



Centre for Professional Learning in Teacher Education

Annual report for 2016

Abstract

ProTed promotes innovative and relevant teacher education programs for the knowledge society. The overarching goal for these efforts is to promote coherent, integrated programs. ProTed 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.

2016 has seen the end of the first five years of ProTed. Activities in 2016 have concentrated on disseminating the results as well as planning for the second phase of ProTed.

Based on the recommendations from the mid-term evaluation, the research and development portfolio of the centre is being reassessed. We support the generation of new projects actively through seed money, while also/simultaneously designing a new generation of projects drawing on experiences from all of our work packages.

ProTed has engaged in a large number of dissemination activities. In June 2016, ProTed hosted the international research conference “Bringing Teacher Education Forward” in Oslo¹. The conference was a welcomed initiative in the field of teacher education, with more than 220 participants from 29 countries. At the national arena, ProTed hosted the second Knowledge Parliament in collaboration with the National Knowledge Centre for Education. The Parliament is a venue designed for teacher educators to share knowledge and practices with each other. The theme for 2016 was “Research-based Teacher Education”. ProTed arranged the second University school conference in November in Tromsø, where 150 teachers and teacher educators attended to share experiences. The theme of the University school conference was “Research and Development in University-school Partnerships”.

ProTed continues its engagement with widespread dissemination at conferences nationally and internationally as well as scientific publications drawing on our innovations and extensive collaboration with the multiple actors in the field of teacher education. We are in strategic alliance with national agencies such as the National Knowledge Centre for Education and the Norwegian Centre for ICT in Education. Further, we are directly engaging in national policy arenas to support the implementation of reforms in all of the different teacher education programs (1-7, 5-10, 8-13).

In the latest round of SFU applications, ProTed contributed to the development of new centres by sharing experiences and working with potential candidates in advance of the call. ProTed actively contributes to NOKUT’s SFU activities, including the SFU magazine.

In the next five years, we will continue to develop innovative practices in teacher education in close collaboration with university schools. We are striving to promote integrated teacher education through inter-institutional and interdisciplinary collaboration. As a national competency center for teacher education, we are increasingly involved in policy meeting points related to teacher education. We see this as a sign of confidence in our work.

About ProTed

ProTed promotes a research-based development of teacher education through informed interventions in the five-year master programs. The work is organized in work packages (WP 1-5), although some of the interventions involve several or even all of the WPs.

¹ <http://www.uv.uio.no/ils/om/aktuelt/arrangementer/2016/teacher-education---conference-2016/>

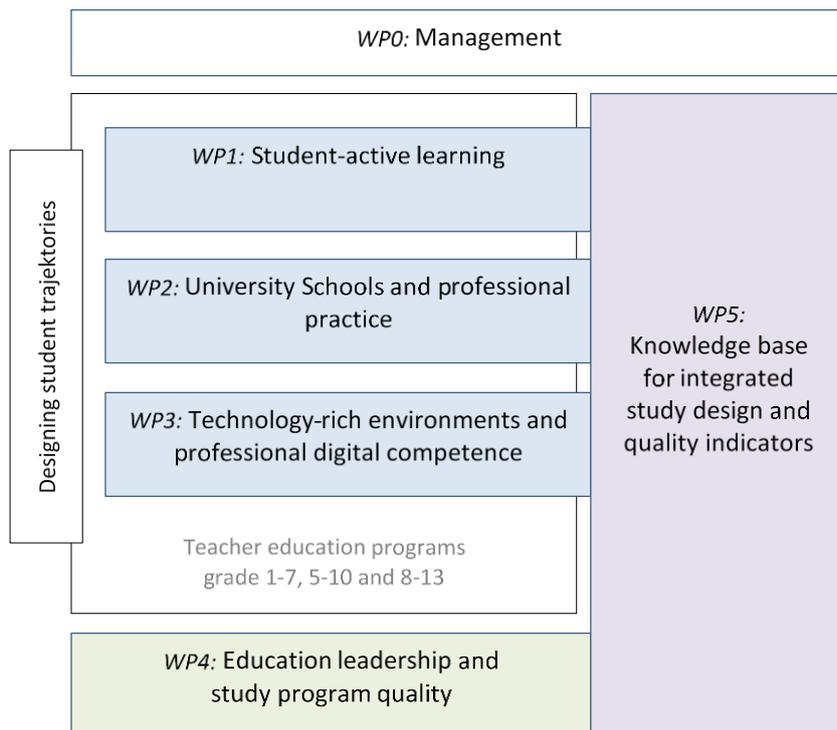


Figure 1. *The organization of activities in ProTed in work packages*

The first three work packages aim to raise the quality in teaching by focusing on students' learning trajectories, work packages 4 and 5 are concerned with educational leadership and contributions to a knowledge base on integrated study design.

In the following section, we provide a summary of the activities in 2016, referring to the full project portfolio listed in Appendix 1.

Work package 1: Student Active Learning

In 2016, several parallel processes were initiated to renew and reduce the project portfolio, based on comments from expert committee report and the experiences derived from the first five years of the centre. An integrated teacher education combining subject, pedagogy, subject didactics and school practice needs to create opportunities for the actors to share best practice with each other so that students will see their program as consisting of coherent components building upon each other.

University of Oslo (UiO)

Through the voluminous project portfolio in this area we have identified and made visible a number of innovative and creative teaching activities and practices that make subject matter more understandable and accessible for young learners (The Relevant project run by the School Laboratory for Physics is an example of a ProTed supported development project, now ready to be incorporated into teacher education courses). Furthermore, we have identified some practices that are crucial in supporting the student's professional and academic advancement /trajectories (examples in this area come from initiatives taken at subject faculties to strengthen the "lector" identity of their students).

