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REPORT



Transforming Norwegian Teacher Education:

The Final Report of the International Advisory Panel for Primary and Lower Secondary Teacher Education

2020



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Biographies of the panel members



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Cochran-
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Croatia, England, Israel, Ireland, Malta, New Zealand, Norway, Portugal, and in many parts of the USA.

Professor Cochran-Smith is a former President of the American Educational Research Association, an AERA fellow, and an elected member of the National Academy of Education. Cochran-Smith has two honorary doctorates, from the University of Alicante (Spain) and the University of Edinburgh (Scotland), as well as two lifetime achievement awards, the 2018 AERA/Division K Legacy Award and the 2014 Distinguished Scholar Lifetime Achievement Award from the Literacy Research Association. Professor Cochran-Smith has written ten books and more than 200 articles, policy briefs, chapters, and editorials. Her latest book, *Reclaiming Accountability in Teacher Education*, won AERA/Division K's 2019 Award for Exemplary Research in Teaching/Teacher Education as well as the 2020 AACTE (American Association of Colleges for Teacher Education) Best Book Award. With the support of a Spencer Foundation grant, she is currently studying teacher preparation at "new graduate schools of education" (nGSEs), which are unaffiliated with universities but grant master's degrees and teacher licensure.



**Mikael
Alexandersson**

Mikael Alexandersson is both Professor of Education and Professor of General Didactics. He earlier had a position at the University of Gothenburg. Alexandersson has since the 1980s carried out research mainly studying teachers' professional development, new digital technology and how political reform affect the educational sector. He has also supervised 20 doctoral students; all of them have been involved in teacher education. Alexandersson has been a university rector of Halmstad University, dean of the Faculty of Education and head of the Centre for Educational Science and Teacher Research

(both at University of Gothenburg). He is also an Honorary Professor and Honorary member of the University's Academic board at Beijing Information Science & Technology University, China.

Parallel to research, teaching and management Alexandersson has been involved as an expert, advisor or secretary in Swedish governmental inquiries and commissions but also in Swedish funding agencies. Some of these focused mainly on the development of teacher education. For instance, the Swedish Government's Research Advisory Committee; the Advisory Group

investigating the Swedish University system; the Swedish Government's Commission of Police Education and the Swedish Teacher Education Committee. During the last decade he has also been chairman of panels and committees for evaluation of higher education in Sweden, Norway and Denmark, that also include teacher education. He was also a member of the Programme Board of Educational Research in Norway (UTDANNING2020) during 2009–2012. In recent years (2018-2020) Mikael is the chairman of the External Assessment of the Research Quality at Malmö University.



Viv Ellis currently holds the Chair in Educational Leadership and Teacher Development at King's College London. Prior to King's, he led the re-opening of the Department of Education at Brunel University London as Professor and Chair and was previously Co-Director of the Centre for Sociocultural and Activity Theory Research (OSAT) at the University of Oxford. From 2009 to 2019, he was associated with Western Norway University of Applied Sciences (HVL) in Bergen as Visiting Professor where he worked on researcher development across the Faculty of Education.

He is currently an Honorary Research Professor at Teachers College, Columbia University and a Visiting Professor at Central China Normal University. He is also Founding Co-Director of the Centre for Innovation in Teacher Education and Development (CITED), a joint initiative between King's College London and Teachers College in New York.

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Lexie Grudnoff is an Associate Professor in the Faculty of Education and Social Work at the University of Auckland, New Zealand. A teacher education practitioner for more than forty years, she directed the undergraduate and post-graduate initial teacher education programmes at the University of Auckland, New Zealand's largest teacher education provider. Her scholarly activities speak to her long term interest in new teacher professional learning and include how novice teachers learn to teach in ways that lead to more equitable learner outcomes, the role of

professional experience in pre-service teacher learning, the process of transition and development new teachers experience when starting teaching, and the induction and mentoring of beginning teachers. Grudnoff has been both lead researcher and co-researcher on a range of collaborative projects related to her research areas. She has had long-standing involvement at the national level as both a scholar and teacher educator. In addition to contributing to numerous policy working groups related to initial teacher education and mentoring and induction, she has been a member of the Board for the New Zealand Council of Education Research and is part of the selection panel for the national Tertiary Teaching Excellence Awards. For over ten years she served as elected Chair of the Teacher Education Forum of Aotearoa New Zealand, the major association for the nation's teacher educators, which provides a national voice for teacher education matters in the political and policy arena.



**Karen
Hammerness**

Karen Hammerness is the Director of Educational Research and Evaluation at the American Museum of Natural History. Her research focuses upon the design and pedagogy of teacher education in the United States and internationally. She has been a visiting professor at Leiden University's Graduate School of Teaching; University of Helsinki's Faculty of Educational Sciences; and the University of Oslo. Her long-time connection to Norway began with a Fulbright Fellowship in 2009-2010, when she and her husband (also a Fulbright recipient) spent a year with their three daughters, all of whom attended school in Norway. Hosted by the

University of Oslo, Hammerness spent a year researching program visions across a sample of Norwegian teacher education programs. She continued her work with Norwegian colleagues as a Professor II from 2010-2019 at the University of Oslo in the Department of Teacher Education and School Research. With Kirsti Klette (University of Oslo), she was the Principal Investigator of a four-year international study of teacher education programs in five countries, including Norway, funded by the Norwegian Research Council. Her most recent book (2017) *Empowered Educators in Finland: How high-performing systems shape teaching quality*, examines the coherent systems supporting teaching in Finland. She has contributed chapters about teacher education to a number of books, including *Teacher Education around the World: Changing Policies and Practices* (Routledge, 2012) and *Preparing Teachers for a Changing World* (Jossey-Bass, 2005). Her forthcoming book *Preparing Science Teachers Through Practice-Based Education* (Harvard Education Press) will be released in Fall, 2020.



**Alis
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Alis Oancea is Professor of Philosophy of Education and Research Policy at the University of Oxford, where she is also Director of Research in the Department of Education. She conducts research on research (e.g. policy, quality, impact, openness, capacity, assessment, cross-sectoral relationships) and is fascinated by the philosophical entanglements of different modes of research, research policy and assessment, and educational practice. Her writing challenges divisive interpretations of research methodologies and critiques conceptually underdeveloped metrics for research, while arguing for a tighter

relationship between philosophical, theoretical and empirical inquiry and professional practice in the social sciences and humanities. Recent work on teacher education includes a historiography of teachers' professional knowledge in state-funded teacher education; a study of ethical quandaries in practitioner research; inquiry into the contribution of educational research to teachers' professional learning; and into philosophical perspectives on teacher education. Ongoing collaborative projects include contribution to the intellectual basis of teacher education group convened by the Universities Council for the Education of Teachers (UK) and to research on early years and resources for teachers (S.Nag with colleagues from India, the Philippines and the UK) and on quality in teacher education (D.Mayer, with colleagues from five countries). Books include *Assessing Quality in Applied and Practice-based Research* (Routledge, 2007), *Education for All* (Routledge, 2012) and *Introduction to Research Methods in Education* (2014). Alis is joint editor-in-chief of the *Oxford Review of Education*, and was a founding editor of the *Review of Education*.



**Auli
Toom**

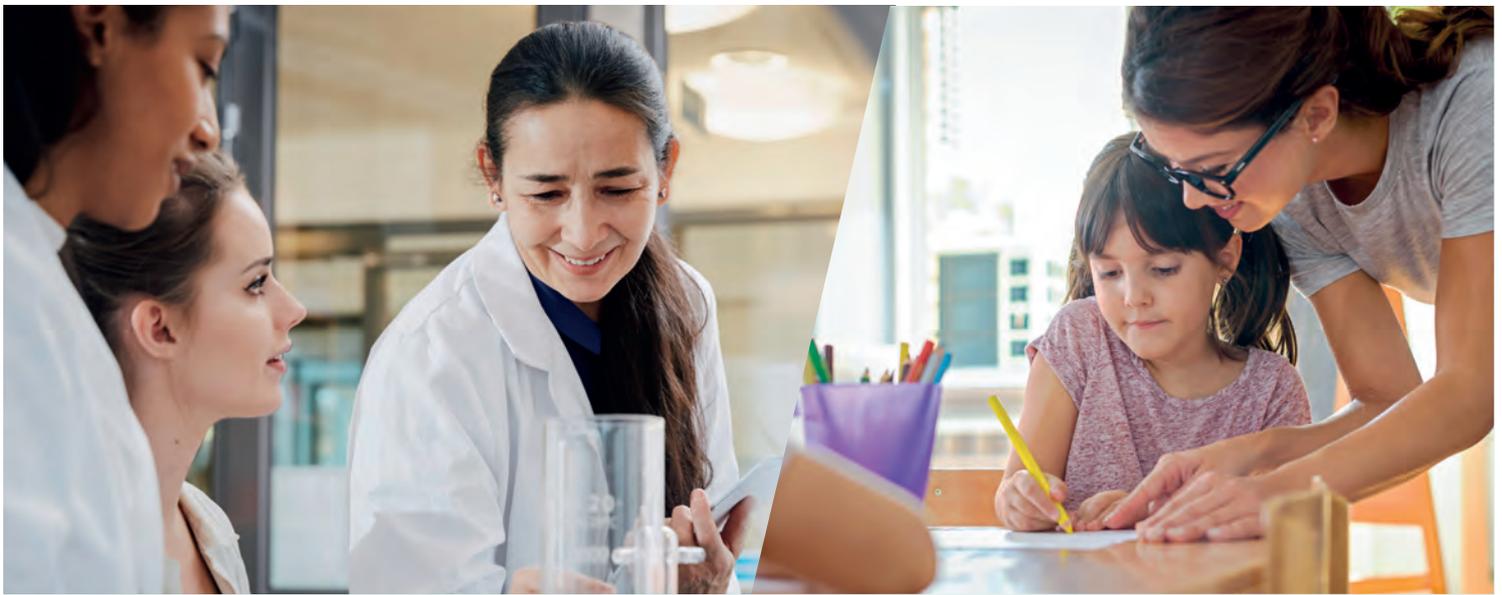
Auli Toom, PhD, Professor of Higher Education, works as a Director of the Centre for University Teaching and Learning at University of Helsinki, Finland. Toom is also the Director of the Doctoral Programme PsyCo (Psychology, Learning and Communication). She holds Adjunct Professorship at the University of Eastern Finland and is

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Executive Summary

On 1 April 2016, the Norwegian Ministry of Education and Research commissioned NOKUT to establish a panel of international experts on teacher education (APT) to advise Norwegian higher education institutions on the implementation of the new 5-year integrated master's degree programmes in primary and lower secondary (PLS) teacher education. We met as a panel for the first time in February 2017 and completed our work in May 2020 with the publication of this report.

As panel members, we were united in our conclusion that the new master's programmes for PLS teacher education represent an internationally distinctive and remarkably ambitious reform based on high expectations for student teachers, for university/college-based and school-based teacher educators, and ultimately, for the country's school children. The goal of the new PLS teacher education programmes is integrating enhanced knowledge and research competency with inquiry-rich, school-based experiences to create a permanent professionally-oriented teaching force. The success of these new programmes depends on new ways to think about accountability, collaboration, and what it means to learn to teach. This requires profound cultural change for Norway's teachers and teacher educators as well as profound changes in the approaches of the Ministry of Education and Research and NOKUT. Profound cultural change requires both resources, including the development of permanent institutional

capacity and infrastructure in the TEIs and the schools, and time, including the time to take risks, to learn from local innovations, and to respond to the short- and long-term implications of the reform.

This report presents two sets of recommendations about core issues in PLS teacher education. One set, which deals with systemic or policy issues, is addressed to the Ministry of Education and Research and to NOKUT. The second set, which deals with collaboration and joint responsibility for teacher education, is addressed to the TEIs and their school and municipality partners.

Some readers of this report may worry that our recommendations are bold and transformative. They are. But Norway's goals for PLS teacher education are also bold and transformative. Threaded throughout our recommendations, the panel focuses on five aspects of PLS teacher education that we believe are central to the desired transformation: *collaboration* across multiple stakeholders, the *active agency* of all participants in knowledge building and learning, building *research competence and capacity* for all student teachers and teacher educators, enhancing the *practice orientation* of student teachers' school experiences and master's theses, and ensuring the *sustainability* of reforms by providing the necessary infrastructure, resources, mechanisms, and tools over the long haul.

Recommendations to the Ministry of Education and Research and to NOKUT

Recommendations on accountability

The panel recommends that the Ministry of Education and Research follows through on its aspiration to develop an accountability system based on professional responsibility, agency, and local innovation rather than on excessive monitoring, compliance, and uniformity.

- Ensure that the timeline for auditing is long enough to allow TEIs to fully implement all aspects of the new 5-year programmes.
 - Allow enough time for short- and longer-term implications and intended as well as unintended consequences of the reform to become visible.
 - Allow time for TEIs to conduct and respond to their own local research about the impact and consequences of local programme practices and policies.
 - Extend the audit time frame beyond the time it takes for one cohort to move through the programme.
- At the end of seven years, which will allow for three cohorts to complete the programme, conduct a participatory and formative evaluation that involves TEIs and their school/municipality partners in working out the format, arrangements, and timing.
 - Create new arrangements that include TEI and school-based teacher educators as partners in establishing the methods, arrangements, and themes of NOKUT evaluation.
- Sponsor ongoing regional and national teacher education meetings that support collaboration, sharing research and innovation, and discussing challenges and problems.
- Provide resources dedicated to supporting the creation of a culture of research and inquiry about the new programmes that informs continuous improvement.
- Provide the materials, tools, and resources that enhance the research capacity of TEIs and their school-based partners
- Reduce the number and specificity of national regulations, guidelines, and frameworks for teacher education at the TEIs.
 - Aim for more professional autonomy for TEIs to meet a small number of broad guiding principles rather than compliance with multiple detailed requirements.
- Rethink the role of the Ministry of Education and Research and NOKUT in teacher education.
 - Aim to create the conditions for strong internal accountability in the form of intelligent professional responsibility rather than micro-management.
 - Continue to reorganise NOKUT's approach to quality assurance by moving away from external audit/surveillance and toward supporting professionals as agents of change.

Recommendations on sustainability

The panel strongly supports Norway's aspirations to permanently enhance the quality of PLS teacher education. To do so, the panel recommends multiple measures to ensure sustainability.

- Place a national moratorium on primary and lower secondary teacher education reforms until the integrated master's programmes are firmly in place.

- Strengthen the external reform infrastructure to support the implementation of the master's reform.
 - Establish a permanent group with representatives from Udir, NOKUT, and Diku to provide national, systems-level coordination of teacher education oversight, accountability, and quality assurance.
 - Provide quality enhancement activities that support strong internal accountability at the level of each local TEI/school partnership, including continuation of the model of alternating regional and national seminars related to the PLS reforms.
 - Support leadership coaching for TEI deans/programme leaders focused on research capacity, internationalisation, building collaboration, and extending networks.
- Provide permanent mechanisms and funding for national coordination and leadership of the 5-year integrated master's programmes.
 - Designate a professional umbrella group to convene, lead, and coordinate regular regional and national meetings of all the constituencies, stakeholders, and professional organisations involved in teacher education.
 - Provide funding for meetings of this umbrella group and for regular regional and national meetings.
- Support ongoing research within and across the TEIs-school partnerships about the nature, quality, and impact of the new master's programmes.
 - Support and fund each TEI-school partnership's development of a programme of research related to the new master's programmes.
 - Establish and support a permanent regular forum for networking, collaboration, and dissemination of research and innovations across TEI-school partnerships.
- Fund research across the new master's programmes that contributes to regional and national knowledge bases about teacher education in the new programmes and beyond.
- Provide additional funding for the regular operating needs of the new 5-year master's programmes, which involve more students, new collaborations, and new partnerships.
- Provide funding for rich school experiences in Year 4 and Year 5 of the master's programmes.
- Establish a micro-funding programme for TEI-school innovations and pilot projects that focus on sustainability and dissemination across partnerships.

Recommendations on partnerships and school experiences

The recommendations below involve the *structural* aspects of TEI-school partnerships and student teachers' school experiences.

Partnerships

- Examine the current relationships of the oversight agencies involved in teacher education in Norway.
 - Develop a new national partnership model that includes coordination across Udir, NOKUT and Diku on all teacher education issues.
 - Avoid the development of teacher education initiatives that are not informed by research and/or not connected to already-existing initiatives.
- Evaluate current partnership agreements of the TEIs and their school/municipality partners.
 - Establish agreement about broad general principles to guide partnerships between TEIs and their school/municipality partners.

- Avoid both one-sided approaches and top-down, unfunded mandates.
- Aim for all student teachers to spend a substantial portion of their school experience in schools with coherent and genuine partnerships with TEIs.
- Provide the resources, mechanisms, and tools for TEIs and schools to function as genuine partners with full agency and joint responsibility for teacher education.
 - Provide resources and tools for local partnerships to design, study, and revise teacher education in ongoing cycles of inquiry and improvement.
 - Provide funding *directly to the school/municipality partners* to support dedicated staff involved in teacher education.
- Hold TEI-school partnerships jointly accountable for the quality of PLS teacher education.

School experiences

- Move away from the model of “school-based days” and toward a rich model of quality professional school experience for student teachers.
- Require that TEIs and their school partners jointly foster the conditions wherein student teachers in Years 4 and 5 engage in inquiry-rich and coherent “school experiences” that are long and connected enough for student teachers to engage in the central activities of teaching.
- Change the framework regulations so that TEI-school partnerships are required to devise ways for student teachers to have rich fully-participatory periods of professional school experience in Years 4 and 5.
- Provide adequate funding for the experiences in Year 4 and Year 5.

Recommendations on funding

Norway’s PLS reform calls for greater professionalisation, closer relationships with schools, stronger links between theory and practice, and making research central. To succeed, there must be adequate funding for the reform over the long haul.

- Move the new 5-year master’s programmes in PLS teacher education from category D to category C in Norway’s higher education funding system in order to fund general operations.
- Fund specific initiatives related to research capacity building, programme integration, partnerships and school experience, and the master’s thesis, as stated throughout the report and summarised in Table 10 (p. 100). Of particular importance is the recommendation that the schools receive direct funding for dedicated school-based leaders and teachers responsible for partnership activities, working with student teachers, and participating in thesis and R&D supervision.

Recommendations to Teacher Education Institutions and Schools

Recommendations on research capacity building

The transformation of PLS teacher education in Norway requires a coherent, strategic approach to research capacity building.

- Invest in enhancing the qualifications and professional development of existing staff to increase the pool of those with research experience in both TEIs and schools.
 - Create a professional development strategy for teacher educators linked with recruitment strategies for Practitioner II and Professor II positions in TEIs.
 - Provide leadership training for new deans and leaders of newly merged TEIs, including ways to provide professional development to increase faculty research capacity.
- Provide financial and logistical support for sustainable research collaborations between TEIs and schools.
 - Jointly develop a collaborative research agenda, including plans for master’s thesis co-supervision.
 - Co-design a timetable of opportunities for collaborative work involving university TEI and school teachers and mentors in face-to-face and other interactions.
 - Co-design opportunities for student teachers and new teachers to be part of professional communities focused on research and practice.
- Build and consolidate infrastructure to support the conduct, quality assurance, and sharing of research across TEIs and schools.
 - Build infrastructure for research engagement between TEIs and schools, municipa-

lities, and other research institutions, and across subject areas.

- Provide mechanisms and tools for sharing the findings and insights generated by student teachers’ master’s theses.
- Review existing mechanisms for incentivising and recognising research engagement as an essential part of professional activity in TEIs and schools.
 - Consider becoming signatories of DORA (Declaration on Research Assessment) and applying its principles to evaluate hiring, tenure, promotion, and reward decisions, especially for early-stage academics.
 - Ensure that research engagement is accounted for in the allocation of time and workload and arrangements for study leave.

Recommendations on programme design and integration

In order to develop “research-based skills” to make “informed decisions”, all student teachers need inquiry-rich, coherent, and integrated learning experiences relevant to teaching practice. This requires TEIs and their school partners working collaboratively on programme design and integration.

- Reach agreement about a conception of student teacher learning and a vision of good teaching/good teachers.
 - Agree on the practices, dispositions, and values that characterise good teachers (and ideal programme graduates).
 - Establish inquiry groups or other professional communities with representatives from within and/or across TEI programmes and schools (including student teachers) wherein

participants examine their visions of good teaching/teachers.

- Build networks that bring TEI teacher educators, disciplinary faculty, school-based leaders and teachers, teachers' union representatives, community and/or municipality representatives, and student teachers together to exchange ideas, concerns, values, and visions.

Include school-based educators, student teachers, and TEI educators in programme co-design, evaluation, and decision making.

- Involve other stakeholder groups, such as representatives from unions or other professional organisations, in program improvement through shared work and planning.
- Jointly develop structures, routines, and settings for co-planning and evaluation, such as regular meeting times, dedicated spaces, and on-going logistical support for mutual work.
- Jointly develop and articulate a developmental progression of student teachers' learning to teach and learning to engage in inquiry and practice-oriented research over time.
 - Establish inquiry groups, professional learning communities, action research collaborations, or other groups wherein participants jointly study pupils' and/or student teachers' learning.
 - Develop or adapt protocols that map out key practices, strategies, and dispositions for student teachers over time, including their participation in school-based activities, observations, and inquiries.
 - Examine representations of student teachers' or graduates' teaching (e.g., written work, artefacts of practice, videos) to develop shared understandings of what it means to learn to teach well.
 - Examine key programme assignments across courses and settings to assess alignment and sequencing.

- Document and analyse local PLS programme variation and its impact on student teachers' learning. This research can make a valuable contribution not only across Norway's programmes, but also to the international literature about teacher education and teacher learning.

Recommendations on partnerships and school experience

The recommendations below involve the *local* aspects of TEI-school partnerships and student teachers' school experiences.

- Collaboratively develop sustainable, productive, and mutually beneficial TEI-school partnerships to support student teachers who are professionally capable and research competent.
 - Recognise that teacher education is a responsibility shared by TEI-based and school-based teacher educators.
 - Agree on what "good" teacher education looks like and how it is enacted, including agreement about school experiences and research expectations, particularly in programme Years 4 and 5.
 - Acknowledge that developing a shared vision takes time.
- Jointly construct formal partnership agreements concerning: vision and purpose; partners' contributions, roles, responsibilities, and benefits; and, the structures, processes, and resources necessary for productive and sustainable partnerships.
- Use partnerships as a vehicle for knowledge development and dissemination.
 - Collaboratively conduct evaluations, plan small-scale enquiries, apply for pilot funding, conduct research projects and R&D assignments, and make decisions about issues

- related to undergraduate theses, master's theses, and doctoral student work.
 - Develop dual positions between TEIs and schools.
 - Support the efforts of mentors and other school-based educators dedicated to enhancing student teachers' professional learning and development.
 - Promote reciprocal and collaborative mentor-mentee relationships, as opposed to traditional expert-novice hierarchical relationships.
 - Support the professional development of mentors, recognizing mentoring as a distinct professional skill.
 - Ensure that the mentoring of student teachers draws from both research- and experience-based knowledge.
- Collaboratively design, organise, and manage sufficiently long and connected school experiences during Years 4 and 5 of the programmes so that student teachers have opportunities to engage in the central activities of teaching.

Recommendations on the master's thesis and supervision

The panel recommends that each TEI-school partnership reach agreement about the focus, scope, quality, and supervision of the master's theses, which are central to the new PLS master's programmes.

- Reach agreement on the meaning of “practice-based” and “professionally-oriented” research and on the focus and scope of the master's theses.
 - Allow room for variation and innovation in the focus, scope, and types of research student teachers undertake.
 - Consider the ethical aspects of student teachers doing master's level research in schools and agree on appropriate guidelines and protocols.
- Reach agreement on what constitutes rigour and quality in the master's thesis as an outcome of professionally-oriented and practiced-based research.
 - Agree on guidelines for appropriate assessment criteria, utilising the expertise of educators from the TEIs and the schools.
 - Acknowledge that there is not a consensus in the education field about “closeness to practice” as a criterion for research rigour. However, joint deliberation about these and other complex issues is necessary for the development of meaningful thesis assessment criteria.
- Seek out and share across TEIs national and international examples of collaborative theses (e.g., in pairs or small groups) that have produced academic work that can be individually assessed in the form of a single student's thesis.
 - Use these to encourage discussion about these issues, including the potential that these projects may have to extend the scope of research and alignment of thesis research with school development plans.
- Reach agreement on the supervision structures and practices that support the process of student teachers' conducting and completing quality theses in a timely way.
 - Consider structural supervisory capacity issues as well as pupils' and student teachers' learning needs.
 - Develop strategies for the TEIs to facilitate collaborative supervisory practices with school-based educators, including co-supervision and group-based supervision, while the TEIs retain primary responsibility for the supervision of the thesis.



Sammendrag

1. april 2016 ga Kunnskapsdepartementet NOKUT i oppdrag å opprette et panel med internasjonale eksperter på lærerutdanning (Advisory Panel for Teacher Education, APT) for å gi råd til norske høyere utdanningsinstitusjoner om gjennomføringen av de nye 5-årige integrerte masterstudiene i grunnskolelærerutdanningen (GLU). Vi i panelet møttes for første gang i februar 2017, og vi avsluttet arbeidet i mai 2020 med publiseringen av denne rapporten.

Som panelmedlemmer var vi samlet i vår konklusjon om at de nye masterstudiene for GLU representerer en internasjonalt særegen og usedvanlig ambisiøs reform basert på høye forventninger til lærerstudenter, lærerutdannere ved universiteter, høyskoler og skoler og til syvende og sist landets skoleelever. Målet med de nye GLU-programmene er å skape faglig solide lærerkrefter ved å integrere kunnskap og forskningskompetanse med utforskende praksisopplæring.

Suksessen til disse nye programmene avhenger av nye måter å tenke rundt ansvarlighet, samarbeid og hva det vil si å lære å undervise. Dette krever dyptgripende kulturell endring for norske lærere og lærerutdannere og ditto endringer i tilnærmingen til Kunnskapsdepartementet og NOKUT. Dyptgripende kulturelle endringer krever ressurser, inkludert utvikling av solid institusjonell kapasitet og infrastruktur på lærerutdanningsinstitusjonene

og skolene. I tillegg krever det tid, inkludert tid til å ta risiko, for å lære av lokale innovasjoner og å respondere på kort- og langsiktige implikasjoner av reformen.

Denne rapporten presenterer to sett med anbefalinger om kjerneområder i GLU. Ett sett tar for seg strukturelle eller politiske spørsmål og er adressert til Kunnskapsdepartementet og NOKUT. Det andre settet omhandler samarbeid og felles ansvar for lærerutdanningene og er adressert til lærerutdanningsinstitusjonene og skole- og kommunepartnerne deres.

Enkelte lesere av denne rapporten vil kanskje bekymre seg for at anbefalingene våre er ambisiøse og transformative. Det er de. Men Norges mål for GLU er også ambisiøse og transformative. Panelet fokuserer på fem aspekter ved GLU som vi mener er sentrale for ønsket transformasjon: *samarbeid på tvers mellom flere aktører, aktiv deltakelse fra alle involverte innenfor kunnskapsbygging og læring, oppbygging av forskerkompetanse og kapasitet for alle lærerstudenter og lærerutdannere, styrking av praksisdelen i lærerstudentenes praksisopplæring og masteroppgave samt sikring av bærekraften til reformen ved å få på plass nødvendig infrastruktur, ressurser og verktøy.*

Anbefalinger til Kunnskapsdepartementet og NOKUT

Anbefalinger om ansvarlighet

Panelet anbefaler at Kunnskapsdepartementet følger opp ambisjonen med å utvikle et ansvarssystem basert på faglig ansvarsbevissthet, deltakelse og lokal innovasjon i stedet for overdreven overvåking, føyelighet og ensartethet.

- Sørg for at tidslinjen for tilsyn er så lang at lærerutdanningsinstitusjonene kan implementere alle aspekter ved de 5-årige programmene fullt ut.
 - Sett av nok tid sånn at kort- og langsiktige implikasjoner og intenderte og uintenderte konsekvenser av reformen blir synlige.
 - Gi lærerutdanningsinstitusjonene tid til å utføre og handle på egen forskning på virkningene og konsekvensene av lokale programpraksiser og retningslinjer.
 - Utsett NOKUTs undersøkelse av kvalitets-tilstanden i GLU utover tiden det tar for en kohort å gjennomføre programmet.
- Etter syv år, dvs. når tre årskull har fullført programmet, gjennomføres det en deltakende og formativ evaluering, hvor utarbeidingen av format, ordninger og tidsplan involverer lærerutdanningsinstitusjonene og skole- og kommunepartnere.
 - Opprett nye ordninger hvor lærerutdannere ved lærerutdanningsinstitusjonene og i skolene inkluderes som samarbeidspartnere i etableringen av metoder, ordninger og temaer for NOKUTs evalueringer.
- Støtt pågående regionale og nasjonale lærerutdanningsmøter som understøtter samarbeid, deling av forskning og innovasjoner og diskusjoner rundt utfordringer og problemer.
- Still øremerkede ressurser til rådighet i arbeidet med å etablere en kultur for forskning og

utredning rundt de nye integrerte masterprogrammene, som skaper et kunnskapsgrunnlag for videre utvikling.

- Bidra med materialer, verktøy og ressurser som forbedrer forskningskapasiteten til lærerutdanningsinstitusjonene og de skolebaserte samarbeidspartnerne deres.
- Reduser antallet og detaljnivå i nasjonale forskrifter, retningslinjer og rammeplaner for lærerutdanningene ved lærerutdanningsinstitusjonene.
 - Ta sikte på en mer profesjonell autonomi for lærerutdanningsinstitusjonene ved å be dem følge noen få romslige retningslinjer i stedet for å overholde flere detaljerte krav.
- Revurder rollen Kunnskapsdepartementet og NOKUT har i lærerutdanningen.
 - Ta sikte på å skape forutsetninger for sterk intern ansvarlighet i form av kunnskapsrikt faglig ansvar i stedet for detaljstyring.
 - Fortsett omorganiseringen av NOKUTs tilnærming til kvalitetssikring ved å gå bort fra eksternt tilsyn/overvåking til å støtte fagpersoners rolle som endringsagenter.

Anbefalinger om bærekraft

Panelet støtter fullt opp om Norges ambisjoner om en varig forbedring av kvaliteten på GLU-programmene. For å gjøre dette anbefaler panelet flere tiltak for å sikre bærekraft.

- Utsett nye reformer i grunnskolelærerutdanningen til de integrerte masterprogrammene er på plass.
- Forsterk reformens eksterne infrastruktur for å støtte implementeringen.

- Etabler en fast gruppe med representanter fra Utdanningsdirektoratet (Udir), NOKUT og Direktoratet for internasjonalisering og kvalitetsutvikling i høgare utdanning (Diku), for å sørge for nasjonal koordinering på systemnivå når det gjelder tilsyn, ansvarlighet og kvalitetssikring av lærerutdanning.
 - Tilby kvalitetsforbedrende aktiviteter som understøtter en sterk intern ansvarlighet hos hver lokal lærerutdanningsinstitusjon/praksisskole, herunder videreføring av modellen med alternerende regionale og nasjonale seminarer relatert til GLU-reformen.
 - Støtt kursing i ledelse for dekaner/programledere ved lærerutdanningsinstitusjonene, med fokus på forskningskapasitet, internasjonalisering, samarbeidsbygging og utvidelse av nettverk.
- Få på plass varige mekanismer og finansiering for nasjonal koordinering og ledelse av de 5-årige integrerte masterprogrammene.
 - Utpøk en profesjonell paraplyorganisasjon for å sammenkalle, lede og koordinere faste regionale og nasjonale møter med alle grupper, interessenter og profesjonelle organisasjoner som er involvert i lærerutdanning.
 - Gi finansiering til møter i denne paraplyorganisasjonen og til faste regionale og nasjonale møter.
 - Støtt pågående forskning på beskaffenheten, kvaliteten og effekten av de nye masterprogrammene innenfor og på tvers av lærerutdanningsinstitusjonenes samarbeidspartnere.
 - Støtt og finansier UH-skole-partnerskaps utvikling av forskningsprogram knyttet til de nye masterprogrammene.
 - Etabler og støtt et fast, regelmessig forum for nettverk, samarbeid og formidling av forskning og innovasjoner på tvers av lærerutdanningsinstitusjonenes samarbeidspartnere.
 - Finansier forskning på tvers av de nye masterprogrammene som bidrar til regionale

og nasjonale kunnskapsbaser om lærerutdanning i de nye programmene mv.

- Gi ekstra finansiering for de faste driftsbehovene til de nye 5-årige masterprogrammene, herunder flere studenter, nye samarbeid og nye partnerskap.
- Gi midler til innholdsrik praksisopplæring i 4. og 5. år av masterprogrammene.
- Etabler et mikrofinansieringsprogram for lærerutdanningsinstitusjoners innovasjoner og pilotprosjekter som fokuserer på bærekraft og formidling på tvers av partnerskap.

Anbefalinger om partnerskap og praksisopplæring

Anbefalingene nedenfor handler om de *strukturelle aspektene ved lærerutdanningsinstitusjoners partnerskap og lærerstudentenes praksisopplæring.*

Partnerskap

- Vurder om samhandlingen mellom direktoratene som er involvert i lærerutdanning i Norge er hensiktsmessig.
 - Utvikle en ny nasjonal partnerskapsmodell som inkluderer koordinering av alle spørsmål om lærerutdanning på tvers av Udir, NOKUT og Diku.
 - Unngå utvikling av lærerutdanningstiltak som ikke er støttet av forskning og/eller ikke er knyttet til allerede eksisterende tiltak.
- Evaluer lærerutdanningsinstitusjonenes gjeldende partnerskapsavtaler med skole-/kommunepartnerne deres.
 - Bli enige om brede generelle prinsipper for å veilede om partnerskap mellom lærerutdanningsinstitusjonene og skole-/kommunepartnerne deres.

- Unngå både ensidige tilnæringer og toppstyrte ikke-finansierte mandater.
- Ta sikte på at alle lærerstudenter skal bruke en betydelig del av sin praksisopplæring på skoler som har et helhetlig og genuint partnerskap med lærerutdanningsinstitusjonene.
- Gi de ressursene, mekanismene og verktøyene som lærerutdanningsinstitusjonene og skolene behøver for å kunne fungere som genuine likestilte partnere med felles ansvar for lærerutdanning.
 - Gi ressurser og verktøy til lokale partnerskap sånn at de kan utforme, studere og revidere lærerutdanning i pågående sykluser med utredning og forbedring.
 - Gi direkte finansiering til skole-/kommunepartnerne for å støtte dedikert personell som er involvert i lærerutdanning.
- Hold lærerutdanningsinstitusjonenes partnerskap i fellesskap ansvarlig for kvaliteten på GLU.

Praksisopplæring

- Gå bort fra modellen med “skolebaserte dager” og til en rikholdig modell bestående av praksisopplevelser av høy faglig kvalitet for lærerstudenter.
- Krev at lærerutdanningsinstitusjonene og skolepartnerne deres i fellesskap skaper muligheter for at lærerstudenter får utforskende praksisopplæring på 4. og 5. året i perioder som er lange nok og sammenkoblet nok til at lærerstudentene kan delta i de sentrale aktivitetene i undervisningen
- Endre rammeplaner slik at UH-skole-partnerskapene er pålagt å legge til rette for at lærerstudenter skal ha fullt deltakende perioder med faglige erfaringer i skolen på det 4. og 5. året.
- Gi tilstrekkelig finansiering til praksisopplæringen på 4. og 5. året.

Anbefalinger om finansiering

Norges GLU-reform krever større profesjonalisering, tettere forhold til skoler, sterkere koblinger mellom teori og praksis og å gjøre forskning sentral. For å lykkes må det være tilstrekkelig finansiering av reformen på lang sikt.

- Flytt de nye 5-årige masterprogrammene i GLU fra kategori D til kategori C i det norske finansieringssystemet for høyere utdanning, for å finansiere den generelle driften.
- Finansier spesifikke initiativer relatert til bygging av forskningskapasitet, programintegrering, partnerskap, praksisopplæring og masteroppgaven, som det fremgår av rapporten og oppsummert i tabell 10 (s. 100). Av spesiell betydning er anbefalingen om at skolene får direkte midler til dedikerte skolebaserte ledere og lærere som er ansvarlige for partnerskapsaktiviteter, arbeid med lærerstudenter og deltakelse i oppgave- og FoU-veiledning.

Anbefalinger til lærerutdanningsinstitusjoner og skoler

Anbefalinger om bygging av forskningskapasitet

Transformasjonen av den norske grunnskolelærerutdanningen krever en helhetlig, strategisk tilnærming til bygging av forskningskapasitet.

- Invester i å styrke kvalifikasjonene og den faglige utviklingen av eksisterende stab for å øke tilfanget av personer med forskningserfaring både i lærerutdanningsinstitusjonene og skolene.
 - Lag en faglig utviklingsstrategi for lærerutdannere knyttet til rekrutteringsstrategier for stillinger som praksis II og professor II i lærerutdanningsinstitusjonene.
 - Gi ledertrening for nye dekaner og ledere av nylig fusjonerte lærerutdanningsinstitusjoner, inkludert måter som kan gi faglig utvikling for å øke fakultetets forskningskapasitet.
- Gi økonomisk og logistisk støtte for bærekraftig forskningssamarbeid mellom lærerutdanningsinstitusjoner og skoler.
 - Utvikle en felles forskningsagenda basert på samarbeid, inkludert planer for medveiledning på masteroppgaven.
 - Samarbeid om å utforme et tidsskjema for muligheter for samarbeid som involverer lærerutdanningsinstitusjoner og skolelærere og veiledere i fysiske møter og andre interaksjoner.
 - Samarbeid for å skape muligheter for lærerstudenter og nye lærere sånn at de kan få være en del av fagmiljøer med fokus på forskning og praksis.
- Bygg og konsolider infrastruktur for å støtte gjennomføring, kvalitetssikring og deling av forskning på tvers av lærerutdanningsinstitusjoner og skoler.
 - Bygg infrastruktur for forskningsengasjement mellom lærerutdanningsinstitusjoner og skoler, kommuner og andre forskningsinstitusjoner, og på tvers av fagområder.
 - Få på plass systemer og verktøy for deling av funn og innsikt generert av lærerstudentenes masteroppgaver.
- Gå gjennom eksisterende systemer for å stimulere og anerkjenne forskningsengasjement som en essensiell del av den faglige aktiviteten innen lærerutdanningsinstitusjoner og skoler.
 - Vurder å signere DORA (erklæring om forskningsvurdering) og anvende prinsippene i denne for å vurdere ansettelse, ansettelsesforhold, forfremmelse og belønning, spesielt for akademikere på tidlige stadier i programmet.
 - Sørg for at forskningsengasjement blir redegjort for i tildelingen av tid og arbeidsmengde og ordninger for studiepermisjon.

