



## **Teacher Education in Norway** *Challenges and Reforms 1992-2022*

Bjørn Magne Aakre. Professor emeritus PhD  
University of South-Eastern Norway (USN)

*This article is based on a qualitative study of Norwegian teacher education for primary and lower secondary schools. The purpose is to contribute to the knowledge of teacher education in general, and specifically teacher education in Norway. The focus is on the development from a 4-year general teacher education to a 5-year specialized teacher education with a master's degree.*

*The method is inspired by Grounded Theory (GT) which is a systematic but flexible research method using both qualitative and quantitative data. In addition to describing phenomena, one seeks to build theory and possible explanation through constant comparison, saturation and structuring of statements and concepts. Major data was collected from policy and curriculum documents, national and international statistics, and more than thirty years of experience from teacher education.*

*The study concludes that the reforms are based on a perception that professional teachers are crucial for pupils' learning and development. But there is no clear consensus on which factors are most important. The reforms also reflect an international trend where different ideologies have influenced the development.*

*Better recruitment of teachers has been another justification, but in Norway these goals have not yet been met. The applications for teacher education programs are still very low and in the autumn of 2022 the teachers' organizations began a long-term strike for, among other things, higher wages. However, teachers have also lost autonomy and become a profession with more external control.*

*In terms of content, teacher education has become more specialized with fewer compulsory subjects and more emphasis on basic skills, language and mathematics. Low scores on international tests such as PISA and TIMSS have been a contributing factor. Free play, drama, interdisciplinarity and other forms of learning that emphasize experience, wholeness and context, were toned down. This means that interdisciplinary competence is weakened in today's teacher education and the goal of sustainable development will be among the challenges for the teacher in the years to come.*

*Keywords: pedagogy, teacher education, primary school teacher, master's degree, Telemark*



## **1. Introduction**

What characterizes good teachers and how can good teachers be educated? The purpose of this article is to contribute some answers through a study of challenges and reforms in Norwegian teacher education. The study is limited to teacher education for primary and lower secondary school, grades 1 to 10, in the years 1992 to 2022. The questions have also concerned researchers in many countries. Most of them conclude that good teachers are crucial for the student's learning and development. On the other hand, it is difficult to find consensus about which characteristics of teachers matter the most. (Arfwedson, 1994; Pantić and Florian, 2016; Haugan, 2012; Hattie, 2012; Ulvik and Smith, 2018; Irvine, 2018). The reason may be that people learn in different ways, there are disagreements about what is most important to learn and there are different expectations among students, parents and others about what the school should emphasize. Some places emphasizes on well-being and the social dimension, others on professional learning and hard work.

Similar perceptions are also expressed in various theories about knowledge as capital. A classic variant is theories of human capital which, briefly explained, are concerned with measuring efficiency and financial return as a function of effort in education (Shultz, 1962). Measurable skills and cognitive abilities play an important role in such examinations. Such a theory stands strong in the OECD, which has regularly given advice on Norwegian education since the late 1980s (OECD, 2022). Another feature of this type of neoliberal theory is market adaptation and efficiency through the privatization of education and other public services (Pollit and Bouckaert, 2004). An opposite view is based on the idea of education as a value in itself and that education gives back to society and culture in the form of independent and competent citizens who take responsibility for themselves and the community (Coleman, 1990; Bourdieu, 1984). These theories are either referred to as social capital, cultural capital or in a combination. They emphasize both cognitive and non-cognitive abilities. For the teaching profession, Hargraves and Fullan have also launched the term professional capital as a synthesis of human capital, social capital and decision-making capital (Hargraves and Fullan, 2012, p.107).

Norway has carried out many reforms in its teacher education in recent decades. Probably more than many other countries. But have they worked as intended? They are all based on the assumption that better teacher education is a prerequisite for equal, high-quality education for all and a more competitive society (NOU 1996: 22; KUF, 2002; KD 2009; KD, 2015 and KD, 2017). On the other hand, which social forces have legitimized this development, how were they justified and to what extent have the reforms



contributed to better learning outcomes among the pupils in the school? So far there is no clear evidence for that (OECD, 2022).

In both national and international research on teacher education, we find a wide range of approaches to the questions. In some teacher training courses, in the 1990s Gerhard Arfwedson (1994) used his critical analysis of English language teacher research as a basis for teaching students about the theme. Arfwedson was among the first to come to the conclusion that it is difficult to point to a consensus. In his analysis, he found three main categories of teacher research: Teaching effectiveness, teacher education, and teacher cultures. We also find these categories in later research. In addition, there are now also theories about teachers' experiences and their importance, about teachers' professional competence, gender, teacher behavior and teachers' opportunity to learn in practice (Burroughs, Gardner, Lee, Guo, Touitou, Jansen and Schmidt, 2019).

In recent years, researchers have also taken an interest in the failing recruitment to teacher education in many countries (Mevorach and Ezer, 2010). The problem began to emerge in Norway at the end of the 1990s, is not yet been solved in spite of the many reforms. Teacher shortage in the districts is one example. The last perspective also touches on the relationship between the center and periphery, which came to play a role in the Norwegian general election in autumn 2021 (Aakre, 2021 a and b). This problem escalated in the late 1990's.

A Norwegian survey found 23 studies on Norwegian general teacher training published between 2000 and 2010 (Hauhan, 2010). The results were arranged in three categories: 1) Research on teacher educators, both at educational institutions and in practice schools (5 studies), 2) Research on student teachers (15 studies) and 3) Research on development initiatives in teacher education (3 studies). Furthermore, we find that the teaching profession and teacher training are often a topic in the public conversation. A few searches in databases yield far more hits on teacher and teacher education than on, for example, nursing and nursing education, or engineering and engineering education. It is probably related to the fact that teachers and teacher education affects most people, both the students, their parents and siblings, their grandparents and others. Against this background, the following problem for the survey was formulated:

*How has Norwegian teacher training for primary schools developed in the years from 1992 to 2022, which challenges have been in focus and which reforms have been carried out to solve these challenges?*



To answer the problem, a wide selection of notes, lecture notes and subject plans from general and primary school teacher training in Telemark was used, as well as national guidelines in the form of framework plans, curricula and reports in combination with views from the public discourse on teacher education. Curriculum theory was used as a theoretical frame of reference. John Dewey argued that curricula must not be perceived as static and final, or as something outside the student's own life and experiences. Curricula must be understood as something fluid with moving and democratic goals that are created in a meeting between student, teacher and society (Dewey, 1902, p. 11). He did not see the curriculum as a neutral list of tasks the teachers and the school had to carry out on behalf of the state.

Researchers today raise similar questions and claim that the curricula of our time are no longer written for pupils' education and learning, but to make pupils effective in a market characterized by competition, technological changes and economic progress. They claim that curriculum thinking in recent decades has been dominated by a neoliberal ideology and put into practice with the implementation of strategies from New Public Management (NPM) with the intention of making public services more efficient (Pollitt and Bouckart, 2004, p.7). Typical features of this ideology are that competitiveness in a global market can be improved by training human resources who can be innovative, adopt new technology and work effectively based on the needs of the labor market and the technological changes required (Al-Haija and Mahamid, 2021, p. 20). One means of achieving this is to use detailed measurements that are used to correct behavior at the individual and community level. This is expressed in the form of national and international tests, standardization of the curriculum at national level and accountability through feedback and control (Hays, 2016, p. 2).

Lorence Stenhouse emphasized that curricula are an attempt to communicate the essential principles and characteristics of an education. He argued that curricula should, as a minimum, provide a basis for planning learning, studying learning processes empirically and that the rationale for the plan must be able to be critically assessed (Stenhouse, 1975, pp. 4-5). Similar ideas originally formed the basis of the idea of quality and professionalism in the teaching profession. However, some researchers are now pointing out that concepts such as quality and professionalism have been transformed and given new meaning adapted to a neoliberal ideology. Quality as a strategy has become economic adaptation to a global market and teacher professionalism is about effective implementation of goal-directed curricula (Hall and Ginity, 2015, p. 4). Norwegian researchers have also contributed to the debate (Aagre and Schaaning, 2022). In short: development of the teacher's role takes place on many levels from actions in practice to theory in a college or university, curriculum reforms as well as research on teacher education.



