

Centre for Professional Learning in Teacher Education

Annual report for 2021

Vision

ProTed's vision is to promote innovative and relevant teacher education programs for future schools. The overarching goal for these efforts is to promote coherent, integrated programs. The centre is a developmental unit, a national provider of insights and an internationally recognized partner for the development of a knowledge base for teacher education. The centre is a catalyst for research and development through systematic interventions, analyses and dissemination.

In order to realize our vision, we build on the following principles:

- Research based development of teacher education
- Systematic work with coherence and progression in studies
- Systematic work with student active learning
- Development of partnerships between universities and schools
- Systematic work to integrate multiple knowledge domains

Together these principles provide a basis for educating professional teachers for the future knowledge society.

Executive summary

After two long years of the Corona Pandemic, the Norwegian society is finally opening again. To say that higher education has been changed by the pandemic is an understatement. For two years, students and educators have navigated web-based teaching solutions. The impact on teaching at universities has forced the further development of on-line courses, hybrid models of instruction and innovation in working with on-line environments. As we find our way out of the tunnel, we will surely experience new forms of teaching and learning that did not exist two years ago. Out of the crisis can come innovation and new ideas.

Activities during 2021 were influenced by the Covid-19 pandemic. Many meetings and seminars that should have been physical were moved to zoom. In spite of this, we have tried to fulfill our intentions for work packages as best possible. A reorganization of the entire institute at UiT, as well as moving into a new building, also caused some planned projects to be postponed until 2022.

Ten years have gone by since the first SFU was funded in 2011. However, due to the pandemic, we were granted an extension for our activities until the end of 2022. We thank the Directorate for Higher Education and Skills (HK-dir) for allowing us to carry on in the SFU capacity, using 2022 to make important transitions for future innovation at our institutions. The process of writing an anthology to share the experiences of ProTed is underway, with a publication date in 2023.

The ProTed leadership changed in 2021. Henning Marius Sollid moved into the leadership role of ProTed Tromsø after Siw Skrøvset became department head of their institute. Doris Jorde continued her leadership role in 2021 with Kirsti Engelién as Associate leader. In 2022 they exchange roles as Jorde is moving towards retirement. ProTed welcomes Sollid and Engelién into their new leadership roles and looks forward to continuing innovation projects in teacher education.

Henning Marius Sollid and Doris Jorde

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Organization

ProTed serves as an experimental bed for innovation in teacher education through systematic interventions, analyses and dissemination. ProTed is a partnership between the University of Oslo (UiO) and The Arctic University of Norway (UiT), with UiO as the host institution. The ProTed board has members from both institutions. Professor/Dekan (Faculty of Education, UiO) Rita Elisabeth Hvistendahl serves as the board leader. The centre is managed through joint scientific leadership, with leaders at UiO and UiT.

ProTed leadership teams at UiO and UiT (2021)

UiO

- Leader of ProTed/Professor Doris Jorde
- Head of Studies Kirsti Engelién
- Seniorkonsulent Magnus Heie

UiT

- Leader of ProTed/Henning Marius Sollid
- Adviser Silje Sivertsvik

The centre serves as a development unit together with the two universities and the hosting departments: Department for Teacher Education and School Research (ILS, UiO) and Department for Teacher Education and Pedagogy (ILP, UiT). ProTed works with the development of quality in the integrated five-year teacher education programs for levels 1-7, 5-10 and 8-13.

<http://www.uv.uio.no/proted/om/> and <https://result.uit.no/proted/>

ProTed is organized in work packages, each contributing to the design of coherent teacher education practices.

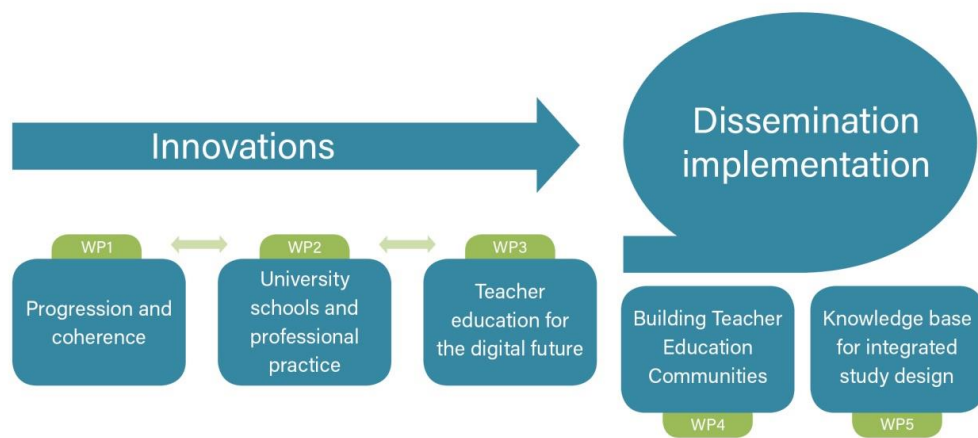


Figure 1: The organization of the ProTed work packages

The first three work packages highlight innovation in teacher education programs related to student centered study designs. A large body of development projects collectively generate a movement towards the future, experimenting with new design elements in the five-year study programs.

The latter two work packages relate the experimental work in ProTed to the wider community of teacher educators locally, nationally and internationally. Implementing ideas into working models and evaluating the outcomes of new innovations in our programs locally provides a growing knowledge base for dissemination nationally and internationally.