Anbefalinger om programdesign og integrering

For å utvikle «forskningsbasert kompetanse» for så å ta «begrunnede valg», trenger alle lærerstudenter utforskende, sammenhengende og integrerte læringserfaringer som er relevante for undervisningspraksis. Dette krever at lærerutdanningsinstitusjonene og skolepartnerne deres samarbeider om programdesign og integrering.

- Kom til enighet om en forestilling av lærerstudentenes læring og en visjon om god undervisning/gode lærere.
 - Bli enige om praksis, kvaliteter og verdier som kjennetegner gode lærere (og ideelle GLU-kandidater).
 - Etabler undersøkelsesgrupper eller andre fagmiljøer med representanter innen og/

- eller på tvers av programmer og skoler (inkludert lærerstudenter) der deltakerne undersøker visjonene de har om god undervisning/lærere.
- Bygg nettverk som samler lærerutdannere, utdannere fra disiplinlag, skolebaserte ledere og lærere, lærernes fagforeningsrepresentanter, representanter for samfunnet og/eller kommunene og lærerstudentene for å utveksle ideer, bekymringer, verdier og visjoner.
- Inkluder skolebaserte lærere, lærerstudenter og UH-baserte lærerutdannere i deltakende programdesign, evaluering og beslutningstaking.
 - Involver andre interessentgrupper, for eksempel representanter fra fagforeninger eller andre yrkesorganisasjoner, i programforbedringer gjennom delt arbeid og planlegging.
 - Utvikle strukturer, rutiner og rammer for planlegging og evaluering i fellesskap, for eksempel faste møtetider, dedikerte områder og logistisk støtte for felles arbeid som er i gang.
 - Samarbeid om å utvikle og formulere en utviklingsmessig progresjon som viser lærerstudentenes undervisningslære og hvordan de lærer å delta i utforskning og praksisorientert forskning over tid.
 - Etabler undersøkelsesgrupper, faglige læringsfellesskap, aksjonsforskningssamarbeid eller andre grupper der deltakerne sammen studerer elevers og/eller lærerstudenters læring.
 - Utvikle eller tilpass protokoller som kartlegger kjerneaktiviteter, strategier og personlige kvaliteter for lærerstudenter over tid, inkludert deltakelse i skolebaserte aktiviteter, observasjoner og utforskning.
 - Undersøk representasjoner av lærerstudenters eller nyutdannedes undervisning (f.eks. skriftlig arbeid, eksempler fra praksis, videoer) for å utvikle en delt forståelse av hva det vil si å lære å undervise godt.
 - Undersøk viktige studentoppgaver på tvers av emner og studieprogram for å vurdere justering og rekkefølge.
 - Dokumenter og analyser lokale variasjoner i GLU-program og innvirkningen de har på lærerstudentenes læring. Denne forskningen kan gi et verdifullt bidrag ikke bare på tvers av Norges programmer, men også til den internasjonale litteraturen om lærerutdanning og undervisningslære.

Anbefalinger om partnerskap og praksisopplæring

Anbefalingene nedenfor involverer de lokale aspektene ved lærerutdanningsinstitusjonenes praksisskoler og lærerstudentenes praksisopplæring i skolen.

- Samarbeid om å utvikle bærekraftige, produktive og gjensidig fordelaktige praksisskoler for å støtte lærerstudenter som er faglig dyktige og forskningskompetente.
 - Erkjenn at lærerutdanning er et fellesansvar for lærerutdannere ved lærerutdanningsinstitusjonene og praksisskolene.
 - Bli enige om hvordan «god» lærerutdanning ser ut og hvordan den blir utført, inkludert enighet om praksisopplæring og forskningsforventninger, spesielt på 4. og 5. året i programmet.
 - Erkjenn at det tar tid å utvikle en felles visjon.
- Lag formelle partnerskapsavtaler i fellesskap som inneholder: visjon og formål; partnernes bidrag, roller, ansvar og fordeler; strukturer, prosesser og ressurser som er nødvendige for produktive og bærekraftige partnerskap.
- Bruk partnerskap som et redskap for kunnskapsutvikling og -formidling.
 - Gjennomfør evalueringer, planlegg småskalaundersøkelser, søk om pilotfinansiering,

gjennomfør forskningsprosjekter og FoU-oppgaver og ta beslutninger om spørsmål relatert til studentoppgaver, masteroppgaver og doktorgradsarbeid.

- Utvikle doble stillinger mellom lærer-utdanningsinstitusjonene og praksisskolene.
 - Støtt innsatsen til veiledere og andre skolebaserte lærere som er spesielt dedikert til å styrke lærerstudentenes profesjonelle læring og utvikling.
 - Frem gjensidige og samarbeidende veilederstudent-forhold, i motsetning til den tradisjonelle hierarkiske relasjonen ekspertnybegynner.
 - Støtt den faglige utviklingen av veiledere ved å anerkjenne veiledning som en distinkt profesjonell ferdighet.
 - Sørg for at veiledning av lærerstudenter utnytter både forsknings- og erfaringsbasert kunnskap.
- Samarbeid om å utforme, organisere og administrere tilstrekkelig lange og sammenkoblede praksisopplæringsperioder i løpet av 4. og 5. året av programmene slik at lærerstudentene har muligheter til å delta i de sentrale aktivitetene i undervisningen.

Anbefalinger om masteroppgaven og veiledning

Panelet anbefaler at hvert skolepartnerskap blir enige om masteroppgavens fokus, omfang, kvalitet og veiledning, noe som er sentralt i de nye GLU-programmene.

- Bli enige om betydningen av «profesjonsrettet» og «praksisorientert» forskning og om masteroppgavens fokus og omfang.
- Gi rom for variasjon og innovasjon i fokus, omfang og typer av forskning lærerstudenter utfører.
- Tenk gjennom de etiske aspektene ved lærerstudenter som gjør forskning på

masternivå i skolene og bli enige om passende retningslinjer og protokoller.

- Bli enige om hva som utgjør presisjon og kvalitet i masteroppgaven som et resultat av profesjonsrettet og praksisbasert forskning.
 - Bli enige om retningslinjer for passende vurderingskriterier, og bruk kompetansen til lærere fra lærerutdanningsinstitusjonene og praksisskolene.
 - Erkjenn at det ikke er enighet i utdanningsfeltet om «praksisnærhet» som kriterium for grundig forskning. Felles overveielse om dette og andre komplekse spørsmål er imidlertid nødvendig for utvikling av meningsfulle vurderingskriterier for masteroppgaver.
- Finn og del, på tvers av lærerutdanningsinstitusjonene, nasjonale og internasjonale eksempler på masteroppgaver som er utført av par eller små grupper og som kan vurderes individuelt i form av en enkelt students avhandling.
 - Bruk disse for å oppmuntre til diskusjon om disse problemene, inkludert potensialet som prosjektene kan ha for å utvide omfanget av forskning og tilpasning av masteroppgaveforskning til utviklingsplaner i skolen.
- Bli enige om veiledningsstrukturer og veiledningspraksis som støtter prosessen med lærerstudentenes gjennomføring og ferdigstilling av masteroppgaver av god kvalitet på en betimelig måte.
 - Vurder strukturelle spørsmål om veiledningskapasitet så vel som elevenes og lærerstudentenes læringsbehov.
 - Utvikle strategier for lærerutdanningsinstitusjonene for å legge til rette for en veiledningspraksis som utarbeides i samarbeid med skolebaserte lærere, inkludert samveiledning og gruppebasert veiledning, samtidig som lærerutdanningsinstitusjonene beholder hovedansvaret for veiledningen av masteroppgaven.

Acronyms and abbreviations

AACTE	American Association of Colleges for Teacher Education
ALU	General teacher education programme in Norway until 2010 (allmennlærerutdanning)
APT	Advisory Panel for Teacher Education
Diku	Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (Direktorat for internasjonalisering og kvalitetsutvikling i høgare utdanning)
DORA	Declaration on Research Assessment
FINNUT	Research and Innovation in the Educational Sector, a programme by the Norwegian Research Council (Forskning og innovasjon i utdanningssektoren)
HiOA	Oslo and Akershus University College (Høgskolen i Oslo og Akershus, since 2018 OsloMet – storbyuniversitet/Oslo Metropolitan University)
HiØ	Østfold University College (Høgskolen i Østfold)
HVL	Western Norway University of Applied Sciences (Høgskulen på Vestlandet)
HVO	Volda University College (Høgskulen i Volda)
INN	Inland Norway University of Applied Science (Høgskolen i Innlandet)
NAFOL	Norwegian National Research School in Teacher Education (Nasjonal forskerskole for lærerutdanning)
NAPDS	National Association for Professional Development Schools (USA)
NCATE	National Council for the Accreditation of Teacher Education (USA)
NLA	NLA University College (NLA Høgskolen)
NOKUT	Norwegian Agency for Quality Assurance in Education (Nasjonal organ for kvalitet i utdanning)
NORD	Nord University (Nord universitet)
NRLU	National committee for teacher education, Universities Norway (Nasjonalt råd for lærerutdanning, Universitets- og høgskolerådet) renamed UHR-Lærerutdanning (UHR-LU) around 2019
NTNU	Norwegian University of Science and Technology (Norges teknisk-naturvitenskapelige universitet)
PDS	Professional development schools
PLS	Primary and lower secondary (grunnskole)
ProTED	Centre for Professional Learning in Teacher Education
Sámi	Sámi University of Applied Sciences (Sámi allaskuvla / Samisk høgskole)
SINTEF	Independent multidisciplinary Norwegian research organisation
Steiner	Rudolf Steiner University College (Steinerhøgskolen)
TE	Teacher education
TEI	Teacher education institution
Udir	Norwegian Directorate for Education and Training (Utdanningsdirektorat)
UHR-LU	UHR-Teacher education (UHR-Lærerutdanning)
UHR	Universities Norway
UiA	University of Agder (Universitetet i Agder)
UiO	University of Oslo (Universitetet i Oslo)
UiS	University of Stavanger (Universitetet i Stavanger)
UiT	UiT – The Arctic University of Norway (UiT - Norges arktiske universitet)
USN	University of South-Eastern Norway (Universitetet i Sørøst-Norge)



Introduction

Norway's reform of teacher education for primary and lower secondary (PLS) schools is internationally distinctive and remarkably ambitious. The reform is based on high expectations for student teachers, for university/college-based and school-based teacher educators, and for the country's school children. The recommendations in this report are intended to support Norway's ambitious goals and, ultimately, the transformation of PLS teacher education.

The international Advisory Panel for Teacher Education (APT) was established by NOKUT at the request of the Norwegian Ministry of Education and Research during the autumn of 2016. The members of the APT first convened with NOKUT staff in February 2017, and also met at that time with representatives of Norway's teacher education institutions (TEIs) that offer preparation programmes for PLS teachers. The panel was charged with providing advice and support that would enhance initial teacher education for PLS teachers in Norway and help ensure that the nation's ambitious new 5-year integrated master's programmes were successful. The panel was also asked to consider a host of issues pertaining to the new reform, some of which represent perennial challenges in teacher education internationally, including: staffing at TEIs; the research capacity/productivity and the school experiences of TEI faculty; the research capacity of school-based teachers and mentors; TEI-school partnerships; the integration of theory, research, and practice across the university and school learning contexts of teacher education programmes; the nature and quality of school-based experiences

for student teachers; master's thesis quality and supervision; and, existing structural, financial, and other potential obstacles to enhancing and sustaining the quality of Norwegian PLS teacher education.

This report, which represents the panel's collective voice, describes our work over a three-year period, providing details about the model we created, the regional and national meetings we had with TEIs, schools, and other stakeholders, and the insights and recommendations we developed as we came to understand both the promises and the challenges posed by the new 5-year integrated master's programmes. From the outset, the panel members were united in their conclusion that Norway's new 5-year integrated master's programmes for PLS teacher education were a highly ambitious and forward-looking reform, when considered in a broad international context. Norway's reform is based on new and very high expectations for both student teachers and their mentors with the goal of integrating enhanced knowledge and research competency with inquiry-rich, school-based experiences in order

to create a permanent professionally-oriented teaching force. There are a number of countries that share similar aspirations. However, unlike some countries, Norway opened the door to an international advisory group with many diverse perspectives on teacher education and thus paved the way for the inclusive and collaborative approach promoted by the panel.

In keeping with Norway's ambitious goals, the APT created a unique advisory model for supporting the PLS reform and for making recommendations to the Ministry, NOKUT, the TEIs, and their school partners. This new advisory model has seven key characteristics – it is participatory and collaborative, inclusive, empowerment-oriented, context-specific and local, research-informed *and* practice-informed, comparative, and critical. This model is grounded in trust of all the professionals involved in the work of teacher education and depends on the mutual efforts of participants from higher education institutions, schools/municipalities, teacher unions, student teachers, and NOKUT staff members, with all of us regarded as partners and active agents in the success of the reform. The model is designed to create synergy between the application of broad general principles about teaching, learning, and learning to teach, on one hand, and the development of innovations and strategies fine-tuned to the needs and strengths of local contexts and communities, on the other.

Norway's goal is to substantially strengthen the Norwegian teaching force and permanently elevate both the quality and the status of the teaching profession and teacher education. The new 5-year integrated master's programmes for PLS teacher education reflect this desire in that they redefine what it means to learn to teach, what it means to be a professional, and what it means to enhance and support the learning of those who are studying and preparing to be teachers. In short, the new programmes have the potential to be transformative. The new programmes are intended to prepare teachers who are not only highly knowledgeable in subject

areas and in didactics, but also are competent teacher researchers. Teachers who are also researchers know how to interpret and learn from the research conducted by others, and, as importantly, they know how to learn about teaching in the context of teaching itself by posing questions, challenging assumptions (their own and others'), and continuously engaging in the processes of professionally-oriented inquiry and research. All of this means that the new 5-year programmes require reconceptualised roles for student teachers as well as for their teachers, including TEI-based teacher educators and faculty as well as school-based teacher educators, mentors, and leaders.

The success of the new 5-year integrated master's programmes for PLS teacher education requires profound cultural change for Norway's teachers and teacher educators in the TEIs and in the schools as well as profound changes in the approaches of the Ministry of Education and Research and NOKUT. Profound cultural change requires resources, including the development of permanent institutional capacity and infrastructure in the TEIs and in the schools to support the PLS master's programmes so that they function as intended – that is, as a powerful lever for producing a fully-professionalised Norwegian teaching force. Throughout the report, we have paid special attention to issues of accountability, partnership, and sustainability, acknowledging that the goals of the PLS teacher education reform are far-reaching. We also acknowledge that profound cultural change takes time, including the time for TEI-school partnerships to take risks, invent new approaches to working together and with PLS student teachers, try out innovations, identify successes and failures, and make revisions that are responsive to local and larger needs. As this report goes to press three years into the reform, which was initially implemented in the autumn of 2017, the first cohorts of student teachers in the new 5-year master's programmes have not yet completed their entire programmes (except for those in the pilot programme at The Arctic University of Norway). Given that the PLS reform

is only partway through its first cycle, this report is in a sense intended to be developmental. It is our hope that our recommendations will influence the course and trajectory of the new programmes.

In making recommendations, the APT drew on six major bodies of knowledge and experience: (1) the collective national and international experiences of our panel members who have worked in multiple sectors related to teacher education research, practice, and policy over many years; (2) our interpretation and critique of existing policy documents and guidelines that represent Norway's current and future aspirations regarding teacher education, the quality of the nation's teachers, and the quality of the educational experiences of the nation's pupils; (3) our work with NOKUT, especially their provision of reports, survey results, original and translated analyses, and other materials that enriched our understanding of the Norwegian teacher education context; (4) our experience with the TEIs and their school partners in nine regional and national meetings over three years and the feedback, responses, and progress reports that followed each of these meetings; (5) our discussions and experience with multiple stakeholder groups and organizations related to teacher education in Norway; and, (6) our review of international research in a number of key areas that are particularly relevant to Norway's teacher education reform.

A word about our review of the international research is necessary here. The panel acknowledged early on that it would be impossible to identify clear empirical evidence that would speak to the likely impact of the entirety of a reform as multi-faceted as the new 5-year integrated master's programmes for PLS teacher education. This reform is extraordinarily complex. It is based on transformative ideas about accountability, research capacity, what it means to learn to teach, and how key roles in teacher education should be conceptualised. The reform requires the joint efforts of two sectors - primary/lower secondary education and university/college-

based teacher education - that have grown up in substantially separate policy, practice, and fiscal spaces. It is being implemented in a nation that is geographically dispersed and, in some cases, at institutions that have been organisationally but not physically merged. In addition, as with the implementation of any policy, the implementation of the PLS teacher education reform is mediated by the values and experiences of the participants in each local context as well as by their interpretations of the reform and of the larger policy context. Given the impossibility of reviewing evidence regarding the likely causal effect of the entire reform, the panel instead identified the most salient aspects of the reform and reviewed the international literature in each area, highlighting the findings and insights we determined were most relevant to the PLS teacher education reform. These areas include: teacher education accountability, the sustainability and funding of teacher education reforms, university-school partnerships, the quality and nature of student teachers' school-based experiences, building research capacity in teacher education, teacher education programme design and integration, and the nature and supervision of practice-based and professionally-oriented master's theses in teacher education.

Readers of this report may worry that our recommendations to the Ministry/NOKUT and to the TEIs/schools are bold and transformative. They are. But Norway's goals for PLS teacher education reform are also bold and far-reaching, and thus in order to be successful, the reform requires actions, strategies, and infrastructures that deviate from the norm and have the potential to support transformative change. The panel took its charge of supporting and helping to ensure the success of the PLS teacher education reform very seriously. For this reason, we did not back away from the bold and ambitious recommendations that we believe are necessary to the success of this reform. Threaded throughout our recommendations, the panel focuses on five aspects of PLS teacher education that we believe are central to transformation: *collaboration*

across multiple stakeholders, the *active agency* of all participants in knowledge building and learning, building *research competence and capacity* for all student teachers and teacher educators, enhancing the *practice orientation* of student teachers' school experiences and master's theses, and ensuring the *sustainability* of reforms by providing the necessary infrastructure, resources, mechanisms, and tools over the long haul.

This report is divided into three parts and a total of ten chapters. As a panel, we asked NOKUT staff to write Chapter 1 of the report, which briefly introduces teacher education in Norway and lays out the policy and political contexts in which the PLS master's reform was devised and is now being implemented. The remainder of the report was written by the panel. In Chapter 2, we describe our interpretation of the mandate we received from the Ministry of Education and Research along with guidelines from NOKUT, and then we situate the PLS teacher education reform within an international context. We consider the structure and conditions of the reform, including key aspects of the 2025 teacher education strategy, the national frameworks, and other guidelines. Also in Chapter 2, we provide considerable detail about the panel's work, including the advisory model we created and the insights we developed based on three years of regional and national meeting with the TEIs and their school partners as well as with other constituencies and stakeholders.

Parts 2 and 3 of the report contain our recommendations. Chapters 3-6 include recommendations to the Ministry of Education and Research and to NOKUT regarding: accountability, sustainability, TEI-school partnerships and student teachers' school experiences, and funding. Chapters 7-10 include recommendations to the TEIs and their school partners regarding: building research capacity in teacher education, teacher education programme design and integration, TEI-school partnerships and student teachers' school experiences, and the nature and supervision of practice-based and professionally-oriented master's theses in teacher education. Each set of

recommendations is organised in four sections: (1) Norway's aspirations and goals related to the topic of the recommendations; (2) potential challenges and obstacles to realisation of the aspirations and goals; (3) insights and evidence from the international literature and from local examples; and, (4) recommendations.

It has been a great challenge, but also a distinct professional pleasure for the members of the panel to work as partners over a significant period of time with Norwegian TEIs, schools, and other stakeholders in teacher education.

It has also been an honour to work with our dedicated NOKUT colleagues who have supported our efforts and provided essential information, guidelines, and analyses. We are hopeful that all groups and individuals in Norway who care about the future of PLS teacher education will find this report thoughtful, useful, and perhaps even inspiring. As panel members, we look forward to both following the progress of the reform as it continues through its first full cycle and beyond and to learning from the experiences of our Norwegian teacher education colleagues.

Part 1

Background and Overview

1. Norwegian Teacher Education Policy Contexts

On 1 April 2016, the Norwegian Ministry of Education and Research gave the Norwegian Agency for Quality Assurance in Education (NOKUT) the task of setting up, and functioning as a secretariat for, an international expert panel on teacher education. The main task of the panel was to support and advise Norwegian higher education institutions concerning the implementation of the new 5-year integrated master's degree programmes in teacher education and to make recommendations to the Ministry of Education and Research and NOKUT

about potential challenges to the success of the reform and ways to address those challenges.

This introductory chapter describes the terms of reference and the mandate NOKUT received from the Ministry of Education and Research. Then the chapter discusses how NOKUT worked to recruit the panel, provided the panel with information about Norwegian teacher education, and finally how NOKUT has worked to support the panel's work.

1.1 The mandate

As stated above, the Ministry of Education and Research tasked NOKUT with recruiting and functioning as a secretariat for an international expert panel on teacher education whose main task was to support Norwegian higher education institutions' implementation of the new 5-year integrated master's programmes in teacher education. The Ministry's terms of reference stated that the panel should stimulate the institutions' enhancement of the quality of both education and research in the teacher education programmes.¹ The Ministry specified six general areas for the panel to consider.

- The panel should maintain a close dialogue with the relevant institutions through open academic events such as seminars or workshops.
- The panel should contribute to quality enhancement so that all teacher education programmes have sufficiently high quality at the time of NOKUT's audit of all programmes in 2019.
- The panel should assess whether the national guidelines for teacher education and the institutional programme plans are based on international research on excellent teacher education.
- The panel should identify structural, academic, and economic factors that might hinder further quality enhancement of the programmes.
- The panel should suggest a norm for how the government should regulate the staff composition of the new 5-year integrated master's education in teacher education.
- The panel should suggest an arrangement for the continuation of the quality enhancement activities after the panel's work is concluded in 2019.

¹ See Appendix 1 for the official mandate.

In order to operationalise the mandate further and to recruit suitable experts for the panel, NOKUT established a reference group² in the early stages of the project. In collaboration with the reference group, NOKUT wrote a separate mandate, which specified a set of recommendations³ for the advisory panel in the Ministry's initial mandate and furthermore advised the panel about what elements might be explored. The following issues were listed for the panel to consider:

- Are national guidelines for Norwegian teacher education, and study programme plans, in accordance with international standards for teacher education? How well do they serve their purpose?
- What qualities in staff composition are necessary in order for the new master's programmes to reach high educational standards?
- How can teacher education institutions (TEIs) become more research active?
- What organisational aspects would help research and development work to flourish in TEIs?
- How can TEIs and educators ensure that their research and development work benefits their students' learning? What are the best ways for research to become part of student teachers' education?
- What strategies will help TEIs form international networks to strengthen their teaching and research?
- How can TEIs create greater coherence between the disciplines involved in teacher education?
- How can the new master's programmes establish good partnerships between TEIs and partner schools?
- How can TEIs create greater coherence between the student teachers' theoretical knowledge and research, their experience in schools, and their future school careers?
- What qualities in study programme design can help the new master's programmes reach high educational standards?
- Are there academic, structural, economic, or other factors that hold teacher education back, or make it harder for it to improve?

1.2 Selecting the international advisory panel

NOKUT has a long history of using international experts in many operations. However, these experts are most often from Scandinavia because most of NOKUT's operations require an understanding of written Norwegian. Since the Ministry of Education and Research wanted an advisory panel with a broader international perspective, NOKUT established a reference

group consisting of Norwegian teacher education academics. The reference group and NOKUT met twice in the autumn of 2016 to discuss the mandate and potential members of the panel. In addition, three of the members of the reference group participated in the first meeting with the advisory panel on 13 February 2017.

2 Members of the reference group (and their institutional affiliations at the time in parenthesis) were Elaine Munthe (University of Stavanger and NRLU), Kari Smith (NTNU and NAFOL), Sølvi Lillejord (Kunnskapssenter for utdanning), Frode Rønning (NTNU), Jonas Bakken (UiO), and Fredrik Thue (HiOA).

3 See Appendix 2 for NOKUT's supplements to the mandate.

The reference group suggested multiple names for the panel, which gave NOKUT an opportunity to tap into a large international network of teacher education experts.

Throughout the autumn of 2016, NOKUT contacted several international experts and by January 2017, all members of the advisory panel confirmed their participation for the entire project period (2017-2019).

The advisory panel for teacher education comprises:

- **Professor Marilyn Cochran-Smith, Boston College, USA (Chair)**

- **Professor Mikael Alexandersson, Göteborgs universitet, Sweden**
- **Director of Educational Research and Evaluation Karen Hammerness, American Museum of Natural History, USA**
- **Professor Viv Ellis, King's College London, Great Britain**
- **Associate Professor Lexie Grudnoff, The University of Auckland, New Zealand**
- **Professor Alis Oancea, University of Oxford, Great Britain**
- **Professor Auli Toom, University of Helsinki, Finland**

1.3 NOKUT's role as secretariat

Besides appointing the panel and providing the panel with information about Norwegian teacher education, NOKUT has functioned as a secretariat for the panel. In this role, NOKUT served as a link between the panel and the teacher education programmes, organised the logistics for the seminars and workshops, and set up meetings with relevant stakeholders, for instance, representatives from the committee for teacher education, Universities Norway, the Council for Teacher Education 2025, the Union of Education Norway etc. Furthermore, NOKUT continuously supported the panel's work through gathering relevant information on specific topics identified by the panel. The panel members were responsible for the content of the seminars and workshops and for the recommendations in this report as well as the recommendations they released in May 2018.⁴

1.3.1 Information to the panel

Members of the advisory panel have written extensively on teacher education from both national and international/comparative perspectives. Thus, their report is based on the experience, research, and expertise of the panel members, including the insights of two of the panel members who are associated with Norwegian higher education institutions and teacher education programmes.⁵ Additionally, it was necessary for NOKUT to provide the panel with information about teacher education in Norway in order for the panel to understand the context of the new master's reform.

Norwegian scholars have written much about Norwegian teacher education, and NOKUT staff translated and summarised a number of key documents, reports and book chapters into two

⁴ See Appendix 3 for the first set of recommendations.

⁵ Viv Ellis is a professor II at the Western Norway University of Applied Science and Karen Hammerness was professor II at the University of Oslo, and is now an associated researcher.

English language reports.⁶ In addition, NOKUT staff translated the framework plans and the national guidelines into English (*rammeplaner* and *nasjonale retningslinjer*).

Finally, the new 5-year integrated master’s degrees in teacher education require that either NOKUT or the institutions themselves accredit new teacher education programmes. NOKUT accredited the programmes for institutions without self-accreditation rights, while institutions with self-accreditation rights accredited their own pro-

grammes. All self-accrediting institutions were required to send the accreditation material to NOKUT for verification. This process gave NOKUT access to each institution’s list of academic staff associated with all of the new teacher education programmes. NOKUT used these lists to commission a report on the research and development activities that have taken place at the different institutions during the 2006 to 2015 period. SINTEF wrote the report about research productivity, and NOKUT shared the report with the panel in the spring of 2017.⁷

1.4 Norwegian Teacher Education: An overview

To set the stage for the rest of the report, this chapter provides a brief overview of Norwegian teacher education in general and of primary and lower secondary school teacher education in particular. This begins with a brief overview of the four main teacher education programmes, then provides a more detailed overview of the primary and lower secondary (PLS) programmes.

1.4.1 Norwegian teacher education

There are four main teacher education programmes in Norway.⁸ These are the two 5-year inte-

grated PLS master’s programmes (PLS 1–7 and PLS 5–10), then there is the 5-year integrated “lector” programme (8–13), and there is the one year “practical” teacher programme (5–13). The PLS programmes cover levels 1–4, 5–7 and 8–10, which is Norwegian lower and upper primary and lower secondary school. Both programmes are 5-year integrated master’s programmes. Candidates who complete the 5-year integrated lector master’s programme are qualified to teach lower and upper secondary school (8–13). The professional programme in practical teacher training also qualifies candidates to teach lower and upper secondary school (5–13).

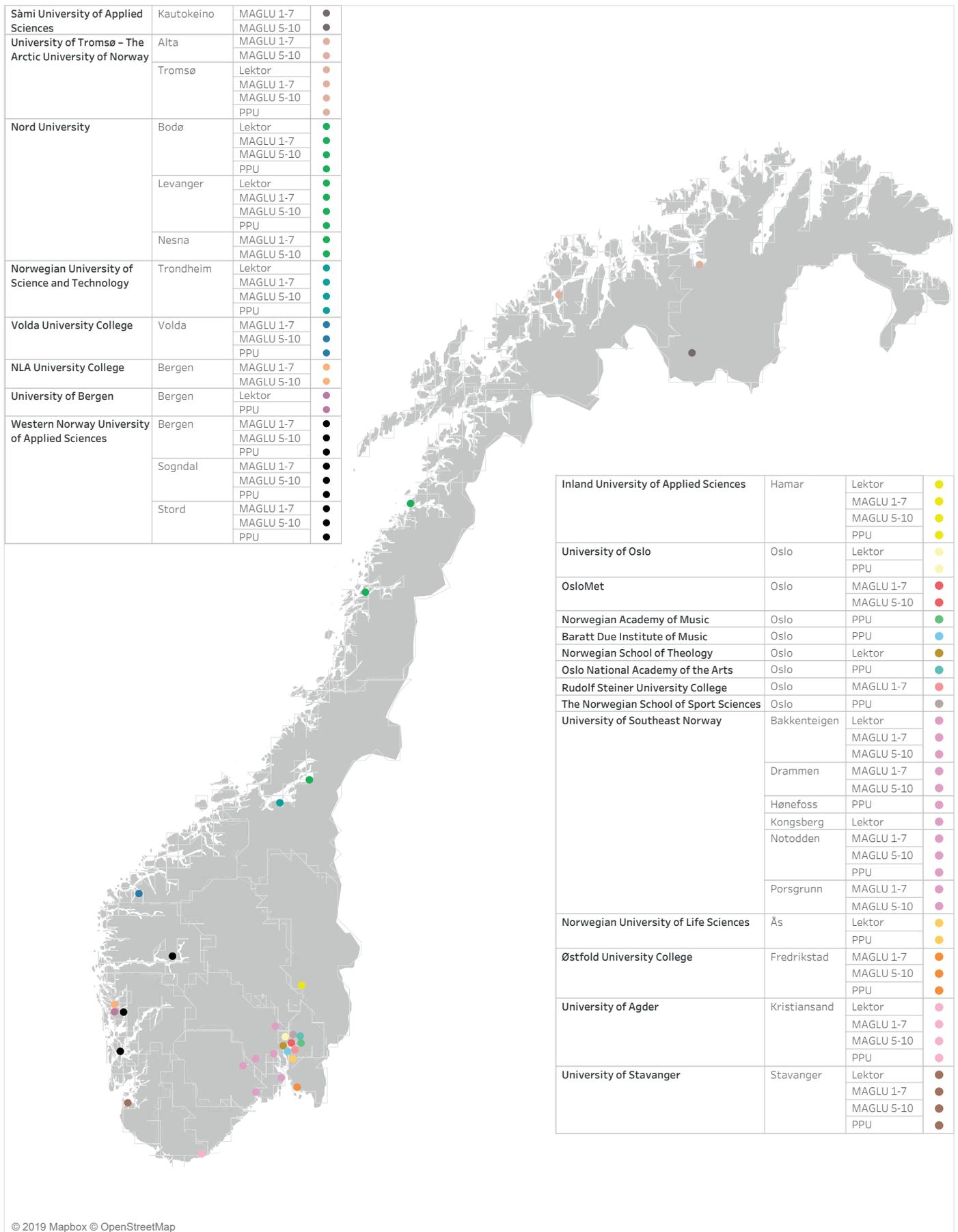
Teacher education programmes	Primary and lower secondary school (PLS)			Upper secondary school
	Lower primary level grades 1 to 4	Upper primary level grades 5 to 7	Lower secondary level grades 8 to 10	Upper secondary level grades 11 to 13
PLS teacher education for grades 1 to 7 (PLS 1–7)				
PLS teacher education for grades 5 to 10 (PLS 5–10)				
Secondary teacher education for grades 8 to 13 (lector 8–13)				
Practical teacher training (5–13)				

Table 1. Four different teacher education programmes

6 The reports by NOKUT are “A Brief Introduction to Primary and Lower Secondary Teacher Education in Norway” (2017), www.nokut.no/globalassets/nokut/rapporter/ua/2017/a-brief-introduction-to-norwegian-pls_2017.pdf and “Primary and Lower Secondary Teacher Education in Norway: Further Information” (2017), https://www.nokut.no/globalassets/nokut/rapporter/ua/2017/pls-teacher-education-in-norway-further-information_2017.pdf.

7 The SINTEF report “R&D in Teacher Education Milieus” (2017) is available on https://sintef.brage.unit.no/sintef-xmlui/bitstream/handle/11250/2446882/sintef_a28156.pdf?sequence=1&isAllowed=y.

8 These are the main teacher education programmes. In addition there is a bachelor programme for kindergarten teachers, and multiple programmes for school-based teachers in vocational subjects, as well as in some specific courses, such as physical education and arts.



© 2019 Mapbox © OpenStreetMap

Figure 1. Institutions offering teacher education in Norway

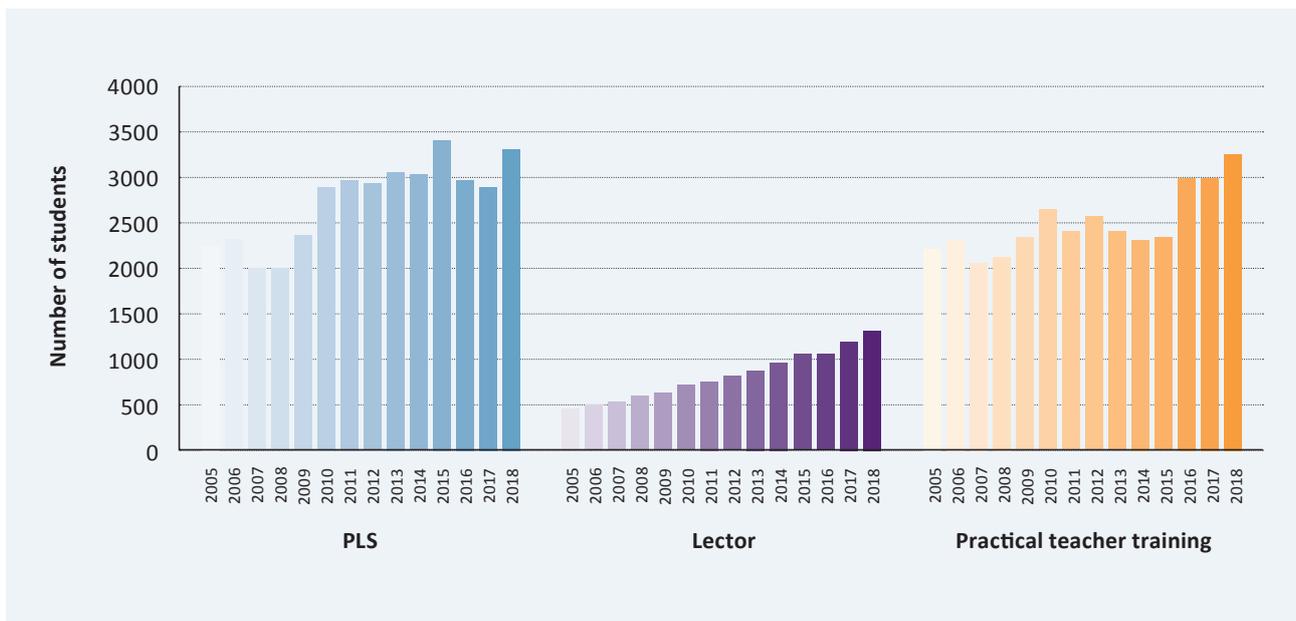


Figure 2. Student Admissions. Number of students admitted nationally 2005–2018

Teacher education in Norway for all levels of kindergarten, schooling, and vocational training is delivered by universities, university colleges, and a small number of specialised colleges. Traditionally, university colleges across the entire country have delivered teacher education for primary and lower secondary schools (PLS 1–7 and 5–10), while the universities have provided master’s education for teachers for lower and upper secondary school. However, this division of labour is gradually changing, and many new universities (former university colleges) now offer all three programmes, namely PLS, lector, and practical teacher training. The map below shows which institutions offer the different types of programmes.

In 2018, approximately 7850 students were admitted into the three programmes combined. The PLS programmes and the professional programme in practical teacher training are the largest ones, while the lector programme is the smallest one. Figure 2 shows admission figures for the different teacher education programmes between 2005 and 2018.

As this figure shows, PLS 1–7 and 5–10 and the practical teacher training programmes admit

significantly more students than the lector programmes.

As the expert panel’s mandate is only related to the PLS programmes, the remainder of this chapter focuses on those programmes.

1.4.2 Primary and lower secondary (PLS) teacher education

Primary and lower secondary teacher education in Norway has gone through more reforms than any other comparable area of education. Five major reforms in 25 years (1992, 1999, 2003, 2010 and 2017) have transformed both the contents and delivery of teacher education. The study programmes for PLS school teachers increased gradually over time to a 3-year programme in 1973 and a 4-year programme in 1992 called ALU, or general teacher education programme (*allmennlærerutdanning*). They were integrated in a more generic bachelor’s degree framework in 2003 as a part of the homogenisation of European tertiary degree requirements. The PLS 1–7 and 5–10 programmes superseded the single ALU programme in 2010, still as 4-year programmes. In 2017, the PLS study programmes

extended to 5-year master's studies (following a pilot period at UiT The Arctic University of Norway).

The teacher education sector has also undergone several reorganisations, mostly initiated by national authorities, and in theory only partly linked to specific changes in study programmes. In 1973, elementary teacher education institutions were given university college status. Some were integrated with other professional study institutions as well. A 1994 reform reduced the number of TEIs in Norway from over 100 to about 30. This was mostly an organisational reform, as the geographically distributed campus location pattern was basically maintained. Around 2016, many of the TEIs merged during another restructuring of the TEI sector, resulting in the map above.

1.4.3 The purpose of the new master's programmes in PLS teacher education

The idea of a 5-year integrated master's programme for PLS school teachers has been under consideration for some time in Norwegian politics. A government white paper (Stortingsmelding no. 11 2008–2009), entitled *Læreren: Rollen og utdanningen* ("The teacher: role and education") and produced by the Stoltenberg left-green coalition government, proposed the idea of a future transition to 5-year integrated master's programmes, but chose not to start the transition at that point. The report cited concerns that the TEIs would not be able to manage this transition quickly, as well as uncertainty as to whether the transition would reduce or increase the number of applicants. Instead, the report focused on strengthening the quality of 4-year teacher education, developing a stronger research foundation and greater professionalisation.