## **2. Method**

For this study, a qualitative research approach was chosen. Partly because it makes it possible to go in depth and explore questions through various sources, both qualitative and quantitative. Secondly, it is a cost-effective approach that can be carried out at low cost. Among the qualitative methods, the choice fell on Grounded Theory (GT) (Creswell, 2013, p. 11).

Grounded theory is a systematic but flexible research method where, in addition to describing phenomena, one also tries to build theory and possible explanation through constant comparison, condensation and structuring of statements and concepts (Glaser and Strauss, 1967; Strauss and Corbin, 1990, p. 23; Charmaz, 2015, p.16). The flexibility depends, among other things, on the types of data used. It became important in this investigation where self-produced and existing data were combined (Corbin & Strauss, 2015, p.42; Charmaz 2015, p. 330). Quantitative data on applications for teacher training, degree of completion and feedback from students in the form of mid-term assessments were also used. Grounded theory is widespread in social research and has over time developed in slightly different directions, including a Japanese variant M-GTA (Aakre, 2018).

Written sources in the form of research, studies, management documents, regulations and curricula are the primary basis for this investigation. In parallel with these sources, separate notes from curriculum work, semester plans and teaching of student teachers from the autumn of 1992, when 4-year general teacher training was introduced, have been used. In this investigation, a wide variety of sources were used: 1) research literature on teacher education from databases: Eric, Science direct and ProQuest, 2) lecture notes, semester plans, notes from meetings and textbooks, 3) meeting notes from changes in teacher education in 1998, 2008 and 2016, 4) exam papers, student answers and evaluations and 5) documents regulations and curricula for teacher education 1992-2022

To arrive at suitable categories, documents and notes were coded and condensed in three steps: open coding, selective coding and theoretical coding (Corbin et al, 2015). In post-production and production there is an element of hermeneutic interpretation in the light of contexts (Kvale and Brinkmann 2009, p.190). Table 1 and Figure 1 below provide a visual overview.

Table 1. Results from coding of data

Coding	Num.	Codes and categories (a selection of examples)
Theoretical	5	professional development ... leading students in learning and development of character ... pedagogical competences ... disciplinary competences ... sustainable development
Selective	7	context ... pedagogical content knowledge ... subjects and interdisciplinarity ... the teacher as researcher ... digitalization ... internationalization
Coding	320	learning ... teaching ... character ... bildung ... critical reflection ... culture ... ideology ... professional ethics ... PBL ... license ... quality ... testing ... PISA ... objectives ... humanities ... science ... arts and crafts ... master theses ... autonomy ... research ... change ... TIMSS ... OECD

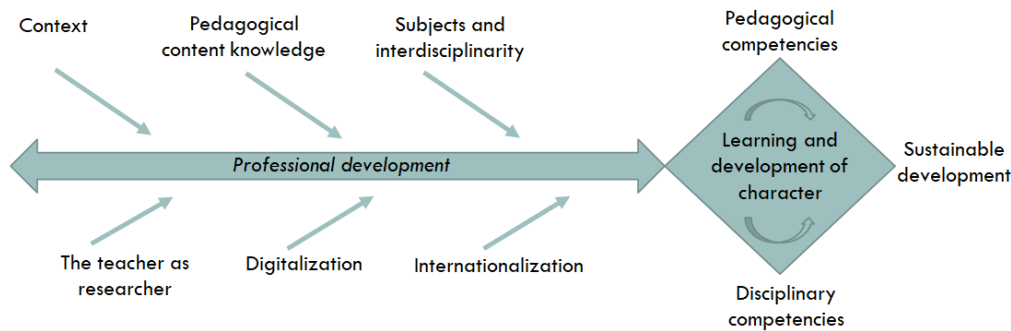


Figure 1. Professional development in teacher education

Figure 1 explains that the overall aim of teacher education is to educate professional teachers who can lead pupils and students in learning and development of a strong character. This demanding task requires a wide range of competences in both pedagogy, school subjects and interdisciplinary skills. Professional development of teachers is also a life-long process. However, how successful has contemporary reforms in Norway been to fulfill this aim?

### 3. A brief historical perspective

The historical dimension is already emphasized. Education and teaching take place in an interaction with the local and national culture. At the same time, we live in an age characterized by globalization where values and perceptions are shared across national borders. Within large organizations like UN and OECD, regular comparisons which in turn affect reforms and changes in curricula. These changes have gained a greater scope in later decades. Teacher education must therefore be understood in the light of such a broad



context. An appropriate introduction to the problem is nevertheless to start the historical perspective with the help of some overall facts and figures. These are summarized in table 2.

Firstly, we see that teacher training has changed from a comprehensive program in 1992 to a more specialized program in 2022. Secondly, we see that the length of the education has been extended from four to five years where a master's degree in pedagogy or a school subject is compulsory. The number of compulsory school subjects has also been reduced from six to two, with the school subjects Norwegian language and mathematics in a special position. The possibility to choose subjects has also become more limited. Finally, the number of days of practice has also been increased.

In addition, it can be assumed that topics such as professional ethics, use of digital aids and internationalization have been strengthened.

Table 2. Major changes between 1992 and 2022

Overall structure of teacher education after the reform of 1992 and after the reform of 2017 (e)	1992	2022	
	Grade 1-10	Grade 1-7	Grade 5-10
Length of program	4 years	5 years	5 years
Total number of credits (Equivalent to ECTS)	240	300	300
Degree	Bachelor	Master	Master
Minimum number of school subjects	6	2 (a)	2 (b)
Pedagogic, minimum number of credits (ECTS)	30	60 (c)	60 (c)
Norwegian language, minimum number of credits (ECTS)	30	30/60 (d)	60
Mathematics, minimum number of credits (ECTS)	15	60/30 (d)	60
Master program. Pedagogic or a School subject (ECTS)	2 extra years	120	
Practice in training school	80 days	105 days	105 days

Notes: a) Normally 3-4 subjects. b) Normally 2-3 subjects. c) Ethics is included as 15 ECTS. d) One of the two subjects has to be 60 ECTS. e) Between 1992 and 2017 there were several minor reforms. ECTS is the European Credit Transfer System.

The period from 1992-2002 was characterized by profound societal changes in the political, social and economic fields. The relationship with the world around also changed. Internationally, the end of the Cold War and the dissolution of the Soviet Union in 1991, was the major turning point. Norway had become a multicultural society and the classical nuclear family came under pressure from the new liberation of the individual. Debates from the previous period on climate and environmental issues and immigration continued. New technology changed the society and schools. Terms such as the knowledge society, the information society and the communication society came to characterize the exchange of words about society and school. New technology changed society and school. Terms such as the knowledge society, the information society and the communication society came to characterize the exchange of words about society and school. The idea of a common school for all, which was supposed to contribute to social equalization and social unity, came under strong criticism.



Against this background, the new 4-year teacher education program was introduced in 1992. Holistic and progressive ideas, inclusion and personal growth were still influential. The teacher should be able to act both a supervisor, role model, knowledge transferer and instructor for the pupils' growth (KUF, 1992, p. 8). The good teacher should be both a caretaker and a transmitter of knowledge. Drama as a method also became compulsory and was justified by the fact that interdisciplinary and comprehensive teaching creates a basis for further development of drama competence in particular and of aesthetic competence in general (KUF, 1999, p. 171).

But new reforms throughout the education sector heralded a new era. They were explained by researchers as a combination of restorative pedagogy and a gradual transition to a more market liberal view of education (Østerud, 2004). The aim was to make education an instrument for international competition (Telhaug, 2005, p. 34). The restorative ideas were expressed in elements from older curriculums (N1939) and the cultural program from the 1950s which, among other things, spoke of the cultured human person (Aakre, 2005, p. 298).

In 1994, the colleges of education were brought together in regional colleges where they had to adapt to other professional educations with joint management and budget. This led, among other things, to a greater focus on research. At former Telemark University College, a separate strategy for research and development was drawn up in 1996. Application for research funds was introduced and it was possible to apply for a scholarship to take a doctorate with the aim of strengthening local research.

