LeadVET PR2

LeadVET Partnership model The path to Future Skilled Workers. A model for Recruiting and Retaining Vocational Teachers

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Summary: LeadVET Partnership model for Recruiting Vocational **Teachers**

The LeadVET partnership model is based on what we call the Nordic model, often defined as the interaction between organized labor, broad public welfare programs, and economic policy. The model has been developed in a Norwegian context, through several workshops with participants from secondary education, teacher education, companies, and training offices in Norway, as well as feedback from our partner countries in Finland, Turkey, and Germany. The model is a result of an EU-funded project, LeadVET, led by Anne Berit Emstad, a professor at the teacher education program at NTNU.

Components of the LeadVET model

Creation and support of partnerships involving business/industry, vocational schools and vocational teacher education institutions

Increased use of **shared positions** enabling skilled workers to teach part-time while continuing to work in their respective professional roles

Three **training modules** designed to facilitate entry into teaching for these skilled workers Increased emphasis on mentors as boundary spanners across industry, VTE and VET school contexts (PR3)

Adjustment of national systems and norms where necessary to accommodate the model.

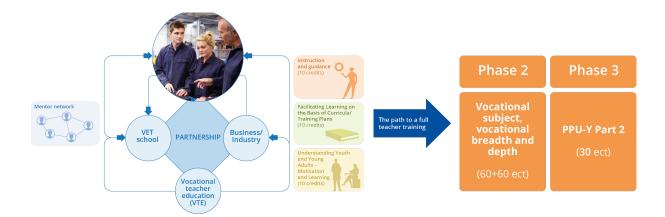


Figure 1LeadVET partneship model













The model is innovative and offers a solution for recruiting teachers in subjects where there are few applicants for VET (Vocational Education and Training). Additionally, the model facilitates skill enhancement for the recruited teachers, which can eventually lead to certification as vocational education teachers. We argue that current approaches have not successfully addressed the shortage of VET teachers. Rather than waiting for professionals to find teaching more appealing than working in a company, we need to develop strategies that bring expertise directly into the classroom, ensuring that students receive high-quality instruction. LeadVET's model does just this. By increasing the use of shared positions, schools can ensure they always have access to the latest industry knowledge, including technological advancements, new methods, and changes in laws and regulations. In the long term, this will lead to improved outcomes for both apprentices and the newly skilled workforce.

This is a committed partnership that includes three parties: VET school, companies (business/industry), and Vocational Teacher Education (VTE). It is a committed partnership where business/industry assists schools by allowing their skilled workers to hold small, shared positions (5% - 20%) in the school, and VTE offers in-service training opportunities that are perceived as meaningful both for VET and business/industry.

The first step involves offering tailored continuing education that meets the needs of companies whilst reaching educational goals that aligns with the VTE-curriculum. This means an education strengthened by increased pedagogical and didactic competence, which not only opens doors to possible teaching careers but also serves as a career path within the vocational field in question.

The three training modules, outlined in the table below are anchored in the vocational teacher education curricula:

1. Instruction and Guidance	2. Understanding Youth and	3. Facilitating Learning on the
	Young Adults	Basis of Curriculum Plans
Objective	Objective	Objective
Equip vocational teachers	Deepen teachers' understanding	Enable teachers to effectively
with practical strategies for	of the developmental, social,	interpret and implement
instructing and guiding	and emotional needs of youth	curriculum plans to facilitate
students in various learning	and young adult learners.	learning that meets educational
	Content	standards.













environments, including classrooms and workshops.

Content

- Effective teaching methodologies, including interactive and studentcentered approaches.
- Techniques for providing constructive feedback and mentoring.
- Classroom management and fostering a positive learning atmosphere.
- Adapting instruction to different learning styles and abilities.

Outcome

Teachers will develop the skills to guide learners through theoretical and practical tasks, ensuring personalized support that enhances student outcomes.

- Adolescent psychology and the transition to adulthood.
- Social dynamics, peer influence, and the impact of technology on young learners.
- Motivational strategies that resonate with youth and young adults.
- Identifying and addressing potential barriers to learning, such as mental health issues and socio-economic challenges.

Outcome

Teachers will be able to tailor their approach to meet the unique needs of young learners, creating an inclusive and supportive environment for personal and academic growth.

Content

- Understanding the structure and goals of curriculum frameworks in vocational education.
- Developing lesson plans that align with learning outcomes and competencies specified in the curriculum.
- Assessment strategies that reflect curriculum requirements and student progress.
- Adapting curriculum to meet the needs of diverse learners and companies demands.