- 1) Together with ProTed UiT we are working to summarize and synthesize what we have learned from the project portfolio in the first five years (work conducted within work package five).
- 2) We have designed a few larger, cross-disciplinary projects promoting future oriented learning (Including Education for Sustainable Development as a cross-curricular topic, DiDiAC project for use of digital resources in the classroom and multicultural perspectives in the classroom).
- 3) We are actively supporting the generation of new projects by providing seed funding for new development projects. Many of these projects are directly related to WP2 with our university schools.

The Arctic University of Norway (UiT)

At UiT, the main challenge is to move from a four-year bachelor program to an integrated five-year master program. At UiT, the focus is on developing the master programs on the basis of the ideas behind the Tromsø stairs, a model describing coherence and progression in the program. In WP1, ProTed has worked specifically with the integration of subject specific projects and their connections to an integrated teacher education program, as well as student active learning and progression throughout the program. First generation projects are being both recontextualized and also subject to research.

Work Package 2: University schools and professional practice

ProTed continues to polish "the jewel in the crown", as stated by the committee in the midterm evaluation. University schools are an important contact point between theory and practices; between campus and schools. The main overall contribution in this area was the second national university school conference in Tromsø. The long-term offspring of this arena is a national and/or international network for partnerships in teacher education.

The Arctic University of Norway (UiT)

The University School Project at UiT (1-7 and 5-10) has over the years developed models and strategies for organization, content and communication related to the practicum dimension in the master degree programs. Furthermore, the goals are to promote research and development related to university schools, to build networks and share and disseminate the insights from the projects, and finally to developing competence at the university schools.

New initiatives in 2016 included: redesigning the practicum plan; recontextualizing “punktpraksis” from physical education to “mat og helse”; development of rural practicum placement and international practicum placement. The project Ipad in supervision (Nettbrett i praksisveiledning²) has been successful in collaboratively developing supervision during practicum placement, and based on the experiences of the first phase of the project the goal is to currently to develop and test a new digital tool for mentoring. In this project ProTed has engaged a research and design assistant from one of the university schools.

The university school concept is currently being re-contextualized at UiT with three new university schools in ILP campus Alta, and also initiatives to extend the ideas to early childhood education (barnehagelærerutdanningen) and to UiT’s 8-13 program.

In October 33 members of the teacher education community at UiT (i.e. teacher educators, students, university school teachers, leaders and administration) visited Åbo Akademi and Vasa Övningsskola. The first goal of the visit was to learn more about Finnish teacher education, and in particular how they are developing knowledge in partnership between university and university schools. The second goal was to build relationships within the UiT group.

University of Oslo (UiO)

The university school project at UiO (8-13) is working towards a sustainable and permanent model for university-school-partnerships. The work in the university school project in Oslo is based on three main ambitions, constituted in a mutual agreement between the partners: Developing teacher education, developing the practice periods for teacher education students, and joint research and development work. There are regular seminars, lectures, and arrangements for university schools. The number of university schools has been expanded to 20 (from 13) based on the success of the partnerships.

Through the partnership, university schools are increasingly involved in the development of teaching practices on campus in multiple ways. Among the greatest successes in 2016, was the development of the mentoring program (PROMO³), a strategic intervention highly valued by the students. PROMO places lector students in contact with university school teachers throughout their five year education. (See also SUF Magazine, Autumn 2016 for more details on Promo.)

To support joint research and development work, two measures have been taken. First, seed money is funding about 20 smaller development projects in schools, in collaboration between university staff and schools. Second, a large joint research and development project is run by the project management: “Exploring how to develop research-based conversations about pupil learning and teaching in classrooms: Lesson study in schools and teacher education”.

For the full list of projects, see Appendix 1.

Moving into 2017, the university school partnership program at the University of Oslo is considering how to scale-up from university school-collaboration as project, to partnership as a permanent basis of development work in teacher education. One of the questions in this area is how to disseminate experience and knowledge from a small number of university schools to all partner schools and beyond.

² <http://www.praksisveiledning.no/prosjekter/nettbrett-i-praksisveiledning>

³ <http://www.uio.no/studier/program/lektorprogrammet/promo/>

Work Package 3: Technology-rich environments and professional digital competence

A national challenge evidenced by numerous reports as well as in "Lærerløftet" is the weak or non-existent preparation of student teachers for a technology rich society and matching educational practices. In 2016, and at both UiO and UiT, professional digital competence (PDC) has been a prioritized area. Both institutions have experts in the field as well as having established labs devoted to ICT and digital video production. We have published and presented extensively on what PDC entails, and are currently operationalizing these insights into our programs.

University of Oslo (UiO)

Professional digital competence (**PDC**) as a concept has been thoroughly developed (see publications) and is currently being implemented in the five-years master's programs in the form of a combination of lectures, digital learning modules using MOOC-technology and workshops for students.

Digital videocase exam is a new style exam which has attracted much interest nationally and is one of our main innovations. ProTed's project leader, Ketil Matiassen, has contributed to the University of Oslo's "Digital Exam-project", ensuring that more than 30 000 students have taken their exams digitally in 2016. ProTeds work with new forms of assessment in teacher education is shared with other institutions, among them Norgesuniversitetet.

Videobased assessment in teacher education is a pilot involving students during their individual practical training in their 7th semester. Students collaborate in producing videos from their teaching, highlighting teachable moments. They receive feedback from their supervisor in school, as well as a teacher educator. The effort has attracted interest nationally as well as internationally. In the next phase the pilot will be developed with a stronger connection to the students' school subjects and by involving mentors in schools and subject didactic experts at the department (ILS). At the same time there will be an increased focus on developing a more systematic knowledge base in this area. The project is expected to make visible new dimensions of collaboration between campus and schools.