ProTed builds on the ideas of coherence and innovation developed to improve teacher education programs for all involved (students, those teaching courses, those working in school, etc). Changes come about through the process of identifying problems or challenges, followed by innovative design and solutions, implementation, evaluation and research. The process is iterative and serves to continuously push ideas of change into the system of teacher education. Challenges may come from students, from those teaching in the program, from teachers in practice schools or from changes to our national guiding documents (forskrifter).

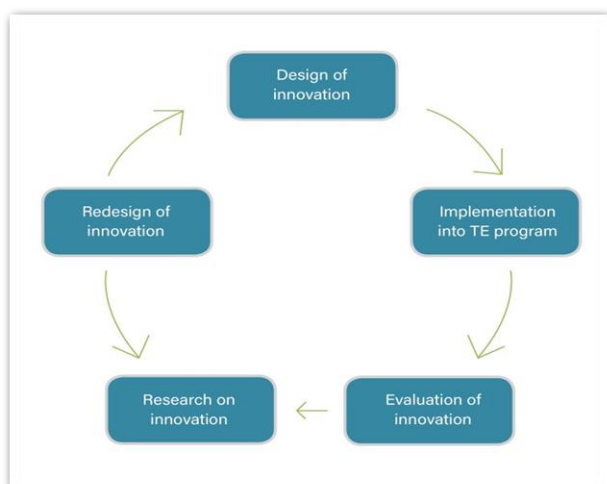


Figure 2: Innovation cycle

Research and development activities

In the following sections we highlight selected projects from the individual work packages in ProTed.

WP1: Coherence and Progression in Integrated Teacher education

The overarching goal for WP1 is to promote coherence and progression in our programs by developing research-based, student-active and professionally relevant practices on campus. Innovations are related to different components in the program, with the intent to promote integration and progression between the different content areas. The project portfolio includes elements such as e.g. new assignment designs, developing integrative dialogue arenas and addressing subject-specific or subject-overarching themes. This work builds upon systematic, research-based interventions and innovations, stimulating new initiatives, e.g. through seed-money, and disseminating projects that have exemplary status.

Working with coherent models of integrated teacher education for grades 8-13 in the “Oslo Model” for teacher education involves the integration of academic subjects (2) together with professional courses (pedagogy and subject didactics) and 100 days of school practice (see attachment 1). Coherence and progression in the five-year teacher education program at UiO (Lektorprogrammet) involves close collaboration between five faculties. In this way, students are engaged with top academic research environments, while at the same time taking courses preparing them to become professional teachers. Models for integrated teacher education 1-7 and 5-10 involve 3-4 academic subjects, pedagogy, subject didactics and school practice as students work towards a master’s degree (see attachment 1). ProTed works continuously with different aspects of the three different teacher education programs helping students in their professional development through the five-years.

Model development at ILS

In the fall of 2014, ILS started a revised program for teacher education 8-13 based on new national guidelines. In our report for 2018 and 2019, we reported on the PROMO project designed to connect practice teachers with students on campus. In 2019 we presented information on the revised plans and student evaluations for the MA courses in semesters 8-10. The first lector students following the new plan began their master specialization in Spring 2018, delivering their Master thesis in the spring of 2019.

Following up on their work with GLU and the ATP-group of international experts, the Norwegian Agency for Quality Assurance in Education (NOKUT) conducted a mapping in 2019 of the programs educating teachers for grades 8-13. In 2020, NOKUT started an evaluation process with the intention of contributing to the development of new knowledge and insights into these complex programs. They were explicit in stating that they wanted this to be a collaborative process which would be considered useful for the institutions. As a centre of excellence, ProTed UiO has earlier established a researched based network with other institutions offering these programs for 8-13 (NTNU, UiB, UiT). We therefore invited NOKUT to a meeting to discuss their upcoming evaluation, giving feedback on important topics and research. NOKUT appointed an international supervision committee with Inga S. Jensen (ILS, UiO) as chair. She has worked with ProTed and is a renowned researcher in this field.

NOKUT gathered different sets of data, including site visits from the expert committee. An interesting aspect, that we have already been given feedback on, is the management structure of the 8-13 program. UiO has the largest program with 250-300 new students per year. The program has six different fields

of study with 49 possible combinations for subjects 1 and 2. The committee's feedback was very positive for this leadership model, and the work that has been done to be able to offer an integrated teacher education in collaboration with five different faculties.

The ongoing evaluation will provide useful insights when placed in context with our own quality work, providing a foundation for our continuous work with the design of the program.

STIL project (Study intensive forms of teaching and learning in GLU teacher education)

The STIL-project (Student Intensive Learning Methods) is a project designed to increase and support first year teacher students' learning, through focus on engagement and motivation in the first phase of their teacher education program. One important aim of the project is to establish an early connection to the development of a professional identity as a teacher, so that this can serve as a motor for learning throughout the years of study. The first phase of the project was implemented at the start of the term in august 2017, and was a combination of activities including creative workshops on communication, drama and music, meetings with schools and teachers, social excursions, presentation of various subjects and programs, etc. The overall question during these two weeks of introduction was, "Why do I want to become a teacher?" "What kind of teacher do I want to be?" and "What is necessary in order to become this teacher?". The project had its start in 2018, resulting in a film to document experiences (<https://www.youtube.com/channel/UCLe6sGAZPvC7vruF4pSHqcQ>). The start-up week project is run every year for new students.

Students returned to campus in the fall of 2021, through with restrictions due to the pandemic. STIL had a usual start at UiT between students and staff, (and in the new building), however school visits were limited. Plans for following students through their 5-year study continue and will result in video films.

