

Artikkel 3

Understandings and attitudes regarding different curriculum defined views on learning and developing. A comparative study of attitudes and understandings among Norwegian and New Zealand teacher educators.¹

¹ Under vurdering hos Educational Research for Policy and Practice etter ønske om revideringer.

Abstract:

This is a study of Norwegian and New Zealand teacher educators' attitudes and understandings of what constitutes learning in schools. Excerpts of curriculum differences between the countries were used as catalysts to gain insight into teacher educators' espoused theories regarding their understanding of learning. This article describes reactions from Norwegian and New Zealand teacher educators' when presented with examples of two different educational cultures. The Norwegian and New Zealand educational contexts are similar, but one difference is how the educational systems are governed, with Norway appearing to be governed top-down to a greater degree than New Zealand. This article examines whether top-down governing of education can lead to discrepancies between formal curriculum, perceived curriculum, and operationalised curriculum. The findings indicate that such discrepancies exist among Norwegian Teacher educators, and it can furthermore lead to a gap between these levels of the curriculum and the teachers' own professional convictions. The findings indicate that inconsistencies of this character could affect teacher educators' motivation for their profession, and can be perceived to undermine the trust that practitioners feel for their professional and pedagogical competencies. This article contributes to broadening the understanding of how the governing of education could affect practitioners at a time of political pressure and technological innovation.

Introduction

Auerbach wrote about a computer revolution in 1967. He described the computer revolution as being underestimated and claimed it was a technological inevitability (Auerbach, 1967, p. 12). For the last three decades, researchers, policy makers, and educationalists have all harboured great expectations for the use of technology. The technological revolution has had a great impact on the field of education in Norway; Sørby (2007, p. 57) stated that Norway was the first country in Europe with a curriculum that held digital literacy to be a fundamental component. The use of digital tools has, in fact, been made mandatory in all school subjects at all levels in Norwegian schools (Ministry of Education and Research [MER], 2006; 2016a) and has been added as a fifth basic skill – on a par with oral skills, reading, writing and numeracy (MER, 2016b). In effect, Norway has been exposed to a stronger top-down educational implementation of information and communication technology (ICT) than other countries (Krumsvik, 2014).

However, Elstad (2016b) has claimed that educational technology has raised false expectations. Fifty years after Auerbach's predictions, Krumsvik (2014) stated that we are still in the infancy of understanding how digital technology might contribute to the field of

education. The development is a global phenomenon, but not all countries have made it a pervasive part of their curricula for schools. Teacher educators in New Zealand have not been subject to the same political pressure to implement digital technology in education (Ministry of Education [MoE], 2007); the New Zealand curriculum is more suggestive in its formulation, and their way of implementing digital technology in education is based on wordings like ‘should’ or ‘could’ (MoE, 2007). The use of digital technology is not explicitly implemented in the curriculum as it is in Norway (Madsen, Thorvaldsen, & Archard, 2018).

To exemplify this, both the Norwegian and New Zealand primary school curricula contain five-item bullet lists defining what is prerequisite for learning. New Zealand has defined its bullet list as competencies, described as ‘capabilities people have, and need to develop, to live and learn today and in the future’ (MoE, 2014). In the Norwegian curriculum, the basic skills are ‘defined as basic to learning in school, work, and social life. These skills are basic in the sense that they are fundamental to learning in all subjects as well as a prerequisite for the pupil to show his/her competence and qualifications’ (MER, 2012). Even though the two lists are described as basic and fundamental for learning, the two countries have chosen to base these overarching sections of the curricula on quite different educational cultures. The New Zealand list contains a more holistic view of the student, and the Norwegian list contains a more technical skill oriented perspective on learning.

Table 1: The New Zealand key competencies and the Norwegian basic skills

New Zealand key competencies (MoE, 2007, p. 12)	Norwegian basic skills (DET, 2006)
<ul style="list-style-type: none"> • Thinking • Using language, symbols, and texts • Managing self • Relating to others • Participating and contributing 	<ul style="list-style-type: none"> • Oral skills • Reading • Writing • Digital skills • Numeracy

Elstad (2016b) has claimed that the ambitious governmental strategies for implementing ICT in schools have been criticised by researchers and school professionals. It has also been questioned whether the changes made by the Norwegian reforms in 2006 were motivated by

political eagerness rather than a concern for quality in education (Krumsvik, 2014). It would therefore be interesting to investigate how Norwegian and New Zealand teacher educators relate to these two different perspectives on learning. This is a comparative study of teacher educators responses and attitudes towards examples of two different educational cultures. It is not a comparative study of Norwegian and New Zealand formal curricula, as the two excerpts will not do either of the two curricula justice as a whole.

Research Question

What are Norwegian and New Zealand teacher educators' responses and attitudes towards examples of holistic and technical perspectives on learning?