Outcome

Teachers will gain expertise in using curriculum plans as a foundation for designing and delivering effective instruction that prepares students for both exams and real-world applications.

By improving the quality of guidance and understanding of young students' "behavior," these training modules are also valuable for individuals who do not work as full-time teachers. This can include apprenticeship supervisors, mentors, and instructors working internally.

Mentoring is a crucial component of the LeadVET model, as it enhances the quality of guidance provided to apprentices and supports the professional development of skilled workers. Developed in collaboration with our partners in Finland, the mentor network aspect ensures that mentors with increased pedagogical and didactic competence can offer more effective and personalized guidance to apprentices. Additionally, the mentoring aspect of the model provides skilled workers with opportunities for career advancement within their own fields, as they gain valuable teaching and mentoring skills that are recognized and accredited as part of their continuing education. This holistic approach fosters a collaborative environment that benefits both mentors and apprentices, ultimately contributing to the overall success of the vocational education system.





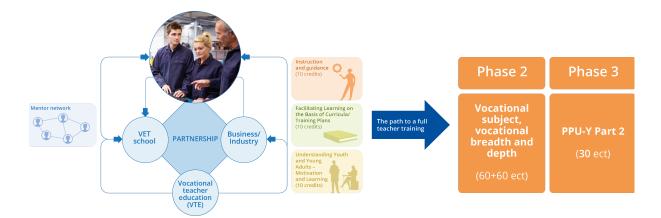








The model implies that the educational offerings provided can be the first step towards teacher education (phases 2 and 3). After completing 30 credits, participants have covered half of the Norwegian practical-pedagogical education (PPU for VET).



The model permits skilled workers without the necessary educational qualifications to start continuing education and to gain credits that they can use if they decide to continue in teacher education. A major challenge, however, is that skilled workers should be able to work in schools without losing out financially. Based on feedback from all partners, its emphasized that for the model to succeed, significant structural and cultural shifts will be needed to make it appealing to professionals and ensure that both educational institutions and companies benefit.













"Partnership between Schools, Companies and Teacher Education: The path to the future skilled worker."

Background

Europe has a significant need for skilled workers to meet labor market demands, which is crucial for future value creation, contributing to sustainable, inclusive, democratic, and socially equitable societies. In Norwegian terms, an estimated 70,000 additional skilled workers will be required by 2035 (Statistics Norway, 2023). The European need for skilled workers is underscored by Euronews (April 2024), which reported that 75% of employers across 21 European countries struggled to find workers with the right skills in 2023, up from 42% in 2018—a 33% increase. The demand for skilled workers shows no signs of slowing down.

The EU's Osnabrück declaration emphasizes the importance of vocational training for European competitiveness, sustainability, employment, equity, democracy, and value creation. The declaration also states: "It is necessary to promote VET as an attractive and high-quality pathway for jobs and life. In particular, attractiveness can be achieved through adaptability, flexibility, high quality, inclusiveness, and permeability of training pathways." To achieve success, it is essential to have dedicated teachers, guidance counsellors, trainers, and mentors who benefit from high-quality and inclusive initial and ongoing professional development. These individuals play a crucial role as multipliers and mediators, fostering a culture of lifelong learning. In many ways, teaching and training staff will be actively involved in change management in the wake of this development. Digital teaching and training require VET-staff to develop new methodological and didactic approaches for a connected world. To this end, the attractiveness of teachers' and trainers' professions needs to be increased, for instance and if applicable, by supporting access of company professionals to the teachers' and trainers' professions within VET-institutions, in line with national legislation and conditions of access to the teaching profession".

Concerns about the lack of recruitment of vocational teachers in a European context is also a topic in the OECD report "Teachers and Leaders in Vocational Education and Training" from 2021. The report describes the role of vocational teachers as demanding because they need both industrial and pedagogical competence. It is challenging to obtain resources for continuing education to acquire new knowledge and skills. The report highlights that financial













incentives are needed to encourage more people to become vocational teachers. Additionally, hiring skilled workers from companies can contribute to increasing the number of teachers. "As they generally lack the required teaching qualifications and pedagogical skills, providing flexible pathways for qualification, training, and recruitment can ease their entry into teaching. For example, countries may relax qualification requirements, if needed, for company professionals or graduates from higher education specializing in relevant subjects and provide alternative routes to obtaining teaching qualifications. Part-time work can also facilitate flexible teaching in VET, but it should not come at the expense of VET teachers' working conditions and teaching skills. Collaboration between VET institutions and companies should be strengthened to facilitate the engagement of company professionals in VET teaching." Furthermore, vocational teacher education programs should have updated curricula, collaborate with vocational training for internships, and engage in research and innovation within vocational pedagogy.