Digital course in Professional digital competence (PfdK) involves the development of digital learning modules integrated into student campus courses in Professional subjects (integrating pedagogy with subject didactics) in the 3rd, 6th and 7th semester in the five year program. The first two digital courses have been developed, and the third will be produced in 2017. These courses are closely integrated in the students' other learning activities through a series of exploratory tasks encouraging students to explore how technology can help support pupil learning in their specific field of study, such as Mathematics or English. The students also learn strategies to ensure a successful learning environment in technology rich environments.

Flipped Teacher Education explores how new learning management platforms can create new opportunities to learn in teacher education through a hybrid program design. New scaffolding structures in the LMS (Canvas) enable students to interact with new digital learning resources in their preparation before and after class. A number of digital resources have been developed to enhance student understanding of the different topics and subject areas, thus affording a learning and teaching approach that frees time for discussion and student involvement as more uni-directional delivery of course material is available regardless of space and time. ProTeds innovative work in this area will be important as UiO and approximately 20 other institutions will make a transition to the Canvas platform during 2017/2018.

The Arctic University of Norway (UiT)

ProTed Tromsø continued the positive development of digital technology in 2016. Based on the ideas at UiO we have carried out a new style **digital exam** and also extended this concept to our 8-13 program. The **FutureLab** at the Department of Education is expanding the activities where students, together with researchers, arrange a series of seminars. In addition there are projects where teacher educators are investigating new strategies for integrating and developing the students' PDC. International collaboration with partners at UC Berkeley and University of Primorska continue to develop, providing valuable insights with respect to developing the ICT track across the five years in the master programs. Of particular interest are also the experiences of offering a flexible master of education (campus Alta). These experiences are positive and have been important in the redesign of the 1-7 and 5-10 programs which will be offered from 2017 (see below).

Overall reflections

ProTed's work on professional digital competence (PDC) is published and presented in numerous ways making an impact in the field. From this robust and research based foundation a principled integration of PDC in the programs has started and will be combined with student teachers development of designs for technology rich environments and trajectories.

Work Package 4: Educational leadership and study program quality

ProTed works to develop educational leadership and study program quality through systematic collegium based processes to ensure coherence and progression in the study programs. The goal is to integrate research and experience based knowledge on teacher education and to foster continuous professional development among staff by developing sustainable arenas and practices for collaboration and exploring models for leadership (in collaboration with WP5).

Nationally, WP4 is developed through a series of Knowledge Parliaments; collaboration with the Norwegian Knowledge Centre for Education, and where teacher educators (and other stakeholders) meet in order to continuously build a knowledge base for teacher education.

In WP4 ProTed is focusing on educational leadership and staff competence through building cultures for sharing and analyzing teaching in integrated, researched based teacher education and where structural and content related dimensions are aligned. A common lesson at both universities is the need to forge even stronger links between ProTed leadership and institute leadership at several levels. This has been a priority in 2016.

The Arctic University of Norway (UiT)

At UiT the main priority has been to develop staff competence in supervision of the students' MA theses. The first phase of the project (2014-2015) was concerned with the first students completing the five-year master programs for 1-7 and 5-10, in which main measures were staff seminars for sharing knowledge and experience. The second phase (2015-2017) will continue this focus, and in addition, develop a common infrastructure between the programs and across the supervisors and subjects. To support MA supervision, reading groups focusing on methodology were established. The developmental phase of this project ends spring 2017. The main achievement is the development of a foundation for collaborative leadership on MA supervision. ProTed will use the ideas of building a collaborative leadership in developing a shared understanding of research and development in other parts of the program.

University of Oslo (UiO)

At the University of Oslo, WP4 has been concerned with implementing the integrated teacher education study model amongst our staff. In recent years, there has been an increasing number of newly employed staff hired at ILS, needing to be introduced to the nuts and bolts of our study model as well as the thinking behind it to ensure a coherent understanding of the common goals of the program. Both 'old' and new staff are systematically allocated ProTed tasks and time resources. This has resulted in the following activities within WP4:

- Collaborated on creating new structures for educational leadership for all teacher education programs at the course coordinator level
- Collaborated on the development of an extensive program for working with different aspects of quality at all levels in our teacher education program
- Collaborated on the development of new forms of practical training for Professional subjects (pedagogy and subject didactics) in collaboration with representatives from university schools, ensuring progression in student learning throughout the five-year program
- Collaborated on the development of a new study design for the master component in the five-year program (8th-10th semesters). In this new design, students receive a supervisor for their master thesis already in their 8th semester, helping to ensure a continuous learning progression during their specialization. Students complete their practical classroom training in their 9th semester, opening for the possibility of empirical data collection for their master thesis.
- Contributed to regular thematic workshops for our faculty concerning different aspects of our study model as well as courses specific for new faculty
- Contributed to the yearly two-day seminar for all faculty members as well as representatives from the university schools on the development of the program design. In 2016 the topic was on “How to ensure excellent quality in students practical training”
- Collaboration with working groups on an initiative to further develop the practicum component of the teacher education program
- Continued work with documentation of the new study model, both as part of quality assurance procedures, in scientific articles and for dissemination to students and beyond.

Overall reflections

We see the need to forge stronger links between WP4 and leadership at the department level at both universities, in particular with heads of studies/teaching. At both institutions steps have been taken and will continue to be taken in order to strengthen this connection. As ProTed continuously has gained insights and experience from piloting and experimenting, we are now in a phase where implementation into programs can be done without unnecessary risks.

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 will cooperate with WP 1-4 to develop quality descriptions.

ProTed's cooperation with Norwegian Knowledge Centre for Education on Knowledge Parliaments represents an important contribution to the development of a knowledge base for teacher education design.

The results of the work in WP5 will be disseminated through national and international publications and other relevant outlets. ProTed's Scientific Advisory Committee (SAC) will be involved systematically to develop the work strategically and support international publication and dissemination.