UiT has started a new, flexible teacher education program for grades 1-7 and 5-10 (GLU) at Harstad. Connected to this development, ProTed UiT and the program for teacher education have received funding from HK-Dir to work with student active learning forms in flexible teaching programs.

WP2 University schools and professional practice

ProTed works to integrate forms of knowledge through searching for coherence between academic and experiential knowledge throughout a five-year integrated study design. This work package develops more symmetric partnerships between stakeholders in teacher education at campus and in university schools by developing innovative models for professional practice. Developing the University School concept as a sustainable partnership model is a core task. There is great potential in further developing this concept, not least by involving university schools in joint research and development projects, mentoring practices, campus instruction and arenas for knowledge exchange.

UiO and UiT were the first institutions to professionalize the inclusion of partnerships with schools in their teacher education programs. The idea of "University Schools" has been developed since 2009, and from 2011 in ProTed. In 2015, this partnership model was included in Teacher Education 2025: National Strategy for Quality and Cooperation in Teacher Education. The strategy states that all teacher education institutions shall have partnerships with schools and kindergarten to strengthen student practice as well as school based research. The key to development in this area is to continue to

explore ways for campus and school to meet to exchange and build on their knowledge bases, especially since our students meet both environments during their teacher education.

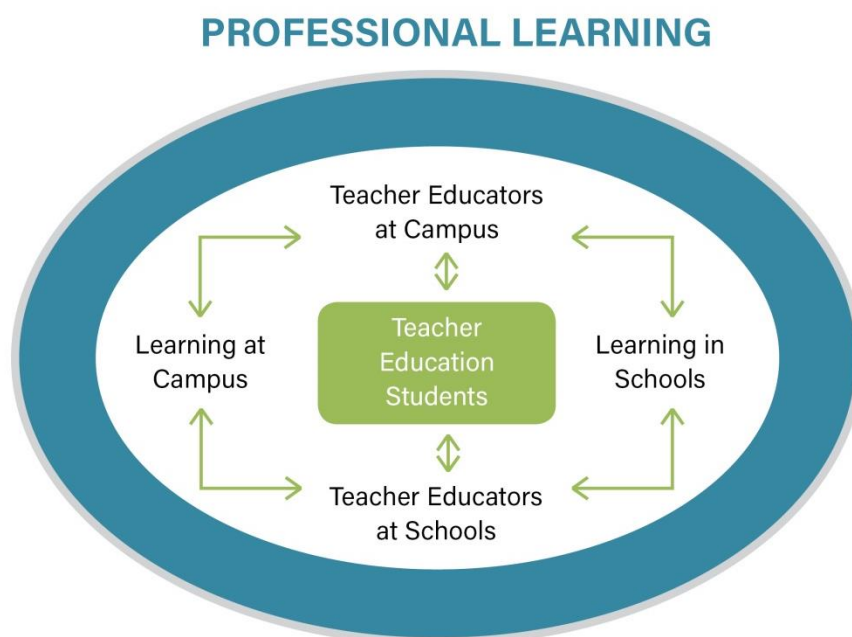


Figure 3: Collaborative Model of Teacher Education (Developed further from Lillejord, 2014)
<http://www.tandfonline.com/doi/abs/10.1080/02619768.2016.1252911>

University of Oslo

The University schools project at the University of Oslo is in its fourth period (2018-2022) with 18 schools. Goals for UiO university school project:

- Develop quality in schools and higher education to strengthen learning for teacher education students and students in schools
- Further develop teacher education including development of models for practice
- Increase cooperation in research and development work between ILS and schools

The situation with the pandemic made it difficult to come together in collaboration as we have done earlier. We ambitiously planned a Christmas seminar for our schools in collaboration with the research teams evaluating the new curriculum for 1-13. Sadly, we had to cancel at the last minute due to changes in the Covid-19 regulations.

Research and Development (FOU) circles – This project aims to create a new arena for FoU-collaboration. This arena will create opportunities for researcher, teacher, and students to work together. The model has the potential to become a new interactive arena for students’ school practice. The Corona situation postponed the start of this project until late in the fall of 2021

One of the FoU-circles managed to start their collaboration in 2021. Nine teachers at three university schools (Blindern vgs., Rosenvilde vgs and Nessoden vgs) wished to collaborate with a research team on the topic of “Power and Sustainability”. In the spring of 2022, several master students will be able to join this collaboration as equal partners. In addition, two other university schools (Ullern vgs. and

Mailand vgs.) were given stimulation funding so that they can collaborate with faculty at UiO to become participants in the FoU-Cirsel-projects in 2022.

Even though the pandemic made it difficult to come together; we were luckily able to announce seed funding for research and development projects in which schools and faculty can apply for funding. Three projects were chosen in 2021:

- Global History Understanding, Institute for archeology, conservation and history (IAKH) at HF Faculty (30.000 kr). A pilot project to develop cooperation between university educators and classroom teachers.
- Literature History as a didactic theme, Institute for linguistics and Nordic studies (ILN) at HF Faculty (80.000). Development of didactical themes with university educators and classroom teachers.
- Inquiry based Mathematics teaching, ILS MN, and Ullern vgs (82.500). Project between university educators and classroom teachers to develop teaching modules in mathematics.

University of Tromsø

The university school project at UiT is in a transition period, having completed the pilot project in 2021. Work is in progress to determine the best model for future work with university schools. School leaders have been involved in evaluating the pilot project, including ideas for future projects. Throughout 2021, seminars involving university schools and university kindergardens have provided feedback on experiences in the collaboration to help build future projects together.

