

# Developing a signature pedagogy for doctoral education

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## Abstract

The number of doctoral students internationally is on the increase, yet low completion rates seem to be stable. Universities need to learn from each other to strengthen doctoral education. In doctoral education, the person and the doctoral project are intertwined and both must be nurtured and developed. This article presents the signature pedagogy of the Norwegian Research School in Teacher Education (NAFOL). The international and national context of NAFOL is described and the reasons for establishing NAFOL are presented. The pedagogical vision behind the research school is outlined, and examples of how the vision translates into activities are provided. The last part of the article analyses experiences from NAFOL and highlights points that might be useful to other research schools in different contexts. Based on the experience gained at NAFOL, a *whole person approach* to doctoral students in doctoral education is recommended.

## 1 | INTRODUCTION

You need space to ask stupid questions. That was what I felt I got in NAFOL. There was space to ask stupid questions you do not ask a professor at your own institution when you are a doctoral student. You don't want to appear as an idiot. But, when I go to the NAFOL seminars, there was more room to pose questions to the NAFOL professors and my peer students, questions such as: 'Is

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it normal to feel this...?', or 'Do I need to do more of that...?', or 'Does the way I think make sense, or am I all wrong?'

(NAFOL student, translated from Sunde, 2020, p. 25)

The above quote is the response from a doctoral student at the Norwegian National Research School in Teacher Education (NAFOL) when asked about her experiences with NAFOL. This article elaborates on the signature pedagogy (Shulman, 2005) of NAFOL as a research school. A signature pedagogy relates to "The types of teaching that organize the fundamental ways in which future practitioners are educated for their new professions" (Shulman, 2005, p. 52). At NAFOL we educate teacher educators to be practicing researchers by seeing the person and the doctoral project as intertwined (Yorks & Kasl, 2002). We assume that during doctoral education both should be nurtured and developed. This article is structured as follows. First, the international and national context of the NAFOL is described. Next, the reasons for establishing NAFOL, and the pedagogical vision behind the research school are outlined. Examples of how the vision translates into activities are provided. The last part of the article analyses experiences from NAFOL and highlights points that might be useful to other research schools in different contexts.

Doctoral education is on the increase and doctoral education is changing all over Europe (Hasgall et al., 2019). Only a few decades ago, getting a doctoral degree was usually something only a few persons achieved at the end of their career, and the thesis was a thick book written alone or under the guidance of a supervisor. However, today the situation is different. Most universities will have doctoral programmes, with courses that provide credits compatible with the European Credit Transfer System (ECTS), contract-based supervision by one or more professors, an institutional support network, and financial support to students. The thesis can be presented in different ways, such as a monograph, collection of articles—with or without a meta-text—or an artistic product with a meta-text. The numbers of doctoral students continue to increase, yet the completion rate in Europe seems to be stable for the last ten years, and about a third of students do not complete within six years (Hasgall et al., 2019).

With the central role doctoral education has in the academy, policy makers tend to pay more attention to developing policy frameworks, whereas researchers tend to explore the complexity of doctoral education. Several research directions can be identified in the literature. This article focuses on three research focus areas, (1) the well-being of doctoral students, (2) the relationship between the doctoral student and the supervisor, and (3) practices for providing feedback. The following sections discuss these three research directions.

## 1.1 | Doctoral students' well being

Whereas policy makers discuss frameworks and requirements, numerous researchers have looked at the well-being of doctoral students, and the findings are not optimistic. Juniper (2005) considers factors such as good health, a secure social and occupational environment, financial security, spirituality, self-confidence, and strong, supportive relationships in her clinical definition of well-being. This definition has later been operationalised in research on doctoral students by specifying their role and the influence of institutional interventions on doctoral students' well-being (Juniper et al., 2012). Research suggests that about a third of doctoral students internationally suffer from depression (Carter et al., 2020; Levecque et al., 2017). The main causes are, among others, the relationship with the supervisor which has been found to have a direct impact on the completion rate (Green & Bowden, 2012) and the fear of not completing the doctoral project in time. Being late might, to some, mean that they have no further finances, or, as in Norway, they lose their status as employees of the institution. They may have other obligations waiting, or they worry about not finding a job upon completion. Carter et al. (2020) also claim that many doctoral students experience a lack of confidence from time to time during the doctoral work, which often is related to feedback from the supervisor. Moreover, the doctoral student is a whole person, not only an emerging researcher, and there might be events and crises in the personal life that affect the doctoral work. In

my long experience as a supervisor, the latter is one of the most common causes for distress, it may be related to breaking up with partners, personal or family health problems; and beyond all, handling many roles; e.g., as a doctoral student, parent, partner, and colleague. Time puts constraints on the manner some doctoral students aspire to fulfil the various roles. All the above-mentioned factors affecting doctoral students' well-being were also found in a review study by Schmidt and Hansson (2018).