The period was also marked by major reforms in nursery, primary and secondary education. The start of school for 6-year-olds was introduced, play and drama were to be emphasized as forms of learning and primary school stages 1 to 4 were to be a smooth transition from kindergarten. It also led to a need for more teachers. The intake of students doubled in a few years at several educational institutions, including Telemark. The academic level among many of the students who were admitted decreased, partly because of schemes to recruit students from among the unemployed via NAV. Many of these initially had no strong desire to become teachers. It contributed to the fact that the good learning environment became difficult to continue. This was probably a contributing factor to the drastic drop in applications for general teacher training, although there is no good research that can explain this decline.

The transition 9-year to a 10-year primary school program and the start of school for 6-year-olds characterized teacher education in the years following the introduction in 1997. The requirement was that





the new primary school level 1 to 4 should provide a smooth transition from kindergarten to school with an emphasis on play was a particular challenge. At the same time, the new teacher education should ensure professional deepening in the fourth year of study with at least a one-year unit. This should help to strengthen teaching in lower secondary school. A one-year unit also provided competence for teaching in upper secondary education. A good number of new teachers chose this alternative career.

During the same period, digitization also came to leave its mark on developments in society and with expectations that the field of education had to become better at adopting the new technology in educational work, not just as an administrative tool. The Mjø̈s committee, which was tasked with assessing the quality of higher education on a broad front, also highlighted the digital development in its recommendation:

*"Today's children and young people, through their use of the Internet and computer games, have become accustomed to such forms of presentation, and will probably expect to encounter them at universities and colleges as well" (NOU 2004, p.24).*

The period 2002-2012 was characterized by quality as a competitive force and education was expected to contribute to society's competitiveness nationally and internationally. Social media also increasingly shaped people's lives, both young and old. Teachers were now to function as professional resource persons, to facilitate an environment for development and learning and to be supervisors of competitive students (UF, 2003, pp. 14-15). Emphasis was also placed on the fact that "the school should contribute to pupils developing competence in the subjects" (KD, 2007, p. 21).

One of the most influential actors in the years that followed was the OECD with its PISA surveys, Program for International Student Assessment (OECD, 2001). Norway came out poorly in these surveys, which reinforced the criticism of both Norwegian schools, teachers and teacher training. Another and quite important premises provider was the Mjø̈s committee which concluded that "quality and efficiency in both education and research must be in focus" (NOU 2000, p. 2). In the teacher training, there was a change to closer follow-up of the students through more guidance, frequent submissions and more and varied forms of assessment. As an expression of quality, five competence areas for all teacher training were formalized. (KD, 2002, pp. 25-25), even though they had been in use in several places, including in Telemark, since 1992.



The Mjøøs committee also gave the impetus to more extensive reforms in both higher education and basic education. This particularly applied to the Quality Committee's two recommendations: First class from first class (NOU 2002: 10) and In the first place – Enhanced quality in basic education for all (NOU 2003: 16) and the subsequent message Culture for learning (KD, 2004) which the Parliament unanimously joined. This meant, among other things, unanimous support for the need to invest in basic skills as the basis for learning in all subjects: writing, speaking, reading, arithmetic and digital skills. Furthermore, that there should be national tests in some of the basic skills and that this should be reflected in new teaching plans for both primary and secondary education (LK06).

This meant that basic skills as an interdisciplinary theme came to characterize teacher training in the years that followed. In order to strengthen initial training in reading, writing and arithmetic, a separate interdisciplinary subject GLSM was also introduced, organized jointly by the subjects Norwegian, mathematics and pedagogy (Berge, 2005). The subject is still included in teacher education. Early intervention was also used as justification for introducing differentiated teacher training. It was also argued that "seeing the students and introducing the right tools early on will be decisive" (KD, 2009, p. 9). The result was a specialized primary school teacher training for grades 1-7 and 5-10 with requirements for greater depth in subjects and with extended pedagogy from 30 to 60 credits. (FOR-2010-03-01-295). A point that led forward was about the establishment of master's degrees.

A third element was the formulation of providing experience with online teaching and the use of digital teaching aids. Telemark University College invested heavily in online teacher training to compensate for fewer teachers on campus (Tømte and Kårstein, 2013). First through experiments with various flexible educations, from 2008 online general teacher training (NALU) and later online primary school teacher training 1-7 and 5-10 (NAGLU).

*The period 2012-2022* was primarily characterized by the "Lærerløftet", the Solberg government's strategy for "Kunnskapsskolen", a school emphasizing the subject matter (KD, 2014). In this strategy the government launched new competence requirements for teachers, testing of new career paths (teaching specialist) and 5-year primary school teacher training with a master's degree (KD, 2014, p. 25, p. 38 and p. 43). In the curriculum for the 5-year primary school teacher training, the focus is on the teacher and what the teacher has to do. The teacher must ensure early intervention and ensure progression in the pupil's development of basic skills and subject competence. The teacher must place particular emphasis on beginner training in reading, writing and arithmetic, and the teacher must have specialized insight into a limited subject area, the "master's thesis" (FOR-2016-06-07-860).



Framework plan for 5-year primary school teacher training was adopted in 2016 and started the following year (FOR-2016-06-07-860). The new competence requirements meant that teachers who lacked specialization in key school subjects had to take further training in order to retain their approval. It created a lot of debate and the scheme was abolished by the Støre government in the autumn of 2021. There was also the scheme with a teaching specialist and the stricter admission requirements for teacher training that the Solberg government had introduced. Furthermore, centralization and autonomy in higher education became a theme towards the end of the period. The decision to close teacher training at Nesna as a national symbolic matter (Aakre, 2021 a and b). In the autumn of 2022, 23 colleges and universities report they have vacancies in teacher education programs. In some places, more than 50% of the places are vacant and many applicants do not even turn up (Larsen, 2022). And this is not a new situation (Utdanningsnytt, 2006)

A standardization of curricula also took place during the period. The basis for this work was the European qualifications framework (EQF), which was adapted to Norwegian education in the form of the Norwegian Qualifications Framework (NKR) (NOKUT, 2011). In teacher training, work started at bachelor's level in 2012 and was carried out at higher level in the years that followed.

Towards the end of the period, the Ludvigsen committee and the subject renewal left their mark on the work in teacher training with subsequent adaptation to the new curricula for primary and secondary education LK20 (Udir, 2020). They mark a turning point back to more holistic forms of learning and three overarching themes: public health and coping with life, democracy and citizenship, and sustainable development. Here one finds parallels to previous curricula, including L97 (KUF, 1997). The idea of in-depth learning has also raised a new debate about assessment and questions are being raised today as to whether the exam should be "scrapped" (Burner, 2022).

#### **4. Pedagogy**

The subject of pedagogy is often explained as "the academic basis of the teaching profession", but the subject's name and rationale have changed somewhat over time. In the first years, the compulsory scope was equivalent to 30 ECTS with the option of taking an extra module of 30 ECTS in social pedagogy or special pedagogy in the 4<sup>th</sup> year of study. When primary school teacher training was introduced in 2010, pedagogy was referred to as a "superior professional subject" and expanded to 60 ECTS. (GLU, 2009, p. 16). In the latest reform, the subject is explained as follows: "Pedagogy and student knowledge must contribute to the student experiencing progression, wholeness and coherence in the meeting between



practice, subject and pedagogy (MAGLU, 2016, p.18). Since 2017, pedagogy can also be taken as a master's subject with 120 ECTS. This will be discussed later.

Based on local subject plans and semester plans, the content of pedagogy as a compulsory subject after 1992 can be summarized in five categories: the pupils, the teacher, the school and the society. In addition, there is a fifth category with interdisciplinary themes. In later years, it primarily concerns "interdisciplinary themes" related to reading, writing and arithmetic. These five categories can be found in most plans, but formulated in different ways and in different order. Order and prioritization also vary somewhat between institutions and campuses. However, the content and structure became more consistent after it was adopted as a national regulation to the law (FOR-2016-06-07-860 and 861)

In the first years of the program, the main focus was on the student with support in child and youth psychology. In the latest curriculum for pedagogy and student knowledge (PEL), psychology is emphasized in subjects 2 and 3 in combination with adapted learning (TPO) and special educational topics such as learning difficulties, behavioral difficulties, mental health and various measures. In the latest curriculum, didactics comes first with an emphasis on class management, planning, evaluation and implementation of teaching. These changes were made after criticism from the students. The quality reform also emphasized preparing students better for practice and concrete teaching tasks. Throughout the period, the societal perspective has been at the end of the study. This topic is now included in subject 4 as a consequence of the education committee's recommendation of 2009 (KD, 2009, p. 3). The subject also emphasizes the teaching profession, counselling, professional ethics, and contemporary challenges related to social media and societal problems. On the one hand, personal challenges such as mental stress, eating disorders and abuse have come more into focus. Finally, global issues such as the environment problems, climate change and sustainable development was implemented (Dalin, 1994). This topic was strongly influenced by the major school reforms of the 1990s and the Brundtland Commission had raised (Brundtland, 1987).