University of Oslo (UiO)

The introduction of WP5 is also a fair representation of work done at UiO. Our work focusing on a theoretical validation of ProTed projects and initiatives has proved to yield substantial result in terms of impact - both academically (where scientific rigor is a requirement) and when increasingly addressing non-experts since this gives us a principled approach to developmental work. The long list of presentations testifies to this. At this stage we can say that the strategic effort connected to theoretical validation is starting pay off. As we enter the last five year period of ProTed, a post-doc position was awarded to ProTed Oslo in 2016 to begin work with a longitudinal study of teacher professional identity. The position will be filled in 2017.

The Arctic University of Norway (UiT)

In 2016 the main activity in WP5 has been linked to the redesign of our 1-7 and 5-10 programs. Based on the evaluations of Pilot i Nord in 2015, UiT has in developed two program designs which are in line with the national requirements. The redesign has been a shared process between campus Tromsø and Alta, and is the largest shared academic work between the campuses after the institutional merger in 2013. The steering committee was led by Ove Drageset (leader of WP 5 and head of program 5-10). ProTed has in particular contributed to developing the pedagogy subject, the research and development track, and course pensum across the five years.

The project RELEMAST (UiT) is continuing to follow students from the first two cohorts with a master degree in elementary and lower secondary school during their first years as teachers in Norwegian schools.

Overall reflections

In WP5 the synergies between the many ProTed projects are analyzed through relevant theoretical lenses. The main strategies are to validate and develop theories on integration, design and quality on the basis of empirical data from different models of integrated study designs (1-7, 5-10, and 8-13). With the implementation of master of education as the national standards for primary teacher education (1-7 and 5-10) the relevance of this contribution to the knowledge base is evident.

Dissemination

Based on recommendations from the expert committee in 2015, ProTed has developed a dissemination strategy based on three categories: dissemination for awareness, dissemination for understanding, and dissemination for action. In addition we have included a fourth as we want to emphasize dissemination for involvement and sustainability. Our publication record shows that dissemination for understanding dominates, but also that we have been active in dissemination for awareness and action. We are still working on revitalizing the ProTed website even though it has proved difficult and resource consuming to maintain. Our Facebook pages are still active and quite successful but somewhat limited to brief notifications. Dissemination for action involves active and transformation-oriented parties at the receiving end of the communication, for example to politicians and other stakeholders. In 2016 we have prioritized to participate in a selection of venues, like conversations with the Minister of Education and Research (January, Oslo and June, Tromsø). We believe our joint work with the Norwegian Knowledge center for education on a series of Knowledge Parliaments (also commended by the expert committee) is a targeted effort.

The enclosed list of publications and presentations reflects ProTed's impact on teacher education, nationally and internationally.

Student grants and student involvement

At UiO, two master students were awarded grants for their MA work. One (funded by NOKUT) is concerned with education in Palestine and how in a zone of war, tension and animosity it is possible to teach citizenship under occupation. This is of particular interest to the social sciences and subject didactics in this field, but with obvious relevance for education in multi-cultural societies and an increasingly global world. The other grant (funded by ProTed, UiO), was given to a student doing her master thesis on multi-disciplinary approaches to education at one of our university schools. Both of these projects were completed in 2016.

At UiT, one master student (program 5-10) was awarded a grant funded by NOKUT. The project is concerned with professional development through further education with a particular focus on Mathematics MOOCs. The project was successfully submitted in May 2016. The project is of particular interest for WP3, digital learning environments.

Student involvement is a significant part of ProTed's work, both at the level of representation, but also as a deeper engagement in developmental work. Most notably, the students are invited to share their experiences at national arenas (The Knowledge Parliament and The University School Conference). As students become more involved in collaborative research projects as a part of their MA work, they are writing articles together with researchers. The student voice continues to be valuable in following their progression through integrated teacher education programs, helping to inform changes leading to improved quality.

Plans for 2017 and beyond

Doris Jorde (UiO) and Siw Skrøvset (UiT) began in their positions as ProTed center leders in January, 2017. Whereas they are interested in continuing the work done in the first five years of ProTed, it is also understandable that some changes may be coming in 2017. The individual plans for work packages will need to be discussed with the work package leaders at both institutions resulting in specific visions for 2017. This work will take place during the Spring of 2017.

University of Oslo (UiO)

In the following are general projects we will work on in 2017.

1. We will administer and evaluate the "STIL" project (studieintensive arbeidsformer) initiated by The Department of Education (KD).
<http://www.uv.uio.no/proted/aktuelt/aktuelle-saker/utlysning-av-midler%20-%20STIL.html>
The project is designed to identify 4-5 projects within GLU in which student active learning forms are implemented into the new 5-year teacher education programs. The project is designed for a one year period from H17 – H18. An external committee is in place to evaluate the applications.
2. Knowledge Parliament 2017. In cooperation with the Norwegian Knowledge center for Education, the seminar will be dedicated to the theme: "Who is a teacher educator?" The seminar will draw on models for teacher education pointing to the importance of integrating subject, didactics, pedagogy and practice where all of the actors contribute to the competencies needed for becoming a professional teacher.
3. Establish a Post-Doc position working with the development of the "Professional teacher". The position will be advertised early in 2017, with a start in late spring. The project will be

designed as a longitudinal study to follow student progression through programs of study at the University of Oslo- integrated teacher education program (Lektorprogrammet).