Four university schools (1-7) participated in a seminar series in 2021 to discuss the master's degree for grades 1-4 (begynneropplæring). Collaboration with schools and teachers is a way to build a bridge between campus and schools for potential master's degree projects.

WP3 Teacher Education for the Digital Future

2020/2021 forced all teaching institutions over to digital solutions due to the COVID-19 pandemic. Teacher education programs at UiO and UiT were fortunate to have worked with different aspects of this situation through many years. For instance, UiO has developed new ways of combining technology and assessments, and UiT has developed new learning activities building on their own FutureLab. The communities of practice, using digital technologies worked well during 2020-2021 to share ideas and provide the best possible instruction for teacher education students. One cannot say enough about how colleagues met with a willingness to adapt and work as a community to meet the challenges to teacher education in 2020/2021. Lessons learned from the time of the pandemic will help us better understand the role of digital technologies in teaching and learning – be they positive or negative.

VIVA

The Visual Vocal Application (VIVA) project is developing the VIVA app for video and audio recordings according to the Data Protection Regulation (GDPR). In developing the app, we have developed an infrastructure that collaborates with other necessary technologies and systems. The VIVA app can be used to make recordings in supervised professional training, mentoring of colleagues and when collecting data for master thesis and research.

DIVA

The Digital Integration of Video Assessment in Different Arenas (DIVA) project is an innovation project piloting the VIVA app at ILS's teacher education programs. The DIVA project started in 2020, with students in the 8-13 program filming their classroom teaching, then using this to discuss teaching strategies with other students and instructors from ILS (and other variations on this theme). Current analysis shows that students are reporting positive learning experiences in both formative and summative assessment when using the VIVA app. Covid-19 has placed some restrictions on the DIVA project plans, however, the move to more digitalization has now also placed this type of technology into the forefront for quality in teaching. The DIVA project has received multiple sources of funding, including from DIKU to work with student active learning. Multiple work packages have started their trials of the VIVA app in 2021, continuing into 2022 and beyond.

The VIVA and DIVA projects are an important part of the innovation portfolio for improving teaching education programs through digital technologies. ProTed will therefore continue to contribute to the development of VIVA in the year to come.



DIVA transforms formative and summative assessment in teacher education:

- Formative assessment dialogues with mentor at practice placement will no longer be based on divergent memory or lack of memory of what happened in a specific teaching sequence. The video recording will support a common understanding of the teaching sequence.
- Experiences in practice placement will merge with campus activities, as students bring their video recorded teaching sequences for common examination and assessment between themselves, peers and teacher educators at campus.
- Mentors from practice placement and teacher educators at campus will collaborate on providing formative and summative assessment to the students by making use of students' recorded videos of teaching sequences.
- Students can become more aware of their own professional development over time by creating a portfolio of their teaching sequences from the beginning to the end of their educational program.
- Teacher educators can bring practice placement into their teaching in lectures and seminars at campus, to exemplify pedagogical theory and make their teaching more relevant for their students.

MOSO in teacher education (UiT) - Design of digital supported teaching practice

MOSO (mentoring observation software) is a Norwegian developed program for use in practice advising. The product was developed by UiT, UiA and University of Halmstad, Sweden. MOSO provides a digital platform where plans, documents, and feedback may be exchanged and stored for later use. The platform has been in a development phase with the three universities for three years with formative evaluation in place. Results from the first period showed that students reported better quality in the advising they received from practice teachers.

Funding for the project to continue working with MOSO was awarded through the «Digitalisering for læring i høyere utdanning for 2020-21» program at DIKU. Six teacher education programs are involved in the project, including Barneagelærerutdanning, GLU 1-7, GLU 5-10, PPU A; PPU Y and Lektor 8-13. The goals of the project are to develop digital designs to support learning, student

advising and feedback for teacher education students in practice using MOSO (monitoring and observation software). 230 of 350 students in GLU are currently using MOSO in their practice periods. Plans are being made for use of MOSO in “barnehagelærerutdanning” and for lector utdanning (8-13) as well as the flexible teacher education described in section 1.

Activities for the project group at UiT and Alta include introduction of the MOSO platform to first year students in GLU with implementation in practice spring, 2021; implementation on use of the MOSO platform at several university and practice schools for use with 4th year students and planning for future use of MOSO in all practice periods for students. Due to the Covid situation, the project will ending in the spring of 2022.

WP4 Building teacher education communities

WP 4 is concerned with building learning communities of teacher educators locally, nationally and internationally. The goal is to integrate research and experience based knowledge on teacher education. All teacher education programs in Norway integrate multiple knowledge domains including academic subjects (science, Norwegian, mathematics), subject didactics (science education, mathematics education), pedagogy and classroom practice. Teacher education students navigate through these domains in their education, making it necessary for programs to follow their progression and increase internal coordination between those delivering courses in the programs.

2020 and 2021 has been years marked by challenges to all teacher education communities. School and university closures forced digital teaching solutions into the forefront. Prior work done on the integration of the learning environment Canvas as well as teaching innovations related to digital teaching made this transition possible for our teacher education programs. ProTed used the opportunity to build on past experience within digitalization of teaching such that little time was lost to our educational programs. Of particular importance were internal meetings where colleagues shared experiences and pushed development of digital instruction.

PROMO (UiO)

2014 marked the start of the new study program at ILS for 8-13 five-year integrated teacher education at UiO. We have presented the PROMO project in earlier reports as a successful innovation for providing students with a social and academic network. In 2020 and 2021, this program became even more important for students as they lost their physical connections on campus. (Please view this recent video providing a student perspective of PROMO <https://fb.watch/3iVOz8Dx4z/>). PROMO is a voluntary supplement to the teacher education program in which groups of students meet with classroom teachers from their area of study. The project is financed by ILS/ProTed.