The idea of educational theory and practice was already introduced in 1973 but is still an implementation to be achieved in a good way (LOV-1973-06-08-49, §23a). In the first years of the 4-year general teacher education, the pedagogy subject had a particular responsibility for collaboration with the field of practice and follow-up of students in practice. A specific and popular measure was the "school takeover", which the pedagogy department administered. This measure gave the students as a group to manage a whole school for a few days. However, the pedagogy subject was not extended to 60 credits before 2010 and the subject soon struggled to fulfill all the intentions of the law. Now "school takeover" is part of the



internship program. There was also a growing demand that the school subjects with their subject didactics should play a more active role with both preparation and follow-up in practice. After a transition period, the concept of the formulation pedagogical theory and practice was withdrawn when the Act relating teacher education was repealed in 1999 and incorporated into the Act relating to universities and university colleges (LOV-2005-04-01-15). In the curriculum of 2016, emphasis is placed on the fact that it is the internship program, not pedagogy, that should have an integrating function in teacher education. However, it seems somewhat unclear whether this arrangement works better, but the intention is that the semester plans should specify the learning activities, tools and tasks.

In the early 1990's, the pupils as a topic area was supported by a systematic introduction to child and youth psychology. Many theories and models were introduced, and cases were discussed in groups and through observations in the teacher training schools. These topics area also formed an important basis for a basic competence in special education. However, gradually psychological theories were reduced due to the fact that students found the transition to practice difficult without a firm base on curriculum, planning and instruction. Most students preferred to experience real teaching and less theory. Demands for new topics also made it difficult to maintain special education topics at a reasonable level before the subject pedagogy was expanded to 60 credits (ECTS) in 2009.

Teaching and learning as a topic area was explained in the first years as didactics. Using curriculum documents, planning, implementation, and assessment of student learning outcomes were emphasized. Different methodological approaches were also discussed before and after practice in teacher training schools. First planning individual lessons and later half-yearly and annual plans where emphasis was placed on analyzing subjects in a context. The latter was particularly emphasized with the introduction of national curriculum of 1997 (L97). According to this curriculum teaching in the schools should integrate both subjects, themes and projects. To support this idea problem-based learning (PBL) was also introduced in the teacher education program at campus. However, soon after the first PISA shock in 2001, this methodology gradually became less popular.

Finally, at the end of the third year of study emphasis was placed on educational history and the relation between the school and society. Critical reflection and a critical perspective on education was emphasized. However, educational history was a topic the students were most critical of. They argued that history of education had less relevance for their work as teachers of today. The challenge is to make it relevant for the understanding for education today. In today's curriculum the topic is remained as an integrated learning outcome:



*“has broad knowledge of the teaching profession, the nature and history of the subjects, and an understanding of the school's development as an organization, its mandate, value base and place in society” (FOR-2016-06-07-860, §2.2).*

The students were more interested in discussing new and contemporary problems that emerged in the 1990's, such ethics, bullying, violence, child abuse and eating disorders. At first, they were discussed as social structural problems that had to be solved through changes in the school system and the society (Freire, 1999; Melling Olsen, 1977; Aagre, 2022). Today, such problems tend to be understood as individual problems and that education should help students learn to adapt to societal changes (Christiansen, 2022, p.16; Brochmann and Madsen, 2022). in short, individualization has occurred in many areas of society.

The teacher as a researcher was raised as a pedagogical task and introduced as a compulsory research paper in 1994. Classes on research methods implemented and guidance was provided during the work on the assignment (Halvorsen, 1993). Among the titles that can be mentioned are "Workshop education", "Outdoor school", "Children in grief", "Dropouts in sports", "Learning problems in mathematics", "Fashion pressure on secondary school students", "Sexual abuse" and more. At first, the criteria were a scientific paper of about 30 pages and quantitative research methodology was promoted. Gradually qualitative research methods and narratives became more popular. 2010 it was formalized as a compulsory requirement in the national curriculum. Some typical topics from this period are «What makes tablets a good tool in reading education», "Inclusion in digital mathematics teaching" and "How can the curriculum of 2020 contribute to reducing social differences?". These projects laid the foundation for the introduction of master's theses from 2017. More on this in a later section.

Over the years, there has been a lot of new literature and more use of specialist articles and supporting literature, some of which is in English. However, at some universities you can still find literature that was used in the 1990s, but in new editions (Imsen, 1991 and 1997). Furthermore, there have been more varied forms of assessment with more written work requirements that the students receive guidance on during their studies. In the first years there was a written test at each semester, sometimes in the form of an essay, and a project assignment with a freely chosen topic from pedagogy, subjects or a combination.



### *Special pedagogy and social pedagogy*

In the first years, special education topics were covered in the second year of study in the spring with their own literature, including Asmervik (1993) and various supporting literature. Emphasis was placed on the development of the field of special education, legislation and more specific topics such as reading and writing difficulties and the use of reading tests, on social and emotional difficulties, behavioral difficulties, bullying and children in grief. In the topic of bullying, one used the programs of Dan Olweus (1992) and Erling Roland (1987). Roland was also invited as a guest lecturer. Later, theme days about eating disorders, violence and abuse and children in mourning were introduced. More specific and practically oriented were cases and assignments with individual training plans (IOP).

From the end of the 1990s, the element of special education became smaller. Part of the reason was "overcrowding" due to all the topics that came up and which the students thought they should learn about. Another reason was that the number of hours of pure teaching was reduced, basic reading and writing (GLSM) came in as an interdisciplinary topic and more time was spent on guidance and follow-up of students instead of pure teaching. The possibility to choose special pedagogy as a specialization in the fourth year of study was also used as justification.

### *Education (Bildung) and professional ethics*

In May 2007, the Education Committee was established as an independent committee of individual institutions in the university and college sector. The purpose was to safeguard the academic formation of the studies ahead of a new millennium. The rationale was a globalized world where new communication technology and increased contact between civilizations generally make knowledge exchange, financial transactions and personal contact easier. The committee's work left its mark on all teacher training and education entered curricula for kindergarten, primary school and upper secondary education. The committee itself formulated its mandate, where the main question was about how academic education, understood as critical reflection, insight into scientific thinking and cognition, deepening, objectivity and ethical competence can be better secured in various studies (Danningsutvalget, 2009, p. 3). The committee's work was also followed up in a large anthology with a large number of articles on education in various individual subjects and professions (Hagtvedt and Ogenjenovic (eds), 2011, pp. 385 ff). In the years that followed, education became a central theme in both pedagogy, general didactics and subject didactics in teacher education. The term was treated in a large number of articles and theses and student theses with roots in a long European tradition going back to Comenius and even further (Comenius, 1657).





Much thinking and teaching material was taken from Wolfgang Klafki. His openness to new impulses, in-depth learning by critically choosing a categorical educational content, his five interdisciplinary key questions provided a good introduction to both pedagogy, subjects and practice. One of the key themes deals with the existential environmental challenges of our time (Klafki, 2013). With Russia's attack on Ukraine on 26/02/2022, we have also been reminded of the fight for peace that has characterized Klafki's career. He himself was a child soldier on the Eastern Front. These key themes also embrace many of the UN's global sustainability goals that were adopted in 2015 (Aakre, 2021).

### *Interdisciplinary and interdisciplinary topics*

The framework plan from 1992 placed great emphasis on interdisciplinarity in all subjects. This was particularly evident in the interdisciplinary subject nature, society and environment (NSM), which was a compulsory subject. However, in the pedagogy subject interdisciplinarity was also highlighted as a holistic and good form of learning. It was practiced in several ways, including as a link between subjects, multidisciplinary, interdisciplinarity and projects with integrated interdisciplinarity. The new curricula for primary and secondary education that came in the 1990s also made interdisciplinarity mandatory in the form of a certain amount of themes and projects at the various levels (KUF, 1997, p. 83). Testing and introducing school takeover was one of the projects across subjects, pedagogy and practice.