Theoretical Background and perspectives

This article is a comparative study of teacher educators in Tromsø, Norway and teacher educators in Waikato, New Zealand. Norway and New Zealand are facing many similar challenges in education policy; both must educate student teachers in digital-rich environments (Organisation for Economic Co-operation and Development [OECD], 2010, p. 95), and they are comparable in terms of the similar structure of their educational systems. The University of Waikato (UoW) is similar to the Arctic University of Norway (UiT) in number of students (UoW: 12,000 students; UiT: 15,800 students); they are both universities with a strong bicultural component, as they both focus on indigenous cultures and people; and both universities value international collaborations and have multicultural student populations. Besides the similarities, what makes this an interesting comparative study is the mentioned differences in how the two countries have politically governed education during the last decade.

One of the impetuses for this research was to investigate the established gap between policy and practice regarding digital technology in Norwegian education (Egeberg, Hultin, & Berge, 2016; Ørnes, Wilhelmsen, Breivik, & Solstad, 2011). In reviewing relevant literature, it was found that this gap is often explained with practitioners' deficiencies (Arbelaiz & Gorospe, 2009; Egeberg et al., 2012; Egeberg et al., 2016; Enochsson & Rizza, 2009; Gouseti, 2010; Hatlevik, Egeberg, Gudmundsdóttir, Loftsgarden, & Loi, 2013; Player-Koro, 2013; Wilhelmsen, Ørnes, Kristiansen, & Breivik, 2009; Ørnes et al., 2011). This article is a supplement to this ongoing discussion and is a contribution to broadening the understanding of the gap between policy and practice in Norway.

This study builds on a conducted survey and it appeared from the results that the influence of and contribution to digital practice was quite different in the two countries. In Norway, the use of digital technology was dominated by the professional attitude, while in New Zealand it was dominated by digital competence. At the same time, digital competence was somewhat lower in New Zealand than in Norway, but the professional application of digital tools was significantly higher (Madsen, Thorvaldsen, & Archard, 2018).

There is often a mismatch between new technology and well-established educational practices, and well-established pedagogical practices can be resistant to change (Hauge & Lund, 2012). However, the Norwegian mismatch between attitudes and practices in the use of digital tools merits deeper analysis, and it may contain elements for deeper understanding of technology-enhanced learning. Regarding the claims that educational technology has raised false expectations, it seems necessary to include the practitioners' perspective to get a broader understanding of the field of research. This study is about finding out whether there is a pattern to be found in how Norwegian and New Zealand teacher educators assess parts of their own educational culture and what attitudes are expressed when confronted with a different one.

[The New Zealand curriculum](#)

The New Zealand curriculum is a statement of official policy relating to teaching and learning in English-medium New Zealand schools. Its principal function, according to the MoE, is to set the direction for student learning and to provide guidance for schools as they design and review their own curricula. A parallel document, Te Marautanga o Aotearoa, serves the same function for Māori-medium schools. Although they come from different perspectives, both start with visions of young people who will develop the competencies they need for study, work, and lifelong learning, and who will go on to realise their potential. Together, the two documents help schools give effect to the partnership that is at the core of the nation's founding document, Te Tiriti o Waitangi/The Treaty of Waitangi (MoE, 2017). The New Zealand curriculum sets the direction for teaching and learning in English-medium New Zealand schools; however, as stated by the MoE, it is a framework rather than a detailed plan. 'This means that while every school curriculum must be clearly aligned with the intent of this document, schools have considerable flexibility when determining the details. In doing this, they can draw on a wide range of ideas, resources, and models' (MoE, 2017). Schools are, according to the ministry, required to base their curricula on the principles of the New

Zealand curriculum, to encourage and model its values, and to develop the key competencies at all year levels (MoE, 2017).

The Norwegian curriculum

The Knowledge Promotion is the latest reform in 10-year compulsory schooling and in upper secondary education and training. It came into effect in 2006 and consists of three main documents: the core curriculum (den generelle delen av lærerplanen), the quality framework (læringsplakaten mm), and the subject curriculum (den fagspesifikke læreplanen). The core curriculum was retained from the reform in 1997 and holds a holistic perspective of the student (Directorate for Education and Training [DET], 2011b). ‘The quality framework summarises and elaborates on the provisions in the Education Act and its regulations, including the National Curriculum for Knowledge Promotion in Primary and Secondary Education and Training, and must be considered in light of the legislation and regulations’ (DET, 2011a). The subject curriculum addresses the subject objectives, competence objectives, assessment, teaching hours, and the basic skills. The basic skills are integrated into the competence objectives for each subject. Both the core curriculum and the quality framework cover the holistic perspective presented in the New Zealand key competencies, while the subject curriculum is based on the basic skills and defines what objectives should be covered during the school year.