In June 2014, the conservative Solberg government announced a transition to 5-year PLS master's programmes in the strategy report *Lærerløftet: På lag for kunnskapsskolen* (roughly translated, "The teacher lift: Teaming up for a

knowledge-based school"). Although it argues for a 5-year rather than a 4-year course of study for PLS teachers (*grunnskolelærere*), this report has many similarities with the 2009 report both in how it frames the problems in Norwegian TE and in the solutions it provides, suggesting some basic political consensus. The report is an argument for a more knowledge-based school, noting that

Even though Norway invests heavily in education, our results are average compared to other countries. Many students graduate lower secondary school without having developed sufficient skills in reading, writing and arithmetic. One out of seven Norwegian teachers and one out of five maths teachers in primary/lower secondary school have no in-depth competence in the subject they teach. (Norwegian Ministry of Education and Research, 2014, p. 6)

The report also notes that teachers in Norwegian schools tend not to stay up-to-date on research and developments in their field. Based on NOKUT data that suggests that student teachers tend to work fewer hours a week compared to students on most other study programmes, the report posits that Norwegian teacher education programmes do not have sufficiently high ambitions for their students. Finally, the report notes that teacher education programmes need to become more attractive to students and better at retaining them in order to be able to meet the societal need for teachers in the future.

To remedy the situation, the report lays out several goals which are highly relevant to the purposes of the Advisory Panel for Teacher Education. The report calls for:

- Teachers with in-depth subject knowledge. This entails:
 - Higher demands for relevant competence in the teaching subject for all PLS teachers who teach maths, English, Norwegian, Sámi, and Norwegian Sign Language.

- More government support for further education for PLS teachers.
- An attractive and high-quality teacher education. This entails, among other things:
 - PLS teacher education programmes will become 5-year master's programmes in 2017. Programmes in the teacher education subjects Norwegian, Sámi, Norwegian Sign Language, maths and English are to be prioritised.
 - Raising the maths grade requirement for PLS teacher education programmes from 3 to 4. Other entrance requirements will gradually become more stringent.

The report expresses an ambition that the new master's theses will contribute to a stronger integration of theoretical and practical education. The master's theses are to be "profession-oriented" and "practice-oriented" and should focus on issues tied to work in schools.

The report is clear that there are likely to be practical challenges connected to the transition to the new 5-year integrated master's programmes in PLS teacher education and points out the same potential issues that discouraged the earlier government in 2009. It suggests that many TEIs will find it challenging to meet NOKUT's requirements for the academic competence and staff composition of institutions offering master's programmes and that it seems likely that the higher entrance requirements and longer, more challenging course of study will lead to fewer applicants, at least initially. However, the report also notes a positive correlation between student grades at admission and graduation rates, suggesting that a student body with higher admission grades (described in the report as "stronger candidates") will have a lower dropout rate, and that this will partially compensate for the lower application numbers.

In short, Norway's political leadership sees the new master's programmes as a way to solve

some central issues in PLS teacher education. It hopes that the new programmes will:

- Improve both teacher educators' and school-based teachers' research competence and in-depth subject knowledge
- Professionalise teacher education by creating clearer connections between theoretical knowledge and practice work
- Make teacher education more attractive and more able to retain students.

The report also makes it clear that the new master's theses, which are expected to be related to practice, are not intended solely to "academise" teacher education, but to professionalise it.

1.4.4 The content of the new programmes

Both the 5-year integrated master's programme in primary and lower secondary teacher education for grades 1 to 7 (PLS 1–7) and grades 5 to 10 (PLS 5–10) are governed through national regulations that stipulate minimum requirements for the contents of the programmes. There are many requirements, yet institutions and students have much choice in what subjects to offer and to take. The different options make for a complicated structure, but it is helpful to briefly describe some of the minimum requirements at this stage.

PLS 1–7

Students who take the 5-year integrated master's programme in primary and lower secondary teacher education, grades 1–7, must take a minimum of 60 credits in the subject "pedagogy and pupil-related skills". They must also study a minimum of three school subjects, which must include Norwegian and Mathematics (minimum 30 credits/each). They cannot study more than four school subjects. In addition, students have two alternatives for specialisation. They can specialise either in a school subject (e.g. Norwegian,

mathematics, English, Christian and other religious and ethical education, physical education, music, natural science, and social studies) or in pedagogy.

Specialisation in a school subject

In the first three years of the programme, students who choose to specialise in a school subject must complete:

- 80 school-based days of supervised and assessed teaching practice, including at least five days of observation;
- A minimum of 30 credits in the subject “pedagogy and pupil-related skills”;
- A minimum of 60 credits in a school subject of their choice, which will be their subject specialisation;
- A minimum of 30 credits in a second school subject of their choice;
- A minimum of 30 credits in a third school subject of their choice;
- With the remaining 30 credits, students may choose one among the following options:
 - Take further studies in their second or third choice of school subject;
 - Study a fourth school subject of their choice; or
 - Study a subject relevant for working as a teacher.

In the last two years of the programme, students who choose to specialise in a school subject must complete:

- 30 school-based days of supervised and assessed teaching practice;
- A minimum of 30 credits in the subject “pedagogy and pupil-related skills”;

- A minimum of 90 credits in the school subject specified as their subject specialisation.

Students who choose to specialise in a school subject may choose to write their master’s theses either in subject didactics or initial education and basic skills.

Specialisation in pedagogy

In the first three years of the programme, students who choose to specialise in pedagogy must complete:

- 80 school-based days of supervised and assessed teaching practice, including at least five days of observation;
- A minimum of 60 credits in profession-oriented pedagogy or special needs education (including a minimum of 30 credits in the subject “pedagogy and pupil-related skills”);
- A minimum of 60 credits in a school subject of their choice;
- A minimum of 30 credits in a second school subject of their choice;
- A minimum of 30 credits in a third school subject of their choice.

In the last two years of the programme, students who choose to specialise in pedagogy must complete

- 30 school-based days of supervised and assessed teaching practice;
- A minimum of 90 credits in pedagogy, including a minimum of 30 credits in the subject “pedagogy and pupil-related skills”;
- A minimum of 30 credits in a school subject, which must build upon the 60 credits acquired in a particular school subject during the first three years of the programme.

Students who choose to specialise in pedagogy may write their theses in profession-oriented pedagogy, digital education, or special needs education.

PLS 5–10

Students who take the 5-year integrated master's programme in primary and lower secondary teacher education, grades 5–10, must take a minimum of 60 credits in the subject "pedagogy and pupil-related skills". Students must also study a minimum of two school subjects. They cannot study more than three school subjects. In addition, students have two alternatives for specialisation. They can specialise either in a school subject (e.g. Norwegian, mathematics, English, Christian and other religious and ethical education, physical education, music, natural science, Sámi, and social studies) or in pedagogy.

Specialisation in a school subject

In the first three years of the programme, students who choose to specialise in a school subject must complete:

- 80 school-based days of supervised and assessed teaching practice, including at least five days of observation;
- A minimum of 30 credits in the subject "pedagogy and pupil-related skills";
- A minimum of 60 credits in a school subject of their choice, which will be their subject specialisation;
- A minimum of 60 credits in a second school subject of their choice;
- With the remaining 30 credits, students may choose one among the following options:
 - Take further studies in their first or second choice of school subject;

- Study a third school subject of their choice; or
- Study a subject relevant for working as a teacher.

In the last two years of the programme, students who choose to specialise in a school subject must complete:

- 30 school-based days of supervised and assessed teaching practice;
- A minimum of 30 credits in the subject "pedagogy and pupil-related skills";
- A minimum of 90 credits in the school subject specified as their subject specialisation.

Specialisation in pedagogy

In the first three years of the programme, students who choose to specialise in pedagogy must complete:

- 80 school-based days of supervised and assessed teaching practice, including at least five days of observation;
- A minimum of 60 credits in profession-oriented pedagogy or special needs education (including a minimum of 30 credits in the subject "pedagogy and pupil-related skills");
- A minimum of 60 credits in a school subject of their choice;
- A minimum of 60 credits in a second school subject of their choice;

In the last two years of the programme, students who choose to specialise in pedagogy must complete

- 30 school-based days of supervised and assessed teaching practice;
- A minimum of 90 credits in pedagogy, including a minimum of 30 credits in the subject "pedagogy and pupil-related skills";

- A minimum of 30 credits in one of the two school subjects they chose to study during the first three years of the programme.

Students who choose to specialise in pedagogy may choose to write their theses in profession-oriented pedagogy, digital education or special needs education.

Master's Degree Specialisations

According to NOKUT's Academic Supervision Regulations (Section 2–3), the staff composition of a programme must meet the following requirements:

- It must be proportional to the number of students and the programme's characteristics, be stable over time in terms of competence, and have a composition that covers the programme's topics and subjects;
 - It must have relevant educational competence;
 - The programme must have clear academic leadership with defined responsibilities for quality assurance and the development of the study programme; and
- At least 50 percent of the academic full-time equivalents affiliated with the programme must be staff with their primary employment at the institution. Of these, academic staff with at least associate professor qualifications must be represented among those who teach core elements of the programme. Second-cycle programmes (e.g. 5-year integrated master's programmes in PLS 1–7 and PLS 5–10 teacher education) must also meet the following requirement: at least 50 percent of the members of the academic environment must have at least associate professor qualifications. Within this 50 percent, at least 10 percent must have professor or docent⁹ qualifications.

One consequence of these regulations is that Norwegian TEIs only offer master's degree specialisations in a limited number of school subjects. The TEIs themselves choose which specialisations to offer, but they must have enough academic staff with associate professor and professor competence. The tables below give an overview of the various master's degree specialisations offered by teacher education institutions across the country.

⁹ In Norway the academic rank docent (dosent) is foremost used at colleges and is less common at universities. A docent holds a doctoral degree and his/her tasks are teaching and research, thus largely corresponding to the academic rank of associate professor.

	Initial education	English	Christian and other religious and ethical education (CREE)	Physical Education (PE)	Arts and Crafts	Food and Health	Mathematics	Music	Natural Science	Norwegian	Social Studies	Specialisations in pedagogy
HVL		Bergen & Sogndal	Bergen		Bergen & Stord	Bergen		Bergen & Stord	Bergen		Bergen & Sogndal	Profession-oriented pedagogy & special needs education
INN												Profession-oriented pedagogy
USN												Profession-oriented pedagogy
OsloMet												Profession-oriented pedagogy, digital education & special needs education
UiA												Profession-oriented pedagogy
NORD							Levanger					Profession-oriented pedagogy
NTNU												Profession-oriented pedagogy & special needs education
UIS												Profession-oriented pedagogy
UiT												
NLA												Profession-oriented pedagogy
HVO												special needs education
HiØ												Profession-oriented pedagogy
Sámi University of Applied Sciences												
Steiner												

Table 2. Master’s Degree Specialisations, PLS 1–7¹⁰

10 Light blue boxes indicate that the respective institution does not offer specialisation in the subject area in question; for example, initial education is not offered at HVL. Empty blue-shaded boxes imply that all of the institution’s campuses offer specialisation in the subject area in question; for example physical education is offered at all of HVL’s campuses. However, only HVL campuses at Bergen and Sogndal offer specialisation in English. The table is based on information provided on the TEIs’ webpages as of August 2019.

	English	Christian and other religious and ethical education (CREE)	Physical Education (PE)	Arts and Crafts	Food and Health	Mathematics	Music	Natural Science	Norwegian	Social Studies	Other Languages	Specialisations in pedagogy
HVL	Bergen & Sogndal	Bergen	Sogndal	Bergen & Stord	Bergen	Bergen & Stord	Bergen & Stord		Bergen & Stord	Bergen & Sogndal		Profession-oriented pedagogy & special needs education
INN												Profession-oriented pedagogy
USN												Profession-oriented pedagogy
OsloMet												Profession-oriented pedagogy, digital education & special needs education
UiA												Profession-oriented pedagogy
NORD												Profession-oriented pedagogy special needs education
NTNU												Profession-oriented pedagogy og special needs education
UiS												Profession-oriented pedagogy
UiT												
NLA												Profession-oriented pedagogy
HVO												
HiØ											German	Profession-oriented pedagogy
Sámi University of Applied Sciences											Sámi	

Table 3. Master's Degree Specialisations, PLS 5–10

As the tables above indicate, only OsloMet offers master specialisation for all subjects in PLS 1–7. A number of the other large institutions (NTNU, USN and HVL) offer master’s specialisations in a large number of subjects, whereas many of the smaller institutions only offer a few master

specialisations. For PLS 5–10 no institution offers master’s specialisation for all subjects, but the large institutions offer specialisation for almost all subjects. As with PLS 1–7, several smaller institutions only offer a few master’s specialisations.

1.5 Conclusion

This chapter was written by the NOKUT secretariat. The purpose of the chapter was to provide sufficient information about the backdrop of the panel’s work in the period 2017 to 2019 and the remaining part of the report at hand, which may be especially helpful to readers outside of Norway.

This chapter presents the mandate NOKUT received from the Ministry of Education and Research, how NOKUT worked to recruit the

panel and provide the panel with information about Norwegian teacher education, and finally how NOKUT supported the panel’s work. Furthermore, the chapter provides a brief overview of Norwegian teacher education in general and of primary and lower secondary school teacher education in particular. The remainder of this report was written by the Advisory Panel for Teacher Education.



2. The Work of the Advisory Panel for Teacher Education

The Advisory Panel for Teacher Education (APT) in Norway was established by NOKUT during the autumn of 2016 at the request of the Ministry of Education and Research. The goal of this initiative

was to strengthen teacher education in connection with implementation of Norway's new 5-year integrated master's programme in primary and lower secondary education.

2.1 The panel's interpretation of the mandate

The panel was charged with providing advice that would strengthen initial teacher education in Norway, particularly to ensure the successful implementation of the new 5-year integrated master's programmes. NOKUT suggested that we work with TEIs through open academic events such as workshops and seminars, follow-ups with institutions, and connections with already-established relevant Norwegian organisations. However, as previous sections of this report indicate, the stated mandate of the panel was broader than simply supporting the implementation of the master's reform. We were also asked to provide advice regarding how to improve Norwegian primary and lower secondary teacher education generally, including consideration of issues related to: TEI staffing and research capacity/productivity; TEI-school partnerships; the integration and coherence of theory, research, and school experience in the 5-year master's programme; the quality of master's theses; the appropriateness and research basis, from an international perspective, of Norway's teacher education national guidelines; and, structural, financial, and other challenges well as supports for strengthening and sustaining the quality of teacher education in Norway.

We first met as a panel with NOKUT staff in Oslo in February 2017. During this meeting, NOKUT clarified the panel's charge and presented an overview of the recent history, policy, and politics of Norwegian teacher education reform. Previous and current reports, national guidelines, frame-

works, and other documents issued by the Ministry of Education and Research and other agencies that were relevant to teacher education reform in Norway were distributed and discussed, an activity that has continued throughout this project with NOKUT providing the panel with background and contextual information.

The panel was charged with providing advice that would strengthen initial teacher education in Norway, particularly to ensure the successful implementation of the new 5-year integrated master's programmes.

At the February meeting, the panel also met with representatives of the 13 Norwegian TEIs¹¹ that offer primary and lower secondary teacher education programmes, all of which were deeply involved at that time in preparations for the required September 2017 implementation of the 5-year integrated master's programmes (except UiT The Arctic University of Norway, which piloted the programme and was already in the 7th year of implementation). At this meeting, an important part of our job as a panel was to listen. We learned from representatives from each institution about their progress in developing the new master's, the strengths and unique attributes of their programmes, and the challenges and concerns they faced. We emphasised that our mandate was fully advisory rather than evaluative. It was this assurance, we believe, that

11 Note that the number of TEIs increased from 13 to 14 in 2018, when NOKUT accredited PLS teacher education (level 1-7) at Rudolf Steiner University College.

prompted the TEIs' positive attitude about the prospect of working with us, including their interest in having members of the panel visit their programmes. We also learned that many TEIs were concerned about the planned 2019 NOKUT audit, which came on the heels of mergers and other recent reforms.¹² The TEIs were concerned that this tight timeframe did not allow them ample time and space for trying out innovative strategies, structures, and processes; to the contrary, the timeframe encouraged the TEIs simply to comply with what they perceived as requirements. In addition, it became clear at this first meeting that key partners in the preparation of teachers - including school/municipality partners, union leaders, and student teachers themselves - were absent, which we feared could seriously undermine the success of the reform.

Our initial experiences as well as the materials translated or produced for us by NOKUT staff shaped our interpretation of the mandate and guided our work over the years. The panel took its advisory charge very seriously, aiming to provide advice that would support the efforts of TEIs and their school partners, whom we regarded as active, empowered agents in their own work. We also aimed to provide advice to the Ministry of Education and Research about obstructions and support for the work of teacher preparation

more generally. To organise our work, we interpreted our advisory mandate as a three-fold opportunity to contribute to the improvement of primary and lower secondary teacher education in Norway by:

- Redefining the problem space of the new master's programmes by situating the reform within the larger international context and in terms of enduring tensions in initial teacher education;
- Reframing accountability as a policy tool for the reform of teacher education consistent with larger policy and practice shifts internationally from compliance to empowerment models;
- Supporting and enhancing the efforts of the TEIs and their school/university partners to design and implement inquiry-rich integrated master's programmes based on collaboration, attention to local needs and innovations, and continuous research and inquiry¹³ to inform ongoing improvement.

We also determined that it was important to consider Norway's PLS reform in terms of the larger international context of teacher education reform.

12 We learned later from NOKUT that although officially NOKUT had not made a final decision regarding the upcoming audit, there had been discussions about this at various events in 2016. Also the document, *Teacher Education 2025. National Strategy for Quality and Cooperation in Teacher Education* (Norwegian Ministry of Education and Research, 2018), stated that NOKUT would audit programmes in 2019. Some programmes had already begun to prepare for this.

13 Throughout this report, we use the term "inquiry" in a broad sense that is consistent with the international literature on teacher education and teacher learning. With regard to teacher learning during the initial teacher education period, inquiry refers to forms of ongoing reflection, research, and study carried out by student teachers, often working with university- and school-based educators, about classroom- and school-related practice and policy. For student teachers, this often includes opportunities to unpack, examine, and study their own knowledge and assumptions, their own and others' teaching practices, the content and meaning of curriculum materials and assessments, pupils' learning opportunities and experiences, and other aspects of school and community life. When this report uses the term, "inquiry-rich", it is referring to programme contexts for student teachers that are rich in opportunities to raise questions, make connections, collect and interpret practice-related data, and construct evidence-informed critiques of classroom and school policy and practice. When the report refers to an "inquiry stance" (Cochran-Smith & Lytle, 2009), the point is that inquiry is a perspective and a way of thinking about teaching, learning, and schooling, rather than a time-bounded project or problem-solving method.

2.2 Norwegian teacher education reform in an international context

In developed countries around the world, the late 20th century shift from an industrial to a knowledge society brought unparalleled attention to the quality of education systems (Anderson, 2008; Gilbert, 2005; Jarvis, 2001). In many countries, it was presumed that teacher quality was a major influence, if not the central determinant, of pupil achievement and of the quality of the work force for the new economy (e.g., Akiba & LeTendre, 2017; OECD, 2005; World Bank, 2010). This assumption coupled with the rise of international large-scale assessments of pupil achievement, such as PISA, PIRLS, TIMSS and ICILS (Braun, 2008), prompted many nations to develop new expectations for teachers and teacher education, including preparing teachers who could teach all pupils to “world-class standards”, serve as the linchpins in various educational reforms, and help diminish social inequality (Furlong, Cochran-Smith & Brennan, 2009; Menter, 2017). From an international perspective, it is important to note that new standards and expectations regarding teaching and teacher education developed within a period of widespread political and cultural change, including in many countries, the emergence of “audit cultures” in the public sector and in education (Power, 1994), new conditions of social and cultural life influenced by extraordinary advances in technology and massive migration world-wide (Luke, 2004), and growing income inequality (Adamson, 2012).

2.2.1 Reforming teacher education: International trends

Despite important critiques of the assumptions and developments outlined above, over the last two to three decades many developed countries implemented major teacher education reforms. In addition, in some countries, there were sharp debates about the appropriate location, content, format, regulation, and requirements of teacher education. In many countries, teacher education was constructed as a public “policy problem” and

given unprecedented attention from policy makers at the highest levels (Cochran-Smith, 2004; Furlong, Cochran-Smith & Brennan, 2008; Menter, 2016; Moon, 2013; Murray, Kosnik & Swennen, 2019; Oancea, 2014). Based on the construction of teacher education as a policy problem, the goal for policy makers was to determine which of the broad parameters they could control was most likely to improve the quality of teacher education, which in turn was assumed would enhance teacher quality and the quality of a nation’s overall education system. Although the policy parameters in question varied across nations, many had to do with the structural arrangements that shape and govern initial teacher education, such as policies stipulating: allowable entry routes into teaching; authorised teacher education providers; requirements such as academic majors, number/kinds of courses, or school-based days; and, programme length or degrees conferred. In some countries, policy makers also stipulated new requirements for teacher educators, particularly regarding academic credentials and degrees, and/or for prospective teachers, such as new entrance requirements, including higher grade point averages or entry test scores.

Internationally, over the last two to three decades, a number of major trends, sometimes referred to as “turns” in teacher education, have been identified. These include, among others, “the university/research turn”, “the practice turn”, and “the accountability turn” (Cochran-Smith, 2016), which are particularly relevant to Norway. It is worth noting that none of these turns is good or bad per se. For example, requiring student teachers to complete more years at university or spend more time in schools does not automatically make them better teachers. Rather the value added by each of these depends on how the additional time is spent. Likewise, the value and impact of an accountability system depends not on more or less accountability per se, but on who is accountable for what, to whom, with what consequences, and for what purposes.

Over the last two decades, critical questions have been raised about the role of universities and colleges in teacher education and the contributions they do/do not make (e.g., Furlong, 2011; Hess & McShane, 2016; Moon, 2016). In many countries, but certainly not all of them, policy makers have enacted legislation intended to improve teacher quality by strengthening the role of universities, and along with it, the role of research in initial teacher education. For example, the “university/research turn” can be seen in Finland, Iceland, Brunei, Estonia, Portugal, Malta, and Norway, where policies require all student teachers to earn master’s degrees and complete research-based master’s theses prior to initial licensure as teachers. Along related lines, in some countries, there have been mandated mergers in the higher education sector between universities and teacher training colleges, with the goal of creating fewer but academically stronger and more research-based institutions for teacher preparation. This has occurred, for example, in Namibia, Scotland, Northern Ireland, Zimbabwe, Flanders, the Netherlands, New Zealand, and Norway. Further, in some countries, including Ireland, Scotland, and Wales, teacher education for primary schools shifted from 3-year to 4-year programmes, and post-baccalaureate programmes in some countries shifted from 1 to 2 years. In addition, in a number of countries, including the Netherlands, New Zealand, and Norway, there have been new requirements upping the percentage of teacher educators who must have PhDs and/or increasing expectations regarding teacher educators’ research productivity. Despite important differences, what these examples of “the university/research turn” have in common is the assumption that existing approaches to teacher preparation are inadequate because the academic training they offer in subject areas is not strong enough and thus the programmes do not produce teachers with the capacity and inclination to read, engage in, and use, up-to-date research to improve their ongoing work as teachers. This viewpoint is closely related to the perception in many countries that the academic training of teacher educators themselves has been inadequate, as reflected

in low levels of research productivity and inadequate research capacity. Teacher education reforms in many countries are consistent with the “university/research turn” in that they aim for more academically robust preparation, including more focus on research and higher numbers of PhD level, research-productive teacher educators. The assumption underlying the university/research turn is that reforms that strengthen the role of universities in teacher education along with more attention to research will enhance teacher quality, thus improving the capacity of education systems to meet their nations’ ambitious expectations for tomorrow’s pupils.

In addition to the “university/research turn”, in many countries there has also been a new emphasis on teacher candidates’ school experience and on the importance of closer and more productive professional relationships between teacher education programmes/institutions and schools. Along these lines, in many nations, closer ties have been established between higher education institutions and their partner schools over the last few decades (Murray, 2016). Closer university-school relationships reflect what has been called the “practice turn” in teacher education (Reid, 2011), a concept that emerged internationally partly in response to the charge that teacher preparation programmes do not produce effective teachers because of the long-perceived gap between theory and practice. The notion of a “theory-practice gap” is based on the perception that university models of teacher education overly emphasise theory, values and beliefs at the expense of actual teaching practice, thus leaving new teachers on their own to implement or translate university-produced theory into classroom-ready practice. There have been reforms and projects in many countries that broadly reflect “the practice turn”. Generally speaking, these reforms are intended to increase and improve the quality of student teachers’ school experiences. However it is important to note that there is great variation in what “the practice turn” actually looks like, partly because various reform efforts are based on markedly different conceptions of

“practice” and markedly different views about what it means to learn to teach, what it means to conceptualise and enact teaching as a profession, and how teaching “effectiveness” is defined (e.g., Reynolds et al., 2014; Sachs, 2001; Whitty, 2008). This means that the “practice turn” takes many different forms, including: university teacher training schools organised to support teacher development and active engagement in research (e.g., Finland), requirements that student teachers pass a uniform assessment of classroom teaching performance prior to initial licensure (e.g., USA, Australia), residency- or school-based models of teacher preparation wherein a significant portion of preparation time is spent in schools (e.g., USA, England), new requirements that experienced teachers receive professional development related to the mentoring of new teachers (e.g., Israel, Norway), new regulatory requirements that universities and schools share responsibility for teacher education (e.g., Wales), and teacher education programmes and curricula wherein the centrepiece is student teachers’ learning of core practices (e.g., USA, Chile).

In addition to the “university/research turn” and the “practice turn”, a third teacher education trend in many developed countries over the last several decades is the “accountability turn”. This has to do with policies and practices intended to reform initial teacher education and improve its quality by zeroing in on programme and institutional accountability related to teacher education. Along these lines, there have been new policies in many countries intended to regulate and monitor the inputs, procedures, processes, practices, systems, and/or outcomes that teacher education institutions are accountable for in order to be accredited, approved, and/or funded by Ministries of Education or other regulatory agencies. In keeping with the “accountability turn”, over the last decades, many countries have developed and implemented new sets of standards or competencies for institutional accreditation and approval and/or new auditing procedures that apply to those colleges and universities that wish to offer initial teacher education programmes. In

some countries (e.g., England, USA, Australia), teacher education programmes have become increasingly accountable for outcomes, such as programme graduates’ effectiveness, teachers’ performance in the classroom, programme impact, and teacher retention. In contrast, in some other countries, such as Austria, Portugal, New Zealand, Scotland, Wales, and Norway, there is more emphasis on accountability for inputs and processes than on outcomes. However, whether the focus is on inputs, processes, practices, systems, or outcomes - or, more commonly, some combination of these - accountability has come to be regarded in many countries as a powerful policy tool for the reform of initial teacher education (Cochran-Smith et al, 2017).

2.2.2. Norway’s reform and the international context

So where does Norway fit within the international context in terms of its 2017 reform requiring 5-year integrated master’s programmes with a master’s thesis for all prospective primary and lower secondary teachers? Like many countries, Norway’s reforms assume that a stronger teaching profession will boost the quality of the nation’s education system and enhance the quality of pupils’ school experiences. In keeping with this assumption, like many countries, Norway has raised its expectations for pupils, teachers, and teacher educators. And like many countries, Norway has implemented teacher education reforms related to the role of colleges and universities, the importance of practice, and accountability requirements for teacher education institutions (Norwegian Ministry of Education and Research, 2014, 2018).

Although generally consistent with international trends, the specific features of Norway’s reforms and its collaborative and sustained approach to implementation are distinctive in teacher education internationally. Norway’s reforms call for greater professionalisation, closer relationships with schools, and research-rich school-based

experiences for student teachers. This is being accomplished through a highly-distinctive and genuinely participatory approach that includes teacher educators, teachers, teacher unions, municipalities, student teachers and their unions, and a panel of international experts. Norway's reforms aim to establish stronger links between theory and practice and to make research central throughout the programme. This is being accomplished in part through ground-breaking 5-year integrated programmes and through the highly-ambitious requirement that all student teachers complete master's theses that are practice-oriented and that treat research and practice as inherently inter-connected rather than as dichotomous. Norway's reforms also reflect high expectations regarding research rigour and educators' research capacity. This is being accomplished through sustained, innovative, and high-priority efforts to build research capacity for Norway's school-based teachers and leaders, for teacher educators at higher education institutions, and for student teachers. In short, Norway's aspirations and its approach to teacher education reform stand out in the international context, reflecting a strong commitment to academic excellence, close partnerships with schools, and professionalisation of the teaching force.

Norway's new 5-year integrated master's programmes, new entrance requirements for prospective teachers, and new requirements regarding PhDs in programmes demonstrate a highly-distinctive and multi-faceted effort to enhance the quality of teacher preparation. As noted above, Norway's effort is consistent in many ways with broad international trends in teacher education. However, it is also distinctive in that its centrepiece is the challenge of building teaching and teacher education as genuine professions based on the mutual efforts of higher education institutions, schools, municipalities, teacher unions, student teachers, and an array of national and international partners.

2.2.3. Persistent tensions in teacher education

Successful implementation of Norway's ambitious and distinctive integrated 5-year master's programme reform requires the successful navigation of multiple conceptual, practical, and political issues in teacher education that have persisted over time and across national boundaries and geopolitical contexts. Although these issues are critically important to the success of any teacher education reform, it is important to note that they are not "resolvable" in the sense that unambiguous and permanent solutions can be formulated by policymakers or practitioners. Rather these are enduring questions, tensions, and contradictions that are inherent in teacher education. Although these tensions are intransigent, many of them can also be powerful influences on practice. If these tensions are identified and addressed directly by stakeholders within teacher education partnerships, they can prompt new ways of understanding complex situations, lead to innovative problem-solving approaches, or unmask additional or deep-level aspects of reform that were previously hidden.

The extent to which Norway's reforms present multiple challenges to the various stakeholders in the teacher education system is represented in the following list of persistent tensions with which those involved in making sense of Norway's reforms are currently grappling:

- The tension between research and practice (or theory and practice) in the education of new teachers, especially problems created by the traditional treatment of theory and practice as dichotomous or by privileging one over the other rather than regarding them as dialectical and positioning them in ways that promote productive exchange with one another;
- Tensions between research productivity and school-based experience as desired credentials for teacher educators, including the problems that can emerge if research knowledge is privileged over knowledge of practice, which is seen as lower-status;
- The tension between conceptualising practice as “practical”, on one hand, and conceptualising it more broadly, on the other hand, to encompass not only what teachers do, but also how they think about and theorise what they are doing, how they work with families and communities, and how they learn over time;
- Tensions between the subject knowledge-related and the didactical aspects of teaching and learning to teach, as they play out in university and field-based requirements and learning opportunities for student teachers;
- The tension between collaboration and critique that emerges when higher education institutions and schools/municipalities work closely and begin to impinge into each others' territories;
- The tensions prompted by the structural arrangements and power differentials involved in higher education institution-school/municipality partnerships, given that (1) historically the primary responsibility of higher education institutions has been the education of teachers while the primary responsibility of schools has been the education of pupils, and (2) higher education institutions and schools are often governed by different regulatory bodies and funded through different channels;
- The meaning of “practice-oriented” research, including tensions related to its status compared to traditional university research in the humanities and natural sciences, its value and purpose in the education of prospective teachers, and its relevance to problems and issues defined by schools;
- The tension between research/inquiry as “stance” and research as discrete, time-bounded project along with the difficulties involved in the integration of a research/inquiry stance throughout the course of a teacher education programme and across university and school contexts (Cochran-Smith & Lytle, 2009);
- The practical and political issues involved in enhancing the research capacity of teacher educators who have previously focused on practice, including the potential emergence of a 2-tiered teacher educator system (i.e., a research-tier and a practice-tier) and the potential loss of important practice perspectives, as has happened in other parts of the world.

In order for Norway's ambitious teacher education reforms to succeed, these tensions must be dealt with openly and directly. This requires sustained support for contexts that foster rich collaborations between university teacher educators and school/municipality-based teacher

educators, mutually committed to the ambitious goals Norway has for its students, its teachers, and its teacher educators. As a panel, we have seriously considered these issues and have tried to tackle some of them in the recommendations that conclude this report.

2.3 What the panel did

Beginning in February 2017, the panel engaged in a number of activities in collaboration with and supported by NOKUT staff, including: planning and leading multiple regional and national meetings with the TEIs and schools; multiple consultations with university, union, and other stakeholder groups and organisations; meetings with members of the Ministry of Education and Research and NOKUT; proposing a set of recommendations in May 2018 regarding student teachers' school-based days, PhD staffing, and other issues; and, synthesising international research relevant to Norway's 5-year integrated master's programme to inform our final recommendations. These activities are described below.

2.3.1. A model for supporting TEI reform

To support the implementation of the 5-year programmes, we developed a model for supporting the efforts of TEIs and their school/municipal partners. This model is based on seven interrelated principles that capture the nature of formative support for teacher education reform coupled with a geographic/chronological infrastructure for instantiating the principles in the process of implementing the new master's programmes.

In our work with TEIs, we developed an advisory model that was participatory and collaborative rather than constructing ourselves as the generators and the TEIs as the receivers of knowledge about best processes, practices, or strategies for teacher preparation. This approach was based on trust rather than mistrust of the professionals involved in the work of teacher education, assuming that they already knew a great deal about the work they were doing. Second, the model was designed to be inclusive of all the participants in the teacher education enterprise, including not only leaders and faculty from TEIs, but also their school- and municipality-based partners as well as teacher union leaders and student teachers themselves. Third, the advisory model was designed to foster empowerment rather than compliance by emphasising the collective agency, ownership, and responsibility of local TEI/school groups for the preparation of teachers. For this reason, at regional and national meetings, we shared conceptual frameworks and broad principles of practice intended to encourage creativity and innovation rather than calling for conformity with prescribed practices. Fourth, the advisory model was context-specific and local in that the goal was to create the conditions in which the work of local TEI programmes/schools was respected, built upon, and enhanced; in addition, local work was positioned as potentially useful beyond the local context in that other TEIs/schools could borrow innovations and build for local needs and strengths. Fifth, the advisory model was simultaneously research-informed *and* practice-informed in that activities were intended to privilege neither research nor practice but to emphasise the reciprocal interrelationship

Formative support of teacher education reform should be:

- participatory and collaborative
- inclusive
- empowerment-oriented
- context-specific and local
- research-informed and practice-informed
- comparative/international
- critical

Table 4. A model for supporting teacher education reform: Guiding principles

of the two rather than a “theory-into-practice” approach or a solely “practice-based” approach. Sixth, given the composition of the panel, its advisory work was, from the outset, comparative and international, drawing on research and practice traditions from many countries and contexts and continuously locating and interpreting Norway’s teacher education scene in terms of larger international issues, trends, and developments. Finally, the advisory model was critical in that we worked collaboratively with TEIs, their school partners, and other constituencies to identify promising leverage points for change as well as to identify the structures, resource needs,

and power and access issues that were obstacles to the successful implementation of the master’s reform.

The second part of the advisory model the panel created is a geographic/chronological structure for instantiating the seven principles in support of the implementation of 5-year integrated programmes at TEIs/schools. Although it was impossible for us to visit each TEI individually, it was possible for members of the panel to work with all the TEIs once they were divided into three regional groups in the north, the south and west, and the east, as indicated below.

	Region: North Meeting place: Tromsø	Region: South and west Meeting place: Bergen	Region: East Meeting place: Drammen/Oslo
Institutions	<ul style="list-style-type: none"> Norwegian University of Science and Technology Nord University UiT- The Arctic University of Norway Sámi University of Applied Science 	<ul style="list-style-type: none"> University of Agder University of Stavanger Western Norway University of Applied Sciences NLA University College Volda University College 	<ul style="list-style-type: none"> Oslo Metropolitan University, OsloMet Inland University of Applied Sciences University of South-Eastern Norway Østfold University College Rudolf Steiner University College

Following the national meeting in February 2017, there were three regional meetings during the autumn: in Drammen (December 2017), Bergen (October 2017), and Tromsø (October/November 2017), followed by another national meeting in Oslo in May 2018. Regional meetings occurred again in the autumn of 2018: in Oslo (November 2018), Bergen (October 2018), and Tromsø (October 2018), followed by a final national meeting in Oslo in May 2019. This geographic/chronological infrastructure supported the even more important and extensive work that occurred at each TEI and each university-school/municipality partnership in between, preceding, and following the meetings.

Below we describe the regional and national meetings in some detail because these were the central contexts in which the panel interacted

and engaged with the TEIs and their school partners and the central forum for cross-institutional examination of the issues, challenges, and possibilities related to the master’s reform.

It is also important to note that this regional/national meeting structure was not only a forum for collaboration and cross-institutional consideration of the challenges involved in implementing the reform, as noted above. As importantly, the regional/national meetings were a critical source for the panel in its information-gathering role. These meetings allowed us to gain knowledge about the Norwegian context generally as well as specific local knowledge about the institutional contexts of the various TEIs. This knowledge was central to our development of the recommendations included in this report.