One of the proposed measures in the OECD report is to strengthen leadership roles in vocational training. We need leaders who understand trades, have knowledge of the labor market, and possess the necessary skills to improve both training and learning. The report states: "Institutional leaders in VET play many important roles, from developing and supporting teachers to engaging multiple stakeholders and improving the quality of VET through the allocation of resources and provision of instructional guidance."

Both the Osnabrück Declaration and the OECD report emphasize that to strengthen vocational training, we need more teachers, close collaboration with companies, increased financial resources, flexible teacher education programs, and dedicated school leaders.

To address these challenges, concerted efforts are necessary. Ambitious young people must choose vocational education and training, which must be of high quality. Companies should actively participate by providing workplace training, competence development, internships, and apprenticeships. Additionally, we need make vocational teaching a more attractive career, both nationally and internationally. Our collective European welfare and value creation depend on the skilled workers of the future. Without good teachers, there are no skilled workers.

The Erasmus+ project "Completing Secondary Education" (2017), led by Charlottenlund Upper Secondary School, highlighted the significant impact teachers have on students













completing their education. To achieve the goal of more skilled workers in a European context, we must address the varying availability of vocational teachers across different subjects and countries. Innovative solutions are needed to meet current and future demands. Our shared European objectives—sustainable value creation, inclusive work environments, social justice, and democratic societies—rely on continuous access to competent and innovative skilled workers.

The Ambition of LeadVET

The ambition of LeadVET is to strengthen vocational teacher education and vocational training by establishing sustainable university-school collaborations and then work in partnership with companies. Leadership and networking between education and companies are crucial prerequisites for a sustainable vocational training with high quality at all levels.

In the LeadVET project, we have gathered experiences and knowledge from Norway, Finland, Germany, and Turkey to create a model for recruitment of VET-teachers and improved vocational education. This collaboration involves vocational schools, companies, universities, and government authorities. Our model is designed to enhance recruitment for vocational training and vocational teacher education, ultimately elevating the status of vocational subjects. In LeadVET, we present a partnership model where schools, teacher education institutions, and companies collaborate to enhance the quality and attractiveness of vocational training. In our work on LeadVET, we've received clear signals that companies desire greater influence over school education. Challenges include outdated equipment and a shortage of teachers with the right qualifications, especially in technical fields. A sustainable vocational teacher education system—one that is not driven solely by economic cycles—is essential. European vocational teacher education should attract motivated and competent applicants from the business sector. Building strong networks between school leadership, businesses, and universities is key to this aim.

The LeadVET model is based on the Nordic social model, often defined as the interaction between organized labor, broad public welfare programs, and economic policy. Effective collaboration across policy areas is crucial for sustaining a society with high employment and minimal disparities. The Nordic model combines responsible economic policies, innovation capacity, welfare, and strong labor market partnerships. This has resulted in prosperous societies with high levels of welfare, trust, participation, and a high standard of living for the













majority of the population. At the micro-level, the Nordic model ensures collaboration on wage levels, employment conditions and professional development in workplaces. One result of the Norwegian wage settlement in 2024-2026 has been continuing education reform, funded by employers and the state. The LeadVET model is, therefore, designed to enhance collaboration between schools and companies, offering skilled workers the opportunity to take up part-time teaching positions in schools.

This context features tripartite cooperation between organizations representing employers, employees, and the state. For our model to be implemented, these three parties must agree on organization and financing, ensuring state contributions to vocational education in schools and support for skilled workers to take training modules or vocational teacher education at universities.

The model has been developed in a Norwegian context, with feedback from partners in Finland, Turkey and Germany. For Norway, the model demonstrates opportunities for skilled workers to participate in partial or full teacher education programs at the Norwegian University of Science and Technology (NTNU). The LeadVET Model was also presented at a learning, teaching, and training activity (LTTA), where top-level leaders from the workforce in Finland participated in a panel discussion about the model. The leaders were very positive about the model but also mentioned that it would require a win-win-win situation for their workers to contribute. Win for the company, win for the skilled worker, and win for the school. The first is the biggest challenge because they already have workforce issues themselves. They point out that in the end, it could lead to more and better future skilled workers, but in the partnership, it must always be considered how to create a win-win-win for everyone along the way.