4. We will continue to collect data, together with ILS, to help describe the quality of the teacher education program at multiple points in the five year program. We will continue to evaluate the UiO teacher education model, with increasing attention to projects directly connected with HF, Mat Nat, SV and TF. In a similar way, we will continue our intensive connections to University Schools, considering the benefits the program has for our teacher education students in their practice, as well as for teachers at schools and researchers at the university as they develop research projects together.
5. We will restructure our leadership team to include Kirsti Lyngvær Engelién (Head of Studies at ILS) so that ProTed and ILS have a more fluid structure.
6. We will work together with ILS and the Norwegian Centre for Science Education (Naturfagsenteret) to establish a national course for science teacher educators in Science Education (naturfagdidaktikk).
7. We will continue to work with the ProTed scientific board, identifying areas where their expertise will improve our activities. In particular, we are interested in establishing a close link to Oxford University with Ann Edwards, to develop our work with university/school partnerships.
8. We will continue our work with the establishment of an international network of teacher education institutions relevant to our program at UiO and UiT. Of particular interest is the development of understanding of university/school partnerships and their role in the professional development of teachers (Stanford, Oxford, Göteborg, for example). A working seminar leading to a seminar abstract at AERA in 2018 is a possible goal.
9. We will continue to work with ideas bringing teacher education closer to 21st skills required by teachers and schools in the future. Use of technology tools for teaching and learning will continue to dominate within the project portfolio, including the use of digital exams. Use of authentic classroom video will be used increasing in teaching courses.
10. We will develop new innovative learning activities where students are provided with opportunities to work as researchers in analyzing authentic video data collected by several large scale classroom research projects at ILS.
11. We will collaborate with faculty at UiO in developing an extensive database with video cases for all subject areas in the teacher education program.
12. We will establish a stipend for MA students.
13. We will continue to disseminate the results of our completed and on-going projects within ProTed such that policy makers and teacher education institutions nationally and internationally will benefit from the ProTed SFU.

The Arctic University of Norway (UiT)

Our plans for 2017 are made according to the overall vision for 2017-2021 and the Milestones for ProTed. With new leaders in both Oslo and Tromsø, we will make this shift as a start of ProTed II, (2017-21). We do not see dramatic changes coming up, but we will use the opportunity to analyze and discuss the priorities for the next years, together and with the work package leaders.

In Tromsø, one of the main goals for 2017 is to strengthen ProTed as a developmental unit within the Department of Education. This is according to the Expert group, who advised an “Exit-strategy”, to prepare for the years after 2021. This includes strengthening the links between ProTed leadership and

leadership of the department (see section on WP 4 in the annual report). This also includes taking action for dissemination for involvement and sustainability.

Another area of interest, is the advices from the Expert group about the teacher role (Ekspertgruppa om lærerrollen), and particularly their recommendations for the teacher education. Some of the recommendations from the Expert group are already parts of ProTed's strategy and plans (closer collaboration between schools and teacher education on student's learning, following up new teachers), and in addition we will take a closer glance at the advice to strengthen the student's competence and skills to work in a professional community of practice. Developing professional communities of practices is also advices for the teachers as a profession, and for the schools. In this case, we have similar interests and ProTed may push this development and collaboration. The university schools may be suitable areas for such development and collaboration.

While ProTed is turning into a new five-year period of developing the teacher education, the project School-based competence development in lower secondary school 2013-2017 is in its last months. The national strategy for developing the educational system through the school based competence development project corresponds well to our MA 1-7 & 5-10's focus on action learning as R&D competence. In such cases, the two strategies may strengthen each other when seen together.

Appendix 1: Projects and personnel

The following provides a list of projects that have been, or are currently part of ProTed's portfolio in the first period as a centre of excellence. Some of the innovations that have derived from these projects are fully integrated in the study programs, and will be terminated as active projects or result in the generation of new projects in the second period. The personnel listed are those responsible for coordinating projects, even though projects involve a larger number of personnel and students.

	Betegnelsen og institusjon	Kontaktperson
	OMRÅDE 1	
1	Tiltak for å forbedre matematikklærer-utdanningen i matematikk ved UiO ILS/UV og Mat inst/ Mat. Nat. LeP	Helmer Aslaksen, Arne Hole helmer.aslaksen@ils.uio.no arne.hole@ils.uio.no
1	Flerspråklighet. ILS, UiO	Joke Devilde j.i.dewilde@ils.uio.no
1	Drama og matematikk – bruk av roller som endring av samtalemønsteret i matematikk,UIT, HSL-fak, ILP	Ove Gunnar Drageset ove.drageset@uit.no
1	Utredning av biologilærerutdanningen ved UiO. Mat Nat Fak, Inst for biovit og Naturfagsenteret og ILS, UiO	Tone Fredsvik Gregers t.f.gregers@ibv.uio.no
1	ReleKvant - Begrepsutvikling og erkjennelse i relativitetsteori og kvantefysikk. Fysisk institutt, MN-fakultetet, UiO	Ellen K. Henriksen, e.k.henriksen@fys.uio.no
1	Historiefremstilling. UiO, HF, IAKH avd. for historie	John McNicol john.mcnicol@iakh.uio.no
1	Ny masterutdanning i naturfag – bedre lærere? UiT/HSL/ILP	Magne Olufsen magne.olufsen@uit.no
1	DiDiAC- Digitalised Dialogues Across the Curriculum. IPED/UV, UiO	Ingvill Rasmussen ingvill.rasmussen@iped.uio.no
1	Å involvere studentene i forskningsarbeid ILP, UIT	Hilde Sollid, Kari-Anne Sæther. hilde.sollid@uit.no kari-anne.sather@uit.no
1	UBU – Utdanning for bærekraftig utvikling. ILS UiO	Marianne Ødegård marianne.odegaard@ils.uio.no
1	Språklig mangfold i klasserommet. UiT ILP	Hilde Sollid hilde.sollid@uit.no
	OMRÅDE 2	
2	Kronikk forfattet av studenter UIT: LRU-2001. ILP	Svein-Erik Andreassen svein.erik.andreassen@uit.no
2	Dialogseminar UiO ILS	Tove Hunskaa og Marie. S Thorstensen, Anne Kristin Dahl. t.s.hunskaa@ils.uio.no
2	«Ønsker du å utvikle matematikkundervisningen din?» Utviklingsprosjekt for matematikklærere (2014-2015)	Tove Hunskaa og Marie. S Thorstensen, Anne Kristin Dahl. t.s.hunskaa@ils.uio.no
2	Lesson Study som verktøy for profesjonell utvikling UiO, ILS	Tove Hunskaa og Tone M. Eriksen t.s.hunskaa@ils.uio.no