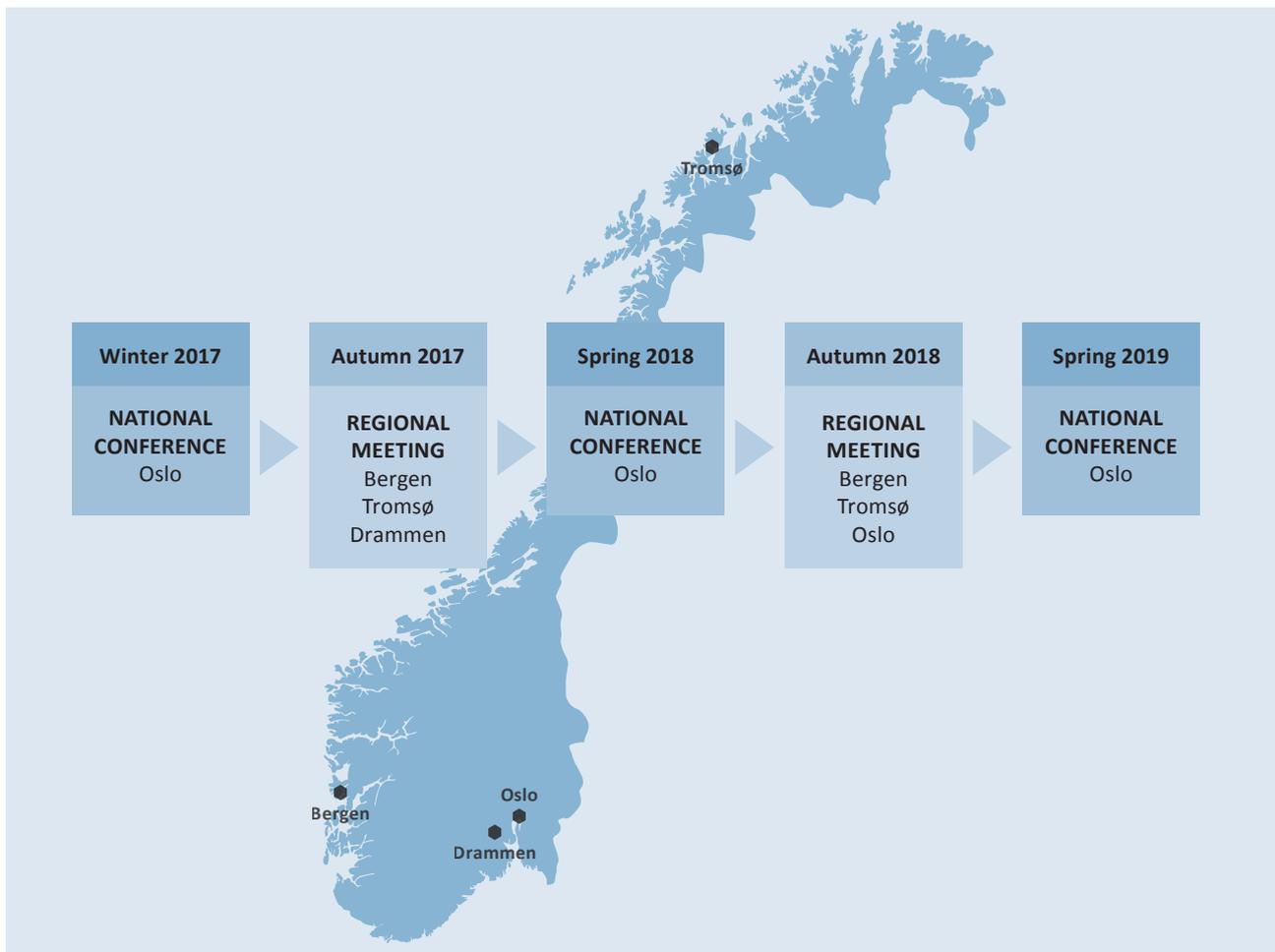


Figure 3. A model for supporting teacher education reform: Geographic/Chronological Infrastructure

2.3.2 Nine regional/national meetings

Supported by NOKUT staff, our panel designed and led nine regional/national meetings that brought together all the panel members, representatives from all the TEIs and their school/municipality partners, representatives from the largest teacher union (Utdanningsforbundet), and at some meetings, current student teachers or graduates. In many cases, different institutional representatives attended the regional and national meetings; this was the result of strategic choices made by the TEIs about which participants had the appropriate knowledge and skill to contribute to specific meetings as well as learn from the topics that were central. This strategic approach to the selection of representatives to attend the meetings meant that over time, many faculty members, school leaders, mentor teachers, and others had a chance to participate and to contribute. This helped to ensure that all voices were

heard. At the end of every regional and national meeting, and then following up later as well, NOKUT gathered feedback from participants and also solicited pertinent information about the plans, progress, history, current arrangements, and concerns of each TEI-school/municipality group. The contents and formats of the regional and national meetings were planned by the panel/NOKUT in keeping with the requests, feedback, questions, and concerns of the TEIs/school partners. The national and regional meetings were a combination of plenary presentations, workshops, and a variety of group sessions, including intra- and inter-institutional discussions, institution-school partner discussions, and meetings of school/municipal representatives. Every national and regional meeting included time for TEIs to work together as programme/institutional groups and in terms of their partnerships with schools/municipalities. Every meeting included opportunities for institutions to learn from each

other by sharing innovations, presenting progress as well as concerns, and working within and across institutional groups. An overview of the major topics and formats of these meetings is

provided below in Table 6 in chronological sequence to reflect the development of themes and issues over time.

	Date/Location	Major Themes/Topics	Major Formats/Presenters
National Meeting #1	14 Feb. 2017/Oslo	<ul style="list-style-type: none"> • Overview of APT • Teacher education trends internationally • The development of master’s programmes at each TEI 	<ul style="list-style-type: none"> • Plenary presentation: NOKUT • Plenary presentation: APT • Plenary presentations: TEIs • Summing up commentaries: APT
Regional Meetings #1, 2, 3	Oct. 2017/Bergen Oct-Nov. 2017/Tromsø Dec. 2017/Drammen	<ul style="list-style-type: none"> • Master’s programmes: TEI overviews • Master’s programmes: Looking across • Master’s programmes: School/ municipality partners • Student teachers’ perspectives • Building TE programmes collaboratively 	<ul style="list-style-type: none"> • Intra-institutional discussion: TEIs • Inter-institutional discussion/gallery walk-TEIs • TEI-partner discussions • Panel discussion with moderator-student teachers: APT • Parallel sessions: TEIs/schools, APT
National Meeting #2	28-29 May 2018/Oslo	<ul style="list-style-type: none"> • Norway’s TE reform in international context • TEI-school partnerships • Role of research in TE • Student teachers’ research and practice • Innovative TE designs • Master’s thesis: supervision/assessment • Directions forward 	<ul style="list-style-type: none"> • Plenary presentation: APT • Workshop: APT, School Principal • Plenary presentation: APT • Workshop: APT, ProTED • Plenary presentation: APT • Workshop: APT, ProTED • Multiple perspectives, general discussion: TEIs, schools, union, APT, NOKUT
Regional Meetings #4,5,6	Oct. 2018/Bergen Oct. 2018/Tromsø Nov. 2018/Oslo	<ul style="list-style-type: none"> • Practice-oriented research-examples from across institutions • Framework for practice-oriented studies • Rethinking with the framework 	<ul style="list-style-type: none"> • Video presentation • Inter-institutional group discussion • Plenary: APT • Intra-institutional group work
National Meeting #3	23-24 May 2019/Oslo	<ul style="list-style-type: none"> • Reflecting on the work of the TEIs/schools, APT, NOKUT; teacher educator roles • Research and learning to teach • Good ideas, innovations, initiatives • Teacher Education 2025 • R&D assignment, school experience & subject didactics • Directions forward 	<ul style="list-style-type: none"> • Plenary: APT • Panel discussion: teacher educators • Panel discussion: new teachers • Inter-institutional discussions • Plenary presentations: all TEIs/partners • Plenary: critical perspectives from the Ministry, APT, Panel TEI/school partners • Inter-institutional discussions • Plenary presentation: all TEIs/schools • Multiple perspectives, general discussion-TEI, school, union representatives, APT, NOKUT

Table 6. Overview of National and Regional Meetings of TEIs, School Partners, the Advisory Panel for Teacher Education, and NOKUT

As Table 6 shows, the regional and national meetings had three kinds of content: (1) frameworks, workshops, and presentations by panel members, colleagues (such as ProTED or school leaders), or representatives of the Ministry of Education and Research; (2) conversations, working group discussions, and TEI/school partner presentations coupled with table discussions or gallery walks intended as channels for sharing experiences, ideas, and innovations; and, (3) cross-institutional

discussions, presentations, comparisons, and analyses that cut across contexts.

It is important to note that all sessions were intended to be generative - that is, the sessions offered conceptual frameworks, new ways to think about perennial dilemmas and concerns, and examples and initiatives generated in one local context but potentially useful in others. No sessions were intended to stipulate required approaches,

prescribe “best” practice, or distribute checklists for compliance. The sessions also provided ample time for TEIs to work together with their school partners and with representatives from other TEIs. This was very important, given that we learned at the first regional meeting that some TEI faculty and leaders had not previously met their school-based partners, and very few of the school partners knew their counterparts at other schools.

Below is one example that shows the interplay of examples, conceptual frameworks, and both intra- and inter-institutional/school partner discussions. This example illustrates how the seven principles of the advisory model were actually put into practice, supported by the infrastructure of regional and national meetings.

Example of an activity at a regional APT meeting

- At the second set of regional meetings, the topic was practice-oriented research, which had generated a fair amount of uncertainty at many of the TEIs. The meetings began with a 20-minute video in which multiple examples of practice-oriented research of many kinds and from differing national and international contexts were described. The video was followed by inter-institutional/school partner discussions that probed the examples in terms of research topics and questions, data collection and analysis methods, underlying meanings of “practice”, relationships to classrooms and schools, and contributions to the learning of student teachers. There were animated discussions about which examples “counted” as practice-oriented research, which were/were not good quality research and why, and which approaches were feasible given the constraints of the master’s programme and the contexts of the schools/municipalities. The second day began with presentation of a conceptual framework, adapted from the work of a panel member (Oancea, 2018), for understanding and sorting out practice-oriented research in terms of four dimensions: choice of topic/research questions; research design and data sources; organisation, support and supervision; and, quality and contribution. This presentation was followed by two intra-institutional/school partner discussions: (1) the expectations that TEIs, schools, and student teachers brought to the table regarding the master’s thesis, how these converged or diverged from one another, and what issues these differences created in terms of assessment and support of theses; and, (2) what the formal roles of TEIs and school-based educators were in the development of thesis topics, supervision of theses, and how the conditions and contexts of each TEI/school partnership would orient, organise, support, and evaluate the master’s theses.
- The point of the above example is to emphasise that regional and national meeting sessions were not prescriptive or technical. That is, they did not stipulate best practices or provide exemplars or prototypes of 5-year integrated master’s programmes that TEI/school partnerships were encouraged to imitate. Rather the sessions assumed that participants were empowered professionals with varied experiences, perspectives, and viewpoints, who brought knowledge of local and larger contexts and who were committed to enhancing the preparation of new teachers. These sessions aimed to create the social, intellectual, and organisational contexts that foster collaboration and support for the day-to-day work of envisioning and enacting the master’s reform and to offer frameworks and examples that could inform the ongoing work of the TEIs and their school partners apart from the regional and national meetings.

Resources related to teacher education in Norway shared by the APT with TEIs/school partners

Across nine regional and national meetings, members of the panel produced and/or presented many resources related to teacher education. These are summarised in the chart below. They are also archived on a NOKUT server for continuing

access by the TEIs at:

www.nokut.no/prosjekter-i-nokut/apt

In addition, all members of the panel have conducted research and produced scholarly work in relation to many of the topics that are relevant to the master's reform in Norway. These works are listed in the table below and the reference list.

Topic/issue	Date/ meeting presented	Format/ Presenters	Resource available
Framework for understanding international trends in teacher education	National meeting 1, February 2017, Oslo	Plenary presentation with PowerPoint Marilyn Cochran-Smith, APT	PowerPoint slides Related publication: Furlong, J., Cochran-Smith, M. & Brennan, M. (Eds.) (2009). <i>Policy and Politics in Teacher Education: International Perspectives</i> . Routledge
Student teachers' experiences of the key aspects in teacher education	Regional meetings 1, October-November 2017, Tromsø	Mini keynote presentation Auli Toom, APT	PowerPoint slides Related publications: Toom, A., Kynäslähti, H., Krokfors, L., Jyrhämä, R., Byman, R., Stenberg, K., Maaranen, K. & Kansanen, P. (2010). Experiences of a research-based approach to teacher education: Suggestions for future policies. <i>European Journal of Education</i> , 45(2), 331–344. https://doi.org/10.1111/j.1465-3435.2010.01432.x Soni, T., Pietarinen, J., Toom, A. & Pyhältö, K. (2015). What contributes to first year student teachers' sense of professional agency in the classroom? <i>Teachers and Teaching: Theory and Practice</i> , 21(6), 641-659. http://doi.org/10.1080/13540602.2015.1044326 Toom, A., Pietarinen, J., Soini, T. & Pyhältö, K. (2017). How does the learning environment in teacher education cultivate first year student teachers' sense of professional agency in the professional community? <i>Teaching and Teacher Education</i> , 63, 126-136. https://doi.org/10.1016/j.tate.2016.12.013 Heikonen, L., Toom, A., Pyhältö, K., Pietarinen, J. & Soini, T. (2017). Student teachers' strategies in classroom interaction in the context of the teaching practicum. <i>Journal of Education for Teaching</i> , 43(5), 534-549. https://doi.org/10.1080/02607476.2017.1355080
Characteristics of a research-based approach to teacher education	Regional meetings 1, October 2017, Bergen	Mini keynote presentation Mikael Alexandersson	Powerpoint slides Related publications: Alexandersson, M. (2019a). Vem i hela världen kan man lita på? Om myndighetsutövning och kollegial kunskapsbildning [Who in the world can you trust? About government control and collegial knowledge formation]. In G. Åsén (Ed.) <i>Att vilja veta. Om utvärdering och pedagogisk bedömning i skolan</i> [Wanting to know. About evaluation and educational assessment at school] (pp. 60–89). Liber. Alexandersson, M. (2007b). Praxisnära forskning och läraryrkets vetenskapliga bas [Practice oriented research and the scientific base of the teaching profession]. In B. Sandin & R. Säljö (Eds) <i>Utbildningsvetenskap – ett kunskapsområde under formering</i> [Educational Science - a field of knowledge in formation] (pp. 355–376). Carlssons förlag.

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Topic/issue	Date/ meeting presented	Format/ Presenters	Resource available
Conceptualising teacher education as research-based and practice focused	Regional meetings 1, October-November 2017, Drammen	Mini keynote presentation Lexie Grudnoff, APT	PowerPoint slides Related publication: Grudnoff, L. et al., (2016). Rethinking initial teacher education: Preparing teachers for schools in low socio-economic communities in New Zealand, <i>Journal of Education for Teaching</i> , 42(4), 451-467. https://doi.org/10.1080/02607476.2016.1215552
Distinction between “reform” and “innovation” in teacher education	National meeting 2, May 2018, Oslo	Plenary presentation with PowerPoint Viv Ellis, APT	PowerPoint slides Related publication: Ellis, V., Souto-Manning, M. & Turvey, K. (2019). Innovation in teacher education: towards a critical re-examination. <i>Journal of Education for Teaching</i> . 45(1), 2–14. https://doi.org/10.1080/02607476.2019.1550602
Examples of supported student teaching (i.e. practice-related assignments) from research on the University of Chicago and the University of Helsinki	National meeting 2, May 2018, Oslo	Plenary presentation with PowerPoint Karen Hammerness, APT	PowerPoint slides Related publications: Hammerness, K. & Kennedy, W. (2018). Teaching Practices Grounded in Foundational Knowledge, Visions and Contexts. <i>The New Educator</i> , 15(1), 66-83. https://doi.org/10.1080/1547688X.2018.1506070 Hammerness, K., Ahtiainen, R., & Sahlberg, P. (2017). <i>Empowered Educators in Finland: How leading nations design systems for teaching quality</i> . Jossey-Bass/Wiley. Feiman-Nemser, S., Tamir, E. & Hammerness, K. (Eds) (2014). <i>Inspiring Teaching: Preparing teachers to succeed in mission-driven schools</i> . Harvard Education Press.
Framework for rethinking university-school partnerships based on knowledge-practice relationships	National meeting 2, May 2018, Oslo	Workshop with PowerPoint and discussion Lexie Grudnoff & Marilyn Cochran-Smith, APT	PowerPoint slides Related publications: Cochran-Smith, M. & Lytle, S. (1999). Relationships of Knowledge and Practice: Teacher Learning in Communities. <i>Review of Research in Education</i> , 4, 249-305. https://doi.org/10.2307/1167272 Grudnoff, L., Haigh, M., & Mackisack, V. (2016). Reinvigorating School-University Practicum Partnerships Through the Development of Collective Third Space. <i>Asia-Pacific Journal of Teacher Education</i> , 45(2), 180-193. https://doi.org/10.1080/1359866X.2016.1201043
Framework for understanding practice-oriented studies	Regional Meetings 2, October-November 2018 Tromsø, Bergen, Oslo	Plenary presentation with PowerPoint and group activity Auli Toom, APT, (Tromsø) Alis Oancea, APT, (Bergen) Marilyn Cochran-Smith, APT, (Oslo)	PowerPoint slides Related publication: Oancea, A. (2018) <i>Practice-oriented research dissertations</i> . Internal presentation delivered at the University of Oxford, Oxford, UK.

The table continues on the next page

Topic/issue	Date/ meeting presented	Format/ Presenters	Resource available
International and Norwegian examples of practice-oriented studies	Regional Meetings 2, October-November 2018 Tromsø, Bergen, Oslo	Video presentation followed by multiple group discussions, activities	Video with international and Norwegian teacher educators describing examples of practice-oriented research Full-length studies in text form
Framework for locating Norway's TE reform in the international context	National meeting 2, May 2018, Oslo	Plenary presentation with PowerPoint Marilyn Cochran-Smith, APT	PowerPoint slides Related publications: Cochran-Smith, M. et al., (2018). <i>Reclaiming Accountability</i> . Teachers College Press. Furlong, J., Cochran-Smith, M. & Brennan, M. (Eds.) (2009). <i>Policy and Politics in Teacher Education: International Perspectives</i> . Routledge
Role of research in teacher education	National meeting 2, May 2018, Oslo	Plenary: Auli Toom & Alis Oancea, APT	PowerPoint slides Related publications: Winch, C., Oancea, A. & Orchard, J. (2015) The contribution of educational research to teachers' professional learning: philosophical understandings, <i>Oxford Review of Education</i> , 41(2) 202-216. http://doi.org/10.1080/03054985.2015.1017406 Oancea, A. (2018) The practice of educational research. In P. Smeyers (Ed.) <i>International Handbook of Philosophy of Education</i> (pp.1045-1057). Springer. Toom, A., Kynäslähti, H., Krokfors, L., Jyrhämä, R., Byman, R., Stenberg, K., Maaranen, K. & Kansanen, P. (2010). Experiences of a research-based approach to teacher education: Suggestions for future policies. <i>European Journal of Education</i> , 45(2), 331-344. https://doi.org/10.1111/j.1465-3435.2010.01432.x

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Topic/issue	Date/ meeting presented	Format/ Presenters	Resource available
What it means to be a teacher educator in today's policy climate: Identity, scholarship and shifting roles	National meeting 3, May 2019, Oslo	All APT members	<p>PowerPoint slides</p> <p>Related publications: Cooper, B., & Grudnoff, L. (2017). Redesigning authentic collaborative practicum partnerships: Lessons from case studies from two New Zealand Universities. In M. Peters, B. Cowie, & I. Mentor (Eds.). <i>A companion to research in teacher education</i> (pp.223-236). Springer.</p> <p>Cochran-Smith, M. & S. Lytle. (2009). <i>Inquiry as Stance</i>. Teachers College Press.</p> <p>Ellis, V., Souto-Manning, M. & Turvey, K. (2019) Innovation in Teacher Education: Towards a critical re-examination, <i>Journal of Education for Teaching</i>, 45(1), 2-14. https://doi.org/10.1080/02607476.2019.1550602</p> <p>Ellis, V., Steadman, S. & Trippestad, T.A. (2018) Teacher Education and the GERM: Policy entrepreneurship, disruptive innovation and the rhetorics of reform, <i>Educational Review</i>, 71(1), 101-121. https://doi.org/10.1080/00131911.2019.1522040</p> <p>Ellis, V. (2016) The Challenge of Transformation: Å arbeide med kunnskapsproblemet i lærerutdanningen', <i>Acta Didactica Norge</i>, 10(2), 366-374.</p> <p>Ellis, V. & McNicholl, J. (2015) <i>Transforming Teacher Education: Reconfiguring the Academic Work</i>. Bloomsbury</p> <p>Alexandersson, M. (2019b). Så att de berörda berörs – Perspektiv på praktknära forskning [So that the affected are affected. Perspective on practice-oriented research]. In M. Dahl (Ed.) <i>Att skapa en professionell identitet. Om utvecklingsinriktade examensarbeten i lärarutbildningen</i> [Creating a Professional Identity. About development-oriented bachelor's thesis in teacher education.] (pp. 15–41). Liber.</p> <p>Alexandersson, M. (2007a). Reflektiv utvärdering. Från central kontroll till professionell utveckling [Reflective assessment. From central control to professional development]. In C. Brusling & G. Strömquist (Eds) <i>Reflektion och praktik i läraryrket</i> [Reflection and practice in the teaching profession] (pp. 147–165). Studentlitteratur.</p> <p>Oancea, A., Fancourt, N., Robson, J., Thompson, I., Childs, A. & Michie, J. (2017) <i>Evaluation of research capacity building in Wales - WISERDEducation</i>. Bedwas, HEFCW.</p> <p>Husu, J., Toom, A. & Patrikainen, S. (2008). Guided reflection as a means to demonstrate and develop student teachers' reflective competencies. <i>Reflective Practice</i>, 9(1), 37-51. https://doi.org/10.1080/14623940701816642</p> <p>Toom, A., Tiilikainen, M., Heikonen, L., Leijen, Ä., Mena, J. & Husu, J. (2019). Teacher candidate learning of action-oriented knowledge from triggering incidents in teaching practice. <i>Teachers and Teaching: Theory and Practice</i>, 25(5), 536-552. https://doi.org/10.1080/13540602.2019.1652162</p> <p>Saariaho, E., Toom, A., Soini, T., Pietarinen, J. & Pyhältö, K. (2019). Student-teachers' and pupils' co-regulated learning behaviours in authentic classroom situations in teaching practice. <i>Teaching and Teacher Education</i>, 85, 92-104. https://doi.org/10.1016/j.tate.2019.06.003</p> <p>Hammerness, K. & Kennedy, W. (2018, September). Teaching Practices Grounded in Foundational Knowledge, Visions and Contexts. <i>The New Educator</i>, 15(1), 66-83. https://doi.org/10.1080/1547688X.2018.1506070</p> <p>Hammerness, K. (2014). Visions of Good Teaching, Chapter Five. In S. Feiman-Nemser, E. Tamir & K. Hammerness (Eds.) (2014). <i>Inspiring Teaching: Preparing teachers to succeed in mission-driven schools</i>. Harvard Education Press.</p>

Table 7. Resources shared with TEIs/Schools by the Advisory Panel for Teacher Education

May 2018 recommendations on policy frameworks/regulations regarding Norwegian teacher education

In May 2018, the panel issued a set of recommendations to the Ministry of Education and Research and NOKUT regarding: TEI staff composition, school-based days for student teachers, supervision of the master's thesis, leadership, and NOKUT auditing. For each area, we described problematic aspects of the current situation, then made recommendations for revisions in policy. In short, we recommended that: the possible NOKUT audit of TEIs in 2019 be postponed or shifted in purpose from summative to formative; staff PhD requirements be applied across rather than within subject areas; TEIs require at least 30 school-based days in both Years 4 and 5 either by increasing or redistributing school-based days across the five years; the Ministry fund the development of innovative approaches to supervision, including cohort, peer, and partner supervision with school-based educators; and, the Ministry support leadership development for TEI deans/programme leaders. We made these recommendations mid-way through our tenure as a panel because it was apparent early on that these issues were of central concern to the TEIs and had the potential to disrupt the successful implementation of the reform. We determined that these pressing issues needed to be addressed as quickly as possible before too many students were enrolled in the new programmes.

Partly as a result of these recommendations and our meetings with NOKUT senior staff, NOKUT decided to delay an audit until after TEIs had fully implemented the new 5-year master's programmes. Some of the other recommendations prompted debate or strong reactions from TEI leaders and faculty, teacher union leaders, and school/municipality educators. This was valuable because it brought important issues to the foreground, prompted sharp exchange of ideas, and created additional opportunities for us to learn about the policy and political contexts. All of these issues are addressed in our recommendations.

Meetings with regulatory and constituency groups

In addition to leading the national and regional meetings with TEIs/schools, panel members and NOKUT staff also met with regulatory groups and several other groups that represented important constituencies in Norwegian teacher education. Our conversations with each of these groups, coupled with our international experience and our interpretation of the international research on teacher education, informed the recommendations we make in the last section of this report.

We met with the Minister of Education and several high-level members of her staff following the release of our May 2018 recommendations described above. The discussion focused on the value of school-based days, the rationale for more (or differently distributed) school-based days, and the funding issues involved. This meeting also gave us a chance to let the Minister know why we saw these issues as pressing.

The panel also met with NOKUT management to discuss our recommendation regarding auditing implementation of the reform. We suggested that the focus be formative rather than summative.

Members of the panel and NOKUT staff met on two different occasions with leaders of *Universities Norway (Universitets- og høyskolerådet, UHR)* to discuss the panel's work and its plans for the final report. In addition some *Universities Norway* leaders participated in the national and regional meetings. Discussions with *Universities Norway* focused on these issues: university-school relationships and responsibilities for teacher education; the nature, number, quality, and funding of student teachers' school-based days; the credentials of teacher educators and other issues related to TEI staffing; supervision of the master's thesis, especially issues related to university and college roles and responsibilities; international research findings related to initial teacher education; ways to strengthen the research base of Norwegian teacher education,

including organising student teachers' master's thesis work; and, issues related to the nature and extent of regulation and oversight laid out in *Teacher Education 2025: National Strategy for Quality and Cooperation in Teacher Education* (Norwegian Ministry of Education and Research, 2017).

We also met on two different occasions with leaders of the *Union of Education Norway (Utdanningsforbundet)*. In addition, several union leaders attended all of the regional and national meetings organised by the panel. Discussions with the *Union of Education Norway* focused on: national guidelines for teacher education, particularly the participation of the teaching profession in the establishment of the guidelines; binding agreements regarding TEI-school partnerships; the need for university and college teacher educators to have school-based knowledge and recent school experience; the need for school-based teachers to have training in supervision/mentoring; and, systematic participation and closer cooperation between TEIs and schools in relation to all aspects of teacher education, including design of programmes, master's thesis topics and supervision, supervision and assessment of student teachers, and ongoing professional development for all teacher educators, both those with PhD qualifications and those with school experience.

The panel also received written input from the *Teacher Education Student Union (Pedagogstudentene i Utdanningsforbundet)* linked to *Union of Education Norway*. They called for: attention to "standard" TEI-school partnerships

as well as teacher education schools; attention to mentoring; closer and higher quality supervision of practice by both TEIs and schools; profession- or subject didactic- orientation of master's theses; more research opportunities; more cross-institutional participation between TEIs and schools; less micro-management of teacher education by the Ministry of Education and Research; and, increased TEI funding.

Finally we met with representatives from the *Council for Teacher Education 2025 (Faglig råd for Lærerutdanning 2025)*, one of two new national groups established by the Ministry of Education and Research concerned with teacher education. The discussion focused on the group's composition, agenda, the annual meetings it will establish, and its current work on a report regarding TEI-school partnerships and cooperation.

Evidence the panel gathered

Over the course of three years, the panel gathered a great deal of evidence related to the implementation of Norway's new 5-year integrated master's programmes in PLS teacher education, which informed our work as an advisory body. NOKUT produced a number of background reports and translated material for us about Norwegian teacher education, current frameworks and guidelines, and the current state of implementation of the reform that guided our work. These are listed below.

NOKUT and SINTEF's APT reports
Aam, P., Bakken, P., Kvistad, E., & Snildal, A. (2017). <i>A Brief Introduction to Primary and Lower Secondary Teacher Education in Norway</i> . NOKUT.
Aam, P., Bakken, P., Boilard, M.C., Kvistad, E. & Rørnes, K. (2017). <i>Primary and Lower Secondary Teacher Education in Norway: Further Information</i> . NOKUT.
Finne, H., Landmark, A., Mordal, S. & Ullern, E.F. (2017). <i>R&D in Teacher Education Milieus. A descriptive mapping of research and development in milieus that educate teachers for primary and lower secondary schools in Norway</i> . SINTEF.
Kalviknes Bore, I.-L. (2018). <i>The Master's Thesis in PLS Teacher Education (GLU)</i> . NOKUT.
Fetscher, E. (2019). <i>Practice in Norwegian Primary and Lower Secondary Schools Teacher Education</i> . NOKUT.
Translated framework plans and guidelines
Regulations Relating to the Framework Plan for Primary and Lower Secondary Teacher Education for Years 1–7.
Regulations Relating to the Framework Plan for Primary and Lower Secondary Teacher Education for Years 5–10.
National Guidelines for the Primary and Lower Secondary Teacher Education Programme for Years 1–7.
National Guidelines for the Primary and Lower Secondary Teacher Education Programme for Years 5–10.
Published reports
Ekspertgruppa om lærerrollen (2016). <i>Om lærerrollen. Et kunnskapsgrunnlag</i> . [About the role of the teacher. A knowledge base] Fagbokforlaget.
Norwegian Ministry of Education and Research. (2016) <i>OECD TALIS Initial Teacher Preparation Study. Country Background Report Norway</i> .
Norwegian Ministry of Education and Research. (2018). <i>Teacher Education 2025. National Strategy for Quality and Cooperation in Teacher Education</i> .
OECD. (2019). <i>A Flying Start. Improving Initial Teacher Preparation Systems</i> . OECD Publishing.
Norwegian Ministry of Education and Research. (2014) <i>Lærerløftet. På lag for kunnskapsskolen</i> . [The teacher lift: Teaming up for the knowledge-based school].
Surveys regarding the national conferences
National conference survey, May/June 2018
National conference survey, May/June 2019

Table 8. Information provided by NOKUT to the panel

In addition, throughout the three years, the panel gathered evidence regarding participants' individual and collective concerns, progress, and capacity each time we met and worked with the TEIs and their school partners. This was not simply a matter of forming "impressions" based on single meetings. Rather, as we have described in detail above, our nine meetings with TEIs and their school partners and our multiple meetings with constituency groups over three years provided a wealth of information about how participants were interpreting and implementing the reform, what they found challenging or problematic in the required changes,

and how their views converged and diverged with the views of others.

In addition, NOKUT collected feedback and progress reports for us after every meeting from all TEI and school/municipality participants. We used this information to gauge responses and plan for subsequent meetings.

Finally, after panel members had become familiar with the Norwegian teacher education context by reading the above materials and meeting on multiple occasions with TEIs and their school partners

and with representatives from Universities Norway and the Union of Education Norway, we identified a number of key topics that are highly pertinent to Norway's current teacher education reform and about which there has been relevant research in multiple countries and contexts. Members of our panel reviewed this literature with the explicit goal of informing our recommendations to the Ministry of Education and Research, to NOKUT, and to the

TEIs/school partners. The areas of international research that we reviewed included: teacher education accountability and accountability systems, the role of practice in teacher preparation, TEI-school partnerships, practice-oriented research and master's theses, supervision of research, capacity building for TEI faculty and school-based teachers, student agency in teacher education, and teacher education programme integration/coherence.

2.4 What the panel discovered

The panel noted early on that Norway has very ambitious aspirations for the nation's pupils and for the teaching profession. Accordingly high expectations have been established regarding the nature and quality of teacher education at the primary and lower secondary levels. The long-term aim for the new 5-year integrated master's programmes is to prepare professionally capable teachers who will enhance pupils' learning outcomes in a more challenging world. The integrated master's programmes are distinctive internationally in that they intend to take on many complex challenges simultaneously, including: enhancing the academic quality and research capacity of teacher educators; making teacher education *both* more research-based *and* more practice-oriented; improving both the subject matter knowledge and the pedagogical skills of teachers; ensuring that teachers are prepared to learn across the career trajectory by working as teacher researchers within inquiry-rich professional learning communities; supporting closer and more mutually respectful and productive partnerships between TEIs and schools/municipalities; and, enhancing the quality and status of teaching as a profession, in order, over time, to reduce teacher recruitment and retention problems.

Over three years and based on our work with the TEIs and their school/municipality partners, the panel reached a number of conclusions about progress toward successful implementation of teacher education reform in Norway.

2.4.1 Multiple viewpoints, multiple voices

It was clear from our meetings with multiple constituencies over time that the various participants involved in teacher education in Norway do not speak with one voice or necessarily share the same viewpoints about all key aspects of teacher education for primary and lower secondary schools. This is neither surprising nor unusual, given different responsibilities and traditions of these groups. Although some differences in viewpoints were especially visible in some written statements and meetings with representatives of the *Union of Education Norway* and representatives of *Universities Norway*, we found that there was also ample variation in the viewpoints of members within these groups. There were some areas of disagreement about:

Multiple viewpoints, multiple voices

- Who should have a voice in the development of guidelines and/or binding agreements regarding the content and organisation of teacher education programmes;
- What the roles and responsibilities of TEI-based and school-based teacher educators should be, including who should be accountable for what, to whom, and with what purposes;
- What knowledge teachers need to have in order to teach to ambitious new standards and what the sources of that knowledge are;
- How master's theses should be organised, including how "practice-oriented" studies that are "relevant for work in schools" should be defined; how topics should be selected; how and by whom these should be supervised; and, how schools should be involved in data collection and other aspects of thesis research;
- What the qualifications and credentials of teacher educators should be, including requirements related to relevant school experience and research capacity of teacher educators at TEIs, the research training of school-based teachers involved in supervision of master's theses, and the mentoring training of teachers who work with candidates;
- What resources (time, capacity building, expertise, space) are necessary to foster genuine TEI-school/municipality collaboration.

The regional and national meetings hosted by the panel provided multiple forums for consideration of these issues and served as a site for collaboration across TEIs, between TEIs and schools/municipalities, and across differences in viewpoint. Many of the points of disagreement noted above are related to issues we take up in our recommendations at the conclusion of this report.

2.4.2 Progress implementing the reform: TEIs/School Partners

Over time we found that the TEIs and their school partners were making steady progress in implementing the new 5-year integrated programmes, which officially began with incoming students in the autumn of 2017, shortly after the first meeting of the panel. It is important to note that, except for UiT The Arctic University of Norway, which served as the pilot for the new

programmes, all of the other institutions were building these new programmes at the same time that they were already underway. This was the result of the very short timeline of the legislated reform and the fact that it came on the heels of mergers for many of the institutions. That process varied considerably. Some TEIs developed and designed their own models, from the ground up, while others borrowed ideas from UiT The Arctic University of Norway. We also found that there was diversity in the ways the TEIs implemented the reform, including different partnership models and different ways of integrating research across coursework and school-based experiences.

It is essential to restate that the work of implementing the 5-year integrated master's programmes is ongoing. Only UiT The Arctic University of Norway actually now has graduates of the new programme; the other institutions will not have

graduates until the spring of 2022. Our role as a panel was not to evaluate the TEIs' implementation of the reform, nor was it to audit their progress. Rather our role was a formative one - to collaborate with TEIs and their school partners and to

support efforts consistent with the aims of the reform. Below we list some indicators of the progress we observed as we worked collaboratively with the TEIs and their school partners over three years.

Indicators of progress

- TEIs and their school-based partners are involved in building close and productive working relationships;
- Teacher educators across TEIs are building collaborative relationships as are school leaders and teachers across different schools/municipalities;
- Participants are engaged whole-heartedly as members of a professional learning community that includes: TEI-based teacher educators with different kinds of research and practice experience, university organisation leaders, union representatives, school-based leaders and teachers with different roles and responsibilities;
- Teacher educators at TEIs and schools are involved in learning from the successes and challenges of other TEI-school partnerships;
- Committed leaders at each TEI are fostering engagement with the master's reform at all levels, although there are different interpretations of the reform mandate, including many differences in partnership agreements between TEIs and schools/municipalities;
- All TEIs are engaged in planning and implementing a 5-year integrated curriculum of courses, R&D projects, assignments, and experiences to support the capacity of student teachers to read, interpret, critique, use, and participate in research in alignment with the goals of the reform;
- Many TEI-school partnerships are developing innovative practices and approaches that support the ambitious goals of the 5-year integrated master's programmes and build research capacity among both student teachers and school-based teacher educators;
- Many TEI-school partnerships are developing creative ways to address the structural and other challenges involved in the new 5-year integrated programmes (see table 9 below)
- Many TEI-school partnerships are posing conceptual, practical, and critical questions about the nature of practice-oriented research, the role of the schools as sites of data collection, the role of school-based educators as supervisors and mentors for the master's thesis research, and the value of research for the schools;
- Some TEIs are researching their own work and studying their own practice with the purpose of revising and enhancing their own programmes but also developing insights and models that are useful to other TEI programmes; UiT The Arctic University of Norway with its well-developed programme of practitioner research, is a strong example of this.
- Some schools and municipalities are exploring professional development for teachers in schools who would mentor students and potentially supervise their practice oriented research.

2.4.3 Innovations, creative initiatives, new structures

At the beginning of the panel's tenure, a primary concern of many of the TEIs was figuring out exactly what was required for the new 5-year integrated master's programmes so they could demonstrate compliance with expectations, particularly because the Ministry of Education and Research had indicated there would be an audit by NOKUT in 2019. This was reflected in the first meeting of the panel with TEIs in 2017. Over time, however, and once the audit was officially postponed, many TEIs moved away from simple compliance. Instead, they concentrated on developing interesting innovations and creative initiatives that addressed conceptual and practical issues related to implementation of the 5-year

integrated master's programmes, enhanced the research capacity of both TEI teacher educators and school-based teachers, and enriched the experience of student teachers. Table 9, presents a summary of some of the innovations and new initiatives implemented by the TEIs and their school partners.

As the table below indicates, these initiatives are designed to address many of the central challenges involved in implementation of the new master's programmes - selection of appropriate topics for the master's thesis, supervision of theses, partnerships, R&D seminars, and new roles for school-based teachers that enhance their research capacity and their knowledge of teacher education.