Pedagogical Innovation at UiO network (PIN) (UiO)

The PIN network was established in 2020 to share experiences at UiO's SFU's of which we now have four. Two PhD positions were secured by Sten Ludvigsen, then Dean at the Faculty of Education, to explore the lessons learned in teaching in higher education. ProTed will announce a PhD position in 2022.

Tools for Mentoring (Verktøy for veiledning) (UiO)

Research project leader: Eli Lejonberg. Project duration: 2019 – 2022). Funding: The Norwegian Research Council.

The project is designed to develop tools for mentors and new teachers working with mentoring in a structured and research-based manner. The tools are to help adapt mentoring to the individual student's individual needs and support mentoring in focusing on essential practices that teachers need to master. The project is represented in the DIVA project group (see work package 3). The project has produced a podcast describing the tools and results from the project:

Nye metoder for veiledning av lærerstudenter kan gjøre overgangen til klasserommet enklere - Institutt for lærerutdanning og skoleforskning (uio.no)

Tools for mentoring - Department of Teacher Education and School Research (uio.no)

QUINT – Nordic Centre of Excellence: Quality in Nordic Teaching (UiO)

ProTed continues to be engaged in the QUINT center whose vision is to systematically investigate teaching quality in the Nordic countries via video recordings taken in Nordic classrooms. ProTed participates in the work package linking quality to teacher education.

[QUINT - QUINT – Quality in Nordic Teaching \(uio.no\)](#)

National network for master supervision (UIT)

Educating the Educators is an important way ProTed builds capacity among colleagues in other teacher education institutions. The new framework for GLU teacher education requires all students to write a MA thesis. This requirement in turn means that many teacher educators, who previously were not involved in advising MA students, will now be engaged in this activity.

Building on ProTeds work with establishing a national arena for collaboration connected to the master thesis, the strategic unit for Teacher Education, Universities Norway (UHR-Lærerutdanning) asked UiT to collaborate with NTNU to continue this work. The two institutions were asked to start a national network for supervising master students in Teacher Education, especially for students in the GLU-programs. The network is modelled after the previous ProTed seminars to include sharing of experiences and discussions about the quality of the master's degree for GLU. The first meeting took place November 24th in 2020, and in February 2021 the second seminar took up the master's degree thesis, including empirical and methods sections. A digital conference was held in the fall of 2021, and two seminars are planned for 2022 with themes of advising and evaluation.

Learning, Assessment and Boundary crossing in Teaching Education (LAB-Ted) (UiT)

Research project leader: Rachel Jakhelln, together with docent Siw Skrøvset (UiT); Professor May Britt Postholm, NTNU; Professor Viv Ellis, Kings College, London. Project duration: four years, financed by the Norwegian Research Council (2019 – 2023).

The new 5-year integrated teacher education framework for 1-7 and 5-10 (GLU) leads to a MA degree oriented towards the practice field and taking up challenges found in schools. The goal for teacher education is to prepare students for becoming research-based teachers (FOU) through their work with a BA and MA thesis. The main research question in the LAB-Ted project is: How can collaboration between universities, schools and student teachers be fostered in order to build capacity for professionally oriented, practice-based research in teacher education as well as the development of teachers' professional practice in five school subjects within the context of the 2017 GLU-reforms?

The overall goal for LAB-Ted is to increase students' research competency in GLU through models of instruction and advising that help students with their BA and MA thesis. Students will work with

teacher educators (campus), university schools (teachers and school leaders) in a partnership for development of a professionally oriented, practice-based research competency. Teacher education students in English, Social Studies, Science, Mathematics and Physical Education are the target group of the study. The project will study student progression through their research development, looking at those factors that lead to progress or lack of progress. Formative interventions, developed by Yrjö Engeström, are used to study FOU development as well as change and development of teacher education on campus and in schools. The project will develop new models for student advising towards the MA degree.

In 2020 the first group of GLU students participating in the LAB-Ted project completed their FoU thesis (year 3) at UiT and NTNU (20 Spring and 18 Fall). Partners in the project, students and practice teachers have developed a strong collaboration through the project. Progress through the first year points to the importance of the three-part model for advising of FoU work in teacher education. In 2021, students are working on the Master degree projects, including educators from ILP, classroom teachers and teacher education students.

TED-NET project (Network for staff mobility in TE) (UIT)

Research project leader: Ove Gunnar Drageset (UiT). Project duration: four years, financed by NOTED. Additional partners: University of California, Berkeley; University of Auckland

There are three main objectives with the network. The first is to develop the quality of all three participants' teacher education through yearly meetings and joint research on the quality of teacher education. The second is to establish staff and student mobility related to this joint research through scholarships for comparative studies. The third is to develop common courses for student mobility between all three partners. For UiT, the aforementioned objectives will be of great importance to our development of the teacher-as-researcher focus in our national teacher training programmes, as the activities involved no doubt will inform and inspire all participants.

The first meeting of TED-NET took place in Tromsø in November 2018. Participants from New Zealand and California scrutinized the GLU teacher education program at UiT, looking at three key thematic areas: Feedback and evaluation, Integration and Research at the Master level. The second TED-NET meeting took place in Auckland, New Zealand in November 2019. At this meeting we expanded the scope of the project, looking also at secondary teacher education. Participants from the three countries studied models for teacher education, visited classrooms and talked with students to get an in-depth picture of how teacher education works at the University of Auckland. Projects between partners from the three countries started in multiple subject domains. Student exchange is active between the three institutions.