2	<p>Såkorprosjekter i samarbeid mellom universitetsskoler og UiO/ILS-ansatte:</p> <ul style="list-style-type: none"> • Samfunnsfag og bærekraftig handlekraft: Et samfunnsfagdidaktisk utviklingsprosjekt • Tolkning av resultater fra TIMSS Advanced og implikasjoner for skole og lærerutdanning • Tverrfaglig, utforskende undervisningsopplegg i naturfag og geografi • Utforskende arbeidsmåter i vgs, Feltarbeid i en geotop • Den erfarte læreplanen i religionsopplæringen i vgs • Vurdering for læring: å drøfte vurderingspraksis opp mot forskning • Skrivning i engelsk • Skrivning i alle fag • Lærerstudenter og nytilsatte som kollegaer • Tverrfaglig opplæring og undervisning • Representasjoner i naturfag: prøve ut undervisningsopplegg • Vurdering for læring. Utvikling av videomateriale • Digitale dialoger på tvers av fag • Brobygging mellom teori og praksis – lærerstudenters forskningskompetanse • Lesson study (x8) 	Tove Hunskaar og Tone M. Eriksen t.s.hunskaar@ils.uio.no , tonemer@ils.uio.no
2	<p>Utvikling av lærerutdanningen, involvering av universitetsskolene, UiO/ILS:</p> <ul style="list-style-type: none"> • Intensiv praksisuke • PROMO: profesjonsbasert mentorordning • Dialogseminar • Videobasert vurdering • PROF1015 • SPOOC: profesjonsfaglig digital kompetanse • Omvendt klasserom • Mikroundervisning • Fredagspraksis • Kvalitetssikring av lærerutdanningen 	Tove Hunskaar og Marie Stanghov Thorstensen; t.s.hunskaar@ils.uio.no , m.s.thorstensen@iøs.uio.no
2	Utvikling av lærerstudenters praksis, UiO/ILS	Tove Hunskaar og Marie Stanghov Thorstensen; t.s.hunskaar@ils.uio.no , m.s.thorstensen@iøs.uio.no
2	Forskningsformidling for universitets- og partnerskoler: universitetsskoleforelesninger	Tove Hunskaar og Marie Stanghov Thorstensen; t.s.hunskaar@ils.uio.no , m.s.thorstensen@iøs.uio.no
2	Overtakelsespraksis for studenter. Kompetansedager for praksislærere. UiT, ILP	Åse Karlshaugen og Henning Sollid ase.karlshaugen@uit.no
2	Sammen gjør vi praksisopplæringa god (SPG). UiT, ILP	Karin Danielsen, Ingrid Frenning karin.danielsen@uit.no ingrid.frenning@uit.no
2	PRAKSISFORUM. REKTORFORUM UiT ILP, ikke knyttet til et studieemne	Tidl. Kristin Skaalvik (USPiT)
2	Veiviser for praksis UiT ILP, emneplan for praksis	Åse Karlshaugen og Henning Sollid ase.karlshaugen@uit.no
2	DIALOGSEMINAR. UiT, ILP	Universitetslærere i profesjonsfaget ved IMA-LU 1.-7. og 5.-10 c/o hilde.sollid@uit.no
2	Fellesveiledning U-veileder og praksisveileder. UiT, ILP, emne LRU2001, Bacheloroppgaven	Annfrid R. Steele annfrid.r.steele@uit.no
OMRÅDE 3		
3	Utvikling av integrerte læringsmoduler (SPOC'er) i profesjonsfaglige digital kompetanse i LeP. UiO, ILS	Greta Björk Gudmundsdottir g.b.gudmundsdottir@ils.uio.no
3	Videobasert vurdering for læring ILS UiO, profesjonsfaget i LU.	Tove Hunskaar (m.fl.) t.s.hunskaar@ils.uio.no
3	Digital eksamen ILP UiT, emne LRU-3551	Prosjektleder Rachel Jakhelln rachel.jakhelln@uit.no
3	Videocase-eksamen. ILS, USIT, UIO.	Ketil Mathiassen, Janne Skeie ketil.mathiassen@ils.uio.no