The environmentally aware person was often the framework for interdisciplinary work in both themes and projects in the 1990s where practice was also involved. One project was the Globe program on global climate change, where schools around the world made regular climate measurements and reported these. It also provided good opportunities to integrate digital skills into the project. In many schools, the activities were combined with outdoor school, which became widespread in these years (Aakre, 1997 and 2021). Entrepreneurship was also a form of work that became widespread, but after the introduction of the knowledge pledge there were fewer such projects. One explanation is that they were prioritized down to advantage basic skills.

In the framework plan from 2003, interdisciplinarity was toned down to the point that "students must gain experience with theme-based, interdisciplinary and multidisciplinary learning work", and the subject nature, society and environment (NSM) was no longer compulsory. Instead, great emphasis was placed on interdisciplinary themes in basic reading, writing and mathematics (GLSM) (UF, 2003, p.21). The interdisciplinary themes still have a dominant place in the new 5-year primary school teacher training, both through regulations and in the institutions' practice (KD, 2016, §2). Interdisciplinarity is not included among the items on learning outcomes.



*Master's degree*

The teacher as a researcher and the implementation of research methodology in teacher education is already mentioned in a previous section. Gradually there were also more teachers who continued to study for a master's degree after completing their teacher education. In most cases they had to study at a university, but some master programs had been available at teacher colleges since the late 1970's. Former Telemark Teacher College had a master of arts and design education since 1978, and in the 1990's steps were taken to start a master in science education. However, less interest in science education the idea was not realized. Instead, a master of educational leadership was adopted by the college's board in 2005. Due to new accreditation criteria it took quite some years before it was approved by the accreditation agency (NOKUT, 2022)

As a result of, among other things, the low PISA results studies, there was increasing criticism of both the Norwegian school system and teacher education as well. Some educators and politicians believed that the time had come to introduce a master's degree requirement for all teachers, as in Finland. The Mjøso committee proposed in 2001 a separate study on teacher education and believed that at least school leaders should have a master's degree. Such education was also started as a qualification program in the municipalities. Finally, a government proposal followed up this proposal for the parliament (KD, 2008). The Solberg government announced in 2013 that it would aim to introduce a master's degree (KD, 2014, p. 43). This program was formalized in new National Curriculum Regulations for Differentiated Primary and Lower Secondary Teacher Education Program for Years 1 – 7 and Years 5 – 10 from 2017 (FOR-2016-06-07-860/861).

In this new five-year program students can choose to take their master in school subjects, professionally pedagogy or special pedagogy (Table 2). The first students graduated from the program in the spring of 2022. So far there is no overall overview of the most common topics. But from a couple of universities, a few examples can mention mentioned: "Motivation and learning in mathematics among students at lower secondary level", "Play, learning and coping", "The transition from lower secondary to upper secondary education for students with dyslexia", and "The principal's work with the pupils' self-perception and psychosocial school environment". The vast majority are based on qualitative methods. Most of the theses are somewhat shorter, around 50 pages of plain text, than the previous master's programs which were carried out over two years without taking other subjects into account. The students who were asked were satisfied but said it was stressful. It is difficult to say anything about the general quality based on a few samples. One must also take into account that this was the first class with all the challenges it entails for both students and teachers.



## **5. School subjects and subject didactics**

Details about the individual subjects in teacher education are not included in this analysis. This does not mean that they are less important, but in order to limit the scope, it has been chosen to limit the analysis to some special features of the scope and structure of the subjects. Greater emphasis on subject didactics is also an aspect of the subjects that must be mentioned. They must be elucidated in a separate analysis. On the other hand, there are some topics of importance for the overall education that need to be discussed. The general didactics had been under criticism for many years because it did not give the student teachers sufficient knowledge about the rationale of the school subjects and how they could best be taught subjects at different age levels (Gundem, 2008, p9). A similar development had taken place within practical-pedagogical education. It was extended to one year, half of which was to include subject didactics in two school subjects, or one subject in vocational didactics (PPU, 1992).

Furthermore, it was argued that the subjects should take greater responsibility for following up the students in practice. Based on my own notes, there was initially some dissatisfaction with a proposal for joint projects between pedagogy, subjects and practice. When the education department took the initiative to try out a school takeover, which was very popular among students and practice schools, the education department was left alone to organize it. But gradually these contradictions went away and today subject didactics seems well integrated in both subjects and practice.

Changes in the subjects were also an argument for more subject didactics in teacher education. The idea of interdisciplinarity and work across disciplines was strong in the early years. 10 weighted numbers (30 credits) Nature, society and environment (NSM) was compulsory and ensured that all new teachers acquired such competence. The new subject was a direct consequence of the UN's World Commission on Environment and Development, which was led by then Prime Minister Gro Harlem Brundtland, who presented the report *Our Common Future* (Brundtland, 1987). The subject NSM was justified by the fact that the study had to aim at the objectives that lay in the UN's environmental education programme, IEEP, i.a. that environmental education should promote understanding that there are mutual connections between the natural basis, the economy, the social environment and the politics that are carried out at different levels in the world community (KUF, 1992). It was also the reason why teacher training became heavily involved in the first climate project *Globe* (Aakre, 1997/2021). These are also the origin of the many formulations we have in subject renewal and today's curricula on sustainable development (LK20). But



after a revision of the framework plan in 2003, neither NSM, science nor social studies became compulsory. Instead, mathematics (30 credits), Norwegian (30 credits) and basic reading, writing and mathematics training (10 credits) became compulsory (UF, 2003).

Based on the framework plan of 1992, students could choose a total of 10 school subjects with a range of up to 15 credits and it was compulsory to take at least one practical-aesthetic subject. It provided a broad and versatile teacher education, but with little professional depth. This breadth and lack of academic depth, especially in mathematics and languages, was used as an explanation for the weak PISA results that came in 2001 and the quality reform that was presented the following year (St.meld. no. 16 (2001-2002)). The result was that the requirement for a practical-aesthetic subject also fell away with the introduction of two-part and specialized primary school teacher training from 2010 (GLU, 2009). The requirement for a practical-aesthetic subject was also not met when a 5-year education with a master's degree was introduced from 2017 (FOR-2016-06-07-860/861), but it became somewhat easier for the institutions to enter a practical aesthetic subject as a possible choice.

Another and much-discussed problem with the two-part primary school teacher training was recruitment, especially at smaller campuses with few students. Some argued that the reform had the effect of centralizing both primary school and teacher training. Many small and fragmented schools were closed in order to achieve the necessary specialization in the teaching group. In some places, this was countered locally with the creation of private schools, most of them Montessori schools. Centralization and the conflict between the center and the periphery also became a political topic nationally, especially in the general elections in autumn 2021 (Aakre, 2021). This led, among other things, to the teacher training at Nesna, which Nord University had decided to close down, being re-established by the Støre government. The introduction of school subjects as master's subjects and the background for it is discussed under the previous point and is not discussed in more detail here.

## **6. Professional development**

When general teacher education became 4 years long, it gained a length and a scope that actualized the question of whether the teaching profession is a profession on the same level as existing professions with a long university education and a high degree of autonomy in the practice of the profession. Gunnar Handal was among the first to raise this debate in connection with the Norwegian primary school's 250th anniversary and Erling Lars Dale wrote about the professional school (Handal, 1989, p. 212; Dale, 1993; Aakre, 2018). Already then, he pointed to some criteria against which the question must be assessed. In



addition to the length of the education, emphasis was placed on autonomy in the practice of the profession, a knowledge base where the profession itself contributes to developing this knowledge base through research as well as its own professional ethics (Imsen, 2006, p. 449).