Ongoing work with new curricula in Norway

Renewal of Knowledge Promotion is an ongoing work, which aims to give students more in-depth learning and better understanding. White Paper no. 28 (2015–2016; ‘Fag – Fordypning – Forståelse. En fornyelse av Kunnskapsløftet’) and Proposition to the Storting no. 19S (2016–2017) defines the goals and framework for this work (MER, 2017). The new curriculum is intended to be implemented in 2020. As part of this renewal process, an expert committee was appointed, often referred to as the Ludvigsen Committee (Ludvigsenutvalget). This committee was to assess the extent to which schools’ content covers the skills students need in their future social and working lives. As part of the Ludvigsen Committee’s examination of the Norwegian curriculum, it contacted, among others, government authorities in New Zealand (NOU, 2015). The committee’s conclusion was clear: the future Norwegian curriculum should be based, to a greater degree, on a broader understanding of competencies. The committee recommended a limited focus on skills, instead building the curriculum on four areas of competence: subject-specific competence; competence in learning; competence in communicating, interacting, and participating; and competence in exploring and creating

(NOU, 2015). Despite this clear recommendation, the Norwegian DET continues to maintain its focus on the basic skills in education (DET, 2017). As described, there are different perspectives expressed in the Norwegian and New Zealand curricula. In the current study, these differences are exemplified by the Norwegian basic skills and the New Zealand key competencies (see table 1).

Methodology

This study uses an mixed methods explanatory sequential design. This means that the results of one approach were necessary for planning the next method (Johnson, 2010; Johnson, Onwuegbuzie, & Turner, 2007). A survey was initially conducted, with all teacher educators at both universities included (N 108). The survey aimed to assess three different constructs: the teacher educators' *level of digital competence*, *attitudes towards digital technology in education*, and *use of digital technology in educational contexts*.

Both digital competence and professional attitude were based on Likert-scaled statements. These two constructs were developed based on the theory of action (Argyris & Schön, 1978), in which an analytical distinction was made between theory in use (digital competence) and espoused theory (attitudes towards digital technology). The construct *digital competence* was operationalised using definitions by Tømte and Olsen (2013) and Lund, Furberg, Bakken, and Engelién (2014). In accordance with these definitions, the focus was placed on three defined aspects of digital competence: pedagogic and didactic understanding, subject-specific understanding, and technological understanding. The construct intended to map teacher educators' attitudes was based on the OECD report 'Connected Minds: Technology and Today's Learners' (2012). In that report, the field is characterised by a continuum from technology averse to technology positive. To encompass this range of attitudes, statements were prepared to cover the respondents' own motivations for using digital tools, their attitudes to the position of digital tools in the public arena, and their attitudes to the use of digital tools in teaching (see Madsen, Thorvaldsen, & Archard, 2018, for additional description). Insight into the teacher educators' use of digital technology was based on the reported frequency of use of 16 digital technologies and the work methods of the participants in their own teaching during the previous year. When assessing internal consistency within the constructs by the use of Chronbachs Alpha, the results suggest that the study was based on reliable data, and that the sample was reliable according to the design Madsen, Thorvaldsen, & Archard, 2018).

The results from the survey also served as the basis for strategically selecting participants to the following qualitative interviews. Digitally skilled teacher educators were selected, with the aim of gathering informed opinions regarding the use of technology in educational contexts. It substantiates the interviewees attitudes towards digital technology in educational contexts, when choosing interviewees who were digitally skilled. It is less likely that their attitudes toward this are based on assumptions. The survey results also offered the opportunity to conduct a maximum variation sampling (Creswell, 2013, p. 156). This strategy requires the defining of a category that produces different responses – in this case *attitudes towards digital technology* – to paint a varied picture of the participants. In line with the sampling strategy, participants who responded as the most critical and the most positive towards digital technology were selected for interviews.

The selection was done by producing a scatterplot of teacher educators' self-reported digital competence and their attitudes towards digital technology was produced. See figure 1 and 2, with x-axis showing the range of attitudes (from 1 being the critical end of the scale, and 5 being the positive end of the scale), and y-axis showing the range of digital competence.