		j.t.scheie@ils.uio.no
3	Nettbrett i praksisveiledning UiT/HSL-FAK/ILP	Petter Mathisen pma034@post.uit.no
3	Et digitalt år ved ILP/Futurelab UiT/ILP.	Rachel Jakhelln, Lisbet Rønningsbakk lisbet.ronningsbakk@uit.no
3	“A study of online learning. Space of innovation.” Samarbeid UiT og UC Berkeley, USA, UiT/ILP	Glynda Hull, Lisbet Rønningsbakk, lisbet.ronningsbakk@uit.no
3	Tromsø EdTech – utvikling av søknad om hovedprosjekt. ILP m samarbeidsparter	Lisbet Rønningsbakk lisbet.ronningsbakk@uit.no
3	Samarbeidsprosjekt med UC Berkeley: Pre-service teacher collaboration: Integrating Technology, Diverse Student’s Cultures, and Human Rights in Instruction. UiT.	Jabari Mahiri, Inga Bostad, Kirsten Stien, Lisbeth Rønningsbakk lisbet.ronningsbakk@uit.no
3	Formativ prøve i PfdK. Kartleggingsprøve for profesjonsfaglig digital kompetanse. UiT, ILP.	Lisbet Rønningsbakk, Henning Sollid, lisbet.ronningsbakk@uit.no
3	Samarbeidsprosjekt med University of Primorska, Slovenia, etter samme opplegg som samarbeidsprosjektet med UC Berkeley (over)	Professor Andreija Istenic Starcic og Lisbet Rønningsbakk lisbet.ronningsbakk@uit.no
3	«Omvendt lærerutdanning» - utforskning av nye digitale læringsomgivelser for LU. ProTed ved ILS i samarb m USIT UiO	Kaja Granum Skarpaas, Kristin B. Vasbø k.g.skarpaas@ils.uio.no k.b.vasbo@ils.uio.no
3	FutureLab Et laboratorium for teknologibasert læring og samhandling. UiT ILP.	Henning M. Sollid. (Jfr digitalt år). henning.m.sollid@uit.no
3	Videodatabase – utvikling av en videodatabase med case. ILS, UiO	I tenkeboksen
3	Utvikling av praktisk, kritisk og utforskende undervisning om IKT i begynneropplæring i lesing og skrivning UiT. Pluss tilhørende kompetanseutvikling	Audhild Nedberg og Astrid Unhjem lisbet.ronningsbakk@uit.no
3	Profesjonsfaglig digital kompetanse i norskfaget. ILP. UiT	Audhild Nedberg og Kari-Anne Sæther
OMRÅDE 4		
4	Strategisk endringsledelse gjennom felles kunnskapsutvikling. ILS, UiO	Kirsti Engelién k.l.engelien@ils.uio.no
4	Studiekvalitet og evalueringssystemer ILS, UiO	Kirsti Engelién/Tone M. Eriksen k.l.engelien@ils.uio.no t.m.eriksen@ils.uio.no
4	Integrerte uker. ILS/UiO	Kirsti Engelién m. fl. k.l.engelien@ils.uio.no
4	FoU-oppgave (inkludert som parallell til BA-oppg) ILS UiO, studieemner PPU3220, PPU3520D	Kirsti Engelién. Jonas Bakken. k.l.engelien@ils.uio.no jonas.bakken@ils.uio.no
4	Utvikling og evaluering av nye komponenter i lærerutdanningen. ILS, UiO	Kirsti Engelién m. fl. k.l.engelien@ils.uio.no
4	Strukturell og konseptuell koherens gjennom dokumentasjon. ILS, UiO	Inga Staal Jensen i.s.jenset@ils.uio.no
4	Seminarer for nyansatte. UiO	Inga Staal Jensen i.s.jenset@ils.uio.no
4	Professional Development for Teacher Educators. ViCoTed. ILS, UiO	Andreas Lund, Inga Staal Jensen andreas.lund@ils.uio.no
4	Kvalitet i masterveiledningen. Kollegabasert kompetanseutvikling for veiledere. UiT/ILP	Kari-Anne Sæther kari-anne.sather@uit.no
4	Utvikling av PhD-kurset «Excellence in Teacher Education» ILS, UiO	Karen Hammerness

Appendix 2: Financial accounts

As the first period as a centre of excellence is finishing, we provide an account of grant funding from NOKUT, 2012-2016. In short, the account shows that all of the funds have been used according to budget, with an accumulated balance. The account does not give an outline of the extensive “own financing” provided by the two partner institutions to support the work of the centre.

The budget for the following period as a centre of excellence gives a more representative image of the total expenses of the centre by including the “own financing”, and by accounting for the each of the two partner institutions both jointly and separately.

Account of grants 2012-2016:

Regnskap over tildelte midler 2012-2016	UIO		UIO		UIT		UIT		Proted Totalt	
	2016		2016		2016		2016		2016	
	Faktisk	Budsjett	Akk.faktisk	Akk. Budsjett	Faktisk	Budsjett	Akk.faktisk	Akk. Budsjett	Akk.faktisk	Akk. Budsjett
Eksterne inntekter og bidrag	1 049 000	-2 926 000	-14 825 000	-14 630 000	-1 074 000	-1 074 000	-5 370 000	-5 370 000	-20 195 000	-20 000 000
Salgs- og leieinntekter	-151 239		-151 239						-151 239	0
	897 761	-2 926 000	-14 976 239	-14 630 000	-1 074 000	-1 074 000	-5 370 000	-5 370 000	-20 346 239	-20 000 000
Overtid	0		0						0	0
Feriepenger, AGA og pensjon	7 463		52 379						52 379	0
Andre personalkostnader	50 762		84 434						84 434	0
Timelønn og honorarer	22 894		100 139						100 139	0
	81 119	0	236 952	0	0	0	0	0	236 952	0
Kjøp av tjenester	0		0						0	0
Andre driftskostnader	128 630	400 000	1 080 649	2 000 000	834 642	250 000	1 615 720	1 279 500	2 696 370	3 279 500
Kurs, konferanser og reiser	300 456		1 604 790						1 604 790	0
	429 086	400 000	2 685 440	2 000 000	834 642	250 000	1 615 720	1 279 500	4 301 160	3 279 500
Investeringer	0	0	57 945						57 945	0
	0	0	57 945	0	0	0	0	0	57 945	0
Egenandel	-897 327	-1 053 000	-4 667 512	-4 412 000	-1 100 000	-1 565 000	-5 758 366	-6 400 500	-10 425 877	-10 812 500
Overhead	905 710	960 804	4 614 895	4 511 124	404 667	648 000	2 335 048	2 926 000	6 949 943	7 437 124
Frikjøp	2 485 505	2 668 900	12 614 516	12 530 900	1 245 870	1 817 000	6 410 958	7 559 000	19 025 474	20 089 900
	2 493 888	2 576 704	12 561 900	12 630 024	550 536	900 000	2 987 640	4 084 500	15 549 540	16 714 524
			565 997	24			-766 640	-6 000	-200 642	-5 976

Appendix 3: Publications and Presentations

Note: On April 6, 2016, ProTed arranged an internal seminar with outside experts to clarify issues and establish guidelines for the joint publications and dissemination of ProTed results.