The final meeting was to take place at the University of California, Berkeley in 2020. However, due to the Corona pandemic, the meeting is postponed until the fall of 2022.

WP5: Knowledge base for integrated study design and quality indicators

The overall aim for ProTed is to develop designs for high quality integrated teacher education. This work package synthesizes the knowledge produced through the developmental projects of WP 1-4, evaluates this knowledge in light of national and international research and develops models for study

design and quality descriptions. WP5 cooperates with WP 1-4 to develop quality descriptions found in our models, in descriptions of progression and in research publications. As the knowledge base for teacher education continuously develops, work proceeds to bring forward a research base for the further development of teacher education.

WP5 is entering its final phase as ProTed funding comes to an end with two important projects.

Anthology

ProTed will produce an anthology in 2023 with the title **“Educating Professionals for the Schools of Tomorrow: The Case for a Master’s Degree in Teacher Education.”** The book will feature the ideas behind and implementation of the Master degree for all levels of teacher education. We see the anthology as our most important means of dissemination of the 10 years of ProTed (lessons learned). Proposed publication date will be in 2023. We are in communication with Routledge for publishing the anthology, which will be in an open-source format. The anthology will be a major contribution to the ProTed Seminar in 2023 to mark the end of Norway’s first SFU.

Dissemination

Dissemination from the five work packages takes place at three levels: Internally, nationally and internationally. ProTed works actively with other teacher education institutions to share innovations and discuss models for programs. Publications from ProTed activities are found in academic journals and national reports and at conference presentations. Members ProTed participate in national networks and committees (including UHR and KD) where innovations from ProTed activities are shared.

Two ProTed doctoral students completed their work at UiT in 2021. We congratulate Lisa Mari Laurantzen (Det skal helst gå godt – Skjønnlitteraturens bidrag til undervisningen om folkehelse og livsmestring i norskfaget på videregående skole. <https://munin.uit.no/handle/10037/22698>) and Oda Julie Hambre (Innføring og bruk av iPad i grunnskolen. Sosiomaterielle sammenvevinger av teknologi, skole og lærerprofesjon. <https://munin.uit.no/handle/10037/23249>)

Publications from the professional communities of ProTed are at the following links:

UiT: publikasjoner2021 ProTed - Senter for fremragende lærerutdanning (uit.no)

UiO: Siste publikasjoner - Institutt for lærerutdanning og skoleforskning (uio.no)

ProTed future plans (UiO and UiT)

ProTed has been granted an extension for activities until the end of 2022.

In the following we provide a strategy for the activities we will implement in 2022 in our last year of ProTed. Our intention is to continue with many of these projects into 2023 and also after the end of ProTed funding.

1. We will work on documentation of the “Lessons Learned” of ProTed as we approach the conclusion of the SFU funding. The final report to HK-dir is due March 2023.

2. We will continue to work on plans for innovation to continue after the end of the ProTed funding.
3. We will continue the planning and writing of an anthology on teacher education in Norway. Publication date: Fall of 2023.

University of Oslo (UiO)

1. ILS welcomes Kirsti Engelién as the new leader of ProTed in 2022. The 10 years of experience from ProTed will now have a permanent place in teacher education at UiO.
2. We will continue to develop the study design for our five-year program, looking especially at key factors improving student engagement, their professional development and measures to ensure less drop out. In the coming year we will focus especially on first year students.
3. We will continue to work with the development of the University school model - in 2022 exploring whether it is possible to build even stronger connections during student clinical training in schools.
4. We will continue our work with the development of the VIVA-app and system enabling the use of authentic video in different learning arenas and contexts.
5. We will continue to work with the 8-13 network for collaboration with other universities offering programs for 8-13. The network is especially relevant following up on the NOKUT evaluation. The network will work with sharing ideas and serve as a reference point for political decisions related to teacher education.
6. We will work together with the SFU CCSE on the thematic areas of computational science in science and math teacher education.
7. We will work with the network for Pedagogical innovation at UiO on lessons learned from SFU's. In 2022 our concentration from ProTed will be related to the organization of an SFU in the leadership structure and also how interdisciplinarity is possible in higher education.
8. We will engage in the work of the research group "Teacher Professionalism and Educational Change: Practices, Purposes, Policies (TEPEC)" as we combine innovation, evaluation, and research studies within the teacher education program. Coordination of activities will result in research papers and conference presentations of the Oslo Model.
9. We will work with research projects at UiO with an eye towards how they may improve the teacher education program.

The Arctic University of Norway (UiT)

1. We will continue to work with the STIL project, implementing phases 1 and 2 as a permanent part of the UiT teacher education program and publishing articles from the project.
2. We will continue our work with the University school project, with an emphasis on sharing experiences between all levels including barnehave, GLU, and 8-13. A new leader will be recruited in 2021.
3. We will continue development of the "Mastertorg" to bridge the gap between the schools and students' interests and needs, and will initiate research to evaluate this project.
4. We will continue the investigation of the MOSO application in all levels of teacher education.
5. We will continue participation with the TED-Net project, together with Berkeley and Auckland.
6. We will continue work with the LAB-Ted project at UiT.
7. We will continue development of master thesis supervision through the Professional Learning Community of academic staff, which will meet on a regular basis.

8. We will continue development of the progression and coherence in the GLU master education, together with NTNU, with a certain focus on progression of the students' R&D-competence combined with relevance for the schools.
9. We will continue development of the Tromsø model for teacher education, especially related to a growing knowledge base related to new projects.