Figure 1: Norway

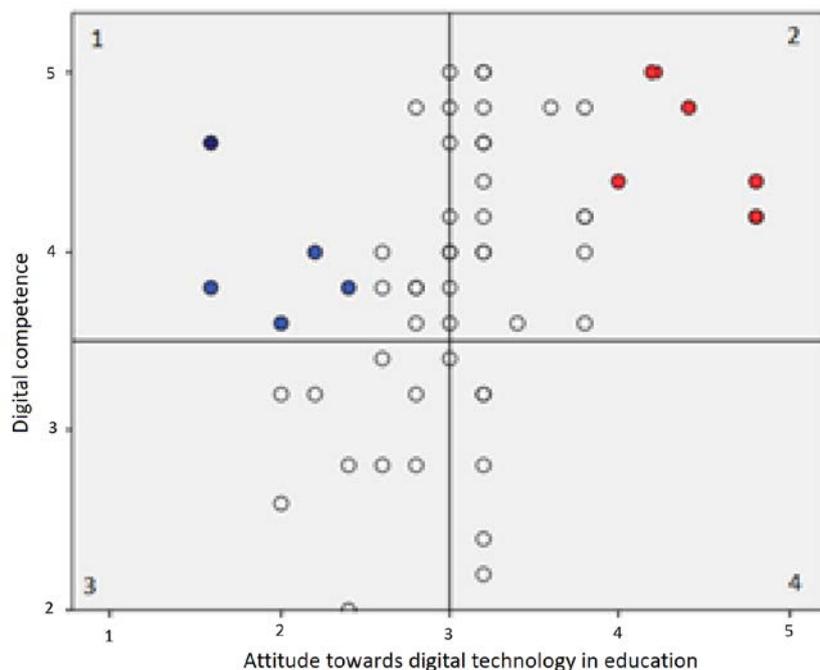
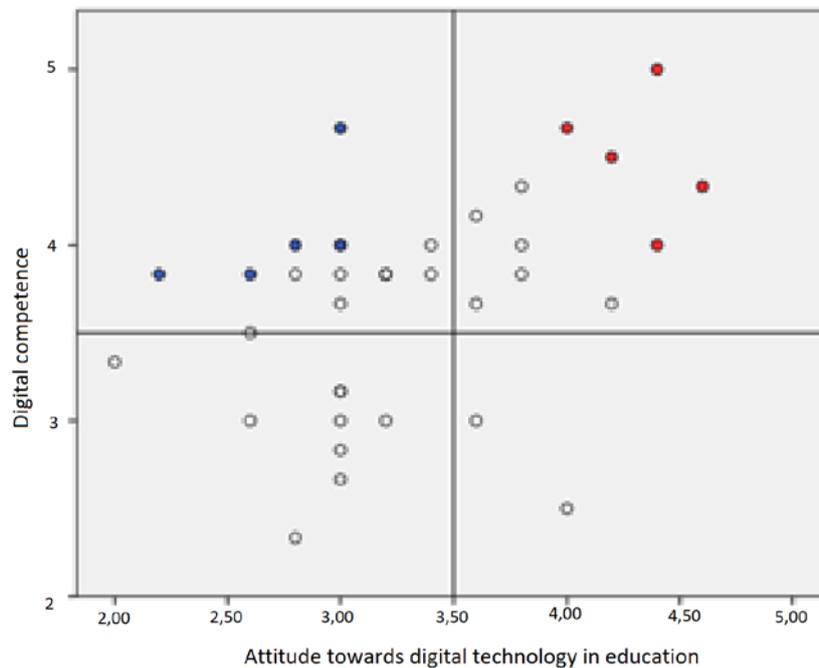


Figure 2: New Zealand



The procedure for the selection of participants for interviews in the second part of the study was based on maximum variation sampling. This was a purposeful selection of interview subjects with different perspectives on a phenomenon (Creswell, 2013, p. 156). The blue dots represent digitally competent teacher educators who were the most critical towards digital technology in education. The red dots represent digitally competent teacher educators who were the most positive towards digital technology in education. The red and blue dots together represent the individuals chosen to participate in the interviews. This was done to ensure a range of attitudes within the group of teacher educators. It was also essential, for this study, that the participants in the second part represent staff with the necessary digital skills, as previous surveys of the gap between policy and practice have often concluded that differences were largely due to lack of digital competence (Norgesuniversitetet, 2015). From this scatterplot, teacher educators who scored low on digital literacy were excluded, to avoid potential explanations that were related to lack of digital literacy. From the remaining teacher educators, the five most critical and the five most positive towards digital technology were selected from each university, resulting in 20 qualitative interviews.

This approach created two groups of informants at each university, with different characteristics (coloured circles in the matrix), to provide insights into different perspectives on the phenomenon (Creswell, 2014). In this way, respondents were categorised into two focus groups: 1) digitally competent staff who were critical of technology in education and 2)

digitally competent staff who were positive towards technology in education. The interviewees from the two groups are shown in Figures 1 and 2. Focusing on the extremes allowed access to two quite different perspectives.

Interviews

Semi-structured interviews were used to understand and elaborate upon the results, from a qualitative perspective. The interviews revolved around the teacher educators' use of digital technology, their attitudes towards digital technology, and how they perceived their educational context regarding curricula and the use of digital technology. In one section of the interview, the teacher educators were asked to interpret the differences between the list of basic skills and the list of key competencies (see Table 1). Both the Norwegian and New Zealand participants were also asked what their attitudes would be towards replacing their formal perspective on learning with the other country's perspective. One of the main goals of the interviews was to uncover how teacher educators understood this difference, and what their attitudes were regarding it. The interview guide included some defined questions regarding this difference, but the opportunity was sought to include unforeseen contributions from the participants. The interviews were therefore not restricted to the predefined questions. The interview guides from the two countries were slightly different, as they had to be adjusted to each country's curriculum structure and other local educational conditions. This was necessary to be able to compare the two contexts.

It is important to clarify that this is not a comparative study of the teacher educators' attitudes towards the two curricula as a whole, but rather a comparative study of the teacher educators' expressed values and beliefs. The interviews were based on small excerpts of the two curricula and are therefore not representative of the curricula as a whole. The two lists cannot be directly compared as equal components from the two curricula, as they are defined as skills and competencies and could possibly serve different purposes. Even so, the commonalities are evident, and this represents an interesting approach for an interview to investigate deeper differences in educational discourses. The two lists were used as a starting point, as measures to exemplify differences found in the two curricula.

The transcribed interviews were subsequently analysed with the use of NVivo. While working in NVivo, elements from both qualitative and quantitative traditions were used. The quantitative elements of the analysis were used to present a broad picture of the participants; the analysis of the content of this picture from a qualitative tradition was used to access the nuances behind the patterns found when quantifying the statements. Those nuances

contributed to understanding the reasons and rationales within the patterns found in the bigger picture.