Institution Innovation	Description
<p>Master – GLU: Connecting the study-, research- and supervision-process into collective structures</p> <p>Western Norway University of Applied Sciences (HVL)</p>	<p>The Faculty of Education, Arts and Sports at HVL have developed a new strategy for achieving sustainability through an innovative perspective and dialogic approaches. The strategy is focused on the three concepts of inspiration, support and empowerment. The objective is connecting the areas of study, research and supervision and thereby answering the increased demand for competent master's thesis supervision. Furthermore, students can contribute to strengthening research and the development of the practice field by means of their master's theses. In order to achieve these objectives, HVL proposes to involve students to a greater extent in larger research projects through the collectivisation of the master's thesis process. Within this collective structure, the need for supervision will partly be answered by peer tutoring among students.</p> <p><i>Presented by Knut-Steinar Engelsen</i></p>
<p>School partnerships – Towards a collaborative partnership structure</p> <p>NTNU</p>	<p>NTNU integrated a new model for partnerships between NTNU and schools, replacing the previous model where one unit was responsible for all schools. The model supports closer interaction among practice schools by grouping ten schools in one partnership. Furthermore, while previously one unit (head of practical studies) was responsible for the dialogue with all of NTNU's practice schools, this task is now shared among tutors at NTNU who are in close contact with two school partnerships (20 schools) each.</p> <p><i>Presented by Helge Restad</i></p>
<p>Starting school practicum</p> <p>Østfold College</p>	<p>Østfold College recently started a voluntary observational practicum as a response to students asking for more insight in processes linked to first graders' first day of school. During the practicum students for instance observe the parents first meeting with the teacher, the teacher's preparation of the classroom and of course the first day of school. The observations are integrated in campus teaching by means of a pedagogy class, an oral presentation by the student, and the possibility to include the starting school practicum in a research project.</p> <p><i>Presented by Lin Ramberg</i></p>
<p>Master's thesis fair</p> <p>Nord University</p>	<p>Inspired by UiT's model, Nord University launched its own master's thesis fair for second year PLS students, which is organised in three activities. In a seminar prior to the fair staff prepares the students what information to seek. During the fair, students meet lecturers and representatives from schools who present ongoing projects, which students can contribute to with their master's thesis. In a workshop after the fair, students, lecturers, and the schools discuss the students' ideas and find the research questions, set up a timeframe for data collection and chose a supervisor. A positive by-product of introducing the master's thesis fair was improved cooperation between the PLS programmes at UiT and Nord University.</p> <p><i>Presented by Gisle Pettersen</i></p>
<p>Research and development coordinator</p> <p>University of Agder (UiA)</p>	<p>The position as research and development coordinator will be located at UiA's teacher education schools that host PLS students in the second cycle. PLS students spend 30 days of teaching practice at the teacher education school during the fourth year and have the opportunity to return to the same school for collecting data for their master's thesis. The coordinator has a teacher background, and is familiar with the requirements of the PLS programme and ongoing research and development at the school, which is one of the requirements in order to be selected as a teacher education school by UiA. Thus, the R&D coordinator represents an important link between the school and UiA regarding the practicum, the master's thesis, and the local research and development.</p> <p><i>Presented by Kristin S. Robstad</i></p>
<p>Master's thesis supervision in the context of school-based research and development groups</p> <p>University of Stavanger (UiS)</p>	<p>The University of Stavanger have started a project for developing supervision collaboration practice in school-based R&D groups. The project involves four key partners: student teachers, university-based teacher educators, school-based teacher educators and school leadership. The master's theses supervised by these groups should take their point of departure in issues concerning school practice. The project should contribute to school development and help develop models for school-university collaboration.</p> <p><i>Presented by Stein Erik Ohna</i></p>

The table continues on the next page

Institution Innovation	Description
<p>University schools and partnership in teacher education: Experience from a pilot project</p> <p>OsloMet</p>	<p>The Oslo Metropolitan University have started a project with their partner schools for establishing “university schools”. The pilot phase of the project started in August 2018 upon recommendation of a cross-subject group based at the Department of Primary and Secondary Teacher Education and involving both academic and administrative staff. Five schools have assumed the role of university schools in the pilot phase of the project. The project aims to strengthen collaboration between these schools and the Department. Each school has one designated contact person from the Department. They were able to add a second university-based teacher educator as contact person for four out of the five university schools. When the pilot phase ends in 2020, they will probably select more schools to assume the role of university schools. They will also cluster the schools into groups based on interest or scope. Finally, they will consider the possibility of attributing one contact person to a group of schools, with the possibility of adding more university-based staff to each group if needed.</p> <p><i>Presented by Ove Edvard Hatlevik</i></p>
<p>Supervision on the master’s level: A professional learning community, for the supervisors’ own capacity building</p> <p>UiT – The Arctic University of Norway</p>	<p>UiT - The Arctic University of Norway have worked to build a professional learning community for master’s thesis supervisors through seminars and regular meetings. The initiative is designed to facilitate dialogue across subjects, to develop a common culture and knowledge base, and to strengthen supervisory competencies.</p> <p><i>Presented by Rachel Jakhelln</i></p>
<p>Involving practice teachers, - increasing competence</p> <p>NLA University College</p>	<p>NLA are working to increase the competencies of their school practice teachers. Practice teachers can already take modules in pedagogical mentoring and supervision, but cycle 2 practice teachers will now also be able to complete PLS modules in the philosophy of science and in research methods. NLA are exploring opportunities for involving practice teachers in mentoring teams and in collaborative R&D projects with NLA staff.</p> <p><i>Presented by Grete S. Meyer</i></p>
<p>On the research track: Indigenous Research Methodology in Sámi Teacher Education</p> <p>Sámi University of Applied Sciences</p>	<p>The Sámi University of Applied Sciences presented their key principles, the “basic lávvu poles”: the use and development of Sámi language and knowledge Sámi traditional (ecological) knowledge and sustainable development Sámi values and cultural based teaching perspectives They have been using workshops, seminars, reading groups, lectures and other activities to explore how they can make sure that these poles are visible in the master’s education in the student master’s thesis.</p> <p><i>Presented by Ylva Jannok Nutti</i></p>
<p>The Research & Development seminar for students in teacher education</p> <p>Volda University College</p>	<p>The Research & Development seminar for students in teacher education Volda University College have been using an annual Research & Development seminar to involve all cycle 1 students in the third year R&D assignment. The third year students present their abstracts, while first and second year students, along with supervisors, act as opponents.</p> <p><i>Presented by Oddvar Aalde</i></p>
<p>Practice II positions – A new position in teacher education?</p> <p>University of South-Eastern Norway</p>	<p>USN have appointed 28 practice teachers to 20% Practice II positions in their PLS programmes. The Practice II teachers work with USN teacher educators to plan, teach and evaluate as a joint process to improve the quality of teaching and learning.</p> <p><i>Presented by Anne Fængsrud</i></p>
<p>Collaboration with Teacher Education Partner Schools</p> <p>Inland Norway University of Applied Sciences</p>	<p>INN have started a collaborative project with their partner schools, and two of the topics they have been working on are the teaching of cross-curricular topics, and professional digital competence. The project should strengthen student competencies and the connection between learning on campus and learning during the practicum.</p> <p><i>Presented by Åshild Vassend Holm</i></p>

Table 9. Innovations and initiatives that support implementation of 5-year integrated master’s programmes

As this table indicates, these initiatives are designed to address many of the central challenges involved in implementation of the new master's programmes - selection of appropriate topics for the master's thesis, supervision of theses, partnerships, R&D seminars, and new roles for school-based teachers that enhance their research capacity and their knowledge of teacher education. Each of these ideas was designed to meet the needs of individual TEIs and their work with school partners, but some of them are also relevant beyond a single institution. In some cases, TEIs have already borrowed or enhanced the innovations from other institutions to meet their own needs. This kind of collaboration and the sharing of ideas and perspectives across institutions is central to the reform model developed by the panel.

2.4.4 Analysis of the international research literature

Panel members reviewed research in a number of key areas relevant to Norway's teacher education reforms (accountability, practice, TEI-school partnerships, practice-oriented research and master's theses, supervision, capacity building, student agency, programme integration/coherence). We also identified trends in the international literature regarding teacher education policy and practice. Our analysis of the literature informed, but did not determine, our recommendations, which are elaborated in the final section of this report. Rather our recommendations are based on our extensive international experience, our work over 3 years with the TEIs and schools/municipalities, and our analysis of Norway's reform aspirations.

2.4.5 Challenges and leverage points related to the 5-year integrated master's programmes

We strongly support the goals and ambitions reflected in the 5-year integrated master's programme reform and spelled out in the

Ministry of Education and Research strategy document, *Teacher Education 2025*. In particular, we applaud the stated emphasis on less micro-management by central government, more trust of the teaching/teacher education profession, more dialogue and rich cooperation between universities and colleges and schools, fewer but more powerful principles that guide practice, joint efforts to ensure that teacher education programmes are academically strong and attractive to prospective teachers, and more powerful roles for research in informing professional practice. These goals are essential.

In our work over three years, however, we have identified a number of factors that may serve as challenges or obstacles to the successful implementation of the integrated master's reform unless they are adequately addressed. It is important to note that many of these obstacles represent perennial issues in teacher education, and they are faced by most countries.

In our work over three years, however, we have identified a number of factors that may serve as challenges or obstacles to the successful implementation of the integrated master's reform *unless* they are adequately addressed. It is important to note that many of these obstacles represent perennial issues in teacher education, and they are faced by most countries. However, the panel members believe that if they are given appropriate attention, these potential obstacles could be transformed into key leverage points, supporting the reform. Many of these issues are reflected in our Recommendations in the final section of this report, but we introduce these below to call attention to the importance of turning obstacles into leverage points.

Cross-walking between the very ambitious goals of the reform, as reflected in particular in *Teacher Education 2025*, on one hand, and current poli-

cies and practices related to the implementation of the 5-year integrated master's programmes, on the other hand, we are concerned that the time frame for implementation and evaluation may be too short. A longer time frame would be more realistic and give TEIs time to invent new structures, try them out, and make revisions based on analysis of local data, which could also be useful to other TEIs. Second, we were very impressed by the intention to have a smaller number of key goals related to teacher education with less micro-management by the central government because this approach fosters professional autonomy and is based on trust of the profession, rather than surveillance and monitoring as is the case with teacher education in some countries. However we noted that there may be some discrepancies between the rhetoric and the reality of these goals, so we urge the Ministry of Education and Research and NOKUT to pay careful attention to the nature and quantity of requirements and audits.

In addition, the panel members were also very impressed by the reform's intention to provide more academically challenging teacher education programmes in terms of both subject knowledge and educational and pedagogical knowledge, a goal with which we agree completely. However, we would caution that there must be simultaneous and equally-emphasised attention to the *professional* relevance of the programmes, as played out in issues such as: the selection of topics, supervision, and evaluation of master's theses; the contents of partnership agreements between TEIs and schools/municipalities; and, the nature and quantity of inquiry-rich learning opportunities student teachers have to work in classrooms and schools *across* the entire span of the 5-year integrated master's programme. This is related to another potential obstacle that we discerned in our work with TEIs and their schools partners and in our reading of Norwegian documents - an underlying conception of theory and practice as dichotomous. To transform this potential obstacle into a powerful leverage point, we would urge all participants to rethink

notions such as "translating theory into practice" and its many variants because these suggest that practice is inherently non-theoretical rather than that theory and practice are mutually and synergistically related. Along somewhat similar lines, we have found that narrow definitions of research and research capacity are also a potential obstacle, while rich and inclusive definitions of research/research capacity can be powerful leverage points for enhancing the development of both TEI and school-based teacher educators. Finally, we believe that a potential leverage point in the successful implementation of the 5-year integrated master's programme is more careful attention to the development of student teachers as professionals with critical agency along with richer understandings of student teacher diversity, especially in relationship to recruitment and retention of teachers.

2.4.6 How we determined recommendations

The panel developed a series of recommendations regarding changes in policy and practice that we believe will support implementation of the 5-year integrated master's programmes and also support progress generally toward Norway's ambitious goals for teachers, teacher education, and pupils. Five major bodies of knowledge and experience informed our recommendations:

Five bodies of knowledge and experience that informed our recommendations

1. the collective national and international experiences of our panel members who have worked in multiple sectors related to teacher education research, practice, and policy over many years;
2. our interpretation and critique of existing policy documents and guidelines that represent Norway's current and future aspirations regarding teacher education, the quality of the nation's teachers, and the quality of the educational experiences of the nation's pupils;
3. our work with NOKUT, especially their creation/translation of reports, survey analyses, and multiple reports that enriched our understanding of the Norwegian teacher education context;
4. our experience with the TEIs and their school partners in nine regional and national meetings over three years and the feedback, responses, and progress reports that followed up on these meetings; and (5) our review of international research in key areas relevant to Norway's teacher education reform.

Each set of recommendations focuses on core issues in teacher education. These are divided into two general sections. The first section includes recommendations addressed to the Ministry of Education and Research and NOKUT, while the second includes recommendations addressed to the teacher education institutions and their school/municipality partners. Each set of recommendations is structured in a similar way: (1) a brief overview of Norway's goals and aspirations for teachers, teacher educators, and/or teacher education programmes with regard to the partic-

ular set of core issues in question; (2) an analysis of key aspects of current policy and practice that may be serving as challenges or hindering realisation of Norway's goals and aspirations in relation to the core issues; (3) a discussion of related international scholarship, local examples, and other forms of evidence related to policy and practice regarding the core issues; and, (4) specific policy and/or practice recommendations.

Part 2

Recommendations to
the Ministry of Education and
Research and NOKUT

In this section, we make recommendations to the Ministry of Education and Research and NOKUT regarding the various policy frameworks and regulations that currently structure Norwegian teacher education. We make these recommendations in keeping with our mandate as the Advisory Panel for Teacher Education to provide feedback on whether and to what extent current frameworks and regulations will ensure quality in the

integrated 5-year master's programmes in primary and lower secondary teacher education. The four recommendations below, which are interrelated, address: accountability, funding, sustainability, and TEI-school partnerships, including school-based days. (With regard to TEI-school partnerships and school-based days, we also make recommendations addressed to the TEIs and their partner schools/municipalities later in this report.)

3. Accountability

The first set of recommendations has to do with Norway's accountability system. The discussion is in four parts: (1) Norway's aspirations related

to accountability, (2) potential challenges; (3) insights and evidence from current scholarship; and (4) recommendations.

3.1 Norway's accountability aspirations

Over the last several decades, *accountability* has come to be regarded in many countries as a powerful policy tool for the reform of initial teacher education and as a way to assure that high quality teacher education programmes produce excellent school-based teachers who in turn provide excellent education for a nation's children (Cochran-Smith et al., 2018; Taubman, 2009). Accordingly, many countries have implemented new standards for teacher education, new accreditation criteria, and/or new auditing procedures for the colleges and universities that offer initial teacher education programmes.

Norway is no exception to this accountability trend in that there have been multiple new regulations related to teacher education, and NOKUT has been charged with monitoring and auditing the extent to which TEIs comply. However, what may indeed be *exceptional about Norway* is that it aspires to engage in "less micromanagement by central government", to establish "relation-

ships of trust" with teacher education providers,

In short, Norway seeks a teacher education accountability system that relies on professional responsibility and agency rather than surveillance and monitoring, fosters empowerment and local innovation rather than compliance and uniformity, and takes an inclusive approach to collaborating with stakeholders rather than relying on the top-down imposition of regulations.

to reduce the use of national regulations "to a minimum level", to increase the "consciousness" of schools as "teacher educator" partners, and to include all the "relevant stakeholders" in efforts to enhance the provision of teacher education (Norwegian Ministry of Education and Research, 2017, p. 6).

In short, Norway seeks a teacher education accountability system that relies on professional responsibility and agency rather than surveillance and monitoring, fosters empowerment and local

innovation rather than compliance and uniformity, and takes an inclusive approach to collaborating with stakeholders rather than relying on the top-down imposition of regulations.

3.2 Potential challenges

The panel members unanimously and wholeheartedly applaud these accountability goals. We believe that a quality assurance system built on confidence in the profession is the right approach for Norwegian teacher education because this kind of a system fosters heightened trust and commitment, enhanced professionalism and collaboration, and deep thoughtful responses to audits rather than superficial responses intended to display compliance.

However, during our 3-year tenure as a panel, we identified several potential challenges to this approach. The first issue is simultaneously simple and extraordinarily complex; it has to do with time. TEIs and their partners need adequate time to create new programme structures, establish new coursework and fieldwork arrangements, develop new strategies for close and ongoing collaboration, and invent new systems and structures for the development, supervision, and evaluation of master's theses. As noted above, in May 2018, we recommended that a possible 2019 NOKUT audit of TEIs be postponed or shifted in focus from summative to formative evaluation. The panel was pleased that partly because of our recommendation and our meeting with NOKUT senior staff, NOKUT decided not to conduct an audit until after the TEIs had fully implemented the 5-year programmes. As a panel, we witnessed the positive effect of this decision in terms of changed attitudes and approaches to programme implementation once the time pressure regarding an initial audit was removed.

A second challenge is closely related to the first. In addition to needing enough time to fully implement the 5-year programmes, TEIs also need time to experiment with and study the impact of

their new systems and structures by collecting and analysing local data, consulting with multiple participants and stakeholders, and investigating both intended and unintended consequences. When TEIs have the time and resources to study the creation, revision, and continued fine-tuning of new strategies, processes, tools, and relationships, as UiT The Arctic University of Norway has done in its role as the pilot institution for Norway's 5-year integrated master, their decisions can be informed by evidence as well as local values, goals, and traditions. The President of the Carnegie Foundation, Anthony Bryk refers to the process of continuous inquiry about practice as organisations "getting better at getting better" (Bryk, Gomez, Grunow, & Lemahieu, 2015). A too-short time frame for auditing undermines efforts to develop a culture of continuous research and inquiry at TEIs and serves as a roadblock to risk-taking and innovation.

A third challenge to developing and sustaining an accountability system based on professional agency and responsibility is the current existence of multiple national regulations, guidelines, and frameworks related to teacher education at TEIs. Both the Ministry of Education and Research and NOKUT regulate quality through different, yet sometimes overlapping regulations (*studiekvalitetsforskriften* and *studietilsynsforskriften*). In addition, the content of the programmes must comply with national frameworks and guidelines (*rammeplaner* and *nasjonale retningslinjer*). Many of these involve numerous, highly specific, and detailed requirements, which means that TEI teacher educators and their school/municipality partners are pushed and pulled in many, sometimes not entirely consistent, directions. This kind of micro-management often leads to a compliance

mind-set, focused on superficial completion of tasks or requirements rather than thoughtful consideration of new directions, risk-taking, experimentation, and innovation.

A final potential challenge is the current role of NOKUT itself, as the nation's higher education quality assurance agency. At the outset of the master's reform, NOKUT's task was primarily external surveillance and monitoring of TEIs' compliance with national teacher education regulations and with mandated requirements for the 5-year integrated master's programme, an approach that allowed few opportunities for TEIs to participate in establishing the themes, methods, and arrangements of NOKUT evaluations. The clearest example of this appears in the Ministry of Education and Research's *Teacher Education 2025*, wherein the Ministry explicitly stated that NOKUT would audit the new master's programmes in 2019. As noted above, NOKUT decided not to evaluate the programmes at that time. In addition, the general role of NOKUT has changed over the three years during which the panel, NOKUT, the TEIs, and their school/municipality partners have

worked together on the new integrated master's programmes. Reflected in their participation and organisation of a series of regional and national meetings, as described above, NOKUT has begun to shift away from the role of primarily external evaluator and compliance monitor and toward a role that includes convenor of meetings and provider of consultative, collaborative, and supportive spaces and resources for TEIs and their school partners to work together on local versions of the new master's programmes.

The panel clearly noted this change over time as NOKUT increasingly participated in a supportive and consultative role. In addition, feedback from the TEIs and their school/municipality partners explicitly pointed out their appreciation that NOKUT had heard and responded to their concerns by not scheduling a 2019 evaluation. TEIs and school partners also indicated their awareness and recognition of NOKUT's role foremost being quality enhancing by supporting the conditions for strong internal responsibility, rather than being perceived as an auditing agency, as suspected by many TEIs in the beginning of the APT project.

3.3 Insights from international scholarship and examples

As noted above, in many countries, accountability has increasingly been regarded as a policy tool for enhancement of teacher education, which is presumed can boost both teacher quality and in turn, the quality of schoolchildren's educational opportunities and performance. Despite this general trend, the international scholarship also makes it clear that accountability is neither a unitary nor a neutral concept. In fact the values and purposes, power relationships, concepts, and consequences underlying teacher education accountability systems (Cochran-Smith et al, 2018) diverge considerably both within and across countries (Beauchamp, Clarke, Hulme, & Murray, 2015; Darling-Hammond et al, 2017; Tuinamuana, 2011) as do the nature and extent of involvement of national/federal, state/regional/provincial, and/or local government agencies

(Tatto & Menter, 2019). Within developed democratic societies, accountability systems for teacher education at higher education institutions tend to range along a continuum. At one end are accountability approaches informed by conceptions such as managerialism (Apple, 2006), performativity (Ball, 2003), and external auditing (Shore & Wright, 1999; Strathern, 2000). At the other end, are accountability approaches grounded in professionalism and professional relationships (Oancea & Orchard, 2012; Sachs, 2001; Whitty, 2008), the inclusion of relevant stakeholders (House & Howe, 2000), and collective responsibility (Cochran-Smith, Keefe et al, 2018; Jenlink, 2016). Hatch (2013a) aptly captures the two ends of this continuum with the terms answerability and responsibility. Norway's aspirations regarding accountability are generally consistent with a

professional, inclusive, and democratic approach to accountability (Volckmar, 2008). Along these lines, Hatch (2013a) has pointed out that “many aspects of the Norwegian educational system reflect an assumption that individuals and organisations can be trusted to carry out their work” (p. 116). Given these accountability aspirations, some of the international scholarly work along these lines is especially pertinent to the Norwegian context. For example, O’Neill (2002) introduced the term, “intelligent accountability” in a series of lectures about the audit culture that had emerged in the UK. She argued that the audit culture’s intense monitoring and surveillance had not improved work in the professions, but had instead damaged professional integrity. O’Neill called instead for *intelligent accountability* that begins with trust, presuming that the people who do the work in a given profession or policy sector have knowledge about that work and generally want to be better at it. Crooks (2003) extended O’Neill’s ideas to primary and secondary education in New Zealand, suggesting six criteria for intelligent accountability: preserving trust among the participants in the accountability process, including participants in the process, encouraging deep rather than superficial responses, acknowledging the limitations of educational performance indicators, providing feedback that supports thoughtful decisions about practice, and enhancing participants’ enthusiasm and motivation regarding their work. Cochran-Smith and colleagues (2018) applied the idea of intelligent accountability to teacher education in the USA, suggesting that accountability grounded in *trust* rather than *mistrust* of teacher educators and teacher education institutions, involves the active participation of the professionals who are being held accountable and is deliberately organised to yield information that can actually be used for thoughtful programme improvement.

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accountability, which has been developed in research about the public sector (Romzek, 2000), higher education (Trow, 1999), and primary/secondary education (Carnoy, Elmore & Siskin, 2003; Fullan, Rincón-Gallardo, & Hargreaves, 2015). Internal accountability involves the values, purposes, and beliefs that are embedded in the patterns of daily life of an occupational group that influence how they enact their work, while external accountability includes the formal regulations and requirements to which occupational groups must comply and the market forces that shape them. Referring to primary and secondary schools, Fullan, Rincón-Gallardo, and Hargreaves (2015) argued that the priority for external accountability agencies should *not* be developing external accountability policies that persuade or coerce schools to comply using carrots and sticks. Rather the priority should be creating the conditions for strong internal accountability wherein professional groups willingly take professional and collective responsibility for continuous school improvement. Cochran-Smith and colleagues (2018) applied these ideas specifically to teacher education accountability; they proposed *intelligent professional responsibility*, which braids together intelligent accountability, the practices of democratic evaluation based on dialogue and deliberation, and professional responsibility. This approach emphasises professional willingness, commitment, and capacity building with stakeholders collaborating within and across institutions. With this approach, the role for external accountability agencies is not monitoring compliance, but building capacity for strong internal accountability based on local and larger goals and commitments.

In terms of international examples, Finland is a country that has been successful at raising pupils’

achievement and establishing teacher education accountability grounded in professionalism and trust. As leaders describe them, Finland's education policies are based on "equity, flexibility, creativity, teacher professionalism and trust" (Sahlberg, 2007). Unlike countries where managerialism and performativity are the key to teacher education accountability, Finland emphasises sustainable leadership and intelligent accountability. Its external policies are intended to support schools and teacher education programmes in creating collaborative and democratic learning environments. Along somewhat similar lines, the provinces of Alberta and Ontario in Canada are high-achieving at the same time that their educational systems emphasise trust, cooperation across and within educational agencies, shared leadership, and capacity building (Campbell, 2020; Darling-Hammond et al, 2017).

3.4 Recommendations on accountability

Building on the rationale, the international literature, and the evidence discussed above, the Advisory Panel for Teacher Education makes the following recommendations regarding

accountability. Some of these are closely related to recommendations in other areas; we note this where appropriate.

- Ensure that the timeline for auditing is long enough to allow TEIs to fully implement all aspects of the new 5-year programmes.
 - Allow enough time for short- and longer-term implications and intended as well as unintended consequences of the reform to become visible.
 - Allow time for TEIs to conduct and respond to their own local research about the impact and consequences of local programme practices and policies.
 - Extend the audit time frame beyond the time it takes for one cohort to move through the programme.
- At the end of seven years, which will allow for three cohorts to complete the programme, conduct a participatory and formative evaluation that involves TEIs and their school/municipality partners in working out the format, arrangements, and timing.
 - Create new arrangements that include TEI and school-based teacher educators as partners in establishing the methods, arrangements, and themes of NOKUT evaluation.
- Sponsor ongoing regional and national teacher education meetings that support collaboration, sharing research and innovation, and discussing challenges and problems.
- Provide resources dedicated to supporting the creation of a culture of research and inquiry about the new programmes that informs continuous improvement.
- Provide the materials, tools, and resources that enhance the research capacity of TEIs and their school-based partners
- Reduce the number and specificity of national regulations, guidelines, and frameworks for teacher education at the TEIs.
 - Aim for more professional autonomy for TEIs to meet a small number of broad guiding principles rather than compliance with multiple detailed requirements.
 - Rethink the role of the Ministry of Education and Research and NOKUT in teacher education.
- Aim to create the conditions for strong internal accountability in the form of intelligent professional responsibility rather than micro-management.
 - Continue to reorganise NOKUT's approach to quality assurance by moving away from external audit/surveillance and toward supporting professionals as agents of change.



4. Sustainability

The second set of recommendations to the Ministry of Education and Research and NOKUT has to do explicitly with the sustainability of the new 5-year integrated master's programmes at the primary and lower secondary levels. By "sustainability", we mean state and other provisions for the development of permanent institutional capacity and infrastructure to support the master's

programmes as a powerful lever for producing a fully-professionalised Norwegian teaching force. The discussion has the same four-part structure as the previous section: (1) Norway's goals related to the sustainability of the 5-year integrated programmes in teacher education, (2) potential challenges; (3) insights and evidence from current scholarship; and (4) recommendations.

4.1 Norway's aspirations regarding sustainability

The 5-year integrated master's programmes for the preparation of primary and lower secondary teachers is a core piece of the Ministry's comprehensive national strategy to permanently upgrade the quality of the nation's teaching profession. *Teacher Education 2025* makes this crystal clear: "Few things have a greater long-term impact on quality in kindergartens and schools than teacher education... It is the government's ambition to permanently strengthen the Norwegian teaching professions. The investments being made now are important in order to prepare for a future in which knowledge and competencies will become increasingly important. The aim is for kindergar-

tens and schools to draw on the teaching professions' own professional strengths to enhance quality" (p. 5).

As we have outlined in previous sections of this report, Norway's general goal of boosting teacher quality in order to enhance students' learning and achievement as part of a long-term nation-building strategy is consistent with the goals of developed countries around the world. Norway's focus on enhancing the quality of the teaching profession in order to accomplish these goals is consistent with the approach of most developed nations, although there are exceptions.

4.2 Potential challenges

The members of the Advisory Panel for Teacher Education strongly support Norway's aspirations to permanently enhance the quality of primary and lower secondary teacher education. We believe that rigorous academic preparation in universities and colleges combined with powerful school experiences as part of a larger professionalisation agenda is the right approach to teacher education reform in Norway.

However, the panel has identified some challenges that may hinder the sustainability of this approach. The first challenge has to do with the large number of reforms that have affected Norwegian teacher education in the recent past.

As is well documented, since 1973, there have been seven reforms as well as additional higher education reforms that have affected teacher education. These include, in particular, the 1992 reform shifting teacher education from three to four years, the 2003 reform stressing content knowledge, and the 2010 reform splitting primary and lower secondary teacher education into two parts (years 1–7 and years 5–10). These reforms have had uneven results with evaluation reports indicating that some programmes lack coherence and that implementation across institutions has varied, depending on structural and external factors (NOKUT, 2006). In addition and most recently, the 2016 reform merged Norway's

33 state-run teacher education institutions into 21 institutions with the goals of consolidating resources, enhancing research and education quality, providing higher education access across regions, and boosting recruitment. The 5-year integrated master's programme reform went into effect in 2017, following on the heels of the mergers. It seems fair to say multiple rapid reforms have created considerable pressure on teacher education programmes, which have had to be prepared to change almost continuously (*Ekspertgruppa om lærerrollen*, 2016). To ensure the success of the master's reform, we think it is important that the impact of continuous change, including the erosion of a sense of professional identity for some "merged" TEIs, will need to be acknowledged in terms of expectations and the professional support provided. Otherwise the burden of reform fatigue (Hatch, 2002; 2019) may have a negative effect.

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Another potential challenge is that Norway's population is geographically dispersed. The spread and dispersion of teacher educators and programmes make it particularly difficult to successfully implement reforms like the integrated 5-year master's programme, which in some cases requires close collaboration among institutions that have been merged organisationally but not physically. Given the geographic spread of the teacher education system, the Ministry and NOKUT will need to focus in particular upon building the infrastructure for collaborative work and for networking and teacher educator learning in professional communities.

A third challenge is the tension that the 5-year integrated master's reform, like all national teacher education reforms, creates between national coherence and local autonomy and ownership. The panel has considered aspects of this issue at some length in the previous section of this report about internal and external accountability. We suggested that the approach to accountability that seems most consistent with Norway's societal values and its history of collective responsibility is for external agencies, such as NOKUT, to create the conditions wherein local professional groups willingly take professional and collective responsibility for successful implementation of the new master's programmes. We stand by this viewpoint. However, local autonomy and empowerment can sometimes undermine national coherence while at the same time efforts to ensure national coherence can sometimes infringe on local autonomy. This means that there will need to be particular attention to creating mechanisms for keeping track of this tension over time as well as for strategies designed to balance the tensions that will inevitably arise.

A fourth challenge to the sustainability of the master's reform is fragmentation and diffusion of efforts. Over the three years the panel met with TEIs, schools/municipalities, teacher unions, professional organisations, and others, we noticed that there were many different initiatives, projects, reports, oversight channels, grant opportunities, conferences, meetings, and other efforts related to the future of teacher education in Norway. In one sense, this is a very positive feature of the current reform situation: there are multiple constituencies and stakeholders, all of whom have a vested interest in the quality of teacher education, and all of whom are committed to being engaged in the long-term work of enhancing teacher education and the teaching profession. However, we also noted that some of these appeared to be overlapping, redundant, and/or inconsistent. Without national oversight coordination at a systems level along with national collaboration across TEIs-schools and other organisations, multiple dispersed efforts may

lead to fragmentation, confusion, and counter-productive efforts.

When reforms are under-funded and under-resourced or when they are only temporarily funded and resourced, most simply do not survive beyond the funding period or they yield uneven and disappointing results that reflect diluted versions of the robust reforms initially envisioned.

The final challenge is in many ways both the most obvious and the most important - lack of adequate infrastructure and resources to support the development and improvement of the 5-year integrated master's programmes over the long haul. The ambitious new master's reform involves the enrolment of more student teachers than previously. It also requires many new roles and

responsibilities for teacher educators at TEIs and schools, new staffing needs, new programming arrangements, new kinds of collaboration, and new efforts to recruit/support/retain teachers throughout the preservice, induction and ongoing professional development periods. None of these things can happen without resources that are available not only during the first blush of the new reform, but through the entire multi-year period of its first implementation cycle *and* beyond that. When reforms are under-funded and under-resourced or when they are only temporarily funded and resourced, most simply do not survive beyond the funding period or they yield uneven and disappointing results that reflect diluted versions of the robust reforms initially envisioned. The later section of this report that addresses funding speaks to the need for revision in the general funding system; the partnership section of the report also includes some funding recommendations.

4.3 Insights from international scholarship and examples

The international scholarship makes it clear that education reform, including teacher education reform, is always shaped by historical, socio-economic, cultural, and geopolitical factors as well as by larger global and transnational trends (Akiba & LeTendre, 2017; Beauchamp, Clarke, Hulme, & Murray, 2015; Tatto & Menter, 2019). The research also makes it clear that teacher education reforms, like other education and social policies, are not simply received or passively implemented by those whose roles and responsibilities the reforms target (Honig, 2006). Rather reforms are actively translated, re-interpreted, mediated, and sometimes contested within and across particular institutions (Ball, 1997; Coburn, 2001; Menter, 2015, 2019). Taking these complexities into account, we draw from the literature some key ideas related to the sustainability of the 5-year integrated master's reform for primary and lower secondary teacher education.

One of the major findings of Darling-Hammond and colleagues' (2017) cross-national analysis of teacher quality/teacher education policies and practices in "high-performing" countries is that they work from a "systems level" approach. That is, all the successful countries that were studied have "comprehensive teaching policy systems" that "cultivate innovative practices but also incorporate them into the system as a whole, rather than leaving them as exceptions in the margins" (p. 2). Darling-Hammond and colleagues argue that it is "therefore critical to pay attention not just to single policies but also the ways in which policies interact and how they function as a policy system that together provides an enabling environment in which quality teaching and learning can occur and evolve to meet new demands" (p. 8). Similar findings regarding the importance of "systems level" or systemic approaches to education reform and practice in either primary/secondary education or in teacher education/professional learning are plentiful in the international lite-

ature (e.g., Fullan, Lieberman, Hargreaves, & Hopkins, 2010; Jensen, B., Sonnemann, J., Roberts-Hull, K., & Hunter, A., 2016; Johnson, 2019; OECD, 2019; World Bank, 2018).

Darling-Hammond and colleagues argue that it is “therefore critical to pay attention not just to single policies but also the ways in which policies interact and how they function as a policy system that together provides an enabling environment in which quality teaching and learning can occur and evolve to meet new demands” (p. 8).

Another useful concept in considering the sustainability of teacher education reform is the role of “outside” or “external” infrastructure. Infrastructure is the term generally used to refer to the basic physical and organisational structures and facilities necessary to operate a particular enterprise. Fullan (2000a and 200b) suggests that with primary and secondary school reform, it is critical that policy makers consider what kind of external infrastructure is needed to produce the desired results inside schools. He points to Bryk and colleagues’ (1998) identification of four key elements of external reform infrastructure that support successful implementation of reforms in schools: decentralisation, capacity building, external accountability, and stimulating innovation. Although these four elements come from research on primary and secondary school reform, we believe they are also useful in considering the external infrastructure that needs to be in place to support national teacher education reforms, like Norway’s 5-year integrated master’s programmes. We address all four of these either in the recommendations below or in this report’s sections on accountability, partnerships, and capacity building.

Finally, the international literature offers one study of the disappointing results of a major teacher education reform that is perhaps instructive here. Provocatively titled, *The Rise and Stall of Teacher Education Reform* (Fullan, Galuzzo, Morris &

Warson, 1998), the study focuses on the Holmes Group, which was a highly visible national consortium of nearly 100 research universities across the USA during the decade from 1985 to 1995. It is important to note that the contexts for education reform in the USA and Norway diverge in many ways, including historically. Most importantly - within the highly decentralised teacher education system in the USA, the Holmes Group was a voluntary organisation of research universities that offered teacher education, and not a national mandate like Norway’s master’s reform. Even given these differences, however, the denouement of the Holmes Group project has some relevance here, given that its goal was to make teacher education more central to the mission of universities and to improve the quality of teacher education through master’s level programmes connected “more closely to research on teaching and learning in partnership with schools” (p. 16).

The report’s conclusion about the Holmes Group reform was this: “[T]he decade between 1985 and 1995 [was] a series of false starts in reform of teacher education - [there were] promises that could not be maintained. Efforts that began with enthusiasm in the first half of that decade, faltered with discouragement and confusion in the early 1990s” (p. 15). The authors identify several major factors that contributed to the “stall” and ultimate downfall of the Holmes Group: many professional development schools (PDSs) did not feature joint decision making, and universities kept control of curriculum and decisions; resources for the project’s initiatives and for PDSs came from inadequate general revenue funds; there was difficulty establishing simultaneous top-down and bottom-up support to link the cultures of universities and schools; partnerships lacked broader institutional support and incentives for research, and thus research faculty were often not involved; lack of national networks and other forums for collaboration hindered development; the project lacked a comprehensive strategy for reform beyond partnerships; and, in some places, 5-year programmes led to declines in enrolment, prompting some institutions to return to under-

graduate-level programmes.

The literature suggests that in order to support people in taking up the responsibility to carry out and sustain a complex reform like the 5-year integrated master's programme for primary and lower secondary teacher education, Norway will need to take a systems-level perspective, providing adequate external infrastructure and funding, and building capacity.

This means explicitly attending to mechanisms that support collective responsibility by determining the technical, human, and social capital tools and resources needed over the long haul and providing these.

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4.4 Recommendations on sustainability

Building on the rationale, scholarly literature, and evidence, the panel makes the following recommendations regarding the sustainability of the 5-year integrated master's programmes.

Some of these are closely related to recommendations in other areas, particularly regarding partnerships, accountability, and building capacity.

- Place a national moratorium on primary and lower secondary teacher education reforms until the integrated master's programmes are firmly in place.
- Strengthen the external reform infrastructure to support the implementation of the master's reform.
 - Establish a permanent group with representatives from Udir, NOKUT, and Diku to provide national, systems-level coordination of teacher education oversight, accountability, and quality assurance.
 - Provide quality enhancement activities that support strong internal accountability at the level of each local TEI/school partnership, including continuation of the model of alternating regional and national seminars related to the PLS reforms.
 - Support leadership coaching for TEI deans/programme leaders focused on research capacity, internationalisation, building collaboration, and extending networks.
- Provide permanent mechanisms and funding for national coordination and leadership of the 5-year integrated master's programmes.
 - Designate a professional umbrella group to convene, lead, and coordinate regular regional and national meetings of all the constituencies, stakeholders, and professional organisations involved in teacher education.
 - Provide funding for meetings of this umbrella group and for regular regional and national meetings.
- Support ongoing research within and across the TEIs-school partnerships about the nature, quality, and impact of the new master's programmes.
 - Support and fund each TEI-school partnership's development of a programme of research related to the new master's programmes.
 - Establish and support a permanent regular forum for networking, collaboration, and dissemination of research and innovations across TEI-school partnerships.
 - Fund research across the new master's programmes that contributes to regional and national knowledge bases about teacher education in the new programmes and beyond.
- Provide additional funding for the regular operating needs of the new 5-year master's programmes, which involve more students, new collaborations, and new partnerships.
- Provide funding for rich school experiences in Year 4 and Year 5 of the master's programmes.
- Establish a micro-funding programme for TEI-school innovations and pilot projects that focus on sustainability and dissemination across partnerships.



5. Partnerships and School Experiences

The third set of recommendations has to do with partnerships between TEIs and the schools/municipalities where their student teachers work in classrooms. In addition to this set of recommendations addressed to the Ministry and NOKUT, later in this report, there is another section regarding partnerships and school experience that features recommendations to the TEIs themselves and their school partners about the nature, quality, and content of partnerships and

school experiences.¹⁴ What follows in this section are recommendations regarding the *structural aspects of partnerships and school experiences* and the support needed for these. Following the established format, the discussion has four parts: (1) Norway's goals related to partnerships in teacher education, (2) potential challenges; (3) insights and evidence from current scholarship; and (4) recommendations.