Student Engagement in ProTed

Students are at the core of all ProTed activities, whether we are studying our teacher education programs or introducing innovations. Student feedback is highly regarded for evaluation and research on program development, driving the iterative process of redesign. Student participation in formal and informal arenas for teacher education provides the student voice in all activities related to teacher education. Students are always represented at national conferences in teacher education (Lektorutdanningskonferansen). The student voice is important and necessary for ProTed.

At UiO students are involved in the planning of teacher education progressions through academic faculties (SV, MN, TF and HF) as well as integration with teacher education programs. We see an increasing interest from faculties to include lector students in decisions related to courses, learning environments and social activities. Lector students have several political and social platforms where students have direct contact with the leadership at ILS and ProTed. Lector students are involved in research projects at ILS as they build competencies in research and development connected to teaching and learning in schools.

At UiT, the STIL-project (Student Intensive Learning Methods) has been the key project for developing increased student engagement since 2017. All new students in the GLU 1-7 & 5-10 master programs are included, together with students in year two as mentors. The second year students led by student representatives, planned and organized components of the introduction week activities for new students. Continuous evaluation of the project shows the need for academic and social connections during the first weeks, and throughout the first year of the professional study. These ideas have become even more important in 2020 as we faced the Corona pandemic.

ProTed: Educating inquiring professional teachers, ready to become change agents in schools



Attachment 1

Teacher education programs at UiO and UiT and national regulations

Teacher education programs are regulated by national regulations for each level of TE:

Forskrift om rammeplan for grunnskolelærerutdanning for trinn 1–7:

<https://lovdata.no/dokument/SF/forskrift/2016-06-07-860>

Forskrift om rammeplan for grunnskolelærerutdanning for trinn 5-10:

<https://lovdata.no/dokument/SF/forskrift/2016-06-07-861>

Forskrift om rammeplan for grunnskolelærerutdanning for trinn 8-13:

<https://lovdata.no/dokument/SF/forskrift/2013-03-18-288>

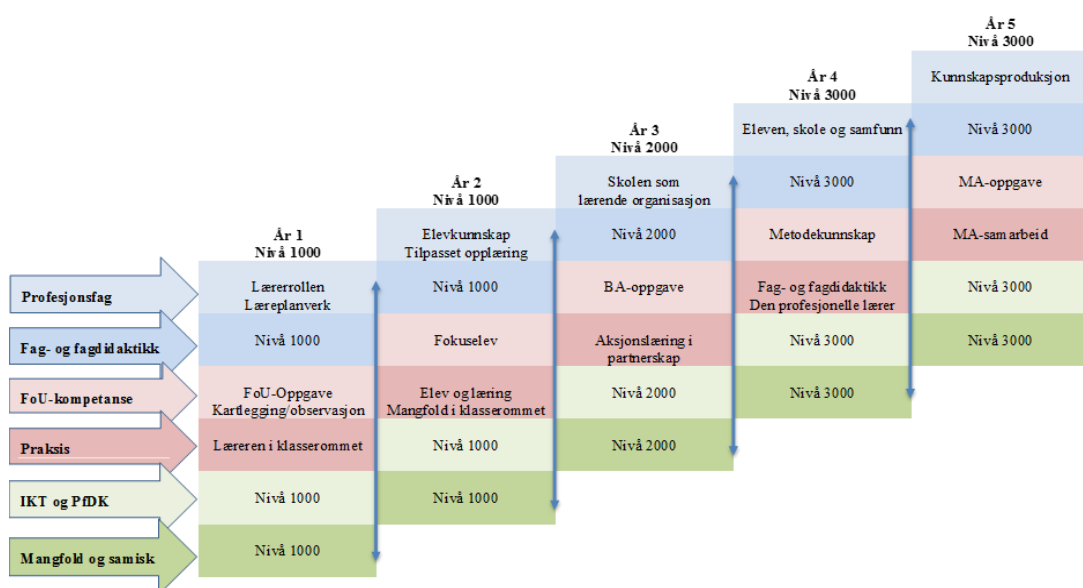
UiT Tromsø model 5-10

	Høst	Vår	Undervisningspraksis
1. studieår	Fag 1 (15sp)	Fag 1 (15sp)	25 dager
	Fag 2 eller 3 (15sp) + PEL (10sp) + Praksis + FoU fag 1 (5sp)		
2. studieår	Fag 2 eller 3 (15sp)	Fag 2 eller 3 (15sp)	30 dager
	Fag 2 eller 3 (15sp) + PEL (10sp) + Praksis + FoU fag 2 (5sp)		
3. studieår	Fag 1 fordypning (20sp)		30 dager
	Fag 2 fordypning (20sp)		
	FoU-tema fag 2 (5sp)	FoU-oppgave fag 1 (15sp)	
	Praksis		
4. studieår	PEL (15sp)	Masteremne (15sp)	30 dager
	PEL (15sp)	Masteremne (15sp)	
	Praksis		
5. studieår	Metode (15sp)		
	Masteroppgave (45sp)		

UiT Tromsø model 1-7

	Høst	Vår	Undervisningspraksis
1. studieår	Matematikk (15sp)	Matematikk (15sp)	25 dager
	Norsk (15sp) + FoU (5sp) + PEL (10sp) + Praksis		
2. studieår	Fag 3 (15sp)	Fag 3 (15sp)	30 dager
	Norsk (15sp) + FoU (5sp) + PEL (10sp) + Praksis		
3. studieår	Fag 4 (15sp)	Fag 4 (15sp)	30 dager
	Fag 1 fordypning (15sp)	FoU-oppgave (15sp)	
	Praksis		
4. studieår	PEL (15sp)	Masteremne (15sp)	30 dager
	PEL (15sp)	Masteremne (15sp)	
	Praksis		
5. studieår	Metode (15sp)		
	Masteroppgave (45sp)		