Validity and Reliability

After conducting the interviews, the participants were presented with their positions in the matrix among the other staff members, and were given the opportunity to comment on that position. A few offered comments concerning minor adjustments, while the remainder identified with the results presented. This was an indication that what was believed to be measured was in line with the respondents' own interpretations of themselves and an indication of good validity.

The survey was originally developed in Norwegian and later translated into English. The Norwegian parts of the interviews, used as examples in this article, have also been translated. It should be noted that some elements may be lost in translation, and this may influence the results. There has been an ongoing collaboration with New Zealand researchers throughout the research process, which has been very helpful regarding important clarification of concepts and language-related nuances.

Theoretical Perspectives

Qualitative data from the interviews is presented in this article, and has been analysed using curriculum theory. The term *curriculum* calls for some elaboration; Goodlad, Klein, and Tye (1979) distinguished between five domains, which could also be described as five different logical levels, of curricula:

- *Ideological curricula*, referring to the ideological and political ideas and underlying values of a curriculum.
- *Formal curricula*, referring to a curriculum as a formal, officially sanctioned document.
- *Perceived curricula*, referring to how an actual curriculum is perceived, for instance by parents, school management, teacher educators and teachers.
- *Operational curricula*, referring to how a curriculum is implemented in daily teaching in classrooms.
- *Experienced curricula*, referring to how an actual curriculum is experienced by students.

Presenting these five different logical levels of curricula demonstrates the difficulty of deriving a single definition of the term *curriculum*. Goodlad et al. (1979) also claimed that there might be significant discrepancies between the different domains of curricula – school culture and teacher background may, for instance, influence what parts of a curriculum are understood to be essential. Resources and competence at school level may also influence which parts of a curriculum are emphasised in teaching on a daily basis. Goodlad et al. (1979) pointed out that a common discourse across the domains is required to trace eventual unacceptable discrepancies between the curricula domains. According to this theoretical understanding, a gap has been found between the formal curricula and the operational curricula in Norway (Norgesuniversitetet, 2015; Ørnes et al., 2011). This article presents the perceived curricula from the perspectives of Norwegian and New Zealand teacher educators, when presented with curricula differences between the two countries. The insights into the perceived curricula could lead to understanding why and where there are discrepancies between the adjoining levels – the formal curricula and operational curricula.

Results and Discussion

Attitudes towards curriculum differences

An unbalanced response towards the presented lists was evident when conducting the interviews. This difference became prominent when establishing a rough overview of the data. The two nodes (the term used for categories in NVivo) *critical to the Norwegian curriculum/positive to the New Zealand curriculum* and *critical to the New Zealand curriculum/positive to the Norwegian curriculum* revealed an interesting pattern among the participants. When all relevant transcribed data that was categorised as one of the two mentioned nodes, 83.5% of the excerpts were statements either critical towards the Norwegian definition or explicitly positive towards the New Zealand definition. Only 16.5% of the excerpts were categorised as being critical towards the New Zealand definition or explicitly positive towards the Norwegian definition.

Participants were asked what their attitudes would be towards replacing the list of basic skills with the list of key competencies, and vice versa. Among the Norwegian participants, the majority expressed positivity towards replacing the basic skills with the New Zealand key competencies. Two of the participants positioned themselves neutrally, viewing the New Zealand and Norwegian perspectives as different, but equally important. When asked why, they stated that their views were based on a rationale regarding what the students were to be measured and examined in.

When the New Zealand participants were asked the same question regarding a change, all but two were critical of a shift towards the Norwegian basic skills – one claimed that a combination of both would be the best alternative, and the other argued that there are too many literacy problems among New Zealand adults, and strengthening the focus on literacy would improve the curricula as a whole. The remaining eight New Zealand participants were explicitly critical of replacing the New Zealand key competencies with the Norwegian basic skills (see table 3 for overview).

Table 2: Overview of distribution of attitudes based on the maximum variation sampling

Position in the matrix	Expressed attitude: Positive towards the New Zealand curriculum/ critical towards the Norwegian curriculum	Expressed attitude: Positive towards the Norwegian curriculum/ critical towards the New Zealand curriculum
Positive Norwegian participants	X	
	X	X
	X	
	X	
	X	
Critical Norwegian participants	X	
	X	
	X	X
	X	
	X	
Positive New Zealand participants	X	
	X	
	X	
		X
	X	
Critical New Zealand participants	X	
	X	X
	X	
	X	
	X	

As seen in table 3, there is no clear pattern between the positive and the critical positioned teacher educators; this could therefore be understood as an educational matter on a deeper level than what merely concerns the use of technology. There seems to be values underpinning the two list parent to the discussion concerning technology. Is this discussion concerning technology just a smaller part of a greater educational discourse, that entails a lot more and on a deeper value-based level?