5.1 Norway's aspirations regarding partnerships and student teachers' school experiences

Over the last several decades, closer relationships and richer partnerships between universities, colleges and schools have been established in many countries (Engelien et al., 2015; Jakhelln et al., 2017; Murray, 2016). Although international teacher education reforms along these lines vary widely both conceptually and practically (Sachs, 2001; Whitty, 2008), many share the common idea that critical aspects of learning to teach occur in the crucible of practice in school-based settings and thus that universities, colleges, and schools should be partners in the teacher education enterprise with joint responsibility for the preparation and development of new school-based teachers.

New approaches to partnership and expanded ideas about student teachers' school experiences are among the defining and most ambitious features of Norway's new master's programmes.

New approaches to partnership and expanded ideas about student teachers' school experiences are among the defining and most ambitious features of Norway's new master's programmes. As *Teacher Education 2025* makes clear, a key part of Norway's national strategy for quality and cooperation in teacher education is to increase the "consciousness" of schools as "teacher educator" partners and to include all the "relevant stakeholders" in efforts to enhance the provision of teacher education (p. 6). In addition the 2025 report explicitly states that a goal of the master's reform is to ensure that "all students are given the opportunity at some point during their studies to practise in selected institutions, specially equipped for R&D-based ('clinical') practice training" (p. 13), along the lines of several "teacher education schools" that already exist in many places.

Norway's aspirations for the new master's programmes are consistent with the general international turn toward practice in teacher education, as noted. The 2025 report emphasises that the goal of the master's programmes is to educate "professional practitioners" who engage

14 We use the term "school experience" in this report to refer to the school- and classroom-related experiences that student teachers have as part of their preparation as teachers. This involves a wide variety of activities, including but not limited to: school or classroom observations, collaborations with school-based teachers and school leaders, working directly with pupils, short- and long-term curriculum and instructional planning and evaluation, interacting with parents and other community members, collecting and analysing data, reviewing classroom- or school-related artefacts such as videotapes or examples of pupils' work, and reflecting with others on problems of practice.

in continuous professional development within learning communities (p. 5). Along these lines, student teachers in the master's programmes are expected not only to be very well-prepared academically, but also to function as beginning professionals with the knowledge, skill, and

competence to participate in research-informed decisions in the classroom, collaborate with other professionals to pose problems of practice, collect/analyse data, and use these analyses to improve practice in a continuous way.

5.2 Potential challenges

The members of the Advisory Panel for Teacher Education strongly support Norway's aspirations. However this kind of approach is only possible when a teacher education system is built on the collaboration and shared responsibility of teacher educators at TEIs and at schools *and* when student teachers have rich learning opportunities in schools across duration of their preparation programmes.

fiscally effective in certain ways, the downside for teacher education is that silos develop wherein agencies do not share information, goals, tools, processes, and priorities. In addition, educators at universities and colleges and educators in schools often do not have regular opportunities for discussion about teacher education. This makes it difficult to develop quality assurance and other mechanisms at the Ministry level that support the goal of TEI-school collaboration and joint responsibility for teacher education.

5.2.1 Challenges for effective partnerships

Although collaboration and joint responsibility represent a potentially very powerful approach to teacher education, the panel identified several structural and systemic issues that may hinder the achievement of these goals. The first is that oversight responsibility for teacher education, on one hand, and oversight responsibility for the schools, on the other hand, is held by different agencies - or branches of agencies - with different funding streams, resources, and primary goals. Specifically, the Ministry of Education and Research, along with the Norwegian Directorate for Education and Training, is responsible for the quality and management of kindergartens, primary schools and secondary schools. Meanwhile the Ministry of Education and Research, along with NOKUT and Diku, is responsible for the quality and management of higher education. This kind of bifurcation is common in countries where the provision of primary and secondary education and the provision of university and college-based teacher education have grown up in substantially separate policy and practice spaces. Although bifurcation is managerially and

Although bifurcation is managerially and fiscally effective in certain ways, the downside for teacher education is that silos develop wherein agencies do not share information, goals, tools, processes, and priorities.

A second challenge is closely related. As is true in many countries, for many years, the major responsibility for teacher education in Norway has been located at TEIs. As reflected in "standard practicum agreements", the schools are expected to serve primarily as the venue at which student teachers complete the requisite number of school-based days mandated by the Ministry, with schools/municipalities paid by the TEIs for providing placements for student teachers. This transactional arrangement underscores the fact that even when universities, colleges, and schools are partners in name, it is usually the university or college that has both primary control over how student teachers' fieldwork experiences are arranged and primary responsibility for their quality and content. In contrast, since

the early 2000s, TEIs in Norway have entered and continuously developed “partnership agreements” between TEIs and school/municipalities that establish partnership schools (the Norwegian terms being *universitetsskoler* and *lærerutdanningskoler*). As noted above, variations of this model, which has great potential, were first developed by the University of Oslo, the University of Tromsø (now UiT The Arctic University of Norway), and the Norwegian University of Science and Technology (NTNU).¹⁵ By 2020 all TEIs have established, or are in the process of establishing, partnership agreements with municipalities and selected schools. The TEIs’ organisation of the school-based days at partnership schools varies. For instance, at the University of Agder student teachers are at partnership schools in Years 4 and 5. At UiT The Arctic University of Norway, student teachers spend a third of their school-based days at partnership schools. However, many PL student teachers currently spend a rather short proportion of their school experience at partnership schools, and the lion’s share of their school experience takes place at schools with standard practicum agreements.

The third potential challenge to collaboration and joint responsibility for teacher education is the dichotomous conception of theory/research, on one hand, and practice, on the other, that may underlie Norwegian teacher education at the systems level. Even though Norway’s reform documents explicitly recognise the problem with this dichotomy, in actuality and especially given the silos that have developed in the oversight of TEIs and schools, the operating assumption seems to be that research and school experience inhabit two largely separate worlds with research living primarily in the theoretical world of universities and colleges and practice living mostly in the practical world of schools. Although invisible, this division presents a serious challenge to the success of the master’s reform because it means

that solutions must bridge two worlds rather than work from a reconceptualised notion of the relationships of research and practice.

5.2.2 Challenges to rich school experiences for student teachers

A major structural challenge to the growth and development of professional school-based teachers with the capacity to make research- and practice-informed decisions and to participate in professional communities is related to the notion of “school-based days” and their distribution across the new 5-year master’s programmes. Of the 14 TEIs that offer the new master’s programmes for primary and lower secondary teacher education, nine have arranged their calendars so that there are no school-based days in Year 5; the remaining five programmes require 5 to 15 school-based days in Year 5.¹⁶

There are two problems here. The first is the notion of “school-based days” as discrete points in time during which student teachers are required to be physically present in schools and classrooms. The second is the distribution of school-based days with very limited time for school experiences during the last two years of teacher preparation, including virtually no time in the fifth and final year. When the school-based days are arranged in ways that do not provide sustained and coherent school experiences during the final year of the programme, student teachers do not have the opportunity to participate alongside their more experienced mentors in the critical professional tasks that define the work of teaching, including: long-term planning, curriculum development, making accommodations for those with special learning needs, working with colleagues and parents, and conducting and learning from both formative and summative assessments. Further, with little or no time spent

15 For more detailed information about this model see Faglig Råd for Lærerutdanning. “Partnerskap i lærerutdanningene – et kunnskapsgrunnlag”. Delrapport 1. 2020.

16 This is based on information provided on TEI websites, as of November 2019.

in schools during the last year of the programme, which is the peak period of preparation when student teachers are most mature as professionals, student teachers cannot fully develop an inquiry or practitioner stance on teaching, learning and schooling (Cochran-Smith & Lytle, 2009) and cannot engage with their colleagues in practitioner research. Practitioner research requires more than knowledge of disciplinary content, didactics, and research methods. It also requires familiarity with the culture of a school, knowledge of the teachers and pupils who are part of that school, awareness of the needs and assets of the municipality/community in which the school is located, understanding of local history and persistent issues, and knowledge of the problems of practice that are important to the teachers,

leaders, pupils, and families who are part of the school. These understandings require prolonged participation in schools rather than single or two-day periods spread out over time.

Further, with little or no time spent in schools during the last year of the programme, which is the peak period of preparation when student teachers are most mature as professionals, student teachers cannot fully develop an inquiry or practitioner stance on teaching, learning and schooling and cannot engage with their colleagues in practitioner research.

5.3 Insights from international scholarship and examples

Internationally, how and where teacher should learn to teach is a contested question (Tatto & Menter, 2019). With the highly visible exceptions of the USA and England, in most developed countries, there is general consensus that effective teacher education depends on rigorous academic preparation in universities (Furlong, 2011; Moon, 2016; OECD, 2019) coupled with powerful learning about professional practice in schools (Darling-Hammond et al., 2017; Hagger & McIntyre, 2006). For this to happen in a way that does not unintentionally buttress the idea that research/theory and practice are dichotomous, there must be strong partnerships and close relationships between TEIs and schools as well as carefully designed and supervised experiences in schools (Toom & Husu, 2019).

5.3.1 Partnerships

The international literature is clear that partnerships between universities and schools are central to the success of almost all education reforms, even though establishing true partnerships is very difficult work (Burns, Jacobs, Baker & Donahue,

2016; Johnson, 1997). More than 25 years ago, famed scholar and leader of educational renewal, John Goodlad (1993) pointed out that “the necessary joining of K-12 and university cultures brings with it virtually every problem documented in the literature of educational change” (p. 24).

Since that time there have been multiple syntheses of the key factors that make TEI-school partnerships effective. The conclusions of these syntheses are remarkably consistent about the structural factors that are most important. For example, in a report sponsored by the Australian Institute for Teaching and School Leadership, Kruger, Davies, Eckersley, Newell and Cherednichenko (2009) analysed 35 university-school partnerships, concluding that the *structural factors* that characterised successful partnerships were: the participation of school/education system authorities, attention to the pressure of school-based teachers’ workloads, and the designation of at least one dedicated school staff member responsible for maintaining partnership activity. Kruger and colleagues concluded:

«The widespread adoption of university-school partnerships cannot be left to individual initiative. No finding is clearer in this study than the need for active contributions by school systems and governments. Encouraging policy will be one contribution but, alone, policy will be insufficient ... Encouragement will require targeted funding and national coordination and accountability» (p. 12).

Along related lines, Burns, Jacobs, Baker and Donahue (2016) analysed the “core ingredients” of effective partnerships based on three syntheses of partnership research in the USA: the National Association for Professional Development Schools’ (NAPDS) synthesis of 30 years of PDS research (NAPDS, 2008); the National Council for the Accreditation of Teacher Education’s (NCATE) Blue Ribbon Panel Report on research related to clinical teacher preparation and schools (NCATE, 2010); and, the National Education Association’s report on redefining teacher education through residency partnerships (Coffman, Patterson, Raabe, & Eubanks, 2014). Burns and colleagues identified seven core ingredients that cut across all these syntheses, including three ingredients that have to do with structures and systems-designated partnership sites with articulated agreements, shared governance with dedicated resources to support sustainability and renewal, and active engagement in the school and local communities.

Finally one of six major recommendations of the recent OECD (2019) report on improving teacher education systems is the adoption of “whole-of-system” perspectives, which the report asserts help stakeholders navigate the tensions that inevitably arise in partnerships. The report suggests that partnership collaborations exist along a continuum of depth of connection from little or no connection to basic, then collaborative, then continuously improving partnerships, and finally coherent partnerships wherein partners jointly design, implement, assess, and improve teacher education (Toon & Jenson, 2017). The report asserts that “systems require deliberate strategies to build strong partnerships” (p. 142). Three of

OECD’s four key strategies in establishing systems perspectives are structural: the creation of mechanisms, such as accountability/accreditation processes, that encourage and expect true partnerships; the provision of sustainable resources, including dedicated time for all participants and continuous (not short-term) funding; and, the development of transparent processes across the system that foster responsibility, agency, and trust (p. 144).

In summary, the international literature suggests three core structural-level factors that support partnerships and are relevant to Norway’s master’s reform: (1) system-level participation and support in partnerships, not only between universities, colleges and schools, but also national coordination and accountability for joint responsibility and active engagement in schools; (2) long-term, sustainable, and adequate roles, resources, tools, and funding that account for the work loads of school-based teachers/teacher educators and include dedicated school staff responsible for partnerships and school experience; and, (3) shared governance with explicit processes and resources to support reciprocity, agency, and shared decision making.

In terms of international examples, it is worth noting that there are a number of individual local programmes in a variety of countries where teacher education occurs in the context of close, well-supported, and coherent partnerships between universities and schools/communities. These individual programmes have democratised teacher education in some ways with partners functioning as co-teacher educators, knowledge sources from both universities and schools/communities equally valued, and partners taking joint responsibility for candidates learning to teach (e.g. Burnett & Lampert, 2016; Kretchmar and Zeichner, 2016; McIntyre, 1990; Zygmunt & Clark, 2015). However, it is also important to know that these individual programmes exist in local pockets of reform and innovation and have been developed and sustained primarily through individuals’ good will, commitment, and

initiative. In contrast, country-level, system-wide examples of teacher education supported by genuine partnerships of universities and schools and focused on inquiry-rich school experiences for all student teachers are much harder to find. Finland's system, which features university teacher training schools that play a central role in teacher education, may come closest to a country-wide example. The faculty of Finland's teacher training schools work closely with university teacher education institutes and faculties to design and develop practice-based/research-based school experiences (Toom & Husu, 2019). Another emerging country-level example involves new accountability requirements and professional vision for teacher preparation in Wales. All participants in teacher education - including teacher educators who have heretofore been relatively unproductive as researchers - are now expected to participate in a culture of inquiry that provides rich integrative learning opportunities that support student teachers' practical and intellectual learning (Furlong, 2016; Welsh Government Education Directorate, 2018). In addition, although it remains to be seen whether this can be accomplished, universities and their school partners in Wales are now jointly accountable for initial teacher education, and new government resources have been ear-marked to support school staff as they take up new roles and responsibilities as co-teacher educators (Cochran-Smith, 2020).

5.3.2 School Experiences

Across many nations, surveys of beginning teachers have consistently shown that they perceive student teaching and other fieldwork experiences as the most important aspect of their preparation (Australian Department of Education and Training, 2015; Levine 2006; National Council for Teacher Quality, 2011). Along the same lines, in many countries, policymakers and practitioners alike have increasingly touted school experiences as a key component - even "the most important" component of - preservice teacher preparation

(e.g., Ahonen et al., 2015; American Association of Colleges for Teacher Education [AACTE], 2010; Darling-Hammond, 2006; Korthagen, 2010; Leijen & Pedaste, 2018; National Council for Accreditation of Teacher Education [NCATE], 2010; Saariaho, Pyhältö, Toom, Pietarinen & Soini, 2016). Also over many years, experienced school-based teachers, including those in Norway, have been concerned that new student teachers do not have enough experience "learning to teach" during the teacher education period (Conway & Munthe, 2015; Smeby & Sutphen, 2014; Ulevik, Helleme & Smith, 2018). The concern that teachers are not adequately prepared has been a general concern in Norway (Munthe & Rogne, 2016), and this concern was also expressed by the school-based participants during our regional and national meetings with TEIs and their partners. It seems fair to conclude that more attention in teacher education programmes needs to be given to practice.

However, and *not* surprisingly, the literature makes it clear that simply having more time in schools is not necessarily better for preparing teachers.

However, and *not* surprisingly, the literature makes it clear that simply having more time in schools is not necessarily better for preparing teachers (Burn & Mutton, 2015; Ronfeldt & Reininger, 2012). Rather it is the nature and quality of the experiences student teachers have in schools - including how practice periods are conceptualised, designed, and organised - that is most important, and it is these features that have the most influence on teachers' preparedness for teaching and on their performance in schools as new teachers (Boyd, Grossman, Lankford, Loeb & Wyckoff, 2009; Hagger & McIntyre, 2006; Kruger, Davies, Eckersley, Newell & Cherednichenko, 2009; 2006; Toom & Husu, 2019).

As we noted in a previous section of this report, growing focus on school experience is part of a

“practice turn” in teacher education. The practice turn has occurred not only around the world, but also across disciplines. Australian teacher education scholar, Jo-Anne Reid (2011) suggests that new attention to the *idea* of practice in contemporary professional theory provides an opportunity to “reconceptualise professional practice and professional experience outside of the now dominant ‘days in schools’ model that has become the major way in which we provide pre-service (student) teachers with the opportunity to actually study the act of teaching and the actions that are involved in the practice of their profession” (p. 293). Reid argues for a different approach, which is consistent with international scholarship at the forefront of the practice movement - figuring out ways to give student teachers the opportunity to engage in *and* study teaching practice rather than simply requiring them to spend a certain number of hours or days in schools.

Darling-Hammond and colleagues’ (2017) cross-national analysis of how seven jurisdictions in five “high-performing” countries boost teacher quality also sheds some light in this area. One of the major findings was that all the jurisdictions that were studied concentrated on preparing school-based teachers as researchers who regularly engaged in teacher research, action research, and/or other forms of inquiry related to practice as they spent more and more time

in professional settings over the course of their programmes. To do this, teacher education programmes had an “increasingly intense focus on extended *clinical training* for teacher candidates” (p. 14), which treated teaching as a “research-informed and research-engaged” profession (p. 15). We know of no exemplary or widely-lauded teacher education programmes internationally in which candidates spend little to no time working in their sites of practice during the final year of preparation.

Finally, it is also worth noting that other areas of professional education in addition to teaching often involve increasing levels of practice-based experiences across programme years, culminating in professional candidates taking on major responsibilities and capstone experiences in the final year of preparation (Grossman, et al. 2009; Little, 2014). Along similar lines, auditing reports in Norway recommend that placements should be of a sufficient duration in order for students to obtain necessary training and carry out independent work. Furthermore, short placements that last one day or a week are not considered effective for providing sufficient learning outcomes due to the amount of resources necessary for organising them (Helseth & Fetscher 2019).

5.4 Recommendations on partnerships and school experiences

Building on the rationale, the literature, and the evidence discussed above, the Advisory Panel for Teacher Education makes the following recommendations to the Ministry and NOKUT regarding *structural and systemic aspects of partnerships and school experiences*. Some of

these recommendations are closely related to recommendations in other areas. There are also additional recommendations about partnerships and school experiences addressed to the TEIs and their schools/municipality partners in a later section of this report.

Partnerships

- Examine the current relationships of the oversight agencies involved in teacher education in Norway.
 - Develop a new national partnership model that includes coordination across Udir, NOKUT and Diku on all teacher education issues.
 - Avoid the development of teacher education initiatives that are not informed by research and/or not connected to already-existing initiatives.
- Evaluate current partnership agreements of the TEIs and their school/municipality partners.
 - Establish agreement about broad general principles to guide partnerships between TEIs and their school/municipality partners.
 - Avoid both one-sided approaches and top-down, unfunded mandates.
 - Aim for all student teachers to spend a substantial portion of their school experience in schools with coherent and genuine partnerships with TEIs.
- Provide the resources, mechanisms, and tools for TEIs and schools to function as genuine partners with full agency and joint responsibility for teacher education.
 - Provide resources and tools for local partnerships to design, study, and revise teacher education in ongoing cycles of inquiry and improvement.

- Provide funding *directly to the school/municipality partners* to support dedicated staff involved in teacher education.

- Hold TEI-school partnerships jointly accountable for the quality of PLS teacher education.

School Experiences

- Move away from the model of “school-based days” and toward a rich model of quality professional school experience for student teachers.
- Require that TEIs and their school partners jointly foster the conditions wherein student teachers in Years 4 and 5 engage in inquiry-rich and coherent “school experiences” that are long and connected enough for student teachers to engage in the central activities of teaching.
- Change the framework regulations so that TEI-school partnerships are required to devise ways for student teachers to have rich fully-participatory periods of professional school experience in Years 4 and 5.
- Provide adequate funding for the experiences in Year 4 and Year 5.



6. Funding

The final set of recommendations to the Ministry of Education and Research and NOKUT relates to the costs of the 5-year integrated programme reform for PLS teacher education, and the need to support the implementation and sustainability of the reform with the necessary funds. The discus-

sion below follows the format used throughout this report: (1) Norway's aspirations for the new master's programme, (2) potential challenges related to funding; (3) insights and evidence from current scholarship; and (4) recommendations.

6.1 Norway's aspirations for the new master's programme in teacher education

Norway's teacher education reform calls for greater professionalisation, closer relationships with schools, and inquiry-rich school-based experiences for student teachers. In addition, the reform aims to establish stronger links between theory and practice and to make research central throughout the programme. To achieve these aspirations, the reform introduces 5-year integrated programmes with the ambitious requirement that master's theses are practice-oriented. This approach treats research and practice as inherently interrelated rather than dichotomous. Norway's

reform also reflects high expectations regarding research rigour and educators' research capacity. In short, Norway's aspirations and its approach to teacher education reform stand out in the international context, reflecting a strong commitment to academic excellence, close partnerships with schools, and professionalisation of the teaching force. This is being accomplished through sustained, innovative, and high-priority efforts to build research capacity for Norway's school-based teachers and leaders, for teacher educators at TEIs, and for PLS teacher education students.

6.2 Potential challenges

As we have stated throughout our recommendations to the Ministry of Education and Research and to NOKUT, the members of the panel strongly support Norway's ambitious goals for PLS teacher education. However, our work over the last three years, including our discussions with leaders and staff at TEIs and schools and with other relevant stakeholders, has suggested that underfunding is a potentially serious challenge to the success of the reform. We are concerned that without increased funding for general operations and for special projects and initiatives, the TEIs and their school partners will not be able to share responsibility for achieving the high aspirations laid out in the reform. Below we first discuss challenges regarding funding for ongoing operating costs, and then we briefly synthesise the challenges that we believe also require additional funding.

We have identified three main funding challenges regarding general operations that make it difficult for the TEIs to meet the high expectations that the Ministry and the public have for the new PLS master's programmes. The first challenge relates to the requirements regarding academic staff. An important consequence of becoming 5-year integrated master's programmes is that the programmes now face significantly stricter requirements for academic staff qualifications. The requirements for a master's programme in Norway indicate that at least 50 percent of the teaching staff must have PhD qualifications (*førstestillingskompetanse*) and 10 percent must be at professor level. Further, during the accreditation process of the new programmes, NOKUT decided that each programme must meet the PhD staffing requirement for *each master's*

subject the institution offers. In other words, an institution that offers master's subjects in math, Norwegian, English, and social science must meet the PhD staffing requirements for each of these subjects. Generally speaking, the panel agrees that rigorous requirements are necessary to improve Norwegian teacher education. However, in May 2018, the panel recommended that NOKUT re-interpret their regulations so that the professor requirements apply to the master's programme *as a whole* rather than to each master's subject the TEI offers (see Appendix 3). Our recommendations in this section build on our previous recommendations.

We recognise that the new staffing requirements come with a significant increase in cost for the institutions. Not only do teaching staff with PhD qualifications and professor rank require higher salaries, they also require more time allocated to producing research, which means that professors and associate professors have fewer teaching hours per year. The combination of increasing teaching staffs' salaries while employing a larger number of academic staff, who teach less, significantly raises the operating cost for the TEIs.

Another challenge to the success of the PLS reform is the way school-based experience is financed and requirements regarding the number of practice days for PLS teacher education students. PLS students are currently required to spend at least 115 practice days in schools with mentoring from qualified teachers. However, students do not receive separate credits for the school practice periods. In addition, each institution has to pay the schools in order to place students there. As we see it, the current arrangements place an undue financial burden on the TEIs. They lose potential funding because school-based experiences are not attached to credits, and on top of that, they have to pay to place students in the schools. Indeed, as far as we understand it, this is a very different arrangement from, for example, that of Norway's nursing education programmes. Nursing students receive credits for their periods of clinical experience, thus the institutions

receive income based on these credits. In addition, nursing programmes do not pay for student placements.

The final funding challenge relating to TEI's general operating costs is posed by an increase in student numbers. Our understanding is that the TEIs will enrol at least the same number of students in the 5-year master's programmes as they did in the 4-year bachelor programmes. In some cases, they may enrol a greater number of students, given the shortage of qualified teachers in Norway. Assuming that about the same number of students complete their degrees in the new 5-year master's programmes as in the previous 4-year programmes, the TEI programmes will experience a 25 percent increase in the total number of students. Although we assume that the government will increase the base funding to TEIs to cover these additional students, it is important to note that more students require more teaching space, additional facilities, and other resources. In addition, the change to more research-intensive master's programmes brings a significant additional demand on staff in terms of advising students completing the third year R&D assignment and the master's thesis. More research-intensive experiences significantly raises the costs of providing the programmes.

In addition to the three funding challenges above, we believe the way PLS programmes are currently categorised and funded is a challenge. As we understand it, the central mechanism for financing university and college programmes is through Norway's higher education category system. As we reviewed the various categories, we noted that non-vocational master's programmes in the social sciences and humanities were included in the same category as the PLS programmes. However, considering the very different cost structures of such programmes, this seems problematic to us. We also noted that teacher education programmes for years 8-13 ("lector programmes") are placed in the same category as the PLS programmes. This also seems somewhat problematic, considering that

students in the 8-13 programmes spend most of their time taking subjects offered by other study programmes (such as biology or geography), which means that multiple institutional entities share the costs of these students. In contrast, the full cost of PLS programmes tends to be borne by the education faculty. Considering the different cost structures across programmes, we believe the way the PLS programmes have been categorised poses a serious challenge to the success of the new 5-year integrated master's programmes.

In addition to problems related to general funding of the new PLS programmes, elsewhere in this

report, we have also identified other challenges that require additional funding. Without adequate funding, we are concerned that PLS students will receive too little and too low quality mentoring and supervision during their school experiences, R&D assignment, and master's thesis. Along the same lines, we believe that without adequate funding, the collaboration between TEIs and partner schools will suffer. Unless the programmes are funded at appropriate levels, it is unlikely the reform will achieve the ambitious goal of research-based and practice-oriented PLS teacher education as laid out in the *Teacher Education 2025* strategy.

6.3 Insights from international scholarship and examples

The funding challenges we identify above are serious, as the international research suggests. Again Darling-Hammond and colleagues' (2017) cross-national study of teacher quality/teacher education policies and practices in high-performing countries is helpful here. We have already pointed out that this study revealed that all the top-performing countries took a "systems level" approach, which applies to issues related to funding. As noted above, the required reforms of PLS teacher education do not operate within a vacuum, rather they operate within a regulatory framework. This means that making PLS teacher education into 5-year integrated programmes requires many other changes that increase operating costs. These challenges cannot be addressed simply by adding funding for the 25 percent more students who are the result of the switch from 4 to 5-year programmes. Rather, as we noted above, these programme changes require changes to the overall system, including hiring more associate professors and professors as well as increasing the capacity of existing staff so that the programmes can provide supervision for students writing master's theses. The reform also requires arrangements and payments for more students with more days in schools. It is worth repeating here in this section on funding the powerful argument Darling-Hammond and

colleagues make about policy systems: "It is critical to pay attention not just to single policies but also the ways in which policies interact and how they function as a policy *system* that together provides an enabling environment in which quality teaching and learning can occur and evolve to meet new demands" (p. 8). This perspective applies to funding issues as well as to more general questions related to accountability, sustainability, and partnerships.

The failure to fully fund education reforms is not new, as the international literature indicates. As Levin (1997) writes about education reform in the school sector, "governments have largely decoupled reform from funding, and have had some success in convincing people that the tackling of the problems of education does not require large infusions of new cash" (p. 255). However Levin also argues that the lack of financing is a serious risk to education reforms. Although simply throwing money at problems related to teacher quality and teacher education does not solve those problems, the literature suggests that there are very few reforms that do not require additional funding to succeed. Along these lines, as we have shown, the additional programme demands that the PLS teacher education reform requires are quite costly.

Over time, many researchers have shown that lack of funding is a serious threat to successful education reforms. For example Bentley (2010) argues that when governments fail to fund education reforms, the schools, higher education institutions, and others responsible for the implementation of the reforms must try to innovate on multiple fronts in order for the reform to succeed. In other words, innovation becomes a means for overcoming funding shortages rather than a matter of quality enhancement. As we have made clear throughout this report, the members of the panel are enthusiastic about the new 5-year integrated teacher education programmes, and we encourage the programmes to innovate on many fronts. However, we believe innovation should be a means to achieving higher levels of quality in teacher education rather than a response to funding shortages.

Finally, Jaquit and McLaughlin's (2010) and Barber's (2010) discussions of the importance of funding mechanisms and sustainability are clearly relevant to our concerns here. Jaquit and McLaughlin (2010) found that "The education reform arena is replete with examples of initiatives nurtured in a special project setting but unsustainable once special funding and attention end – pilot projects that led to nowhere" (p. 88). Similarly, Barber (2010) maintains that having a long-term funding system in place is central to the success of strategic change:

«Investing for the long term is an argument for ensuring the funding is in place not just for the current year but also for the strategic period ahead. There is no doubt that an investment perspective is critical to enabling long-term strategic change and funding systems that depend on sources of income liable to wild fluctuations (e.g., property taxes) are likely to be less successful. Similarly, the process for the allocation of funding is also critical – transparency and steadiness help» (p. 269).

Because reforms related to teacher quality and teacher education exist within larger systems, the lack of adequate funding is among the most critical risk factors when it comes to determining whether or not the new integrated 5-year teacher education programmes for PLS will succeed.

In short, the international research emphasises that even across researchers and policy makers with different political viewpoints, there is general agreement that although money alone does not guarantee the success of education reforms, most reforms do not succeed without adequate funding. Because reforms related to teacher quality and teacher education exist within larger systems, the lack of adequate funding is among the most critical risk factors when it comes to determining whether or not the new integrated 5-year teacher education programmes for PLS will succeed.

6.4 Recommendations on funding

The panel recognises that the government has increased funding for the new PLS teacher education programmes with up to 250 million NOK. However, we understand that this increase in funding is funnelled through specific programmes and primarily covers one-time expenses. We are concerned that only a few institutions and programmes will benefit from these funds, and that funds will only be available for short- to medium-term projects

and programmes. Although many of these are excellent ways to develop innovations and prompt new research, they do not address our underlying concerns. Based on our analyses, the panel has concluded that the current operating budgets for the new teacher education programmes are not adequate to achieve the admirable goals underlying the PLS teacher education reform as elaborated in the *Teacher Education 2025* strategy.

To ensure that the PLS reform is successfully implemented and that the new master’s programmes succeed, we propose the following recommendations regarding funding.

- Move the new 5-year master’s programmes in PLS teacher education from category D to category C in Norway’s higher education funding system in order to fund general operations.

- Fund specific initiatives related to research capacity building, programme integration, partnerships and school experience, and the master’s thesis, as stated throughout the report and summarised in Table 10 below. Of particular importance is the recommendation that the schools receive direct funding for dedicated school-based leaders and teachers responsible for partnership activities, working with student teachers, and participating in thesis and R&D supervision.

Theme/ focus area	Recommendation	Chapter/ page number
Accountability and Partnerships and school experience	Provide resources and ongoing <i>funding directly to the school/municipality partners</i> to support dedicated staff at every school as well as meeting resources and time for school-based teacher educators to engage in the ongoing joint development and oversight of school and other experiences. This is necessary to establish joint accountability for teacher education that is shared by TEIs and their school/municipality partners.	3/78 5/94
Sustainability	Provide targeted resources for the convening of deans and programme leaders from across TEIs and for leadership coaching aimed at bringing the institutions together around the master’s reforms. Coaching could focus on building research capacity, internationalisation, building collaboration across newly merged organisations, and extending networks.	4/85
Sustainability	Designate a professional umbrella group to convene, lead, and coordinate regular regional and national meetings of all the constituencies, stakeholders, and professional organisations involved in teacher education (e.g. TEI programmes, school/municipality partners, teacher unions, Universities Norway, student teacher union, ProTED, and other national forums) to support knowledge-building across institutions and avoid fragmentation of efforts. Provide funding for meetings of this umbrella group and for regular regional and national meetings.	4/85
Sustainability	Provide resources, capacity building support, and funding at the local level for each TEI-school/municipality group to develop a programme of research about student teachers’ and teacher educators’ learning, experiences, and inquiries, including the MA thesis, in the new programmes.	4/85
Sustainability	Provide resources, structures, and funding at the regional and national levels for research across the new master’s programmes that contributes to regional and national knowledge bases about teacher education in the 5-year integrated master’s programmes.	4/85
Sustainability	Establish a micro-funding programme for innovations, good ideas, pilot projects, and new strategies. Require that applications for funding be submitted by schools and TEIs in partnership and that applications designate concrete tools and mechanisms for enhancing sustainability and dissemination across TEI-school partnerships.	4/85
Research capacity building	Provide financial and logistical support for the development of sustainable research collaborations between educators in schools and in TEIs.	7/107

Table 10. Additional recommendations related to funding

Part 3

Recommendations to TEIs and Schools

7. Building Research Capacity

In this section we make recommendations to teacher education institutions and their school and municipality partners about building research capacity for teacher education faculty and school-based teachers. The four recommendations below suggest a coherent, strategic approach to capacity building through investment in: professional development and qualifications of staff; support for research collaboration across TEIs, schools, and municipalities; strengthening of research infrastructure; and creating the organi-

sational cultures and conditions, including time allocation, incentives and recognition, that are needed for engagement in high quality research in both TEIs and schools. This section follows the same format as the others with four interrelated parts: (1) Norway's aspirations regarding programme design and integration, (2) potential challenges; (3) insights from the international research literature and from local examples; and (4) recommendations.

7.1 Norway's aspirations for building research capacity

Norway's PLS teacher education reform has valuable and ambitious aspirations for building research capacity. Along these lines, *Teacher Education 2025* calls for: teacher educators as "active researchers" (p.18), who hold "research qualifications" (p. 17); recruitment of "talented researchers" from Norway and internationally (p. 20); "R&D activities that involve schools" (p. 19); research into the teaching practices of the teacher education programmes" (p. 19); "R&D based professional development" (p. 15) at pre- and in-service levels; "cross-disciplinary cooperation" (p. 17), which in turn would enable "teaching based on high-quality research" (p. 7); "research-based evaluations" of programmes (p. 11); "research-based curricula" (p. 12) and "teaching materials" (p. 11); "the involvement

of students in research projects" (p. 12); and, master's theses that are developed into "insightful research papers" (p. 19). The panel members strongly support Norway's commitment to supporting teacher education provision that is informed by research in its design and is also inquiry-rich in its processes. Further, we applaud the emphasis placed on the role of research and inquiry in sustaining agentic, learner-oriented professional practice in schools.

The panel members strongly support Norway's commitment to supporting teacher education provision that is informed by research in its design and is also inquiry-rich in its processes.

7.2 Potential challenges to building research capacity

Despite remarkable growth in research expertise across the sector in the last decade (as noted, for example, in the Research Council of Norway

expert report, 2018), Norway's TEIs and schools are faced with reduced or unevenly distributed research expertise and supervisory capability,

particularly in the areas of education, subject-didactics, and pedagogy. Examples of current good practice include several institutions' collaborations with university schools, the large-scale database for research in teacher education hosted by the programme for teacher education at NTNU, the Norwegian National Research School for Teacher Education (NAFOL), and the successful nexus between research activities and teacher education programmes at UiO (Research Council of Norway, 2018). Nonetheless, the Research Council report also identifies the need to strengthen the links between research and teacher education as an important area for further development. Further, as indicated by participants in the meetings convened by the APT and NOKUT, often TEIs do not have enough PhD-level staff to conduct and supervise research across all of the programmes offered in the different campuses. Even on campuses where the number of PhD-level staff is higher, the context of tight staff composition regulation is likely to prompt compliance rather than deeper, sustainable capacity building.

In addition, many reports and commentators have pointed to what they see as low research productivity across the PLS teacher education sector, in particular in terms of the low number of international publications produced (Finne et al., 2017). Perceived low quantity is compounded by a perception of low quality of the research. For example, Bungdgaard and Lund (2017) noted substantial variation across institutions in publications in peer-reviewed international journals. Moreover, a national review of research funding found a mixed picture in the quality of research groups working on subjects and didactics (Research Council of Norway, 2018). Also, certain types of research, such as interventional studies and experimental studies, are emphasised in *Teacher Education 2025* and may receive more policy attention. A potential challenge here is that there may be insufficient recognition of the fact that quality research that has sustainable value for practice can be produced through many different research approaches. This lack of recognition may lead to uneven investment in the develop-

ment of a wide range of methodological and research design skills.

A second potential challenge is that some documents and current practices seem to reflect a somewhat fragmented notion of the relationship between research and practice along with lack of sustainable models of research collaboration between schools and TEIs. The *Teacher Education 2025* strategy mentions "the gap between campus and the world of work" as a key obstacle (Ministry of Education and Research, 2017, p.11). This idea was also present in some of the panel's discussions with stakeholders at national and regional meetings. *Teacher Education 2025* also references the potential tensions among different traditions of education and research and among different disciplines or university subjects.

An important question here is how educators from schools and TEIs may cross organisational and paradigmatic boundaries in order to develop shared understandings, thus creating hybrid research cultures that support meaningful, practically-relevant research collaborations.

An important question here is how educators from schools and TEIs may cross organisational and paradigmatic boundaries in order to develop shared understandings, thus creating hybrid research cultures that support meaningful, practically-relevant research collaborations. Factors that hinder engagement of this kind may include the lack of time allocated to developing collaborative relationships around research, conducting research, and reading and using insights from research to develop learning and teaching resources. For example, participants in the first regional meeting in Bergen emphasised the scarcity of joint planning and discussion time for school-based and university-based teacher educators. Along related lines, many participants in our regional and national meetings noted that some partnerships lack sustainable models of

research collaboration based on parity of recognition and balance of contribution between TEIs and school partners. (These issues are discussed in more detail in the two sections of this report related to partnerships.)

A third challenge to building research capacity is the need to update and widen the currently uneven use of infrastructure to support and share research. Some institutions have had more opportunity and support than others for the development of: access to research facilitation and specialist advice; ensuring access to secondary data; full technical support for research; advanced courses in methods and design; ethical protocols fine-tuned to student teacher research and to collaborative and practitioner research in educational settings; quality assurance mechanisms for publications; and, systematic reviewing and research briefing support for schools and municipalities. In particular, in many institutions the systems and mechanisms for effectively archiving and disseminating the master's theses are under-developed.