## 1.2 | Relationships

Another line of research centres around relationships; the relationship between the supervisor and supervisee is central not only to the well-being of the doctoral student, but also to the progress and quality of doctoral work (Ives & Rowley, 2005; McAlpine & Norton, 2006). Grant (2005) claims that the relationship between the supervisor and doctoral student is complex; in addition to the challenging power imbalance, there is a wish to satisfy the other, to push the other, to give the impression of being professional and independent, yet at the same time to please and respect. There might be conflicting perceptions of autonomy and questions to who is the *leader* in the relationship, and there is a need to find a balance that both the doctoral student and the supervisor agree to. Another factor that can challenge the relationship is found in expectations (Grant, 2005). Unless expectations are clarified and discussed at the beginning of the collaboration, unfulfilled expectations will harm the relationship. This also relates to balancing professional and personal relationships during doctoral studies, and the optimal balance will differ from context to context and from supervisor to supervisor (Grant, 2005). The way relationships are experienced in doctoral supervision seems to be more focused around the affective aspects; Yorke (2002) supports my own experience that emotional support is more important than pushing for a better grade, for completing the studies. However, relationships do not only exist with the supervisor; relationships with family, friends and not least, student peers play a major role in the work needed to acquire a doctorate (Carter et al., 2020). At NAFOL, creating supporting peer networks has been central to our work.

## 1.3 | Feedback

A third relevant line of research on doctoral education focuses on feedback. The quality of the dialogue taking place in doctoral education often relates to the quality of feedback, which is the core in supervisory relationships (East et al., 2012). Sadler states that the purpose of feedback has a strong personal dimension: "Feedback should help the student understand more about the learning goal, more about their own achievement status in relation to that goal, and more about ways to bridge the gap between their current status and the desired status" (Sadler, 2010, p. 536). For the type of feedback proposed by Sadler to take place and be perceived as useful, the relationship between the provider and receiver of feedback has to be experienced as safe for both (Li & Seale, 2007). Poulos and Mahonly (2008) found that useful feedback among Australian University students depended on the receiver's understanding of the feedback, its relevance and trustworthiness.

Moreover, useful feedback provides answers to the many inner thoughts and questions with which the doctoral student struggles in relation to the thesis as a whole, and specific aspects of the work. Often these thoughts and questions are not articulated, and the supervisor, who knows they exist, can have difficulties eliciting them. To help the student translate the inner thoughts to words requires *responsive pedagogy*, "a recursive dialogue between the learner's internal feedback and external feedback provided by significant others" (Smith et al., 2016, p. 1). A basic requirement for responsive pedagogy to take place is the mutual trust between the doctoral student and the supervisor or significant others, which facilitates an open and honest dialogue between student and supervisor. During the dialogue, participants develop a shared language and understanding of the goal, and how to work towards achieving the goal—a doctoral degree which entails a combination of academic (thesis specific),

cognitive, affective, and social aspects. There is a danger to limit the supervision to the academic growth at the expense of emotional and personal development. The wholeness of the doctoral education can in such a case be lost (Shavers & Moore, 2014) (Figure 1).

I include the above three aspects, well-being, relationships and feedback in doctoral education in what Elliot et al. (2020) call the *hidden curriculum in doctoral education*. The hidden curriculum are those aspects of doctoral education that are not expressed in the curriculum and regulations. Elliot and colleagues argue that the hidden curriculum is just as important for completing the doctoral degree as the formal curriculum and external criteria. Before I elaborate on how the NAFOL signature pedagogy for doctoral education responds to the three identified research themes, a short description of Norwegian doctoral education is provided as context for the NAFOL.