### *The teacher as researcher*

The Teacher Education Act from 1973, which was repealed in 1999, contained no wording on research. But it had a formulation about "professional and pedagogical development work that is relevant to work in schools and kindergartens, and to provide an understanding of the connection between the teaching profession and the function of the education system in society". However, with the introduction of 4-year general teacher training, emphasis was gradually placed on research, both as a requirement for professional staff to carry out research and as content in the teacher training itself. At Telemark University College, in the 5th semester for the academic year 1994-95, scientific theory and research methods were taught as a basis for R&D work with a scope of approx. 30 pages. In terms of subject matter, scope and quality, they did not differ significantly from the requirements that apply to a bachelor's thesis in today's teacher training. At the beginning, the work was added to the pedagogy subject, but the students were free to choose the subject area for the assignment. One also tried to link these tasks to practice in training schools, but this was not always possible. Similar tasks were also introduced in continuing education for teachers, including social pedagogy, special pedagogy and guidance.

Furthermore, there was a growing demand that the teaching should be research-based. Telemark contributed to TIMMS from 1995 and PIRLS from 2001 (IEA, 202). Participation in the first EU project took place in 1994. In order to ensure that those who teach make time for research, arrangements for applying for research time were introduced early on. A certain percentage of the salary resource was set aside for research and R&D coordinators were employed. The master himself had this function for a few years after it was introduced in 1996 and received 10% of his salary for it. In order to strengthen the research, a significant part of the resource was used as scholarships to take a doctorate. This system was later expanded so that today resources are also provided to qualify as senior lecturer. This has meant that the number of first positions has increased significantly. Today, the institution has its own vice-rector for research, innovation and internationalization.

### *Professional ethics and propriety*

The system of aptitude assessment was already introduced in 1973 with a 3-year general teacher training. Section 24.3 of the Teacher Training Act states: "At the end of a teacher training course, the college must take a final decision on whether the candidate is suitable for the teaching profession". But for a long time



there was no system to meet this requirement. It was also practiced differently (Naustdal and Gabrielsen, 2015). At the end of the 1990s, it was put into a system after there were more frequent reports of students who showed little willingness or ability to work in groups with other students, or who showed a lack of willingness or ability to communicate with students and lead a class. A suitable person was given responsibility for this role, a task the author had for a period. Cases of doubt were then followed up by separate meetings with the students as well as special hearings at a teacher training school. However, it was still through guidance and poor academic results in subjects most of the cases chose to quit. Applying the legislation through judgment proved difficult.

The question of a professional ethics platform for teachers was for a long time a topic that was discussed, among other things, in the topic of ethics. The teachers' organizations were skeptical for a long time on the grounds that it would weaken teachers' autonomy and be used as a "means of control" by the state and school owners. The Norwegian Confederation of Education adopted the "Ethical platform for the teaching profession" in 2013. Two years later they established the "Ethical council for the teaching profession" which will support ethically sound practice in the education sector. The platform's function seems primarily to be advisory and awareness-raising, and the ethical council has so far not made a judgment in any specific cases.

### *Digitization*

In 1992, hardly anyone in teacher education had access to a computer and the telephone system was based on a manual exchange staffed part-time. But that changed quickly. At Telemark teacher training school, there have already been experiments with programming in mathematics and continuing education for science teachers based on digital submission via dial-up connection. In many upper secondary schools, computing had been an elective subject for more than ten years and in 1994 the government presented the first parliamentary report on IT in education (KUF, 1994). This accelerated the work and the Hugin school network was established as a collaborative project between teacher education and practice schools in Telemark and Buskerud. The project was followed up by research and documented in a larger report (Aakre, 1997). The Internet and e-mail were already in use and in 1995 Microsoft included a browser in its software that made sharing and searching for information globally easier. What now came to be called information and communication technology (ICT) came to radically change all education. It changed society and social life between people. It also created new challenges for the teacher and continues to do so. Digital competence has now become a requirement in teacher education and something that affects all subjects (FOR-2016-06-07-860/861, p. 9).



Digitization has changed both the content of teacher education, the subjects and the way in which teacher education is carried out. In 1992, all written submissions and examinations were written by hand and handed in for assessment on paper. Ten years later, only selected school exams were written by hand. Both submission, guidance and feedback were increasingly carried out digitally. Within a few years, some courses were conducted entirely digitally in combination with physical meetings on campus. In Telemark, the first online general teacher training (NALU) was started in 2008, later renamed to online primary school teacher training NGLU (Tømte and Kårstein, 2013). Today, almost all higher education institutions offer online studies. This was reinforced when the corona pandemic hit the country in 2020. Many school owners also invested heavily in digitization by using tablets instead of books, which meant that the teacher education programs had to prepare students for a new teaching role. But the development has also garnered criticism from pedagogues and researchers who believe it is a large-scale experiment with children without sufficient research into the consequences this may have for children's development in the short and particularly long term. Some researchers also claim that excessive use of such aids inhibits children's learning. In addition, many are worried about children and young people's total screen use through games and social media (Schaanning, 2018). Schaanning claims, among other things, that we reflect far too little on and problematize what kind of life kindergarten and school should give our children, and whether there could be other ways to spend childhood and youth than working with adult-imposed school subjects.

#### *Internationalization in teacher education*

Internationalization is partly a consequence of digitization and has made other cultures and ways of thinking more easily accessible. In the 1990s, exchanges of teachers and students were quite random and often the result of personal initiative. It could be students who made an agreement for practice at a school abroad, or teachers who, through institutional agreements, had a week's stay at a teacher training course in a Nordic country. Some were funded by the Nordic Council and often consisted of giving a lecture and otherwise following the teaching at the institution one visited. The program was fairly non-binding, but provided inspiration and new impulses that one took home and used in one's own teaching. Later, exchanges took place with a number of countries outside Europe. An important rationale was the Bologna Declaration from 1999 to develop a more uniform and coherent European area for higher education with, among other things, a comparable degree system (KD, 2009, p. 46). This meant that EU projects gained high prestige, but the application process was and still is demanding. In 1998, teacher education in Telemark began a collaboration with the University of Pune in India. The collaboration has grown year by year and now includes several faculties receiving external funding. In the first years there was rarely talks on research collaboration. Later it came in as a requirement rooted in national policy.



As a consequence of a common degree system, a separate qualification system (EQF/NKR) was introduced, which was of great importance for the design of curricula. The adaptation started with the bachelor's level in 2012 and was completed with plans for the master's degrees in 2015. All the curricula are now arranged in three main categories: knowledge, skills and general competence. At the bottom are also Bloom's categories on assessment based on different levels of knowledge and skills (Bloom, 1956). The organization of student exchange improved after the study centers got their own coordinators for internationalization. Exchange of student teachers was nevertheless difficult due to the special requirements for practice which were difficult to fulfill abroad. The same applied to student teachers from abroad and trainees in Norwegian schools. When introducing 5-year teacher education program, the problem was sought to be solved by adding exchange to the 5th semester without coming into conflict with compulsory practice in teacher training school. The number of student teachers on exchange is still low, but this may have something to do with the fact that the corona pandemic started before the new student teachers arrived for the 5th semester.

When it comes to higher education overall, the status is significantly better. In the last decade, the number of incoming Erasmus students has quadrupled, from 1.000 students in 2001/02 to over 4.000 in 2011/12. Before the pandemic, it was expected that over 20 per cent of those completing higher education had a study or internship abroad, but there are no good statistics on how many student teachers and which subjects they studied.

Research collaboration within teacher education has largely been based on individual agreements. The total scope is low, but experience has been gained that is useful for future research. Firstly, there are different traditions for research, especially outside Europe where free, socially critical education is less common. Expectations for collaboration also differ in that teacher training in some countries is more normative and concerned with cultural collaboration. The same applies to school systems and practices in schools, which makes comparative research difficult. Here one has to largely rely on the major international research programs such as PISA, TIMMS, PIRLS and others. Teacher education was little involved in these programs, but they are used as a common reference and as a basis in other comparative research on teacher education.





## 7. Conclusion

In this survey of teacher education in Norway, one found many reforms and changes in the years between 1992 and 2022. They reflect a society undergoing major changes in which global issues have also played a role and they are based on a perception that professional teachers are crucial for pupils' learning and development. However, there is no clear consensus on which factors are most important. Norway is now a multicultural society where more than 20% of the pupils in school have a different ethnic background than Norwegian. The classical nuclear family came under pressure from the new liberation of the individual. The idea of a common school for all, based on Christian values, which was supposed to contribute to social equalization and social unity, came under strong criticism. Social media also increasingly shaped people's lives, both young and old. Due to social changes, new health problems have also emerged that require measures in schools and teacher education.