As a result of the conditions noted above, although there are emergent research cultures in some TEIs and schools, they exist in a context

wherein there has not yet been sufficient value placed on research as part of the larger organisational vision and ethos. For example, in some places, there are limited understandings and appreciation of research among staff and/or management, as reflected in workloads. In particular there is limited motivation, knowledge, and skill to engage in research or to use existing research effectively for the benefit of student teachers' and pupils' learning. In schools, these conditions can hinder the continued integration of research and practice once student teachers complete preparation. They can also create challenges for the supervision of student teachers and the mentoring of new teachers, both of which are necessary to achieve a new model of teacher professionalism. Finally school-based teachers rarely have dedicated time to engage in practitioner research or other forms of practice-oriented inquiry. For this to happen, inquiry must be validated and recognised as part of educators' work, and there must be more learning opportunities that support student teachers and teacher educators in doing research.

7.3 Insights from international scholarship and local examples

Research capacity building is multi-layered. It includes individuals in all types of relevant institutional settings, but it also includes organisational conditions and cultures as well as local and national policy and infrastructure. The emphasis in the new 5-year integrated PLS programmes on recruiting "talented researchers" and "enhancing research qualifications among the staff" in teacher education institutions can help to stimulate larger-scale research development. But in order for this development to be sustainable, there also needs to be provision for staff development, felicitous research cultures, formative internal evaluation, and infrastructure, including funding and logistics.

Importantly, building research capacity must involve school-based teachers and whole school efforts, not simply universities and colleges and not simply school administrators or management.

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The international scholarship offers several insights along these lines. For example, the evaluation of a large-scale publicly-funded research capacity building programme for initial teacher

education in Wales conducted by Oancea and colleagues (2017) identified wide and persistent barriers and challenges, some of which are also identifiable in the Norwegian context. These included: contextual challenges (e.g., the fast pace of systemic and policy change in the country); institutional challenges (e.g., conflicting pressures on school and university-based teacher educators, perceptions of research and teaching as disjointed functions of higher education institutions, employment conditions, lack of support); individual-level challenges (e.g., time, workload, access to support, professional identity); and field-level challenges (e.g., the relatively small size of the teacher education research community, fragmentation, patchy infrastructure, and uneven spread of advanced research skills). Further, Pollard and Oancea (2010) concluded on the basis of three years of national stakeholder discussions, that research expertise in schools and other educational organisations in the UK was often highly concentrated in key individuals and not fully institutionalised. They recommended a combination of training and support for developing educators' expertise and resilience in engaging with/in research.

These experiences suggest that research capacity building in teacher education is not simply about quantity, as in number of qualified staff or volume of publications, but is also and perhaps even more importantly about quality. This includes issues such as quality of engagement with research in programme design, curriculum, and pedagogy as well as strength of the partnerships between institutions and disciplines. Most importantly, this also includes the quality of student teachers' learning processes that occur through their engagement in research assignments, projects, and research groups.

In addition, there are strong arguments in the literature for valuing and recognising the distinctive contributions that different types of research can make in education (BERA/RSA, 2014, SFRE 2010, Pollard, 2008). Both solution-oriented research (i.e., research explicitly designed to

meet challenges and provide solutions) and non-instrumental research (i.e., research that is reflective, conceptual, or critical) are important in a healthy ecology of research and development in teacher education (Winch, Oancea & Orchard, 2015). *Teacher Education 2025* rightly notes the importance of empirical research that is "carried out to meet challenges and provide solutions in the kindergartens and schools" and that "identifies best practice", particularly through experimental and intervention studies. However a broader notion of research-rich practice would extend also to valuing engagement in reflective, conceptual, and/or critical research. This kind of research foregrounds the contestability of knowledge and enables sharper questioning of the assumptions underpinning decisions. It also emphasises that establishing a strong research base for teacher education does not mean building a definitive knowledge base amenable to unambiguous use (Cochran-Smith & Lytle, 1993, 2009), but rather it means recognising both that knowledge is always contested and contestable (Furlong, 2013) and that this is a strength and a necessary characteristic of professional practice.

The regional and national conferences led by the panel and supported by NOKUT offer one model for learning about programme innovations and for the exchange of ideas related to research and practice in teacher education.

As noted above, a strong research culture is collaborative and inquiry-based. It includes awareness of the contestability of knowledge and research as part of the professional identities and value systems of teacher educators and school-based teachers. Thus, it is important not to use incentives that undermine this, such as performance metrics based solely on quantity of publications or citations or overly prescriptive career progression criteria (Oancea, 2019). The literature on capacity building for evidence-based practice emphasises the importance of creating the right conditions for school-based teachers to engage

in and with research, including providing specialist support, peer support, support from school leaders, collaboration and dialogue, facilitated access to research, co-designed research agendas, and an ambitious vision for research-rich professional practice (Cordingley, 2016).

The regional and national conferences led by the panel and supported by NOKUT offer one model for learning about programme innovations and for the exchange of ideas related to research and practice in teacher education. There are also other examples of school-university professionally-oriented research collaborations available in the international literature. These include “clinical practice” models (Burn & Mutton, 2015) and evidence-informed practice models (Cordingley, 2016). These also include “community of inquiry” models, such as the school-based, district-based, and project-based communities discussed by Christie et al. (2008) on the basis of experience from the Applied Educational Research Scheme in Scotland, the Quality Teaching Rounds designed and scaled up in Australia by Gore and colleagues (Gore et al., 2015), and university-school projects in New Zealand designed to promote equity through collaborative inquiry by teacher educators and school-based teachers across schools (Grudnoff, Ell, Haigh, Hill & Tocker, 2019). In addition, University Teacher Training Schools in Finland are a stable and integrated part of the Faculties of Educational Sciences and teacher education (Toom & Husu, 2019); they provide possibilities for long-term research collaboration and research-based development of research among teachers working at the teacher training schools and researchers working at the teacher education institutions.

Along related lines, there have been various funding schemes for practitioner research, such as those supporting experienced practitioners’ in-service master’s or doctoral level studies in England or practitioners engaged in collaborative research with universities and colleges (Cordingley, 2016; Best Practice Research Scholarships) and those supported by the Applied Educational

Research Scheme (Christie & Menter, 2009). Along these lines, Cochran-Smith and Lytle (1993, 1999, 2009) have described and theorised funding and partnership models of practitioner inquiry communities in the US and in many countries around the world over many years. Other new models of research-rich partnerships between schools and universities and colleges include the Oxford Education Deanery (Fancourt, Edwards & Menter, 2015), the San Francisco State University/Stanford partnership, and other initiatives in the US that partner universities and colleges with school districts around shared “problems of practice” (Coburn, Penuel, & Geil, 2013; Kim, Shen & Wentworth, 2019; Wentworth, Carraza & Stipek, 2016; see also City, Elmore et al., 2009). Finally there are models centred on embedding school-based teachers’ inquiries and action research projects in everyday professional practice, such as the Toronto Teachers’ Union and the National Writing Project in the US (Lieberman, Campbell & Yashkina, 2016; Lieberman & Wood, 2003). Research on school-based teachers’ inquiries and on collaborative research has shown the benefits of teachers learning to study their own practice and has revealed the importance of learning to do so in order to better understand and improve individual practice, school-wide practice, and work in larger professional communities (see examples in Cochran-Smith & Lytle, 1993, 1999, 2009; Lieberman, Campbell & Yashkina, 2016; Willegems et al., 2017).

Oancea et al. (2017) found that the most successful research capacity building strategies in the programmes they evaluated were tailored to specific institutions and local contexts, including modelling high quality studies, developing shared datasets, and funding conference participation for staff.

In addition to providing many models of university-school partnerships that promote research capacity, the international literature also suggests ideas about the most and least effective ways to develop research capacity. For example, Oancea

et al. (2017) found that the most successful research capacity building strategies in the programmes they evaluated were tailored to specific institutions and local contexts, including modelling high quality studies, developing shared datasets, and funding conference participation for staff. Meanwhile coaching and mentoring, placement

fellowships, building a directory of expertise, and digital engagement were moderately successful, particularly in relation to practitioners. Finally, some of the most difficult elements of the programme, but also the most rewarding were joint collaborative projects across more and less research-experienced organisations.

7.4 Recommendations on research capacity building

Building on the rationale, the international literature, and the evidence discussed above, the Advisory Panel for Teacher Education makes the following recommendations to TEIs and schools/municipalities regarding building research capa-

city. These are also related to recommendations we make to the Ministry and NOKUT regarding accountability and sustainability, and recommendations we make to the TEIs and schools regarding partnerships.

- Invest in enhancing the qualifications and professional development of existing staff to increase the pool of those with research experience in both TEIs and schools.
 - Create a professional development strategy for teacher educators linked with recruitment strategies for Practitioner II and Professor II positions in TEIs.
 - Provide leadership training for new deans and leaders of newly merged TEIs, including ways to provide professional development to increase faculty research capacity.
- Provide financial and logistical support for sustainable research collaborations between TEIs and schools.
 - Jointly develop a collaborative research agenda, including plans for master's thesis co-supervision.
 - Co-design a timetable of opportunities for collaborative work involving university TEI and school teachers and mentors in face-to-face and other interactions.
 - Co-design opportunities for student teachers and new teachers to be part of professional communities focused on research and practice.
- Build and consolidate infrastructure to support the conduct, quality assurance, and sharing of research across TEIs and schools.
 - Build infrastructure for research engagement between TEIs and schools, municipalities, and other research institutions, and across subject areas.
 - Provide mechanisms and tools for sharing the findings and insights generated by student teachers' master's theses.
- Review existing mechanisms for incentivising and recognising research engagement as an essential part of professional activity in TEIs and schools.
 - Consider becoming signatories of DORA (Declaration on Research Assessment) and applying its principles to evaluate hiring, tenure, promotion, and reward decisions, especially for early-stage academics.
 - Ensure that research engagement is accounted for in the allocation of time and workload and arrangements for study leave.



8. Programme Design and Integration

In this section, we offer recommendations to the TEIs and their school and municipality partners regarding programme design and integration. This section follows the same format as the others with four interrelated parts: (1) Norway's

aspirations regarding programme design and integration, (2) potential challenges; (3) insights from the international research literature and from local examples; and (4) recommendations.

8.1 Norway's aspirations for programme design and integration

The new 5-year integrated master's programmes in PLS teacher education require that teacher education reflects the inter-relationship of theory and practice in order to "unite and mobilise everyone involved in teacher education" (Norwegian Ministry of Education and Research, 2017, p. 6). The master's reform is driven by a vision of school-based teachers as valued and trusted professionals and a view of teaching as not only a skilled professional practice, but also one that is research-informed. Central to this vision is the intention that student teachers are empowered to learn "research-based skills" so that they can make "informed decisions". Also integral to Norway's reform is the aim that student teachers experience coherent and integrated learning

experiences that are relevant to teaching practice and that all stakeholders work together to identify, frame, and design these. Along these lines, it is very clear that the overall vision of the PLS reform is animated by the idea that teacher educators and school-based teachers need to be partners in the work of teacher preparation. This vision requires shared understanding of the key learning experiences that promote the development of new teachers, based on the premise that the expertise and participation of teacher educators from both the TEIs and the schools are central to teacher preparation. Further, this vision requires ongoing evaluating, reflecting on, and learning from participants' experiences in programme activities, processes, and requirements.

8.2 Potential challenges to programme design and integration

As international panel members, we strongly agree with and support Norway's vision of teacher education. We agree that there are tremendous learning opportunities for student teachers who learn to engage in research, supported by educators at both TEIs and schools. There is great benefit in designing curriculum that deliberately connects theoretical principles and foundational ideas with thoughtful practice, which reflects the ways professional teachers engage in their work. The current reform has the potential to strengthen genuine collaboration between TEIs and school partners, helping Norway forge far stronger links in teacher education than has been the case in teacher education historically and in many other countries.

The current reform has the potential to strengthen genuine collaboration between TEIs and school partners, helping Norway forge far stronger links in teacher education than has been the case in teacher education historically and in many other countries.

Despite our admiration of and agreement with Norway's PLS reform, we also identified some potential challenges to fulfilling its aspirations regarding programme design and integration. First, TEI and school educators rarely have time to plan together or to design learning experiences for the student teachers in their programmes. Along

these lines, we discovered that in some cases, the regional and national meetings planned by the panel and convened by NOKUT were the first opportunity TEI and school-based educators had, to come together to work on the new programmes. The lack of shared time makes it difficult to “forge lasting integrated relationships” (Norwegian Ministry of Education and Research, 2017, p. 13) and to develop a shared vision, thus contributing to the fragmentation of learning experiences for new teachers. To make teacher education more “relevant for professional practice” requires not only time for each TEI-school partnership to work and plan together, but also time to develop a shared vision (Norwegian Ministry of Education and Research, 2017, p.11).

A second and related potential obstacle is the need for TEI-school partnership groups to develop shared understandings of the developmental progression of student teachers’ learning that undergirds programme design.

A second and related potential obstacle is the need for TEI-school partnership groups to develop shared understandings of the developmental progression of student teachers’ learning that undergirds programme design. In particular, the panel noted that during the regional and national meetings, there were many questions from both TEI and school educators about what student teachers should learn during their school experiences over the course of the programme. They sought a more elaborated sequence of learning that would gradually deepen and develop key ideas about teaching over time, asking questions such as, “How will Day 1 in the schools look different from Day 100? What do we want student teachers to do and learn over the course of their school experiences? How will they connect foundational and theoretical ideas to their research and school-based work?” A key idea here is to create a shared understandings of what student teachers are expected to know and do and how their professional agency develops over time

(Soini, Pietarinen, Toom & Pyhältö, 2015). Focusing on Norwegian student teachers, Conway and Munthe (2015) noted the “invisibility” of student teachers: they found that student teachers thought they were expected to be immediate experts with full authority for pupil learning, which masked their novice status and did not promote learning from observation, gathering data about teaching and learning, rehearsing and trying out practices, or getting feedback before, during, and after instruction.

Complicating the lack of clarity about what a learning progression for student teachers’ learning should look like, participants in our regional and national meetings also raised questions about the disconnect they perceived between learning in schools and learning at the university (see also Ulvik & Smith, 2019). They sought stronger ties between what student teachers were learning about in their courses and what they were asked to test out and practice in their school placements. While the aims of the PLS reform require programme coherence and require that student teachers learn from the inter-relationships of theory and practice, there is continuing concern that the learning experiences for student teachers occur in “two unconnected domains” (Norwegian Ministry of Education and Research, 2017, p. 11). Bridging the perceived divide between theory and practice has long been a challenge for teacher education, not only in Norway but also internationally. For many years, critics both within and outside of teacher education have pointed out that teacher education programmes often reinforce (albeit unintentionally) a split between the “two worlds” of universities and schools (Feiman-Nemser & Buchmann, 1985; Anagnostopoulos et al., 2007). On the other hand, Norway’s forward-looking PLS reform requires a new understanding of the dynamic and recursive relationship of theory and practice that rejects the assumption that research and practice inhabit two separate worlds, with research living primarily in the theoretical world of universities and practice living mostly in the practical world of schools (Cochran-Smith, 2019). However, a

potential obstacle to fulfilling the ambitious PLS reform is that despite overall ambitions, underlying some of Norway's reform and strategy documents, there may be an unintended conception of theory and practice as dichotomous (Cochran-Smith & Lytle, 1993, 2009; Oancea, 2018).

A potential obstacle to fulfilling the ambitious PLS reform is that despite overall ambitions, underlying some of Norway's reform and strategy documents, there may be an unintended conception of theory and practice as dichotomous.

An additional potential challenge is the need for structures and routines that support the regular reflection and evaluation of programmes that include student teachers and both the teacher educators who are located at TEIs and those who are located in the schools. Regular evaluation processes that are jointly established help to build a community and a deep investment in the collective improvement of a programme.

8.3 Insights from international scholarship and local examples

The international literature suggests that in order to implement an ambitious teacher education reform, such as the one Norway envisions, it is critical to have a shared vision of good teaching (Darling-Hammond et al., 2005; Feiman-Nemser, 2001; Hammerness & Klette, 2015; Kennedy, 2006; Zeichner & Conklin, 2008; see also National Research Council, 2010.) Vision captures a teacher education programme's larger purposes and reflects the kinds of teachers the programmes hope to prepare. Further, when teacher educators share a clear vision with their student teachers, it enables them to imagine and understand the work for which they are preparing. The research suggests that strong programmes have a coherent vision not only of *good teachers*, but also of *good teaching* (Darling-Hammond, & al., 2005; Hammerness, 2014).

The literature also makes it clear, however, that simply having a vision of good teaching is not enough. Vision needs to inform programme design, curriculum, and pedagogy, and it needs to guide what and how new teachers learn.

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enough. Vision needs to inform programme design, curriculum, and pedagogy, and it needs to guide what and how new teachers learn (Darling-Hammond, 2000; 2006; Kennedy, 1998; Hammerness, 2012). In coherent programmes, vision provides a guiding centre for decisions around the core ideas and learning opportunities in a programme so that learning experiences in the programme are aligned (Cavenna et al., in press; Grossman et al., 2008). Students learn more when they encounter mutually reinforcing ideas and practices across learning experiences and when they have opportunities to practice skills and strategies related to those ideas (Ericsson, Krampe & Tesch-Römer, 1993; NRC, 2010). The Teacher Education and Learning to Teach (TELT) study, a comparative investigation of eleven teacher education programmes in the US during the 1980s and 1990s, found that the more a programme cohered around a set of consistent ideas about teaching and learning, the more powerful the influence of the programme was upon student teachers' learning to teach (National Center for Research on Teacher Education, 1988; Kennedy, 1998). Along similar lines, Finnish teacher education programmes have a clear vision of a research-based and inquiry-oriented teacher education programme (Toom et al., 2010). In addition, teacher educators at

Sámi University of Applied Science worked to ensure that their key principles, “the basic lávvu poles”, were addressed throughout key aspects of their programme so that students genuinely recognised that these were central to the programme. Similarly, the University of Oslo re-organised its teacher education programme around a set of foundational ideas so that students experienced the programme as more coherent (Canrinus et al., 2017; Engelién, 2015).

For a programme to be coherent, the research suggests that opportunities to learn in both school settings and TEI settings need to be aligned and that teacher educators located at both TEIs and schools need to be involved in programme design.

For a programme to be coherent, the research suggests that opportunities to learn in both school settings and TEI settings need to be aligned (Feiman-Nemser, 2001) and that teacher educators located at both TEIs and schools need to be involved in programme design (Del Prete, 2019; Conway & Munthe, 2015). For instance, a case study of Finland concluded that the coherence of programmes was due in part to close and regular partnership, including the involvement of school-based teachers in the design of student teachers’ opportunities to learn (Hammerness, Ahtiainen, & Sahlberg, 2017; see also Niemi, Toom & Kallioniemi, 2016). Along these lines, OsloMet’s work on establishing “university schools”, the University of Agder’s creation of a “research and development coordinator”, Inland Norway University of Applied Sciences’ collaborations with partner schools, and research on partnership schools at the University of Oslo (Hatlevik et al., 2020), all represent efforts to create deeper connections between students teachers’ learning experiences at TEIs and schools (see also Jakhelln, Lund & Vestøl, 2017).

The literature also suggests, however, that differences in status, expertise, and roles between TEI

educators and school-based educators can make it difficult to conceptualise these two groups as jointly-responsible teacher educators, and can impede efforts to develop shared vision and responsibility (Cochran-Smith, Grudnoff, Orland-Barak & Smith 2019; Grossman, Wineburg & Woolworth, 2000). Acknowledging variations in expertise as assets in the teacher education process requires recognising and working on status and power differentials and building trusting relationships over time (Hatch, 2013b). One of the arenas with the most potential for shared planning and collective work in teacher education is curriculum and instruction. Here educators from TEIs and schools can bring various kinds of expertise, ranging widely from deep understanding of working with students from different areas and backgrounds, to subject matter expertise, to research activities (Hatch, 2013b).

Choosing to centre collective work on instructional practice in teacher education is consistent with research on school reform and organisational change (Elmore, 1996). In teacher education, research suggests that if student teachers are introduced to a powerful vision of teaching without the teaching practices that support it, programmes are less likely to have an impact on graduates’ practice. (Hammerness, 2006, 2014). In contrast, when programmes introduce student teachers to a powerful vision coupled with instructional strategies and pedagogical practices consistent with that vision, programmes have far more influence on graduates’ teaching (Feiman-Nemser et al., 2014).

International research also suggests that collaborative efforts to articulate and explore a learning progression for student teachers can be a fruitful focus for shared planning among differently-positioned teacher educators (Thompson, Windschitl & Braaten, 2013). Nearly two decades ago, Feiman Nemser (2001) laid out a “new teacher learning continuum” (Feiman-Nemser, 2001), while more recently some teacher education researchers have described “cycles” of new teachers’ learning (McDonald, Kavanaugh & Kazemi,

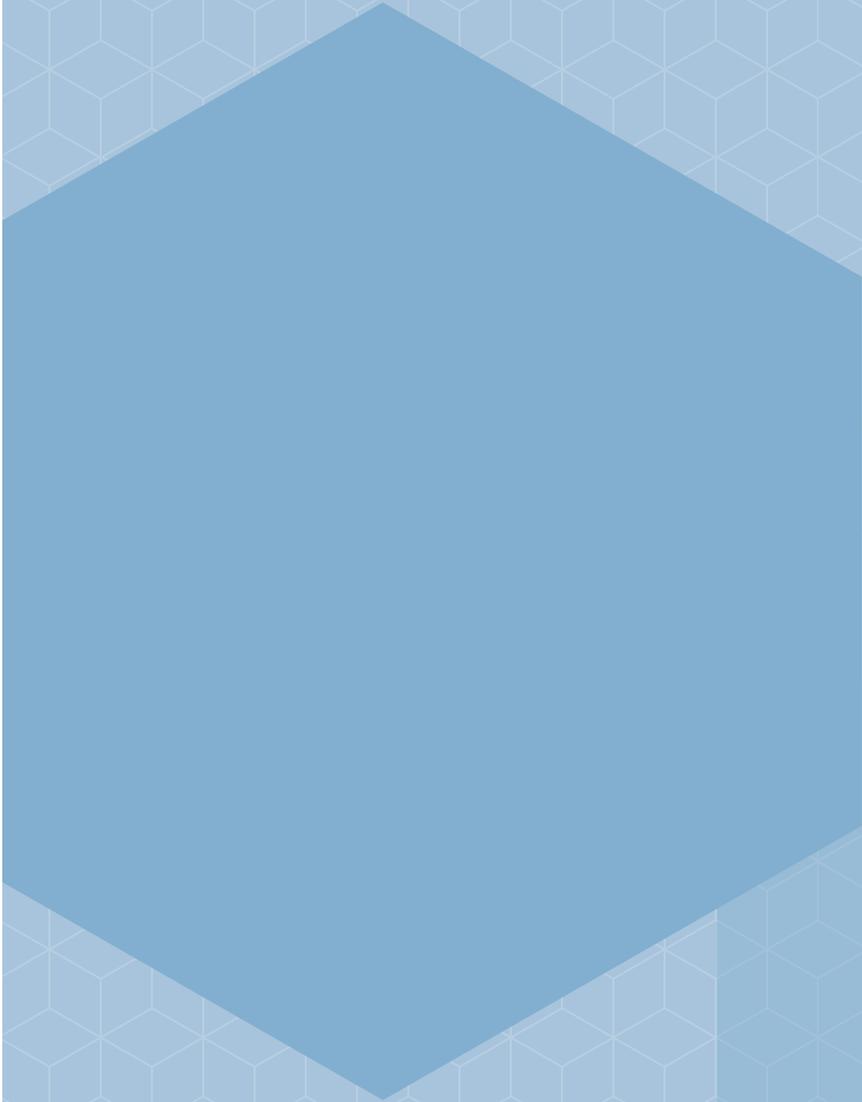
2013; Grossman, 2017). Local examples from both Norway and elsewhere illustrate this sort of exploration. For example, a new assignment tested out at Østfold University College involved student teachers engaging in early classroom observations of the first day of school and of a parent meeting; this assignment gradually built towards student teachers' more interactive roles in the classroom. Along different lines, some US programmes have found "curriculum mapping" across the entire programme to be a fruitful exercise to help articulate a learning progression (Uchimaya & Radin, 2009; Wolff & Kinzler, 2015). Curriculum mapping involves examining how courses, learning experiences, and benchmark assignments line up and gradually build over time in order to identify alignments, gaps, overlaps, and strengths and make revisions across the programme. Regular reflection and evaluation not only help build capacity, but also promote a common investment and draw upon the distributed expertise of all the actors involved in teacher education. As faculty at the University of Oslo learned, involving student teachers in assessing the programme at the start of programme redesign can be a key strategy for building cooperation and agency. Similarly focusing collectively on curriculum alignment and what student teachers' learning progression should look like over time can leverage the expertise of all the stakeholders involved. Collaborative, regular, and routine reflection on key programme aspects is essential to help continually improve programmes and help build a strong professional community. Furthermore, this kind of evaluation represents a considerable opportunity to contribute not only to the programme, but more broadly to research on teacher education.

8.4 Recommendations on programme design and integration

Building on the rationale, the international literature, and the evidence discussed above, the Advisory Panel for Teacher Education makes the following recommendations to TEIs and schools/

municipalities regarding programme design and integration. Some of these are closely related to recommendations in other areas.

- Reach agreement about a conception of student teacher learning and a vision of good teaching/good teachers.
 - Agree on the practices, dispositions, and values that characterise good teachers (and ideal programme graduates).
 - Establish inquiry groups or other professional communities with representatives from within and/or across TEI programmes and schools (including student teachers) wherein participants examine their visions of good teaching/teachers.
 - Build networks that bring TEI teacher educators, disciplinary faculty, school-based leaders and teachers, teachers' union representatives, community and/or municipality representatives, and student teachers together to exchange ideas, concerns, values, and visions.
- Include school-based educators, student teachers, and TEI educators in programme co-design, evaluation, and decision making.
 - Involve other stakeholder groups, such as representatives from unions or other professional organisations, in program improvement through shared work and planning.
 - Jointly develop structures, routines, and settings for co-planning and evaluation, such as regular meeting times, dedicated spaces, and on-going logistical support for mutual work.
- Jointly develop and articulate a developmental progression of student teachers' learning to teach and learning to engage in inquiry and practice-oriented research over time.
 - Establish inquiry groups, professional learning communities, action research collaborations, or other groups wherein participants jointly study pupils' and/or student teachers' learning.
 - Develop or adapt protocols that map out key practices, strategies, and dispositions for student teachers over time, including their participation in school-based activities, observations, and inquiries.
 - Examine representations of student teachers' or graduates' teaching (e.g., written work, artefacts of practice, videos) to develop shared understandings of what it means to learn to teach well.
 - Examine key programme assignments across courses and settings to assess alignment and sequencing.
- Document and analyse local PLS programme variation and its impact on student teachers' learning. This research can make a valuable contribution not only across Norway's programmes, but also to the international literature about teacher education and teacher learning.



9. Partnerships and School Experiences

In this section, we make recommendations to the TEIs and their school/municipality partners regarding partnerships and student teachers' school experiences. These recommendations build on the recommendations we made to the Ministry of Education and Research and to NOKUT

regarding partnerships and work in schools. Like the other sections, this discussion has four parts: (1) Norway's aspirations regarding partnerships and school experience, (2) potential challenges; (3) insights from international research and local examples; and (4) recommendations.

9.1 Norway's aspirations for TEI-school partnerships

Over the last decade, many Norwegian policy documents, frameworks, national guidelines and regulations have signalled the need for strong TEI-school partnerships related to teacher education. Indeed, one of the four overarching goals identified in *Teacher Education 2025* is the establishment of stable and mutually beneficial cooperation between teacher education institu-

tions and the school sector. It is clear that partnership between these two sectors is essential to the development of teachers who are professionally capable and research competent. As a panel, we unanimously support this focus. However we also believe there are potential challenges related to the development and maintenance of productive school-TEI partnerships.

9.2 Potential challenges to productive partnerships and school experiences

One challenge to effective TEI-school partnerships is lack of a shared vision or set of general principles about the purpose of partnerships in teacher education and a lack of clarity regarding partners' roles and responsibilities within particular partnership groups. In common with other countries, Norwegian teacher education is positioned in the middle of many complex relationships among various stakeholders, including policy makers, researchers, teacher educators, school-based leaders, teachers, parents, and municipalities. As we elaborate in the previous section, this means there are different and sometimes conflicting perspectives among stakeholders about what is most important for student teachers' learning and development. Complexity is increased because of the two parallel structures that influence teacher education organisation and processes. On one hand, TEIs have the responsibility for student teachers' learning, while on the other hand, schools and indirectly municipalities are primarily responsible for pupils' learning and their well-being. These parallel,

but separate, structures contribute to tensions related to responsibility for teacher education, with TEIs determining the teacher education programme and then expecting schools to deliver the school-based experience. As panel members, we observed that schools often do not perceive themselves as partners in teacher education and therefore do not necessarily choose to prioritise resources to develop and extend partnerships with TEIs. Also, many TEI faculty do not perceive themselves to be teacher educators; rather they see themselves as academics and researchers who are rarely in schools. As a consequence, TEIs often do not receive sufficient feedback from the schools to inform their teacher education programmes in line with the challenges schools face, and schools miss out on opportunities to enhance their engagement in teacher education. We are concerned that lack of a shared vision between TEIs and their school partners about the general purpose of partnerships coupled with lack of clarity regarding partners' roles and responsibilities are potential challenges to

providing student teachers with coherent school experiences that help them learn to teach in the context of practice.

We are concerned that lack of a shared vision between TEIs and their school partners about the general purpose of partnerships coupled with lack of clarity regarding partners' roles and responsibilities are potential challenges to providing student teachers with coherent school experiences that help them learn to teach in the context of practice.

A second challenge is that both the quantity and quality of mentoring varies across programmes and partnerships. Mentoring student teachers in practice contexts is a key responsibility for nearly all teacher preparation programmes internationally. This means that mentors, or school-based teacher educators, play a critical role in TEI-school partnerships. In Norway there is a need for a greater number of placements for school experiences and a greater number of mentors, given the increased numbers of student teachers in the PLS 5-year integrated programmes. However, there is also a recruitment problem, given that not all designated mentors are positive about, or willing to, mentor student teachers. There are also concerns about the provision of high-quality mentoring. TEIs and unions representing teachers in Norway have suggested that mentoring skill varies considerably across teachers and that the quality of mentoring is affected by the fact that few mentors have been trained in this area.

A third challenge related to partnerships and school experiences is that the number and the allocation of school-based days is problematic. The panel applauds the rationale behind Norway's 5-year integrated master's programmes, which includes improving teacher educators' and school-based teachers' subject knowledge and research capacity coupled with professionalising teacher education by linking theoretical knowl-

edge and practice. However, we believe that the number and allocation of "practice days", as specified in the *Regulations Relating to the Framework Plan for Primary and Lower Secondary Teacher Education* (that is, at least 80 days across Years 1-3 and 30 days across Years 4-5) is problematic. As we point out in a previous section of this report that makes recommendations to the Ministry and NOKUT regarding partnerships and school experience, the majority of TEIs currently distribute the required 30 days across Years 4 and 5 of the degree programme into Year 4 and require no school experience during Year 5. We believe that not requiring school experience in Year 5 creates serious obstacles to reaching Norway's ambitious goal to develop teachers who are research competent and practice ready. Norway's regulations require the master's thesis to be "profession-oriented" and "practice-based". The thesis presents opportunities for student teachers to engage in research that will enhance their teaching capability as well as develop their research capacity, which we discuss in some detail in the final section of this report. Student teachers' research has the potential to enhance knowledge and practice in participating schools, particularly in the particular school contexts in which the research is carried out. Not having any school experiences during the fifth year of the degree reduces opportunities for student teachers to engage in research that develops and refines their practice, with support from school-based mentors. This works against graduates entering teaching as confident and competent new teachers who are ready to teach and who are committed to staying in teaching.

We believe that not requiring school experience in Year 5 creates serious obstacles to reaching Norway's ambitious goal to develop teachers who are research competent and practice ready. Norway's regulations require the master's thesis to be "profession-oriented" and "practice-based".

9.3 Insights from international scholarship and local examples

Around the world, TEI-school partnerships have been promoted by researchers (e.g. Hunt, 2014) and policy makers (e.g. OECD, 2019, p. 36) as a way to improve teacher education and teacher quality. Partnerships have been portrayed as complex, resource-intensive, cross-institutional infrastructures that aim to enhance the school-based experiences of teacher education (Green et al., 2019). How well partnerships function depends on how they are structured, how the work of teacher education is understood, and how roles and responsibilities are defined, understood, and allocated. Payne and Zeichner (2017) argue that teacher education should be organised as a shared task among stakeholders, while Lillejord & Børe (2016) hold that all those responsible for teacher education should perceive themselves as teacher educators. Based on lessons learned from the University of Oslo's extended partnerships with schools, Hatlevik et al. (2020) stress the need to strive for a symmetrical partnership in which the collaboration is designed through dialogue and in which both actors experience the exchange of services as beneficial to their own primary social purpose. As we have argued above, this suggests that effective partnerships are founded on trust-based relationships and sustained by a shared vision about the purposes of the partnership and about partners' roles and responsibilities in enhancing student teachers' knowledge and practice. Multiple scholars (Kruger et al., 2009; Toom & Husu, 2019; Toom & Jensen, 2017) argue that effective partnerships in teacher education depend on all partners being trusted to bring commitment and expertise to the partnership in the expectation that everyone involved will benefit. For all of these reasons, TEI-school partnerships cannot simply be mandated by policy.

Authentic partnerships between TEIs and schools involve activities such as designing and evaluating programmes together, sharing data and information, observing, and sharing teaching practices. Drawing on Finland's experience of teacher

education partnerships, Toom (2017), argues that partnerships play an important role in producing and utilising research on teaching and learning, implementing innovative pedagogical developments, modelling teacher collaboration and collective curriculum work, producing teaching and learning materials, as well as constructing and developing networked expert communities of TEIs and school-based teacher educators. Further, Toon and Jensen (2017) note that the benefits of partnerships include helping TEI teacher educators keep up to date with school-based developments and contributing to school-based teacher educators' professional learning and growth. Well-functioning partnerships are largely about managing complexity (Martin et al., 2011). This means that the role of leadership in developing and sustaining effective partnerships is an important success factor. A new model for partnerships at NTNU addresses this issue. While previously one unit was responsible for the dialogue with all of NTNU's practice schools, this task is now shared among the tutors at NTNU who are in close contact with two school partnerships each. This supports closer interactions among the schools and between the schools and NTNU. Breault and Breault (2010) argue that school and TEI leaders should develop ways to promote meaningful engagement among partners. Lillejord and Børe (2016) conclude that such engagement makes it easier for those who work in partnership to see complexity, to learn to manoeuvre in it, and to avoid simple technical solutions to the complex problems that arise from authentic cross-sector collaboration in the development of new teachers.

Multiple scholars argue that effective partnerships in teacher education depend on all partners being trusted to bring commitment and expertise to the partnership in the expectation that everyone involved will benefit. For all of these reasons, TEI-school partnerships cannot simply be mandated by policy.

The international literature also indicates that mentoring is a professional practice that involves mentors' drawing on their knowledge of teaching and learning to create opportunities to support and extend new teachers' professional practice (Aspfors & Fransson, 2015; Clark et al., 2013; Feiman-Nemser, 2001; Kraft et al., 2018; Schuille, 2008). This requires that mentors pro-actively adapt to student teachers' different levels of expertise, while working toward a vision of good teaching. However, being an effective mentor is not the same as being a good teacher (Feiman Nemser, 2001; Feiman Nemser & Beasley, 2007). As Clarke et al. (2013) note, mentoring has its own skills, knowledge, and practices, all of which must be developed and practiced with feedback, like any professional practice. Aspfors and Fransson (2015) suggest that effective mentoring requires formal systematic training, which should be research-informed, long-term, and reflexive. To do so, mentor training needs to be well integrated with relevant educational contexts, well balanced with theoretical and practical components, and include rich possibilities for interaction and critical reflection.

There is also a growing research base suggesting that mentoring goes well beyond supporting the learning of student teachers (Hobson et al., 2009). It also helps to shift professional learning habits and relationships towards greater collegiality and collaborative reflexivity for the experienced teachers who work as mentors (Castanteira, 2016; Gardiner et al., 2018; Gordon, 2017). But the degree to which mentors benefit from mentoring is dependent in part on the nature of the partnerships within which they work. For instance, when the requirements of student teachers' school experiences are collaboratively designed, mentors' roles become clearer and more elaborated, and mentors become more oriented towards professional development (Hobson et al., 2009; Holland, 2018). Some researchers have argued that a collaborative approach among mentors, other school-based educators, and student teachers advances student teachers' learning more so than relationships between one

mentor and one student teacher (Martin & Snow 2011; Willegems, et al., 2017). This suggests that mentors who work collectively with a group of student teachers and who deepen their knowledge and expertise as mentors by interacting with other mentors, can support the development of a more collaborative partnership. Along these lines, Christens (2012) argues that as mentors become more knowledgeable and skilled, they are more likely to contribute to collective goals and share their knowledge with colleagues.

The nature of student teachers' school experiences is also an area of study in the international literature. School experience is consistently recognised for its critical role in teacher education programmes by providing student teachers with opportunities to engage in real-world settings (Cohen et al., 2013). As we noted earlier in this report, Darling-Hammond (2010, p. 40) concluded that studies of exemplary teacher education programmes show that, "learning to practice *in practice*, with expert guidance is essential to becoming a great teacher of students with a wide range of needs". In exemplary teacher education programmes, school experiences are spread across the entire programme, with experience toward the end of the programme helping student teachers develop deep connections to classrooms and schools (Le Cornu, 2015). As we noted in our recommendations to the Ministry and NOKUT regarding partnerships and school experiences, however, it is not simply spending time in school that matters. Rather, it is the nature and quality of student teachers' school experience that make the difference in their professional learning (Ronfeldt & Reininger, 2012). Of utmost importance to the quality of school experiences is their location within TEI-school partnerships that work from a shared understanding of what "good" teaching is and what role the final practicum plays in preparing student teachers' knowledge and experience (Whatman & MacDonald, 2017) and preparing them for the realities of teaching (Beck & Kosnick, 2006).

The collaborative partnerships can enhance alignment across student teachers' experiences in TEIs and in schools and thus help counter the theory-practice divide that is problematic in many TE programmes.

In short, collaborative partnerships can enhance alignment across student teachers' experiences in TEIs and in schools and thus help counter the theory-practice divide that is problematic in many TE programmes. This so-called divide is seen as contributing to the reality shock that many new teachers experience when moving from teacher education programmes to full-time teaching (Stokking, Leenders, de Jong, & van Tartwijk, 2003). Reality shock has also been identified as a reason for high rates of beginning teacher attrition (Ingersoll & Smith, 2004). Along these lines, Ronfeld et al., (2014) found that teachers who had more weeks of school experience during their teacher education programmes felt significantly more prepared in their first year of teaching, while Ronfeldt and Reininger (2012) reported that student teachers who had high quality school experience felt more prepared to teach, more efficacious, and intended to teach for longer than those who had lower quality practicum experiences.