## 2 | DOCTORAL EDUCATION IN NORWAY

Like in Europe, there is a notable increase in the number of doctoral students in Norway. In 2000 Norway had 647 completed doctoral degrees, whereas in 2020 there were 1,634 (NIFU, 2022). Institutions have developed doctoral programmes which include coursework, supervision, and recently also systematic progress evaluation during the doctoral period. Institutions have been supported by the Norwegian Research Council in establishing cross-institutional research schools, and some universities have introduced supervisor education to improve the quality of supervision with the purpose of increasing the completion rate. Nevertheless, the following figures show that the completion rate in Norway is a serious problem. For doctoral students who started in 2015, 17.7% had completed in three years, 36.6% in five years, and 22.3% had left their doctoral education without completing (Statistics Norway, 2021). This is surprising in that most doctoral students in Norway are employed by the institutions as research fellows with a decent salary for three or four years. They enjoy all the rights and benefits of other university employees. If they are employed for three years, they have no teaching duties, if they hold a four-year employment, there is a 25% teaching duty in the contract.

The national guidelines for doctoral education—which in Norway is a Ph.D. degree only—stipulate a full three-year research project, during which a doctoral student must take 30 ECTS in total. Each student should have two supervisors (or more) (Universities Norway, 2018). Supplementing the national guidelines, each institution has developed additional regulations.

In the field of education and teacher education, the 2020 statistics show completion rates that are low in comparison to the national rates for all fields of research. In education and teacher education, only 6% complete within three years, 14.9% within five years and 53.7% did not complete, they left their doctoral endeavour. Results from the prior year were not good, yet more promising with 45.6% completing after five years and a 32.4%

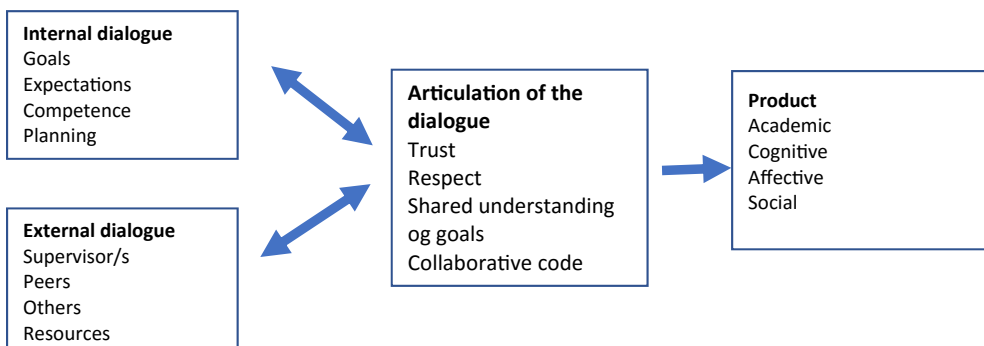


FIGURE 1 Responsive dialogue in doctoral supervision. Source: Authors. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

non-completion (Statistics Norway, 2021). Covid-19 may have had a negative impact on the completion rate in education, as many projects depend on data collection from the field of practice; school closures made it difficult to complete data collection. This is frequently discussed by the NAFOL doctoral students who had not completed their data collection prior to COVID-19.

## 2.1 | Norwegian National Research School in teacher education (NAFOL)

NAFOL was established as a national research school in teacher education in 2010. Most of Norway's teacher education institutions joined the network, and no institutions have left the network. However, Norway has undergone an extensive process of merging higher education institutions and today NAFOL's network includes 17 higher education institutions. As a network-based institution, its doctoral students can apply for the NAFOL programme, the institution has a representative in the NAFOL Council, and NAFOL seminars are organised within the network.

Reasons for establishing the NAFOL were multiple. First, to respond to critiques on the quality of teacher education and to develop teacher education into a more research informed field linked to practice. Secondly, there was a wish to strengthen the professional identity of teacher educators as researchers as well as teachers. Especially, since in 2017 all teacher education in Norway for schools became a five-year master programme. This required research competent teacher educators to supervise the research-based master's theses. A joint application for funding was submitted by the NAFOL network to the Norwegian Research Council in 2009, and full financing was granted for six years, starting in 2010. This has now become twelve years, and the NAFOL funding will be completed in 2022.

### 2.1.1 | Organisational structure

The NAFOL is led by a professor in a full-time position as the academic head appointed by the Board. Members of the Board represent the academy, including a professor from another country than Norway, a representative of teacher education beneficiaries (teachers' union) and two doctoral students. The Board meets twice a year. As already mentioned, each institution in the NAFOL network is represented at the NAFOL Council which meets once a year to share the impact of the research school at each institution and discuss future directions to be recommended to the Board and the academic head. The school employs two people in administrative positions and a part-time webmaster.