New ideologies have also made themselves known or a neoliberal trend has been emerging. It means that teachers tasks have changed from broad holistic view on education and care to more emphasis on individuality and competition. Low scores on international tests such as PISA and TIMSS have been used as justification. Teachers are now supposed to be professionals able to facilitate an environment of change, development and learning and to be supervisors of competitive students. In later years we may sense cautious steps back to a more holistic approach and less testing, but that remains to be seen.

Better recruitment of teachers has been another justification, but in Norway these goals have not yet been met. The applications for teacher education programs are still very low and in the autumn of 2022 the teachers' organizations began a long-term strike for, among other things, higher wages. However, teachers have also lost autonomy and become a profession with more external control.

### *Professional development*

Quality through professional development appear as a main strategy in reforming Norwegian teacher education in the years of the period. But it is not unique to Norway since we find elements of the same in many countries. Often promoted by large organizations such as the OECD. Norway is not member of European Union but increasing cooperation with the EU has contributed to changes. This applies, among other things, to the Bologna Declaration on free movement between the universities and the European Qualifications Framework (EQF).





The aim has been to improve the pupils' learning and make them more competitive. In order to document possible progress and correct for deviations, both national and international tests were introduced. This way of thinking has been controversial and there is no good research that concludes that it has worked as intended. Some have also argued that education is not only about learning, but also about values and development of a sound character.

In Norway the concept “profession” was first used in the national curriculum 1992 and lectures were given with focus on professional schools. Gradually the term was aimed at the teacher's professional development. Specifically, it came to include factors such as longer education, improved pedagogics, specialization in subjects, longer practice, the teacher as researcher, digital competence and internationalization.

In terms of content, pedagogy, practice and school subjects has been expanded. However, teacher education has become more specialized with fewer compulsory subjects and more emphasis on basic skills, language and mathematics. The subject pedagogy has been expanded a greater focus on ethics and social challenges in today's society. More young people are affected by psychological problems, loneliness and eating disorder. On the other hand, free play, drama, interdisciplinarity and other forms of learning that emphasize experience, wholeness and context were toned down. This means that interdisciplinary competence is weakened in today's teacher education and the goal of sustainable development will be among the challenges for the teacher in the years to come.

### *The future*

Aesthetic subjects are now to be strengthened in both schools and teacher education. Not just as subjects, but because aesthetic learning processes, perception and movement are important for all learning. But can these ambitions be realized within a framework that is still characterized by a notion that all knowledge can be measured and used as a means of efficiency and competitiveness? The national assessment schemes designed for this rationale are another obstacle. On these questions, we are now seeing signs of a new debate and perhaps new and better assessment schemes. Recruitment of teachers is still a major challenge, especially in the districts where the former broad general teacher education had its advantages. Some have also advocated that a structure with 3+2 years and at least one year candidate practice before the master's thesis would be an advantage. Above all, we need more research on good teaching and far better recruitment of more teachers with visions of a sustainable future.



## References

- Arfwedson, G. (1994). *Nyare forskning om lärare*. Stockholm: HLS Förlag
- Berge, K. L. (2005). *Skrijving som grunnleggende ferdighet og som nasjonal prøve – ideologi og strategier*. Institutt for nordistikk og litteraturvitenskap, Universitetet i Oslo
- Bloom, B. S. (1956). *Taxonomy of Educational Objectives*. Boston: Allyn and Bacon.
- Bourdieu, P. (1986). *The Forms of Capital*. In Handbook of Theory and Research for the Sociology of Education, edited by John G. Richardson, 241-258, New York: Greenwood.
- Brochmann, G. og Madsen, O. J. (2022). Skolevegring skyldes ikke foreldre som syr puter under armene på barna. *I Aftenposten 23. mars 2022*
- Brundtland, G. H. (red.) (1987). *Vår felles framtid*. Oslo: Tiden norsk forlag
- Burroughs, N. et al. (2019). Teaching for Excellence and Equity. Analyzing Teacher Characteristics, Behaviors and Student Outcomes with TIMSS. *Springer open*.
- Charmaz, K. (2014). *Constructing grounded theory*. Thousand Oaks, CA: Sage
- Coleman, J. (1990). *The Foundations of Social Theory*. Harvard University Press, Cambridge
- Comenius, J. A. (1657). *The Great Didactic*. Translated into English and edited with biographical, historical and critical introductions by M. W. Keatinge, M.A. New York: Russell & Russell, 1967
- Corbin, J. og Strauss A. (2015). *Basics of qualitative reserach. Techniques and procedures for developing grounded theory*. Thousand Oaks CA: Sage
- Dale, E. L. (1993). *Den profesjonelle skole med pedagogikken som grunnlag*. Oslo: Ad Notam Gyldendal
- Dalin, P. (1974). *Utdanning for et nytt århundre*. Oslo: Universitetsforlaget
- Didaktikk – fagdidaktikk, anstrengte eller fruktbare forhold?
- Eklund, G. (2019). Master's Thesis as Part of Research-Based Teacher Education: A Finnish Case. *Journal of Teacher Education and Educators. Volume 8, Number 1, 2019, 5-20*
- FOR-2010-03-01-295. *Forskrift om rammeplan for grunnskolelærerutdanningene for 1.-7. trinn og 5.-10. Trinn*. Lovdata, 2010.
- FOR-2016-06-07-860 and 861. *Forskrift om rammeplan for grunnskolelærerutdanning for trinn 1–7 og 5-10*. Lovdata, 2016.
- Freire, P. (1999). *De undertryktes pedagogikk*. Oslo: Ad Notam Gyldendal
- Gonzales, A. C. og Hagberg, C. (2021). En helskoletilnærming til utdanning for bærekraftig utvikling. En case-studie av Framtiden i våre hender sitt MatVinn-prosjekt på ungdomsskoler i Skog kommune. *Universitetet i Oslo, Institutt for pedagogikk*



- Gundem, B. G. (2008). Didaktikk – fagdidaktikk, anstrengte eller fruktbare forhold? *Acta Didactica Norge. Vol. 2 Nr. 1 Art. 1*
- Hagen, T. (2020). Strid om skolens formål og verdigrunnlag. Hvilke ideologiske og politiske skiller ligger til grunn for utviklingen av skolen fra 1850-tallet til i dag? *Kongsberg: Didactica Vol. 1.*
- Hagtvedt, B. og Ogenjenovic, G. (2011). *Dannelse. Tenkning, modning, refleksjon*. Oslo: Dreyer 2011.
- Halvorsen, K. (1993). Å forske på samfunnet. En innføring i samfunnsvitenskapelig metode. Oslo: Bedriftsøkonomisk forlag
- Hargreaves, A. og Fullan M. (2012). *Professional Capital: Transforming Teaching in Every School*. Teachers College Press.
- Hattie, J. (2012). *Visible learning for teachers. Maximizing impact on learning*. Routledge.
- Haugan, J. A. (2011). A systematic review of research regarding Norwegian general teacher education 2000-2010. *Nordic Studies in Education, 31(4), 229-244.*
- IEA (2022). *International Association for the Evaluation of Educational Achievement*. Hentet 21.03.22 fra; <https://www.iea.nl/>
- Irvine, J. (2018). Relationship between teaching experience and teacher effectiveness: implications for policy decisions. *Journal of Instructional Pedagogies. Volume 22*
- KD (2001). *St. meld. nr. 27 (2000–2001): Gjør din plikt krev din rett. Kvalitetsreform av høyere utdanning*. Oslo: Kunnskapsdepartementet
- KD (2002). *St. meld. nr 16 (2001–2002): Om ny lærerutdanning*. Oslo: Kunnskapsdepartementet.
- KD (2004). *St.meld. nr. 030 (2003-2004). Kultur for læring*. Oslo: Kunnskapsdepartementet
- KD (2007). *St.meld. nr. 16 (2006–2007). ... og ingen sto igjen. Tidlig innsats for livslang læring*. Oslo: Kunnskapsdepartementet
- KD (2009). *St.meld. nr. 14 (2008–2009). Internasjonalisering av utdanning*. Oslo: Kunnskapsdepartementet
- KD (2009). *St. meld. nr. 11 (2008–2009). Læreren. Rollen og utdanningen*. Oslo: Kunnskapsdepartementet.
- KD (2014). *Lærerløftet. På lag for kunnskapsskolen*. Kunnskapsdepartementet
- KD (2015). *Høring - forskrifter om rammeplan for femårige grunnskolelærerutdanninger*. Oslo: Kunnskapsdepartementet
- Klafki, W (2016). *Dannelsesteori og didaktik – nye studier*. Aarhus: Klim forlag 2016.
- KUF (1992). *Rammeplan for 4-årig allmennlærerutdanning*. Oslo: Kirke - utdannings- og forskningsdepartementet
- KUF (1997). *Læreplanverket for den 10 årige grunnskolen*. Nasjonalbiblioteket. Hentet 21.03.22 fra: <https://www.nb.no/nbsok/nb/f4ce6bf9eadeb389172d939275c038bb?lang=no#0>