All of this suggests that participants in TEI-school partnerships need to collaboratively design student teachers' school experiences in Years 4 and 5 of their programmes in ways that support the development of teachers who are professionally capable and research competent.

9.4 Recommendations to TEIs and schools on partnerships and school experiences

Building on the rationale, the international literature, and the evidence discussed above, the Advisory Panel for Teacher Education makes the following recommendations to TEIs and schools/municipalities regarding partnerships and school experience. Some of these are closely related to recommendations in other areas.

Building and maintaining partnerships is achieved through, and characterised by, trust, mutuality,

and reciprocity between TEIs and schools/municipalities. As described above, partnerships are built on shared purposes regarding student teachers' knowledge and practice and on clarity regarding partners' roles and responsibilities, including the provision of high-quality mentoring in the practicum. In order to strengthen the formation of TEI-school partnerships, we make the following recommendations.

- Collaboratively develop sustainable, productive, and mutually beneficial TEI-school partnerships to support student teachers who are professionally capable and research competent.
 - Recognise that teacher education is a responsibility shared by TEI-based and school-based teacher educators.
 - Agree on what “good” teacher education looks like and how it is enacted, including agreement about school experiences and research expectations, particularly in programme Years 4 and 5.
 - Acknowledge that developing a shared vision takes time.
- Jointly construct formal partnership agreements concerning: vision and purpose; partners' contributions, roles, responsibilities, and benefits; and, the structures, processes, and resources necessary for productive and sustainable partnerships.
- Use partnerships as a vehicle for knowledge development and dissemination.
 - Collaboratively conduct evaluations, plan small-scale enquiries, apply for pilot funding, conduct research projects and R&D assignments, and make decisions about issues related to undergraduate theses, master's theses, and doctoral student work.
 - Develop dual positions between TEIs and schools.
 - Support the efforts of mentors and other school-based educators dedicated to enhancing student teachers' professional learning and development.
 - Promote reciprocal and collaborative mentor-mentee relationships, as opposed to traditional expert-novice hierarchical relationships.
 - Support the professional development of mentors, recognizing mentoring as a distinct professional skill.
 - Ensure that the mentoring of student teachers draws from both research- and experience-based knowledge.
- Collaboratively design, organise, and manage sufficiently long and connected school experiences during Years 4 and 5 of the programmes so that student teachers have opportunities to engage in the central activities of teaching.



10. Master's Thesis and Supervision

In this section, recommendations focus explicitly on the master's thesis as a part of the integrated 5-year master's degree programmes in PLS teacher education. The discussion is in four parts:

- (1) Norway's intended goals through master's thesis in teacher education,
- (2) possible challenges;
- (3) perspectives from international research; and
- (4) recommendations.

10.1 Norway's aspirations for the master's thesis and supervision

The new requirement for student teachers to produce a master's thesis is a central part of the extension of Norway's PLS teacher education to five years with accreditation at the master's level. However, it is the requirement that the thesis be "practice-based" and "professionally-oriented" that presents the most significant challenges both to TEIs and schools. The rationale here is that as student teachers learn to be teachers, conducting practically-relevant and practice-oriented master's thesis research helps them develop the needed capacity to understand and develop practice and to work as inquiry-oriented teachers. Topics for professionally-oriented master's theses can potentially emerge from the realities of school and practical work of teaching. In addition to supporting the development of needed capacities for the work of teaching, the master's thesis requirement is also intended to professionalise teaching in Norwegian schools, improve pupil learning, and contribute to school development.

For TEIs, preparing and supervising student teachers who are conducting practice-oriented research during their school placements presents a distinct challenge even though the sector has a successful history of supervising more traditional academic theses.

For TEIs, preparing and supervising student teachers who are conducting practice-oriented research during their school placements presents a distinct challenge even though the sector has a successful history of supervising more traditional

academic theses. For schools, supporting student teachers who undertake this kind of research during school-based periods that have traditionally been used for the extended practice of teaching also represents a profound change in focus. For both TEIs and schools, additional challenges arise having to do with the coordination of their work with student teachers across institutional boundaries and also, very specifically, in terms of the assessment of the thesis as a report of research that is intended to arise out of and feed into existing teaching practices in schools.

Preparing a cadre of school-based teachers with advanced research methodological competence is one of the keys to a sustainably self-improving professional teaching force in Norway.

As panel members, our interpretation of Norway's aspirations regarding the requirement of a practice-based and professionally-oriented master's thesis is that the central goal is for student teachers to develop research expertise at the master's level, which will allow them to have greater control over the development of their own practice across the course of the professional lifespan. In other words, we understand that the intention of the master's thesis requirement - wherein student teachers learn to generate and collect data, analyse it, and reflect on its meaning - is to build their skills at developing and modifying practice as well as to enhance their reflective capacities. From our perspective, this means that the point of the master's thesis requirement is *not* necessarily that the results of the research

produced by student teachers will have a generalised impact on their schools, their subject fields, or the broader profession (although this is possible and will sometimes happen). Rather the point is that preparing a cadre of school-based

teachers with advanced research methodological competence is one of the keys to a sustainably self-improving professional teaching force in Norway.

10.2 Potential challenges for master's thesis and supervision

The panel perceived four challenges that need to be addressed in order to implement the new master's level teacher education programmes successfully and to ensure that student teachers succeed, especially in the completion of the thesis. The first challenge is related to reaching a shared understanding or consensus about the master's thesis, given that it is a completely new element in Norwegian teacher education at the primary and lower secondary level. There are general comments about the thesis in national steering documents regarding teacher education, as noted above, but clear understandings of the nature of the master's thesis among TEI faculty members, school-based leaders and teachers, and student teachers is needed for successful implementation of the reform. A central challenge, then, is reaching shared understanding and agreement about: (1) the meaning of "professionally-oriented" research in teacher education contexts; (2) the rigour of the thesis in terms of educational research more broadly and/or in relation to other fields where master's theses are required; and, (3) the scope of fields/topics/questions that are possible, given different interpretations of the requirement. These issues were discussed in several of our regional and national meetings with TEIs and their school partners over three years, and we concluded that these issues are highly relevant for the future of Norwegian PLS teacher education.

The second challenge is closely related to the first and merits special attention. In addition to building a shared understanding of the meaning, rigour, and scope of the master's thesis, TEIs need to reflect on and carefully plan the teacher education curriculum leading to its production.

The master's thesis itself is a rewarding but demanding task for student teachers in the final year of teacher education studies (Ahonen et al., 2015; Toom et al., 2010). To be successful, student teachers need to have developed sufficient knowledge and educational research skills during their formal teacher education studies (Kansanen, 2007). In particular, the curriculum should include research methods and small-scale inquiry activities that are relevant both to the thesis and to teachers' work more generally. It is important that student teachers learn these skills gradually over the course of their studies so they are able to apply them in practice, and they need to be supported systematically by teacher educators, supervising teachers at schools, and by peer students as they work on a variety of activities and assignments towards the master's thesis process. Many TEIs in Norway are working to address this challenge; their experiences as well as other examples and experiences from student teachers and teacher educators can be utilised by other TEIs and partnerships when developing these aspects further.

The third challenge is related to the supervision of master's thesis research and the coordination of the process among multiple stakeholders, including minimally, the TEIs, the schools, and the student teachers themselves. Master's thesis supervision is about supporting research work, so it presumes that supervisors have capabilities in conducting educational research and also supporting student teachers in all phases of the process. This includes defining relevant aims and research questions, constructing theoretical frameworks, collecting and analysing data, reporting results, and completing the master's thesis

itself. The development of supervision practices and capacity in TEIs adds another challenge. Currently TEIs are focusing on the overall coherence of their teacher education programmes as well as trying to address the specific questions, requirements, and challenges related to master's thesis supervision of "professionally-oriented" theses. TEIs are currently involved in negotiating and solving several big questions related to their work with schools, including issues about the supervision of school experiences and the use/distribution of resources. TEIs are also under pressure to improve their overall research capacity and to move toward internationalisation. The challenge in the midst of multiple sometimes competing demands is to keep the focus on the development of supervision of master's theses in collaboration between TEIs and schools and not simply to emphasise *either* the organisation of school practices *or* the enhancement of research capacity among the staff.

The fourth possible challenge has to do with the collaboration of TEIs and their school/municipal partners as they work to develop shared responsibility for "practice-based" and "professional-

ly-oriented" master's theses. For example, in defining thesis themes, previously unanticipated challenges may emerge regarding the provision of data sets or new possibilities for data collection and co-supervision. The roles of schools and municipalities need to be negotiated, clarified, and shaped so that they have a reasonable and beneficial position in the process. Further, schools and municipalities need to understand the potential long-term benefits of collaborations with TEIs on thesis research as well as the challenges that need to be overcome for this new form of collaboration to succeed. If it is successful, there will be obvious benefits for the school system in terms of the capacity for self-improvement.

The panel recognises the impressive efforts of the TEIs and schools in addressing all of these challenges. The regional and national meetings we have participated in over the last three years have led to shared understandings and new practices intended to overcome the challenges both within TEIs and between. TEIs and their school partners. TEIs have identified their strengths in terms of these issues as well as the issues for which they need support.

10.3 Insights from international scholarship and local examples

The production of a thesis, whether at undergraduate or master's level, is a common feature of higher education internationally and in professional disciplines such as teaching as well as engineering and nursing. In the professional discipline of teaching, there is often the requirement that the thesis have a "professional orientation" or that it be clearly related to the work of teaching. There has been a general discussion in higher education since the late 1990s about a "professional orientation" of higher education in the contexts of widening participation, or massification, and increases in employability expectations and the specification of desired "graduate attributes" (World Bank, 2013). Griffiths (2004) is often cited in discussions of how knowledge production/research, on one hand, and student learning, on

the other, can be brought together in different ways as part of higher education programmes. In the Norwegian context, Afdal (2017) and Munthe and Haug (2010) address the critical importance of the concept of the "professional orientation" and the relevance of educational programmes for the particularities of working life as a professional. However, there is no direct or universal specification of what "professionally-oriented research" might include or exclude. Along these lines, in a small-scale comparative study of European models of thesis-based and portfolio-based teacher education, Råde (2019) points out that differences in terminology across Europe (including among Scandinavian countries) means that it is difficult to generalise about meanings and purposes (see also Jakhelln et al., 2019).

As previously discussed, the master's thesis is regarded as a pedagogical device for enhancing student teachers' learning to be capable and competent teachers and, further, to enhance pupils' learning and developments and innovations at school. This conceptualisation of the thesis is common in those countries where it is a requirement for formal primary and lower secondary school teacher qualification, such as in Finland and Estonia, as well as now in Norway (Toom et al., 2010; Leijen & Pedaste, 2018; Munthe & Rogne, 2015). Research has shown that although there is variation in teacher educators' conceptions of research-based teacher education, practices related to the integration of research and teaching in teacher education programmes, and the role of the thesis in teacher education varies (Krokkfors et al., 2009; Toom et al., 2008; 2010), there is still enough coherence to allow student teachers to proceed in research-based teacher education programmes. Sufficient coherence of the master's thesis processes and the overall quality of the theses can be guided and shaped by programme requirements regarding the master's thesis and by descriptions of the master's thesis seminars and processes that are part of the written teacher education curricula. They can also be regulated through master's thesis assessment criteria that are created jointly by TEI faculty. These are perceived as practices that enhance the research rigor of theses.

The literature suggests that the research expertise of TEI faculty is necessary both for implementing academic research-based teacher education programmes and, particularly, for supervising master's theses at university. Together with school experience, the master's thesis is one of the key learning experiences during pre-service teacher education (Ahonen et al., 2015; Toom et al., 2010; Saariaho et al., 2016). The international literature suggests that student teachers perceive the thesis as challenging due to its extensive demands, especially when trying to manage all phases in the process (Saariaho et al., 2016; 2018), even when they have learned research methods and inquiry throughout their

teacher education studies. In addition, the literature suggests that student teachers' own expectations and goals related to the master's thesis vary. Some want to explore very thoroughly an important theme for themselves, and some want simply to complete the requirement (Maaranen, 2009). The research suggests that effective supervision of the master's thesis is a key element of the successful process, and it includes a set of supervisory skills that teacher educators need to have (Svinhufvud, 2013).

The master's thesis is a significant but often also a challenging phase for student teachers at the end of their teacher education studies. Given this situation, in Finland, educators have thought carefully about how to minimise the risk of students dropping out just before the master's thesis process and thus entering working life without formal qualification.

The master's thesis is a significant but often also a challenging phase for student teachers at the end of their teacher education studies. Given this situation, in Finland, educators have thought carefully about how to minimise the risk of students dropping out just before the master's thesis process and thus entering working life without formal qualification (Toom, 2009). In order to serve the intended purposes of the master's thesis in teacher education, Finland's programmes put the student teacher's own interests and learning as the first priority in the thesis process as a whole as well as when choosing the thesis topic. Thesis topics are always negotiated between the student teachers and university supervisors. In some places, pairs or small groups of students undertake joint thesis research projects and data collection, yet still produce independent academic work that can be individually assessed in the form of a single student's thesis. Student teachers' collaborative theses might open possibilities for them to explore more extensive

themes and learn together about the theme's relevance for them. In these instances, student teachers also learn to support each other in order to complete their theses successfully (Väisänen et al., 2016).

The international research suggests that it is typical that master's thesis supervision takes place in both master's thesis seminars led by the supervisors and in individual supervisor-student teacher dyads. Supervisory dyads can be challenging because they require that supervisors have advanced research, teaching, and interaction skills. For these reasons, co-supervision of theses is one of the significant areas of development in teacher education as it is in other fields at the graduate level. Collaboration in terms of master's thesis supervision is typical in those environments where teacher educators do research together with schools and teachers, and thesis supervision "grows" from this collaboration. Research suggests that effective co-teaching and co-supervision contribute to: quality of supervision (Corner et al., 2017; Dysthe et al., 2006; Ives & Rowley, 2005; Lovitts & Nelson, 2000); quality of theses (Samara, 2006); and, the well-being of students and supervisors, on-time completion, and ethical conduct of theses (Löfström & Pyhältö, 2019). Co-supervision also facilitates peer support among and for students, social support among supervisors, and the professional learning of supervisors. The development of co-supervision practices is related to the capacity building and improvement of research skills in TEIs. Through co-supervision of master's theses, supervisors can demonstrate and model "collaborative professionalism" for student teachers and their future work (Hargreaves & O'Connor, 2018; see also Bevins & Price, 2014; Vangrieken et al., 2015).

International experience suggests that current collaborative TEI-school research groups with shared interests and data sets may be a fruitful starting point for the development of co-supervision practices.

In countries such as Finland where a master's thesis has been required in primary and lower secondary teacher education for a long time, the overall organisational responsibility for the master's thesis and its supervision is at TEIs because they have ultimate responsibility for awarding the master's degree. In Finland, active researchers at the TEIs working within existing research groups and using current and historical data sets are utilised when negotiating and developing co-supervision practices. In short, international experience suggests that current collaborative TEI-school research groups with shared interests and data sets may be a fruitful starting point for the development of co-supervision practices. In Norway, the issues of master's thesis supervision and collaboration between TEIs and schools have been addressed at a number of TEIs, including at the University of Stavanger where there is a project for developing supervision collaboration practice in school-based R&D groups through four key partners - student teachers, university-based teacher educators, school-based teacher educators and school leadership.

10.4 Recommendations on master's thesis and supervision

Building on the rationale, the international literature, and the evidence discussed above, the Advisory Panel for Teacher Education makes the following recommendations to the TEIs and their

school/municipal partners regarding the master's thesis and supervision. Some of these are closely related to recommendations in other areas.

- Reach agreement on the meaning of “practice-based” and “professionally-oriented” research and on the focus and scope of the master's theses.
 - Allow room for variation and innovation in the focus, scope, and types of research student teachers undertake.
 - Consider the ethical aspects of student teachers doing master's level research in schools and agree on appropriate guidelines and protocols.
- Reach agreement on what constitutes rigour and quality in the master's thesis as an outcome of professionally-oriented and practiced-based research.
 - Agree on guidelines for appropriate assessment criteria, utilising the expertise of educators from the TEIs and the schools.
 - Acknowledge that there is not a consensus in the education field about “closeness to practice” as a criterion for research rigour. However, joint deliberation about these and other complex issues is necessary for the development of meaningful thesis assessment criteria.
- Seek out and share across TEIs national and international examples of collaborative theses (e.g., in pairs or small groups) that have produced academic work that can be individually assessed in the form of a single student's thesis.
 - Use these to encourage discussion about these issues, including the potential that these projects may have to extend the scope of research and alignment of thesis research with school development plans.
- Reach agreement on the supervision structures and practices that support the process of student teachers' conducting and completing quality theses in a timely way.
 - Consider structural supervisory capacity issues as well as pupils' and student teachers' learning needs.
 - Develop strategies for the TEIs to facilitate collaborative supervisory practices with school-based educators, including co-supervision and group-based supervision, while the TEIs retain primary responsibility for the supervision of the thesis.



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Appendix 1:

Mandate for the Advisory Panel for Teacher Education from the Ministry of Education and Research



Nasjonalt organ for kvalitet i utdanningen
Postboks 578
1327 LYSAKER

Deres ref

Vår ref
16/1384-

Dato
01.04.2016

Supplerende tildelingsbrev – statsbudsjettet 2016 – kap. 281 post 01 – tildeling av midler til internasjonal rådgivningsgruppe for implementeringen av grunnskolelærerutdanninger på masternivå, prosjekt 82212

1. Innledning

Vi viser til Stortingets behandling av statsbudsjettet for 2016, jf. Innst. 12 S (2015-2016) og Prop. 1 S (2015-2016) der det blant annet bevilges midler til oppfølging av lærerutdanningene. Vi viser videre til kontakt med NOKUT om tildeling av midler til drift av internasjonal rådgivningsgruppe i forbindelse med implementering av nye grunnskolelærerutdanninger på masternivå.

2. Orientering om tildelingen

Kunnskapsdepartementet stiller med dette **2 mill. kroner** til disposisjon til NOKUT for å drifte internasjonal rådgivningsgruppe i forbindelse med implementering av nye grunnskolelærerutdanninger på masternivå.

Med forbehold om de årlige budsjettbehandlingene tar departementet sikte på at prosjektet skal gjennomføres i perioden 2016-2019.

Forutsetningene for tildelingen følger av Innst. 12 S (2015-2016), Prop. 1 S (2015-2016) og av forutsetningene og kravene fastsatt i dette brevet.

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Universitets- og
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Saksbehandler
Øyvind Johnson
22247746

De tildelte midlene kan kreves helt eller delvis tilbakebetalt dersom de ikke benyttes i samsvar med forutsetningene.

2.1 Formålet med tildelingen

Den internasjonale rådgivningsgruppen skal bidra til å utvikle grunnskolelærerutdanning på høyt nivå gjennom å stimulere institusjonenes kvalitetshevende arbeid. Gruppen skal bidra til en god implementering av rammeplan og retningslinjer frem mot studiestart høsten 2017. Gruppens arbeid skal også bidra til å øke sannsynligheten for godkjent tilsyn når det varslede tilsynet gjennomføres i 2019.

Gruppen skal stimulere institusjonenes kvalitetshevende arbeid med de nye grunnskolelærerutdanningene gjennom råd, anbefalinger og tilbakemeldinger, særlig med henblikk på å løfte faglig nivå både i utdanning og forskning. Gruppen har mandat til å gi anbefalinger til UH-institusjonene, NRLU, NOKUT og departement, men kan ikke gi formelle pålegg.

Det er avgjørende at rådgivningsgruppen får rom til å skape kontakter og tillit i lærerutdanningssektoren, og bidrar til reell faglig utvikling fremfor ensidig påpekning av mangler og svakheter ved utdanningene. Det vil også være avgjørende for prosjektets gjennomføring at rådgivningsgruppen fra starten av knytter kontakter og etablerer samarbeid med andre relevante prosjekter og institusjoner utenfor NOKUT.

NOKUT skal nedsette egne, uavhengige sakkyndige komiteer i forbindelse med søknadsbehandling og eventuelle fremtidige tilsyn. Dette er en del av NOKUTs kjernevirksomhet og inngår ikke i dette prosjektet.

2.1.1 Den internasjonale rådgivningsgruppen skal stå for følgende kvalitetshevende tiltak:

- Under den faglige utviklingsperioden frem til etableringen av de nye utdanningene skal gruppen stå i tett dialog med institusjonene gjennom åpne faglige arrangementer (workshops/seminarer), individuell oppfølging av institusjonene og andre tiltak som bidrar til faglig løft av utdanningene.
- I perioden høst 2017 og fram til NOKUTs varslede tilsyn i 2019 skal gruppen bidra til ytterligere kvalitetsheving av lærerutdanningene med sikte på at utdanningene oppnår høy nok kvalitet innen tilsynet iverksettes.
- Vurdere om de nasjonale retningslinjene og de institusjonelle fagplanene tar opp i seg elementer og kunnskap fra internasjonal anerkjent forskning om god lærerutdanning.
- Identifisere kvalitetshemmende faktorer i lærerutdanningene: faglige, strukturelle, økonomiske.
- Foreslå andre kvalitetshevende tiltak som kan supplere rådgivningsarbeidet.
- Utarbeide en norm for fagmiljøenes nivå og sammensetning, og hvordan den nye studietilsynsforordningen til masterkrav kan operasjonaliseres for integrerte lærermastere.

- Foreslå en ordning for videreføring av rådgivningsprosjektet og de påbegynte kvalitetstiltakene på lengre sikt, f. eks. gjennom fortløpende evalueringer.

Det kan også være aktuelt å involvere gruppen i rådgivning mot institusjoner som får avslag i første omgang i akkrediteringsprosessen.

Gruppen skal gi råd og veiledning til UH-institusjonene, NRLU, NOKUT og departementet.

3. RAPPORTERING

Det skal være jevnlig dialog mellom Kunnskapsdepartementet og NOKUT underveis i prosjektet.

Regnskap og rapport for bruk av midlene i 2016 inkluderes i *Årsrapport (2016–2017)* med frist til departementet **15. mars 2017**. Her skal det gis en beskrivelse av tiltakets resultater og grad av måloppnåelse. Det skal videre bekreftes at midlene er benyttet i samsvar med forutsetningene i tildelingsbrevet.

Med hilsen

Hedda Huseby (e.f.)
avdelingsdirektør

Øyvind Johnson
seniorrådgiver

Dokumentet er elektronisk signert og har derfor ikke håndskrevne signaturer.

Kopi: Riksrevisjonen

Appendix 2:

Supplements to the mandate by the reference group and NOKUT

Mandate for advisory group

Purpose

NOKUT has set up this advisory group in connection with the government's introduction of five-year integrated MA programs in primary and lower secondary education (ages 6-15). This means that NOKUT wants the advisory group to advise on how to make these new MA programs work well in practice, and how to ensure that the new MA students get the best possible education. However, the advisory group also has a broader task: to help further improve teacher education at primary and lower secondary level by describing what would make Norwegian teacher education institutions (TEIs) better in general. Because the new MA programs require TEIs to become more thoroughly research-oriented, many of the questions and issues raised below relate to how to put this change into practice. But the advisory group is also asked to explore other aspects of Norwegian primary and lower secondary teacher education that could be improved, in particular issues raised in previous evaluations of Norwegian teacher education, like the collaboration between subject didactics, pedagogics and subject disciplines, the relationship between theory and practice, and collaboration between TEIs and schools. The purpose of the advisory group, then, is to help ensure that this change in degree structure leads to excellent educations for teacher students.

The advisory group's work

The advisory group is composed of international scholars in teacher education, and supported by a secretariat from NOKUT.

In the time until the new MA programs start, the

group should communicate with the TEIs through open academic events like workshops and seminars, follow up institutions individually, and find other measures to help TE programs develop academically. The group may want to make use of already established arenas for collaboration on teacher education, like the National Advisory Board for Teacher Education (NRLU), the Norwegian Knowledge Centre for Education, the Centre for Professional Learning in Teacher Education (ProTed) and the Norwegian National Research School in Teacher Education (NAFOL).

From autumn 2017 until the NOKUT supervision in 2019, the group will continue working with the TEIs to help them reach higher academic standards before the supervision starts.

In collaboration with the advisory group, the secretariat will produce a written summary of the group's work and the advice and recommendations they have given to institutions, as well as a more general overview of advice on how TE in Norway should progress. This summary will suggest ways for the advisory group's work and the new improvement measures to continue in the future.

Issues to consider

The group is free to respond to the mandate in the ways that best fulfill the group's purpose. However, the issues and questions below are intended to help guide the group's work.

- Are national guidelines for Norwegian teacher education, and institutional course plans, in accordance with international standards for teacher education? How well do they serve their purpose?

- What qualities in staff composition are necessary in order for the new MA programs to reach high educational standards?
- How can TEIs become more research active?
- What organizational aspects would help research and development work to flourish in TEIs?
- How can TEIs and educators ensure that their research and development work benefits their students' learning? What are the best ways for research to become part of teacher students' education?
- What strategies will help TEIs form international networks to strengthen their teaching and research?
- How can TEIs create greater coherence between the disciplines involved in teacher education?
- How can the new MA programs establish good partnerships between teacher education institutions and partner schools?
- How can TEIs create greater coherence between the students' theoretical knowledge and research, their practice work in schools, and their future school careers?
- What qualities in study program design can help the new MA programs reach high educational standards?
- Are there academic, structural, economic, or other factors that hold teacher education back, or make it harder for it to improve?

Appendix 3:

Recommendations by the Advisory Panel for Teacher Education, May 2018

Recommendations from the International Advisory Panel in Teacher Education

In the commissioning letter establishing the Advisory Panel in Teacher Education, the Ministry of Education and Research describes the group's task as follows: 'to stimulate the institutions' quality work on the new primary and lower secondary teacher educations through advice, recommendations and feedback...The group's mandate includes giving recommendations to higher education institutions, UHR-LU, NOKUT and the Ministry'. More specifically, the letter asks the group to 'consider whether the national guidelines...incorporate elements and knowledge from internationally recognised research on good teacher education', as well as to 'develop a norm for the level and composition of academic environments, and for how the new academic supervision regulations at MA level can be operationalised for integrated MAs in teacher education'.

The Advisory Panel in Teacher Education has so far pursued its mandate mainly by creating arenas for dialogue, learning and discussion with the teacher education institutions. In response to the institutions' stated desire for us to work with them as directly as possible, we arranged three regional meetings for all institutions in the autumn of 2017. Feedback on the meetings was excellent, and participants were especially enthusiastic about the opportunity for discussions between institutions and practice schools, as well as between practice schools in the same area - in many cases, this was the first time practice teachers and institution-based teacher educators had had a chance to meet. The discussions focused on the core questions of teacher education, e.g. the goals of teacher education, characteristics of the programme, coursework, teaching practice supervision, MA thesis, research in

teacher education, roles of teacher educators at teacher education institutes and schools, as well as possibilities and challenges related to collaboration between teacher education institutions and practice schools. We are following up the discussions that emerged with a national meeting in May of this year, and plan to repeat the pattern of regional and national meetings in 2019.

Having established this dialogue and reached a deeper understanding of the challenges and opportunities facing the field, we would like to take this opportunity to give some recommendations to the Ministry within a particular area: the various policy frameworks and regulations that structure Norwegian teacher education. We do this in keeping with our interpretation of our mandate as an International Advisory Panel – that the Ministry and NOKUT would like feedback on whether and to what extent these frameworks and regulations, in our view, help to ensure and stimulate quality in the new teacher educations, and whether there are any potentially useful changes to make. We do this in light of our collective international expertise in initial teacher education practice, teacher education research, and teacher education policy. This document is our response to this aspect of the mandate.

The Advisory Panel members are, in general, very positive to Norway's teacher education policy, which we see as ambitious and exciting, in particular as regards the new MA programmes in primary and lower secondary (PLS) teacher education. In our experience of teacher education internationally, it is not common to see a national teacher education policy that supports research and research-based education so strongly in the frameworks, regulations and teacher education

curriculum guidelines on all levels. Current policy conditions in Norway provide excellent possibilities for the development of a 5-year MA-level teacher education.

These ambitious policies have led to high expectations, not least when it comes to institutions' ability to build capacity in practice-based research and the supervision of practice-based research as well as developing and supporting the idea of research-based teaching and teacher preparation. The Advisory panel believes that capacity-building is one of the main challenges facing Norwegian TE, and that the TEIs will need to build sustainable research capacity to a greater extent than they are doing at the moment. Based on our analysis of the Norwegian reform and our dialogue with TEI faculty and school-based educators in all regions of the country, we have concluded that currently, some policy frameworks and regulations support the kind of capacity-building that is needed, while others may be hindering it.

With this in mind, this document's purpose is to make recommendations for changes to some of the frameworks and regulations that govern Norwegian TE and/or in some cases, to modify the ways the frameworks and regulations are interpreted and put into practice. One of our recommendations, on MA supervision, does not relate directly to regulations but rather addresses a potential fruitful area for Ministry funding.

The ultimate aim of our recommendations is to improve Norwegian TEIs' capacity-building in research-based practice in teaching/teacher education as well as practice-based research. Both of these are necessary to allow TEIs to achieve the objectives of the MA reform. Since these frameworks and regulations are put in place and operationalised by the Ministry and NOKUT, we address our recommendations to these two organisations, though we include some notes for institutions on what our suggested changes would mean and require from them. Below we present recommendations in five main areas:

staff composition, the organization of practice, supervision of the MA thesis, additional support for deans and program leaders, and NOKUT's future supervision of the teacher education programs.

Recommendations

Staff composition

The current situation: NOKUT's Academic Supervision Regulations section 2-3, 'Requirements for the academic environment', regulate the staff composition of those who teach in MA programmes as follows: '50 per cent of the members of the academic environment must have at least associate professor qualifications [i.e. hold a doctorate or have doctorate-equivalent qualifications]. Within this 50 per cent, at least 10 per cent must have professor or docent qualifications'. In NOKUT's latest round of PLS programme accreditations, this regulation was interpreted to apply to *each subject area* in which the programme offers an MA specialisation. This meant that if, for instance, a programme offered a PLS teacher education MA with a specialisation in mathematics, 10% of the staff teaching in this area would need to have professor or docent qualifications in the relevant field.

Recommendations: In the future, we recommend that NOKUT should interpret the numerical regulations in section 2-3 as applying to the teacher education programme as a whole, not to individual MA specialisations. In particular, requiring that 10% of staff have professor-level qualifications within each of the MA specialisations has the potential to create a counterproductive and very difficult to meet hiring pressure for TEIs. In practice, this pressure may lead to the rapid, short-term hiring of staff with professor-level qualifications in low-percentage part-time roles (most often "professor II" roles), with the primary aim of passing a numerical bar, rather than to building capacity more gradually and sustainably.

We recognise that NOKUT's current interpretation of the regulation is an attempt to ensure that the new programmes have an adequate level of research competence distributed across their key teaching areas. In teacher education, research specialisations are not necessarily generalizable, meaning that a high percentage of doctorate-holders on staff does not in itself mean that the programme has teachers with in-depth subject knowledge in the full range of areas the programme aims to cover. For instance, a staff member with a doctorate in physics will raise the total percentage of doctorate holders on staff, but will obviously not easily be able to fill a teaching need in the field of Norwegian didactics. For this reason, if NOKUT does change its interpretation according to our recommendation, institutions will still need to ensure that their staff composition allows for the necessary subject knowledge and research competence in their key teaching areas. For many institutions, this will require a process of capacity-building over time. We advise institutions to focus both on new hires and on professional development for their existing staff, making use of research capacity-building organisations like NAFOL.

We believe it is especially important for institutions to ensure a good distribution of staff members with doctoral-level qualifications. The uneven distribution of staff members with *professor-level* qualifications is a less pressing issue, since the added importance of professor-level expertise has less to do with their specific subject knowledge and more with their greater research experience, which allows them to contribute to the research development of the academic environment as a whole by collaborating with and providing guidance for colleagues. Institutions should work to ensure that they make broad and cross-disciplinary use of their professors' research expertise.

Practice

The current situation: The Regulations Relating to the Framework Plan for Primary and Lower

Secondary Teacher Education specify that programmes should include at least 110 days of practice (that is, days where students of teaching are working in schools and classrooms) in total, with at least 80 days across years 1-3 and at least 30 days across years 4-5. In practice, to the best of our knowledge, many, if not all TEIs place the final 30 practice days in year 4 and have no practice at all in year 5.

Recommendation: The framework regulations should be changed to specify at least 30 days of practice in year 4 and at least 30 days of practice in year 5. This change could be accomplished in two ways. The first option is to increase the total number of practice days from 110 to 140. The other option is to reduce the number of practice days from 80 to 50 in years 1 to 3, while increasing the number of practice days from 30 to 60 in years 4 and 5. From our international perspective, the first option is highly preferable, but we are well aware that this would be costly, and would require the government to increase its funding to the teacher education programs. Our second option does not increase the total number of practice days, thus it is budget neutral for the programs. However, both suggestions will require changes to the national framework regulations. Our main point is that students need more practice late in their studies, and that there are different ways to achieve this. Again we highly recommend option 1 with the overall number of days of practice increased.

This recommendation is based on the fact that it is preferable for PLS-students to have a higher concentration of practice time when they are further into their education and thus more able to make use and further develop their knowledge and skill base when they are actually closer to entering the field. It is also essential that the practice periods be long and coherent enough to allow for significant professional tasks to be accomplished, including for example, long-term planning, curriculum development, making accommodations for those with special learning needs, working with colleagues and parents,

and conducting and learning from both formative and summative assessments. In addition, long coherent supervised teaching periods allow student teachers to learn the skills and practice of teaching in interaction with more experienced practitioners and teacher educators.

Second, the Regulations Relating to the Framework Plan for Primary and Lower *Secondary Teacher Education* stipulate that the master thesis should be “profession-orientated and practice-based”. Although the policy documents do not specify what these terms mean, based on our international expertise in teacher education, we recommend that these terms be interpreted to mean that the master thesis focus on “problems of practice”, which emerge from student teachers’ full participation in the life of the classroom and school. In order to investigate these problems in their schools and classrooms, the PLS-students would engage in teacher research or other forms of practice-based inquiry. This kind of practice-based research, which draws on data from the classroom, yields knowledge that is highly usable in the local context. This knowledge is valuable to school-based educators who are hosting the PLS-students in their classrooms, but often this knowledge is also of interest well beyond the local setting. In order to conduct this type of research, it is necessary to expand the number of days the PLS-students spend in the schools during the last two years of the programmes.

MA supervision

The current situation: One of the central capacity issues facing the new MA programmes is MA supervision. By 2020, large numbers of PLS-students will be in need of supervisors with the experience and skills to offer research supervision.

Recommendation: While many more skilled research supervisors with doctoral-level research experience are clearly needed in the TEI programmes, doctoral research experience is only one of many potentially important qualities for

a teacher educator, and hiring processes need to take other forms of experience into account as well. This means that institutions should not rely solely on new hires to increase their supervision capacity, but should be encouraged to explore other forms of capacity-building. We recommend that the Ministry sets aside funding for TEIs to develop innovative and collaborative research supervision practices, including for example, cohort or group supervision, peer support processes, and supervisory partnerships between TEIs and schools. One such form of collaborative supervision, cohort supervision, involves a staff member with PhD-level or professor-level research qualifications collaborating with a group of other TEI staff members and/or school-based educators to supervise the MA thesis work of a group of students. This kind of approach has multiple benefits for the students’ thesis work, including at least: increased supervision expertise among TEI staff, increased collaboration across the TE programme; and enhanced collaboration between TEIs and practice schools. This approach would also make it possible to link in productive ways the research of the PLS-students to the ongoing research projects and interests of the schools.

Additional Support for Deans and Program Leaders

The current situation. Many of the deans and program leaders at the newly-merged institutions are new to leadership roles and also to some of the institutions they are now working with. Both the deanship and program leader position are challenging jobs in TEIs, especially in the midst of multiple institutional changes and challenges. These individuals are expected to lead major structural changes (institutional mergers) as well as deliver new teacher education programs across multiple campuses. Without strong competent leadership and collaboration between leaders at different institutions, there is a risk the PLS TE reform might fail to live up to its potential.

Recommendations: We recommend that the Ministry provide resources for drawing together

the deans and program leaders from across TEIs and for offering coaching aimed at bringing the institutions together around the PLS TE reforms. This coaching could focus on building research capacity, internationalisation, building collaboration, and extending networks.

2020 NOKUT supervision of TEIs

The current situation: NOKUT is currently considering the possibility of a supervision of teacher education institutions in 2020. Although it is our understanding that NOKUT has yet to determine the best form for this process to take, our experience meeting with teacher educators at the TEIs suggests that they are anxious about the prospect of an upcoming supervision and that, to a certain extent, they are making decisions about their new programmes more to be sure they are in compliance with the new regulations than because the decisions are best for the programmes.

Recommendations: We believe that the prospect of a potentially punitive supervision may be making TEIs counterproductively risk-averse. The International Advisory Panel recommends that NOKUT replace the 2020 supervision with a formative evaluation. This would take the immediate pressure off the institutions, particularly with regard to their staffing levels and research capacity. This would also make it more likely that the TEIs, which are undergoing many major changes, will be able to take risks and be innovative. In addition, we believe that an evaluation with well-chosen focus areas and a clear formative purpose could be useful in providing feedback and guidance regarding the institutions' change processes.

We suggest that the evaluation focuses on the following:

Regulatory areas:

- Supervision arrangements (both academic and practice-oriented)
- Distribution of practice days
- Institutions' active steps and strategies to build their own research capacity in education and to support practitioner research literacy in schools
- Arrangements for partnership with the schools, including interaction between supervision of practice and thesis

Broader, more formative areas:

- Partnership with the students – how the programme builds on understanding their motivations, professional aspirations, challenges and expectations
- Integration across the different forms of knowledge included in the programme (subject, education research, practitioner knowledge etc.)

Conclusion

From an international perspective we believe that there the PLS TE reform is an ambitious reform that is definitely moving in the right direction and that it has the potential to educate strong Norwegian teachers. Yet, as we discuss above, we believe the Ministry of Education and Research and NOKUT will need to address the issues we discuss above in order to increase the likelihood of success of this ambitious reform.

We look forward to continuing our work for the next 18 months. We have now gained an understanding and appreciation for the regulatory framework, the reform, and the challenges the institutions and teacher education academic staff is facing. In the coming months we look forward to continuing to support the institutions and teacher education academic staff in their efforts to provide stronger teacher education in Norway.

Sincerely,

Marilyn Cochran-Smith,
Professor, Boston College

Mikael Alexandersson,
Professor, Göteborgs universitet

Alis Oancea,
Professor, University of Oxford

Karen Hammerness,
*Director of Educational Research and Evaluation,
American Museum of Natural History*

Viv Ellis,
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