Brevik, Lisbeth M.; Blikstad-Balas, Marte; Engeliën, Kirsti Lyngvær.

Integrating assessment for learning in the teacher education programme at the University of Oslo. *Assessment in education: Principles, Policy & Practice* 2016.

Fiva, T., Lund, A., & Simonsen, B. (2016). OECD Initial Teacher Preparation Study. Country Background Report Norway. Oslo: Ministry of Education and Research.

Furberg, A., & Lund, A. (2016). En profesjonsfaglig digitalt kompetent lærer? Muligheter og utfordringer i teknologirike læringsomgivelser. In R. Krumsvik (Ed.), *Digital læring i skole og lærerutdanning* (pp. 26-48). Oslo: Universitetsforlaget.

Lejonberg, E. E., & Hunskaar, T. S. (2016). Behov for å utvikle "det tredje rom" i relasjonen mellom universitet og praksisskoler. UNIPED.

Lund, A. (2016). I Am Connected, Therefore I Am: Polycontextual Bridging in Education. In E. Elstad (Ed.), *Educational Technology and Polycontextual Bridging* (pp. 129-145). Rotterdam, NL: SENSE Publishers.

Lund, A., & Eriksen, T. M. (2016). Teacher Education as Transformation: Some Lessons Learned from a Center for Excellence in Education. *Acta Didactica Norge*, 10(2), 53-72.

Vestøl, J. M. (2016). Design, Integration and Quality. Teacher Education from the Perspective of ProTed, A Norwegian Centre of Excellence in Education. *Acta Didactica Norge*, 73-91.

Presentations:

- Engeliën, K., Eriksen, T., Lund, A. Presentation of ProTed and advice on application. Delegation from NTNU. Jan. 20, 2016.
- Engeliën, K., Gudmundsdóttir, G., Lund, A. Presentation of ProTed's new style exam for delegation from Nordahl Grieg vgs. February 3, 2016.
- Eriksen, T. M.: & Hunskaar, T.S. Interplay between knowledge cultures: Lesson study in partnership between teacher educators and schools. ECER conference, Dublin 2016
- Gudmundsdóttir, G., Lund, A. Visit to Nordahl Grieg vgs to draft application for new style exams with validity for 21st century skills.
- Hunskaar, T.S. & Eriksen, T. M: Interplay between knowledge cultures: Lesson study in partnership between teacher educators and schools, Bringing Teacher Education forward: National and International Perspectives; 2016-06-06 - 2016-06-08
- Hunskaar, T.S. & Eriksen, T. M: Såkorn slår rot: Kva kan en forskningsbasert lærerutdanning bety i praksis?. Kunnskapsparlamentet september 2016 (Oslo)
- Jakhelln, Rachel Elise; Lund, Andreas; Vestøl, Jon Magne. University schools as an arena for transformation of teacher education. Research-based and student active approaches to professional Development. Bringing Teacher Education forward: National and International Perspectives; 2016-06-06 - 2016-06-08
- Lillejord, S. (Knowledge Center for Education), Lund, A. & Jeppesen, S. (Blindern University School). Partnerships in teacher education. Workshop at the conference hosted by EIPPEE – Evidence Informed Policy and Practice in Education in Europe. Copenhagen, Sep 8-9, 2016.
- Lund, A. Teacher education as foreign aid. International perspectives. NORAD, Feb 18, 2016.

- Lund, A. The future of pedagogy. Conference on the future of pedagogy in Norway. March 2, 2016.
- Lund, A. Presentation of ProTed and discussion of CETL application. NTNU April 6, 2016.
- Lund, A. Presentation of ProTed's report by the expert panel and further discussion of CETL applications. NTNU May 9, 2016.
- Lund, A. How to prepare for site visits. Feedback on CETL applications. NTNU August 10, 2016.
- Lund, Andreas. Video-based assessment of student teachers' learning. Bringing Teacher Education Forward; 2016-06-06 - 2016-06-08
- Lund, A. ProTed's work and its relevance for "Developmental Kindergartens" (Utviklingsbarnehager). HiOA, May 12, 2016.
- Lund, A. ProTed's approaches to excellence in teacher education. Lecture at Athens University of Economics and Business, May 24, 2016 (ERASMUS+ project)
- Lund, A. ProTed's work on Professional Digital Competence in teacher education. Lecture at Athens University of Economics and Business, May 26, 2016 (ERASMUS+ project)
- Lund, A. Professionalism in teacher education. Research symposium, HiOA, June 2, 2016.
- Lund, A. Alliances and Partnerships: a horizontal approach to the advancement of educational knowledge. Presentation at The Knowledge Center for Education's seminar for European institutions establishing knowledge centers. Nov 22, 2016.
- Lund, A., Eriksen, T. Contribution to special issue of Acta Didactica Norway. Publication seminar, Jan 28, 2016.
- Lund, Andreas; Jakhelln, Rachel Elise; Vestøl, Jon Magne; Hammerness, Karen. University schools as an arena for transformation of teacher education: Research-based and student active approaches to professional development (Symposium). Bringing Teacher Education Forward; 2016-06-06 - 2016-06-08
- Lund, Andreas; Vestøl, Jon Magne. Video based supervision as space for transformative agency in teacher education. EARLI SIG, Tarttu, Estonia 2016; 2016-08-27 - 2016-08-30
- Solli, H., Lund, A. A conversation with the Minister of Education and Research about ProTed and excellence in teacher education. UHR conference, Jan 12, 2016.



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