The New Zealand teacher educators expressed pride in the values presented in their key competencies. One New Zealand teacher educator explained the values as being ‘relational and the rich experience that, kind of, teach students something about how to apply ideas in life situations. That is probably a good aspect of this system.’ Another explained,

The NZ key competencies are more encompassing of the interpersonal skills required for effective participation in today's society and are therefore more ‘forward focused.’ The key competencies of *Thinking* and *Using language, symbols, and texts* include each of your basic skills, and then the other three, *Managing self*, *Relating to others* and *Participating and contributing* indicate the need for our students to use or apply the basic skills in a broad range of contexts that will evolve throughout their lives. These key competencies indicate more explicitly the requirement for individuals to be problem solvers and collaborative participants in society.

One of the Norwegian teacher educators explained his reason for wanting a change, by saying, ‘Yes, because I feel that the five Norwegian [basic skills] are actually wrong. It is not what [education] is about, in my mind.’ Another stated, ‘concerning education as a whole, much of the New Zealand perspective is more related to how I actually experience the Norwegian education system.’ The majority of the New Zealand teacher educators were worried about a shift towards a more technical and instrumental focus, and losing their current high-level vision of citizenship. These worries were often founded in The Programme for International Student Assessment (PISA) rankings and other politically driven motives.

Political pressure

When the teacher educators were asked about why they believed there was a difference between the countries, political pressure was a recurring topic. As one New Zealand participant explained,

Anything that is new technology is associated with progress and positive. So, I think that the new things are kind of taken on uncritically, and I fear that ministries, policymakers are guilty of that. Not just ministers and policymakers, but I can see corporate entity are entering the education market. You know, sponsoring schools and giving computers. So, from this kind of context, the economic political pressures, comes the consumer pressures, develops the idea... or this kind of contest produces the idea that ‘oh, digital is wonderful.’ So, we should take it on...

This was also a concern among the Norwegian participants:

I have been at lectures about the basic skills, and everything is being governed by big corporations, you know. They make tests and tools, and if you are not managing you can buy this and that... There is so much business in it. And Norway has joined in... why?

This pressure makes teacher educators concerned for their students:

I think it is political, I think it is a political goal that, you know... and again it's a concern... yes, we do want our students to be numerate and to be literate, but it's only half the brain, and it's at the expense of the majority of people who go through schools and come out feeling quite worthless.

Another said,

I think we're seeing traits at the moment, globally, in wanting to have these particular skills. I would see it as very sad that we would kind of lose this holistic notion of learning and actually relating...and the skills which sit within [the New Zealand curriculum]. I think it is really important for the 21st century citizen, you know. I think it is a big concern actually.

Concerns about a shift towards a skills-oriented curriculum

PISA assesses four dimensions of global competence: communication and relationship management; knowledge of and interest in global development, challenges, and trends; openness and flexibility; and emotional strength and resilience. Similar to PISA's dimensions of global competence, the National Education Association (2015) claims 21st century skills are both subject-specific and universal, referring to the often-used term *the four Cs*: critical thinking and problem solving; communication; collaboration; and creativity and innovation. Though it seems to be a common understanding that these are important future competencies, it has been suggested that the school system in Norway often operates based on the need for instrumental skills. This foundation is also referred to as *the three Rs* – the basic elements of the primary school curriculum: reading, writing, and arithmetic (Elstad, 2016a). The three Rs is evident in what the Norwegian curriculum emphasises as the basic skills for learning (see Table 1), while the four Cs are harder to detect. In the New Zealand curriculum, global competencies – like communication and relationship management; openness and flexibility; emotional strength and resilience; critical thinking; collaboration; and creativity and innovation – are more evident. One might argue that the New Zealand curriculum includes, to

a greater degree, Biesta's (2016) notion of socialisation and subjectification, whereas Norway has a narrower focus on learning, based on qualifications.

Even with PISA's four described dimensions of global competence, the testing of students creates political pressure towards more skills-oriented curricula, making the New Zealand teacher educators concerned about the future development of education. The majority of the teacher educators saw the Norwegian basic skills as being outdated.

I would say, looking at the Norwegian skills, this is probably more the previous iteration of focus in New Zealand, where we had the skills focus. They all look very familiar to me, except of course the digital tools are more recent, but these are the basic skills that have been the bedrock of thinking about educational planning for a long time. I think there have been some positive moves, so I take a critical perspective on the basic skills. This [New Zealand competencies] fits the policy climate for today's education. To focus on wider skills, and the idea of social contribution rather than cognitive learning, as focus for education.

This was explained by another as,

People need 'something else and a bit more,' and what they identified as the 'something else and the bit more' is mostly these relational skills. How you relate to other people. How you manage or organise yourself while you're doing that. The Norwegian seems to be still focused on those traditional skills, adding the digital tools.

The New Zealand teacher educators were, in general, not in agreement with the focus expressed in the Norwegian basic skills, and they were worried about how their school system would be governed politically in the future.

I could see that it's going back to these... you know, the basic skills, and I don't see this as progress. I think it's a big concern. Something we need to be very, very... especially with initial teacher education... we need to be very vocal about it. It's a major concern. But it's the government... it's the government who is pushing this, and yes... we need to be very aware of what is happening.