Progression throughout five years: The Tromsø steps



Teacher education program at UiO (8-13) “Oslo Model”



University of Oslo Study design – Humanities (8-13)				Dimensions throughout the five year, integrated study design			
				Mentor Program (Promo)	Teaching practice in schools	Research methodology	Professional digital competence (PfdK)
10	Master thesis (Subject 1 or Subject didactic 1)			1 seminar + poster-conference	Poster conference with schools	Experience from scientific work Master thesis	Test mapping professional digital competence 3
9	Subject 1 or Subject didactic 1	Subject 1 or Subject didactic 1	Subject 1 or Subject didactic 1	2 seminars	15 days: Empirical data collection?	Data collection + analysis	Digital learning module 4 (integrated SPOC)
8	Subject 1 or Subject didactic 1	Subject 1 or Subject didactic 1	Subject 1 or Subject didactic 1	2 seminars	R&D in schools	Research design + method	Test mapping professional digital competence 2
7	Professional course (Integrated Educational Theory and Subject Didactics)			2 seminars	45 days : Assessment and differentiated instruction	Research methods + R&D exam assignment	Digital learning module 3 (integrated SPOC)
6	Subject 1	Professional course (Integrated Educational Theory and Subject Didactics)		2 seminars	25 days : teaching, learning and classroom management	Research in schools + R&D exam assignment + digital video case exam	Digital learning module 2 (integrated SPOC)
5	Subject 1	Subject 1	Subject 1	3 seminars	Visits to different learning arenas (museums etc.)	Bachelor thesis	Technology in subject areas and research
4	Subject 1	Ex.phil	Subject 1	3 seminars	Schools visits, university schools	Specialization in subject area + Analytical skills	Test mapping professional digital competence 1
3	Subject 1	Subject 1	Professional course	3 seminars	15 days : Pupils learning in different subjects	Systematic observation + Case analysis of pupils and teacher	Digital learning module 1 (integrated SPOC)
2	Subject 2	Subject 2	Subject 2	3 seminars	The role of the teacher	Professional insight in subject area + Critical thinking	Technology in subject areas and research
1	Subject 2	Subject 2	Subject 2	3 seminars	Schools visits, university schools	Professional insight in subject area + Critical thinking	Technology in subject areas and research
	10 ECTS	10 ECTS	10 ECTS				

Attachment 2

Externally funded projects

ProTed has been successful in collaborating with colleagues at ILS and ILP in applying for research funding locally, nationally (DiKU and NRF) and internationally (EU).

1. (ILS): Verktøy for veiledning - Prosjektet skal utvikle forskningsbaserte verktøy til bruk i veiledning, og undersøke hvordan verktøyene bidrar til nye læreres profesjonelle utvikling. Project leader: Eli Lejonberg. Duration 2019 – 2022. The project is integrated into the DIVA 2.
2. (ILS) Linking Instruction in Science and Student impact (LISSI) – Project financed by “Utdanningsdirektoratet” to improve the teaching of science in grades 1-10. The project is financed for three years and will be run jointly between UiO and UiT. Project leaders: Marianne Ødegaard and Marit Kjærnsli (UiO). Duration : 2018-2021. The project is writing an anthology to disseminate results.
3. (Oslo Met + ILS): Developing ICT in Teacher Education (DICTE) - ERASMUS+ project administered by HiOA and where ILS/ProTed is a partner with Greta Björk Gudmundsdottir. The three year project involves four European countries.
<http://www.hioa.no/Aktuelle-saker/Om-laererstudenters-digitale-kompetanse>
4. (ILS): QUINT - Nordic centre of excellence in education, Nordic Council on Ministries. ProTed leader Doris Jorde is participating in the project related to teacher education. Project leader, Kirsti Klette (UiO). 2019 – 2023.
5. (ILS): Science Education for Action and Engagement Towards Sustainability (SEAS). Project leader: Erik Knain, ILS. Funding: EU: Science with and for Society Program. Duration: 2019 – 2022). ProTed leader Doris Jorde participates in the project.
6. (ILP): TED-Net Project (Establishing a network for staff mobility and cooperation to develop research on teacher education) (UIT). Project leader: Ove Gunnar Drageset (UiT). Project duration: four years, financed by NOTED. Additional partners: University of California, Berkeley; Univeristy of Auckland. ProTed leaders Siw Skrøvset and Doris Jorde participate in the project.
7. (ILP): Learning, Assessment and Boundary crossing in Teaching Education (LAB-Ted) (UiT) Project leader: Rachel Jakhelln, together with ProTed leader Siw Skrøvset (UiT); May Britt Postholm, NTNU; Viv Ellis, Kings College, London. Project duration: 2019 – 2023). Financing: Norwegian Research Council.
8. (ProTed Oslo/ILS): Digital Integrering av Videovurdering på ulike Arenaer (DIVA 1 og 2) (UiO). Project leader: Torunn Strømme. Project duration: 2020 – 2023. Financing: DIKU, program for digitalization for learning in higher education.
9. (ILP): Design av digital støttet praksislæring i lærerutdanning (UiT). Project leader: Cato R. P. Bjørndal. Project duration: 2020 – 2021. Financing: DIKU, program for digitalization for learning in higher education.