### 2.1.2 | Doctoral students

The NAFOL doctoral students are all teacher educators who hold a research fellow appointment in one of the network institutions or at the local school authorities. Most of them have a four-year fellowship with 25% teaching responsibilities. The majority work in pre-service teacher education programmes from pre-school to upper secondary programmes, and they have cross-disciplinary backgrounds. A few students work with in-service teacher education and are employed by the local school authorities and teach in school. The students have experience from teaching, thus, the research projects are usually practice-oriented. The average age for starting their doctoral work is 40 or more. The NAFOL students form a dedicated and experienced group who have decided to invest heavily in their professional development and career, which means for many receiving a lower salary during their doctoral period and having less time for family and social life.

The doctoral students are accepted into NAFOL in yearly cohorts of about 25 students. As a result, students advance at more or less the same pace through doctoral studies over four years. An experienced researcher,

usually a professor, is the coordinator of the cohort. This is a person who in the programme is closest to the doctoral students, and the threshold for communicating between students and coordinator is low. The students develop close peer-relationships, supporting each other throughout their doctoral education. This has been found to be a major advantage of the NAFOL structure (Schwach et al., 2021).

The NAFOL does not award the doctoral degree, this is done by their respective home institutions, and the students must follow the required coursework of their respective institutions. NAFOL offers additional support, including coursework tailored to teacher education research, which might replace or supplement institutional coursework. Eventually, the NAFOL doctoral students add commitments to their doctoral work. This puts a heavy responsibility on NAFOL to make it worthwhile, and in the following I will present how this is done.

### 2.1.3 | Pedagogical vision

During the planning stage of NAFOL it became clear that we wanted a different research school. Whereas the main aim was to support the doctoral students completing their projects and receiving the degree, we believed we should not work only with the product, but support the person working on the project, the doctoral student. Students are not just emerging researchers but are individual whole persons who aspire to achieve the highest academic degree. In addition to the challenging job of being a research fellow, the person has family and friends, interests and hobbies, life experience and background, and future hopes and dreams (Nygard & Solli, 2021). At NAFOL we want to get to know the whole person, to see each student as a unique person, and as far as possible provide more than academic support if needed.

In addition, our vision is that becoming an academic is not only being a skilled researcher, but also to be enlightened culturally and socially, to become a scholar. Thus, a different pedagogy of doctoral education has developed in NAFOL which is grounded in various theoretical trends. Gert Biesta (2009, 2015) talks about the purposes of education, claiming they are threefold. Education leading to a qualification is an important purpose, also in doctoral education. The student is expected to acquire knowledge, skills, dispositions and understandings which qualify for a doctoral degree. This is a major task we continuously work towards at NAFOL. However, we also want the doctoral student to be socialised into the academic community with its traditions and cultures, to become part of a global community of learning.

Socialisation is Biesta's (2009) second purpose of education, and he suggests that socialisation is part of the hidden curriculum (Elliot et al., 2020), a kind of tacit knowledge of what it means to live and act in a specific culture (Biesta, 2015), in a doctoral education, as an academic. The third purpose of education Biesta (2009, 2015) discusses is subjectification. Whereas the two first purposes might be putting constraints on the doctoral students' autonomy, subjectification empowers the students in developing a dynamic critical voice in the academic community, positioning themselves as an independent academic. At the NAFOL these three purposes of education guide the work done at the research school by consciously integrating them in the planning of our activities.

Above I have discussed the role of feedback in doctoral education, and the way we practice it at NAFOL leans on the concept of Responsive Pedagogy and on Bandura's (1977) Self-Efficacy theory. Engaging in doctoral education is a demanding, long and complex process. The dropout rates presented at the beginning of this article show that many students who started the process believing in themselves, find it too demanding and drop out. This is something we at the NAFOL work continuously to avoid by seeing the person and not only the product, and consciously providing feedback that empowers the doctoral students to believe in their own capacity, and that they will succeed in fulfilling their aspirations to get a doctoral degree. We do this by deliberately creating a positive dissonance between where they are and where they plan to go. They have to make an effort to progress to the next phase, but they must feel competent to do so. Because the NAFOL students are accepted as cohorts, their peers find themselves at the same stage in their studies, and the tasks they have to do and the texts they have to present at the NAFOL seminars are closely related to the expected stage in the doctoral project. In the first meeting of