It would be the PISA rankings that would fuel the shift, another claims – why New Zealand has not already experienced this shift could be explained by cultural differences. Described by a New Zealand participant,

Norway does well in PISA and so Norway wants to keep its ranking high because their policy is really being driven by these big international assessments. Um... New Zealand teachers tend to be kind of independent thinkers and they wouldn't... they don't like that... New Zealand teachers don't like being told 'you have to do this because there is going to be some big examination,' or whatever. It does not fit with our culture.

In line with these perceptions, Norwegian teacher educators said that they really liked the relational perspective in the key competencies, but they expressed the concern that it would not match what the students are being measured by. As one said, 'I believe the New Zealand perspective would result in a higher degree of coping for the students. There would be less measuring, which is a result of the PISA studies,' or as another explained, 'I want more focus on in depth knowledge, more focus on understanding. Not just technical skills.'

The role of the teacher

The two perspectives on education also affect the role of the teacher. One of the Norwegian teacher educators explained,

I am frustrated by the Norwegian basic skills. I have gone from thinking *okay, we have to do this to what? Why do we have to do this?* There are no pedagogical reasons. Nothing makes sense. We have been tricked. Changing to the New Zealand focus would mean letting the teachers be pedagogues and making choices based on what they actually know.

A New Zealand teacher educator claimed that 'the Norwegian one is a lot more constrained. So I see [New Zealand] as providing the opportunity for teachers to be a lot more creative in how they adapt their programmes in the classroom.' An understanding among the teacher educators was that the focus on how learning is defined in the curricula would influence the role of the teacher, and could limit their ability to make independent pedagogical reflections that influence their practices.

Attitudes towards the Norwegian quality framework and the core curriculum

Both the Norwegian core curriculum and the quality framework cover the perspectives expressed in the New Zealand list of key competencies. It could therefore be legitimately claimed that comparing just the two lists paints an unjust picture of differences between the countries. To correct for this possible pitfall, the Norwegian participants were also explicitly asked about their attitudes towards, and use of, the quality framework and the core

curriculum. One of the participants expressed having a somewhat vague knowledge of the quality framework, and the remaining teacher educators claimed to ‘know of it.’ Of all the participants, not one expressed a close and reflective attitude towards the framework, and only one replied that she had used the document explicitly in her own teaching. The remainder either did not use it at all or explained that the use is implicit, or that it merely exists as a backdrop to their teaching.

Regarding the core curriculum, the pattern is somewhat similar. Only one claimed to use the core curriculum explicitly in teaching. The rest of the teacher educators explained that the core curriculum is not present in their teaching, other than as a backdrop or implicit through their actions. ‘It’s there,’ as several teacher educators pointed out, but the teacher educators’ main focus when teaching was stated to be the competence objectives, which may drive a more instrumental focus, compared to the focus on the framework in documents such as the core curriculum and the quality framework (illustrated in table 4).

Table 3: A How different elements of the Norwegian curricula is communicated at the level of theory in use and espoused theory.

	Subject curriculum (instrumental)	Quality framework /Core curriculum (holistic)
As theory in use (Operational curricula)	Explicit	Explicit
As espoused theory (Perceived curricula)	Explicit	Often implicit

Several relevant questions are raised by these results:

- If Norwegian teacher educators disagree with the instrumental approaches expressed in the basic skills, why do they often exclude the two documents that cover a holistic approach when teaching teachers-to-be?
- Are teacher educators contributing to maintaining an unbalanced use of the curricula, through their own teaching?
- What are the contributing factors regarding the pressure to define the curricula as instrumental, when the curricula in fact contain a range of values including holistic perspectives on learning?
- Are there contradictions between the subject curriculum and the core curriculum that lead Norwegian teacher educators to teach with a discrepancy between their espoused theory and theory in use?

Attitudes towards digital technology's position in Norwegian education

One difference that stands out, and could be seen as a symptom of the increased instrumental, politically governed focus in the Norwegian curriculum, is the implementation of the use of digital tools as a basic skill for learning. The majority of the Norwegian teacher educators were critical towards the definition of basic skills in the curriculum, and several of them were explicitly critical towards the use of digital tools as a basic skill. One of the Norwegian teacher educators claimed that she had always thought that the skill of using digital tools was a 'nonsense skill.' Another one asks: 'Why not mention a pencil? It is just about trying to be modern.' It is difficult to reach a simple conclusion regarding how to understand these findings; however, it is reasonable to assert that this resistance could be related to the different values found in the two curricula for education and learning, and how they are being implemented. An example of this difference is how digital technology is positioned in the Norwegian curriculum as a basic skill for learning.

This position can be supported by recent research. Elstad (2016b) stated that the PISA results published in 2015 show no appreciable improvements in pupils' attainment in reading literacy, mathematics literacy, or science literacy in countries that have invested heavily in ICT for education. Research furthermore shows that the use of digital technology in teaching can limit attainment (Beland & Murphy, 2015; Carter, Greenberg, & Walker, 2016; OECD, 2010). Nevertheless, as Elstad (2016b) wrote, hardly anyone wishes for a situation in which learners do not use technology. Education is supposed to prepare for the future, and it is evident that technology is going to be an important part of it. However, in what societal context and under what political conditions is technology being implemented?

