a fundament, and I am convinced that our fundament is very solid. Our theology, our Bible comments, our exegesis, but if you look at Israel, you start thinking: maybe we actually know only a little bit, and if you go and have a look at the big evil world outside, then you think: ooh, do we claim the only, exclusive truth? And if you go into the whole Christian world further on, from North-Korea, China, Eritrea, where people act and experience it very differently and still they are sincere Christians, which belong to the crowd apparently, yes, then who are we? (...)' 'I stand for 'my truth'. But how far can I impose that, opinion, on others?*'
Same confession, expressions/utterances are different. Talks about a fundament with different houses build on it. Put '*small reformed world*' into perspective.
- Changes in worldview scaring, fear to give up good things (Grace)
- Role of worldview (sometimes students talks about meaning) as a fundament: deeper meaning, without a fundament meaningless, meaning in life, gives sth. to hold on, aim, something of stable value, can't control things in life therefore you need meaning in life, something stable (Meg).
Out of the same fundament different expressions/utterances arise, less deep meaning, strengthen fundament, conflicts often originate at the level of expressions, threatening if

people start to think different. Related to convictions -> people are convinced their truth is the only truth.



Appendix O Reflection on case descriptions

Written for the upgrade, February 2018

This may not become content of the final thesis, first stage of analysis, emerging themes. But I thought it would be helpful to give insight in my thought development, e.g. how I'm dealing with iterative analysis, emic/etic perspective.

- Positivist view on knowledge on both sides of dimension reformed-evangelical. Example case George, use the Bible in every lesson. Idea of Christian education as 'instruction' (chapter Trevor formation in English schools, Cooling, 2018) Telling the students... Jack, reformed school, uses very specific mystic language, seems to have positivist epistemology as well, 'objective knowledge' 'very proved' 'hard knowledge'.
- Case Dean; notice postmodern elements in his worldview. Who has the right to tell me how to live? Role of Authority. Modern liberal thought: nobody should ever adopt any moral standard *on authority*. Everybody should become autonomous. Kohlberg stages, autonomous, principles not based on 'someone's say-so' (Wolterstorff, 1980, p. 106). 'In morality we can never get beyond belief to knowledge' in modern liberal thought, morality human creation. Conflicts with Christian believe, moral law will and command of God. Authority has a central status in the Christian understanding of moral law. Moral law is objective, there is something there to be known. (Wolterstorff, p. 108). p. 19 Modern thought: what is right is own norm.
- Case Grace; elements personal worldview (Blokhuys, literature chapter). Tradition, gender, social environment, age, etcetera influence worldview. 'In the working out of one's worldview to a comprehensive understanding of reality there is a continuing interaction between the personal worldview and ideas and questions in the social environment. In a pluralistic society there is no end to this process' (Blokhuys, 2011, p. 2).
- Cases George and Grace: influence of representations of what others do, in literature and drama (Wolterstorff, 1980, p. 51) Modeling. Palmer (1993, p. 19) students are formed by the reading they do, by the views of self and world such reading presents. Texts contain images of self and world in which our students are formed.
'But it is clear which sort of persons a given person is most likely to imitate; namely, those high in his or her affection or esteem on account of their prestige, power, intelligence, competence and the like (Bandura, modelling) (Wolterstorff, 1980, p. 58)
- 'Bricolage', eclectic character worldview in interviews.
- Several students mention connection meaningful-useful. 'Utilitarian' view on meaning. Can be important. Opposed to 'fundamental'? Influence (post)modern culture? Heteronomous structures, influence society. Classrooms reflect structures of wider institution, which in turn reflects wider form of oppression in modern states (Shipway, 2011).
- Continuity and change theme; Jack reflects a lot on time, society, changes, educational development, innovations.
- Personal knowledge, case George, pupils as unique creatures
- Personal construct theory (Hull, 1985) tight and loose constructs

Appendix P Participant information sheet



Meaningful learning in secondary teacher education at Driestar Christian University

PARTICIPANT INFORMATION SHEET

A research study is being conducted at Driestar Christian University by Eva-Anna Meijer-Kater.

Background

As a teacher probably your hope is that what you teach your students will last for their life time. But that is easier said than done. Because what we as teachers might consider the right things for our students to learn might differ from their perception and interests. The same counts for the education that you take as a student teacher. You would like to hear information and knowledge that is meaningful to you. But what is it that makes it meaningful and what are your ideas about meaningful learning? This is a central question in this study.

What will you be required to do?

Participants in this study will be asked to:

- Participate in three semi-structured interviews in Dutch or English.
- Draw a concept map

To participate in this research you must:

- Be a fourth year student
- Be willing to share your thoughts and experiences about what makes learning meaningful to you as a student teacher

Procedures

Step 1: As a participant you will be asked to draw a kind of mind map (which is called a concept map) about your thoughts and associations considering meaningful learning. After drawing this map I will have an interview with you in which we can elaborate on this map and you can share your ideas about and experiences concerning meaningful learning.

Step 2: After the first interview I will analyse the interview transcript and list themes that arise from the first interview in a document. In a second interview I would like to discuss these main themes together. I will send you the document with themes beforehand.

Step 3: After the second interview I will analyse and bring together themes from all participating students and we will discuss these themes during the third interview.

Step 4: As a final step, during Summer 2018 I will write an anonymized portrait with main themes concerning you and your thoughts on and experiences with meaningful learning at Driestar University.

You will receive this portrait and will be invited to discuss this portrait, by mail, by phone or face to face if you like.

All the interviews will be recorded with your permission. We will find a suitable moment and place for the interviews.

Feedback

Participants will receive a summary report of the key findings. If interested they can receive a full copy of the thesis.

Confidentiality

All data and personal information will be stored securely within Driestar University premises in accordance with the University's own data protection requirements. Data can only be accessed by Eva-Anna Meijer and on request by the two supervisors. After completion of the study, all data will be made anonymous (i.e. all personal information associated with the data will be removed).

Dissemination of results

The results of this study will be presented in a session at Driestar University, which is open to all participating students.

Deciding whether to participate

If you have any questions or concerns about the nature, procedures or requirements for participation do not hesitate to contact me. Should you decide to participate, you will be free to withdraw at any time without having to give a reason.

Any questions?

Please contact Eva-Anna Meijer on 06 58853026 or send an email to E.A.N.Meijer@driestar-educatief.nl

Appendix Q Consent form



CONSENT FORM

Title of Project: Meaningful learning in secondary teacher education

Name of Researcher: Eva-Anna Meijer-Kater

Contact details:

Address:

Tel:

Email:

Please initial box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.
3. I understand that any personal information that I provide to the researchers will be kept strictly confidential
4. I agree to take part in the above study.

Name of Participant

Date

Signature

Researcher

Date

Signature

Copies: 1 for participant

1 for researcher

Appendix R Approval letter Ethics Committee



7th June ,2016

Ref 15/EDU/029

Dear Eva-Anna

Project title: Meaningful learning in secondary teacher education.

Members of the Faculty of Education Research Ethics committee have reviewed your application and have agreed to grant approval. Your application was clear and fully addressed all necessary requirements.

I confirm that you can commence your research. Please notify me (or my replacement as Chair of the committee), of any significant change in the question, design or conduct of the study over its course.

This approval is conditional on you informing me once your research has been completed.

With best wishes for a successful project,

Yours sincerely,

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

Dr Viv Wilson

Acting Chair, Faculty of Education Research Ethics Committee.

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