the first year the students present their planned projects, and then the process is broken up into the various parts of the thesis until the last year. In the last year they are expected to present the full project for various audiences and in various forms, longer and shorter versions. Feedback from professors and peers relate to the individual student's progress and does not focus only on the final product, even though it is the goal, but there are several cairns on the way. NAFOL works from milestone to milestone instead of looking only at the peak of the mountain. There is an intentional effort to push the doctoral students out of their comfort zone and into the learning zone, the zone of proximal development (ZPD) (Vygotsky, 1978), but ensuring that the individual does not enter the anxiety zone. Each doctoral student will have different boundaries for their ZPD, and in NAFOL we try to detect the limitations for the individual. The current dropout percentage from doctoral education among the NAFOL students is <6% which is quite different from the national and European figures presented above. There are probably several other reasons for the low number of dropouts (selection of doctoral students, solid financing, networks etc.) but a pedagogical approach based on self-efficacy (Bandura, 1977) and social-constructivism (Vygotsky, 1978) to doctoral education can support the doctoral students in their demanding and challenging endeavour.

### 2.1.4 | Activities

The funding received from the Norwegian Research Council made it possible for NAFOL to offer each cohort two-to-three-day seminars, four times per year, in total up to 16 seminars during the NAFOL period. Two of these seminars were joint events with research schools in a Nordic or European country with the intention that doctoral students should establish international networks and be socialised into the international academic community. Thus, we also invited national and international speakers to participate in our seminars to provide the opportunity for the doctoral students to personally get to know *big names* in teacher education research. The invited speakers participated in the formal and informal activities of the seminars and were not just flying in and out giving a lecture in between. To further support doctoral students in creating their personal national and international collaboration networks, NAFOL provided financial support for active participation in international conferences and visits to international institutions for up to six months. Norway is a small country, and we need to develop international collaboration and participate in international academic discussions. NAFOL intentionally works to encourage the future generations of teacher education researchers to socialise academically beyond our national borders.

Moreover, through multiple seminars for each cohort, close cross-institutional networks in Norway were developed within the cohorts. The doctoral students got to know each other as emerging researchers and as people, and they support each other academically, friendships have developed, and sustained collaborations were initiated. Sunde (2020) who interviewed NAFOL alumni reports that they emphasised the academic and social benefits of the NAFOL networks. They felt responsible for each other's academic development and progress within the cohort. They felt NAFOL provided a space where they could participate safely in academic discussions, and they jointly acquired an academic language (see quote at the beginning of the article). The seminars included academic work in the form of lectures, presentation of texts in small groups for feedback from peers and an experienced researcher, multiple discussions, and masterclasses. When a NAFOL student completes a full draft of a paper (the majority write an article-based thesis), the student can ask for a masterclass before submitting it to a journal. The master is an external expert reader who discusses the text with the NAFOL student for formative purposes only in a critical academic discussion. The other students listen in, as much learning takes place in listening to genuine discussions of a text. A similar setup is offered when the students are near to completing their studies. An external opponent is invited to read the whole thesis and to provide formative feedback on the coherence of the work before the final submission. This is called a process-seminar. Receiving and providing critical feedback is a core activity for academics, and masterclasses serve all three purposes of education (Biesta, 2009) presented above.

Aligning with our vision to work with the whole person and not only on the product (the thesis), the NAFOL seminars start with an artistic performance, often by NAFOL students themselves. They are more than just

emerging researchers and in NAFOL we want to illuminate different sides of their talents. We usually have a cultural event included in the programme, visits to museums, galleries, or historical sites, guided city-walks where the host institution is located, hikes, plenty of coffee breaks for networking, and not least, joint dinners, one of which for each seminar will be in a restaurant. The cultural and social aspects of the NAFOL activities are planned in accordance with our claim that doctoral education encompasses more than getting a Ph.D.

### 2.1.5 | Conferences

To prepare the NAFOL students for academic life, NAFOL organises an academic conference every year. Prominent keynote speakers are invited and included in the invitation is the expectation that guests offer masterclasses, process-seminars and chair group sessions, commenting on students' texts. Attending conferences, presenting research, and networking might be scary to an emerging researcher. It is not an inborn skill, and in NAFOL we see it as part of a process of *Bildung*, that prepares doctoral students for academic life. NAFOL students and invited doctoral students from our international partner institutions are responsible for the sessions as chairs, presenters, and discussants. They introduce the keynote speakers and lead panel and group debates. These are responsibilities conference participants are likely to have, and in NAFOL we want to prepare them in a safe environment without pressures to perform. It is also customary that the cohort in the third year of the programme takes responsibility for the conference dinner, including the entertainment. In the future they might well be the one who has the main responsibility for organising a conference.