The participants were also asked what their motivations were for using digital tools in their teaching. The answers were categorised in either externally or pedagogically motivated. The answers regarding quality in education were understood as pedagogically motivated, and answers concerning external motivation was explanations like frameworks and curricula, superiors' expectations, pressure from colleagues and students, future tests and so on. The New Zealand participants explained that it was both pedagogically and externally motivated, while the Norwegian participants mainly explained it as being externally motivated.

Table 4: Overview of distribution of externally and pedagogically motivated espoused theory, based on the maximum variation sampling

Position in the matrix:	Externally motivated:	Pedagogically motivated:
Positive Norwegian participants:	X	
	X	
	X	
	X	
	X	
Critical Norwegian participants:	X	
		X
	X	X
	X	
	X	
Positive New Zealand participants:		X
	X	
	X	X
	X	
		X
Critical New Zealand participants:		X
	X	
	X	X
	X	
	X	

Bentzen (2015) claimed that increased employer control obstructs innovation and employees' sense of responsibility, because employees are motivated to work within a framework, which does not reflect the complexity of reality to a satisfactory degree. There is, according to Bentzen (2015), a risk of developing professional tunnel vision, where employees are forced to do what is being measured and not what is professionally reasonable. One concern is that increased control could demotivate dedicated employees, because the top-down governing could be perceived as a lack of trust in their professionalism (Bentzen, 2015; Moynihan, 2010).

Conclusion

The attitudes expressed in the interviews concern more than just attitudes towards technology. There are also differences between the two curricula with regard to overarching values. Introducing digital skills as one of the five basic skills for learning could be understood as an

expression of greater and more general differences between the countries – differences that could be understood as a result of the political governing of education.

The main difference between the countries was found to be in the curricula; the teacher educators' attitudes towards this difference were surprisingly coherent, despite the different affiliations. The implementation in Norway of digital technology as a basic skill, alongside other technical skills, is in contrast to the holistic perspective in New Zealand. The teacher educators in this study generally seemed to agree on how these differences are understood.

The ideological and formal curricula must reflect the professionals' attitudes regarding what should be an operational curriculum. Both the curriculum and digital technologies' role in education must be based on empirical knowledge concerning what is beneficial to learning, where one of the criticisms of curriculum development is that it is done far from the field of practice and implemented top-down by politicians.

Elstad (2016a) claimed that the question of ICT in school touches upon the core tasks of education, as education deals with social change. This notion raises questions about both the aim and content of schooling (Biesta, 2016). Teacher educators in Norway seem to be conflicted concerning questions of this nature; research suggests that Norwegian teacher educators have one set of private attitudes regarding digital technology, and a conflicting set of attitudes expressed in the public arena at the workplace (Madsen, Thorvaldsen, & Archard, 2018). Furthermore, the qualitative interviews revealed that the formal curriculum in Norway is not in line with the teacher educators' professional opinions. This creates a situation where teacher educators are relating to a formal curriculum that is not in line with their professional convictions. Nevertheless, they expressed loyalty towards the formal curriculum, and, therefore, were struggling with an inconsistent espoused theory when talking about their own practice, as shown in Madsen, Archard, and Thorvaldsen (2018).

Using Goodlad et al.'s (1979) conceptual framework, there appears to be a discrepancy between the Norwegian formal curriculum and the perceived curriculum. The core curriculum, with the overarching goals and basic principles for education, seem to be less emphasised by teacher educators than the set of basic skills. Furthermore, the interview responses lead us to ask if the set of basic skills described by some teachers are understood as the actual core curriculum, with the overarching goals for education.

The Norwegian teacher educators' conflicted attitudes towards digital technology could be understood through the way it has been implemented in Norwegian education. Both Haddad

(2008) and Biesta (2016) warned against integrating technology into the educational process as a one-step activity. It is, in fact, an intricate, multi-faceted process that involves a series of deliberate decisions, plans, and measures (Haddad, 2008, p. 5). Biesta (2016, p. 31) described the risk of ICT becoming an all-or-nothing matter, rather than one where precise questions are asked about which educational objectives are best pursued with ICT applications. The way Norway has implemented a curriculum based on digital skills (among other basic skills) could be understood as a one-step activity. When conducting a one-step activity, one has to hope that the step leads in the right direction. ‘No technology can fix a bad education philosophy or compensate for bad practice. In fact, if we are going in the wrong direction, technology will only get us there faster’ (Haddad, 2008, p. 54). The responses from the interviews seem to suggest that a broader and more nuanced approach towards learning could be more appropriate.

The Norwegian teacher educators expressed attitudes supports the Ludvigsen Committee’s evaluation of Norwegian curriculum, when they claimed that the Norwegian curriculum should be based, to a greater degree, on a broader understanding of competencies (NOU, 2015). Auerbach (1967) predicted a digital revolution, and we are now experiencing it, but how this revolution and other global trends should affect our educational system must, as Haddad (2008) described, involve a series of deliberate decisions, plans, and measures.

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