- KUF (1999). *Rammeplan for 4-årig allmennlærerutdanning*. Oslo: Kirke-, utdannings- og forskningsdepartementet
- Kvale, S. og Brinkmann, S. (2015). *Det kvalitative forskningsintervju*. Oslo: Gyldendal Akademisk
- Kvamme, O. A. og Sæther, E. (red) (2019). *Bærekraftdidaktikk*. Fagbokforlaget
- Larsen, H. (2022). Ledige plasser på 23 lærerutdanninger. Retrieved 23.09.2022 fra: <https://khrono.no/ledige-plasser-pa-23-laererutdanninger/601694>
- L97 (1997). *Læreplanverket for dem 10-årige grunnskolen*. Oslo: Kunnskaps- og forskningsdepartementet
- LK06 (2006). *Læreplanverket for Kunnskapsløftet*. Oslo: Kunnskapsdepartementet
- LK20 (2020). *Læreplanverket*. Oslo: Kunnskapsdepartementet
- LOV-1973-06-08. *Lov om lærerutdanning*. Lovdata.
- LOV-2005-04-01-15. *Lov om universiteter og høyskoler (universitets- og høyskoleloven)*.
- M87 (1987). *Mønsterplan for grunnskole*. Oslo: Kirke- og undervisningsdepartementet
- Melling-Olsen, S. T. (1984). *Eleven, matematikken og samfunnet*. Oslo: NKI forlaget
- N39 (1939). *Normalplan. For Folkeskolen*. Oslo: Kyrkje- og undervisningsdepartementet
- NOKUT (2006). *Evaluering av allmennlærerutdanningen i Norge 2006. Del 1: Hovedrapport*.
- NOKUT (2011). *Nasjonalt kvalifikasjonsrammeverk for livslang læring*. Oslo: NOKUT. Retrieved 21.02.22 from: <https://www.nokut.no/norsk-utdanning/nasjonalt-kvalifikasjonsrammeverk-for-livslang-laring>
- NOU 2003: 16. *I første rekke — Forsterket kvalitet i en grunnopplæring for alle*. Oslo: Kunnskapsdepartementet
- NOU 2002: 10. *Førsteklasses fra første klasse— Forslag til rammeverk for et nasjonalt kvalitetsvurderingssystem av norsk grunnopplæring*. Oslo: Kunnskapsdepartementet
- NOU 1996:22. *Lærerutdanning. Mellom krav og ideal*. Oslo: Kirke-, utdannings- og forskningsdepartementet.
- OECD (1989). *Ekspertvurdering fra OECD*. I KUD, KVD og OECD. OECD-vurdering av norsk utdanningspolitikk. Norsk rapport til OECD. Ekspertvurdering fra OECD. Oslo: Aschehoug
- OECD (2022). *Productivity, human capital and educational policies*. Retrieved 06.04.22 from: <https://www.oecd.org/economy/human-capital/#:~:text=A%20new%20OECD%20measure%20of%20human%20capital%20builds.all%20countries%20and%20these%20didn%E2%80%99t%20change%20in%20time>.
- OECD (2020). PISA is the OECD's Programme for International Student Assessment. Retrieved 10.12.2020 from: <https://www.oecd.org/pisa/>
- Olweus, D. (1992). *Mobbing i skolen. Hva vi vet og hva vi kan gjøre*. Oslo: Universitetsforlaget.



- Ongstad, S. (2006). (red.) *Fag og didaktikk i lærerutdanning: Kunnskap i grenseland*. Oslo: Universitetsforlaget.
- Ot.prp. nr. 77 (1997-98). *Om lov om oppheving av lov om lærerutdanning av 8. juni 1973 nr. 49 og endringer i enkelte andre lover*
- Pantic, N. og Florian, L. (2015). Developing teachers as agents of inclusion and social justice. *Education Inquiry* 6(3):333-351
- Pollitt, C. og Bouckaert, G. (2004). *Public Management Reform. A Comparative Analysis*. Oxford, 2004.
- Qiguang Y. og Chunjie Z. (2021). Socially Constructed Teacher Professionalism: An Historical Analysis of Teacher Education Reform Policies of Canadian Case. *International Education Studies; Vol. 14, No. 3*;
- Roland, E. og Munthe E. (1987). *Bullying. An International Perspective*. London: Taylor and Francis
- Schultz, T. W. (1961). Investment in Human Capital. *The American Economic Review, Vol. 51, No. 1 1961, pp. 1-17*.
- Schaanning, E. (2018). *Til alle barns beste? Intervensjoner i skolefeltet*. Kolofon forlag
- Sinnes, A. (2020). *Action, takk! Hva kan skolen lære av unge menneskers handlinger for bærekraftig utvikling?* Universitetsforlaget
- Sinnes, A. (2021). *Utdanning for bærekraftig utvikling*. Universitetsforlaget
- Skogstrøm, L. (2022). Pasienter med spiseforstyrrelser blir yngre og sykere. *I Aftenposten 27.mars 2022, s. 16-19*
- Streitlien, Å og Aakre, B. M. (2019). *Det store spranget. Utdannings og yrkesvalg fra ungdomstrinn til videregående opplæring*. Cappelen Damm Akademisk
- Telhaug, A. O. (1994). *Utdanningspolitikken og enhetsskolen*. Oslo: Didakta
- Telhaug, A. O. (2005). *Kunnskapsløftet – Ny eller gammel skole?* Oslo: Cappelen Akademisk Forlag.
- UF (2003). Rammeplan for Allmennlærerutdanningen. Fastsatt 3. april 2003. Utdannings- og forskningsdepartementet. Oslo: Utdannings- og forskningsdepartementet
- Uhr (2009). *Kunnskap og dannelse foran et nytt århundre. Innstilling fra dannelsesutvalget for høyere utdanning*. Oslo: UHR
- Ulvik, M. og Smith, K. (2018). Lærerutdanneres profesjonelle utvikling. *Uniped 04 / 2018 (Volum 41)*.
- Utdanningsnytt (2006). Ledige plasser i lærerutdanningen. Retrived 06.04.2022 from: <https://www.utdanningsnytt.no/hoyere-utdanning/ledige-plasser-i-laererutdanningen/121104>
- Østerud, S. (2004). *Utdanning for informasjonssamfunnet, Den tredje vei*. Oslo: Universitetsforlaget
- Aagre, W. og Schaanning, E. (Red.) (2022). *Skolens mening. Femti år etter Nils Christies «Hvis skolen ikke fantes»*. Oslo: Universitetsforlaget
- Aakre, B. M. (2021). Bærekraftig utvikling i skole og utdanning. Med Norge og Japan som kontekst. *Kongsberg: Didactica*



Aakre, B. M. (1997/2020). Skolen og informasjonssamfunnet. *Kongsberg: Didactica*

Aakre, B. M. (2018). Yrkesfaglæreres profesjonelle kompetanse. En kvalitativ undersøkelse med Norge og Japan som kontekster. *Lindköping: Nordic Journal of Vocational Education and Training. NJVET, Vol. 8, No. 2, 71–92 (2018)*

Aakre, B. M. (2005). *Formgiving og design i et didaktisk perspektiv*. Trondheim: NTNU

Aakre, B. M. (2013). Vurderingspraksis i yrkesfag. *Lindköping: Nordic Journal of Vocational Education and Training. NJVET, Vol. 3, (2013)*