### 2.1.6 | NAFOL books

From presentation to publication is a slogan often used at the NAFOL. The intention is that if doctoral students have presented a paper, poster, or a roundtable contribution at a conference, it is wise to develop the work into a paper or book chapter for publication. Moreover, the majority of the NAFOL students write what in Norway is called an article-based thesis with three or four articles or book chapters and a meta-text of the research project of about 100 pages. To support the students in the publication struggle, NAFOL publishes a book with peer-reviewed chapters every second year. The call for the fifth NAFOL book is out, and doctoral students who have presented at the NAFOL conferences are invited to submit a lengthy abstract which is subject to blind expert reviews, and the authors of the accepted abstracts are invited to submit full papers which again are sent for review by senior researchers. The papers which are finally accepted, are included in the NAFOL book published by a reputable Norwegian publisher.

## 3 | NAFOL DURING THE COVID-19 PANDEMIC

During the Covid-19 pandemic the NAFOL was, as other education organisations, forced to stop all in-person seminars. Travelling became problematic, restrictions for how many people could meet in-person were enforced on campuses as well as hotels. What had been an integrated part of NAFOL's work, the social meetings and cultural events became impossible to arrange, and the seminars were left with the academic programme only. However, we continued with four online seminars for each cohort per year, and we quickly learned that breakout rooms allowed for feedback sessions in smaller groups, and online masterclasses and process-seminars, and even public defences, worked well. The flexibility of working online enabled us to have masterclasses and process-seminars separately from seminar dates, and we could invite lecturers and examiners from all over the world without taking time and travel costs into consideration. The academic goals of the NAFOL's signature pedagogy were catered for;



however, other aspects were, if not lost, strongly reduced. One of the students noted after an online seminar that the seminar worked better than expected online in terms of academic expectations but that the student really missed the social dimension and was happy that online seminars were a temporary solution.

We went ahead with the plan to have an international conference in the autumn of 2020, when the lockdown was still in force in Norway, but online. As with many other conferences, the academic programme took place as planned, social activities did not work as well as hoped for, which we learned from participant feedback such as the following. "I experienced two rich and useful days. Keynotes and paper sessions worked well, but it was too much sitting still" (Online survey, doctoral student, Norway, November 2020). "A conference is mingling in the breaks, and this cannot be done as well online" (Online survey, doctoral student, Norway, November 2020). "The conference was of a high level, yet I hope the next one will be in-person" (Online survey, doctoral student, Norway, November 2020). "I didn't experience the NAFOL spirit in the same way when it [the conference] is online" (Online survey, doctoral student, Norway, November 2020).

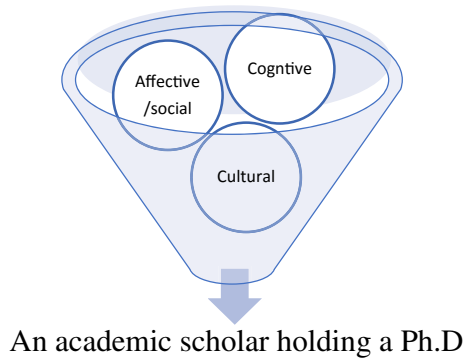
It became clear that the social and cultural aspects of the NAFOL programme are valued by the doctoral students. In November, 2021, we could have our first in-person seminar since March 2020, with lectures, feedback sessions, masterclasses, role play, dinners with music and quizzes, and a visit to a famous outdoor art museum. As one of the participants said when we left: "Finally I feel like a whole person and not only a doctoral student" (Informal comment, doctoral student, Norway, November 2021).

## 4 | THE NAFOL SIGNATURE PEDAGOGY OF DOCTORAL EDUCATION

According to Shulman (2005) signature pedagogies are, as mentioned, about "The types of teaching that organize the fundamental ways in which future practitioners are educated for their new professions" (p. 52). At the NAFOL we educate teacher educators as researchers with a doctorate in addition to acting as teachers. Our aim is to educate academics who see themselves as *teacher educator researchers* capable of disseminating their work and research to practice-based as well as academic communities. As a means to achieve that goal the NAFOL perceives doctoral education as an educative process in which the whole person, not only the cognitive and academic development, is nurtured. The vision behind our view has been presented above, including a description of how we translate our vision into practice in the effort to practice the NAFOL signature pedagogy in doctoral education (Figure 2).

There is more to doctoral education than merely focus on cognitive and academic aspects. Educating a scholar embraces the whole person and addresses affective and social aspects of a person and widens the cultural horizon of the emerging academic. Shulman et al. (2006) claim that "some problems are endemic to all doctoral programs" (p. 25) and question if earning the doctoral degree prepares the students for the professional and scholarly roles they are expected to take on. Moreover, Shulman et al. state that "one of the greatest challenges for education Ph.D. programs is ensuring that students, who have started their career as practitioners, develop into effective researchers" (Shulman et al., 2006, p. 26). Further on Shulman and his colleagues affirm that holders of a Ph.D. "[...] are scholars first, in the fullest sense of the word – future leaders who will creatively generate new knowledge, critically conserve valuable and useful ideas, and responsibly transform those understandings through writing, teaching, and application" (Shulman et al., 2006, p. 27).

NAFOL's vision aligns with the thoughts put forward by Shulman et al., (2006), and we claim that more than high-level research competence is needed to take on such demanding roles. A broader vision of what it entails to be an academic is needed. However, whereas Shulman et al. (2006) suggest that a new degree is needed for practice oriented doctorates, a Professional Practice Doctorate for Education (P.P.D.),<sup>1</sup> NAFOL aspires to educate doctoral students within the framework of the Ph.D. title. By today (October 2021), we have supported nearly 200 teacher educators in achieving a Ph.D. degree, and there are another 65 in the pipeline who will graduate from NAFOL by July, 2022. The theses meet the requirements for a Ph.D. degree and are assessed by external



**FIGURE 2** NAFOL's signature pedagogy for doctoral education. *Source:* Figure constructed by authors with inspiration from Nygaard and Solli (2021). [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

examiners against the strict criteria of a Ph.D. (as this is the only type of doctoral degree recognised in Norway). At NAFOL we claim that it is possible to educate highly qualified researchers who are also scholars and practitioners without creating a new degree. That is NAFOL's signature pedagogy, however, it was not operationalised without challenges.

## 5 | CHALLENGES

One of the factors contributing to the success of the NAFOL has been admitting students in yearly cohorts, which meant that the cohort progressed with their theses at about the same speed. However, due to the high number of applications, we made the mistake of accepting two cohorts with more than 25 students, which turned out to be a challenge. In larger cohorts more students are more likely to be less active. In the larger cohorts, a core group developed strong peer networks, yet some were less involved in the activities during the four years. We did not notice the same in the groups of 25 students or less, in these groups everybody was actively involved. We solved this problem for the ninth cohort by admitting close to 50 students in two cohorts with a different coordinator for each, which turned out to be a good solution.

Another challenge was that NAFOL students are all part of an institutional doctoral programme. At times the students experienced that there were too many tasks and activities, and conflicting time schedules. When we became aware of stress caused by the many demands, we talked to the student and their respective institutions, and in most cases were able to find a solution that the doctoral student, the home university and NAFOL could work with.

The major challenge NAFOL experienced was, however, related to the success of the research school. When NAFOL was established in 2010, there were few doctoral students in teacher education mainly because the teacher education institutions did not have a specific doctoral programme for teachers and teacher educators. Those who proceeded to a doctoral degree did it in a subject matter discipline such as Science, English, Norwegian, or at the Education Sciences Department. To be sure, NAFOL had enough doctoral students to start with, each institution in the NAFOL network had to commit to a certain number of students in the network contract. However, the number of students increased already after the two first years, and the yearly application numbers were far beyond the 25 that NAFOL accepted into a cohort. This created a problem, and the Board had to work out acceptance criteria and ensure that all network institutions were represented in each cohort. A special challenge was that all applicants had already been accepted into doctoral programmes at their own institutions, and we in NAFOL did not feel comfortable making an additional selection as it could be perceived as if we questioned the quality of the students accepted by the network institutions. More and

more institutions created doctoral programmes in teacher education, and the majority of students applied to NAFOL, learning from peers and NAFOL alumni about NAFOL's signature pedagogy. In some bigger institutions, this created a hierarchy of doctoral students, those who were in NAFOL and those who were not. At the same time, smaller institutions with few doctoral students still needed the NAFOL network to support their students. The NAFOL was a unique and timely initiative when it was established in 2010. Now, nearly twelve years later (the NAFOL project ends in July 2022), the signature pedagogy of NAFOL is being translated into the institutional doctoral programmes and to smaller networks that allow for the inclusion of all doctoral students. Thus, in the last section of this paper I will briefly suggest how NAFOL's signature pedagogy can be implemented in other contexts in Norway and beyond.

## 6 | RECOMMENDATIONS FOR OTHER CONTEXTS FOR USING THE NAFOL PEDAGOGY

When creating a doctoral programme, we learned through the NAFOL that it was important to articulate the pedagogical vision framing the programme and its activities. A doctoral student is not only an emerging researcher, but a whole person who invests years of his or her life to achieve the highest academic degree, a doctorate. The whole person needs to be engaged in the activities offered in the doctoral programme. NAFOL's experience is that when the programme is designed with more than the end product in mind, that is the thesis, and when the programme creates space for success and failure, for socialisation and enrichment, expertise and peer support, the students are less likely to experience a lack of self-efficacy and depression (Carter et al., 2020; Leveque et al., 2017), and are more likely to complete the Ph.D. The completion rates at NAFOL presented previously in this paper support this claim, yet no causal effect can be asserted. When signs of distress and demotivation are noticed, they need to be acted on in a system experienced as safe and supportive. The threshold for seeking and getting individual support should be low.

Working with yearly cohorts which allow for close peer networks among the doctoral students was found to be one of the main advantages of the NAFOL. The fact that students advanced through stages of doctoral studies at the same pace allowed them to discuss challenges with peers having similar experiences. The peer cohort reduced the feeling of isolation and insecurity experienced by many doctoral students (Appel & Dahlgren, 2003). As one of the NAFOL students said:

I do not know if it is like this in all the cohorts, but I felt very safe, yes I felt I belonged to a community that wanted my best in every way. The other students in the cohort became more and more important to me.

(Sunde, 2020, p. 28)

The cohort model and the frequent seminars with easy access to expertise and senior researchers provided a safe space for critical academic discussions. The fear of appearing not to be *good enough* is shared by many doctoral students (Carter et al., 2020).

A final recommendation relates to collaboration, not only at the level of students, but also at the institutional level. By creating a national network with the majority of teacher education institutions, we learned from each other through network meetings where each of the doctoral programmes were presented and discussed. Seminars at network institutions allowed for experiencing the institutional academic culture as well as local culture and art. The smaller institutions without their own doctoral programmes were included in a community of doctoral education, and new cross-institutional collaborations were created. The well-known saying that we are stronger together than alone is relevant also for doctoral education. Institutional collaboration is not necessarily limited to a specific national

context, it can be useful in international settings as well—of which the European Doctorate in Teacher Education (EDITE, 2022) is an example.

## 7 | CONCLUSION

The Norwegian National Research School (NAFOL) has been described in this article in relation to doctoral education internationally and in the context of Norway. The NAFOL's signature pedagogy of doctoral education was outlined. Challenges experienced towards the end of the project were also discussed. Hasgall et al. (2019) state in their report about European doctoral education that it is the doctoral community itself that develops the programme, and it is to a lesser extent a top-down dynamic decided by policy makers. Thus, many positive lessons learned from the NAFOL can serve as food for thought for other contexts that want to strengthen doctoral education and specifically, the preparation of teacher educator researchers.

NAFOL's work has recently been externally evaluated by the Nordic Institute for Studies in Innovation, Research, and Education (NIFU). Their final report confirms that NAFOL's signature pedagogy for doctoral education has been successful:

The graduate school has strengthened collaboration and built networks between the academic environments related to teacher education. NAFOL has represented an effort for researcher education for teacher education. The school has contributed to building the knowledge base in teacher education research and thus strengthened the professionalism of teacher education and its research base. The PhD theses have added great added value to teacher education research, and in a broader sense to educational research.

(Schwach et al., 2021, p. 14)

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## ENDNOTE

- <sup>1</sup> A Professional Doctorate in Education (P.P.D.) resembles an Educational Doctorate (Ed.D.); however, none of these exist in Norway, where the only doctorate degree is a Ph.D. Thus, it is beyond the scope of this paper to elaborate on the various doctoral titles.

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