The LeadVET model provides in-service training that enhances the workers' supervisory skills, which in turn contributes to better guidance for apprentices and colleagues. This will result in better-qualified apprentices, and the industry will have a hand in steering the process throughout the four years it takes to become a skilled worker. In this report we point at possibilities for creating those 'win-win 'situations by co-creating in-service training modules that benefit both companies, skilled workers and the schools. This report also highlights the adjustments necessary to adapt the model to other national contexts. A major challenge, across the nations, is that skilled workers should be able to work in schools without losing out financially. Based on feedback from all partners, its emphasized that for the model













to succeed, significant structural and cultural shifts will be needed to make it appealing to professionals and ensure that both educational institutions and companies benefit. With political support and will, it can be made possible for companies to find it beneficial to lend workers to VET, not only through the advantages offered by the model itself, but also by compensating for the disadvantages that arise for companies when their employees take on combined positions.



Figure 2Emstad/ChatPTP









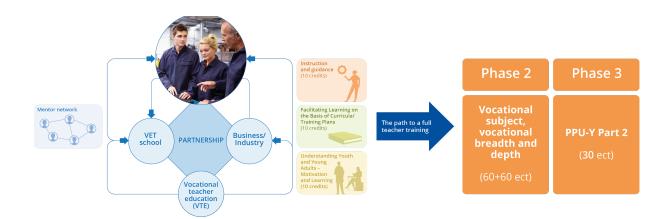




The LeadVET model: "Partnership between School – Company – Teacher Education: The path to the future skilled worker."

These are the components of the LeadVET model:

- 1. Creation and support of **partnerships** involving business/industry, vocational schools and vocational teacher education institutions
- 2. Increased use of **shared positions** enabling skilled workers to teach part-time while continuing to work in their respective professional roles
- 3. Three training modules designed to facilitate entry into teaching for these skilled workers
- 4. Increased emphasis on **mentors as boundary spanners** across industry, VTE and VET school contexts (PR3)
- 5. **Adjustment** of national systems and norms where necessary to accommodate the model.



1. Creation and support of **partnerships** involving business/industry, vocational schools and vocational teacher education institutions

We propose a partnership aimed at contributing to the education of future skilled workers by collectively focusing on recruiting teachers to vocational education programs facing challenges in teacher recruitment. It also proved training modules for the skilled worker that both benefit school and the enterprises. The partnership, as understood in LeadVET, represents a cross-sector collaboration. The term "cross-sector collaboration" describes a process where various organizations within a community unite to collectively focus their expertise and resources on complex issues that are significant to the community they serve.













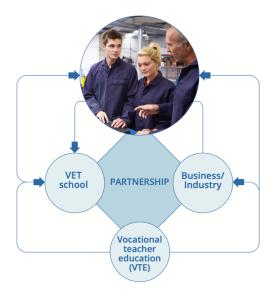


Figure 3Partnership VET - VTE - Business/Industry

When collaborating with partners, it's crucial to ensure a clear advantage for all parties, meaning they achieve something significant together that they couldn't alone. Leveraging windows of opportunity to advance collaborative approaches is essential (Bryson, Crosby & Stone, 2015). This concept is often referred to as creating a win-win situation. Win-win situations are vital for sustainable partnerships as they foster mutual trust, commitment, and long-term success. Both partners gain tangible value, making the collaboration more equitable and less prone to conflicts. Clear benefits for both parties enhance the partnership's endurance and growth (Lank, 2006). Through several workshops and the Learning, Teaching, and Training Week (LTTW) in the LeadVET project, it became clear that for enterprises, a win-win situation is not sufficient. They emphasized the need for a win-win-win model to ensure sustainability. These meetings (workshops in all countries and LTTW) provided insights into what constitutes a win-win-win scenario for both schools and businesses, as well as the associated risks. This win-win-win situation should extend to VET students and apprentices, enhancing the overall quality of teaching and guidance. The resulting benefits could include:

For companies:

- Specialized teacher education gives the skilled workers supervisory competence.
- Supervisors with increased competence can contribute to better supervision of apprentices.













- This will contribute to training better qualified apprentices because vocational education will have access to "expert teachers" with up-to-date knowledge and skills.
- Better vocational education can contribute to increased status for vocational subjects, and recruitment of skilled students who can become skilled trades workers.
- It also provides opportunities to connect with possible future apprentices.
- It provides access to teaching rooms and equipment that may be found in schools, but not in the company.

Benefits For VET/VTE:

- Better access to, and recruitment of, potential teachers.
- Inspiration for teachers who teach vocational education through closer connections to working life and up-to-date knowledge.
- Inspiration for students.
- Students are taught by someone who knows the subject from the inside.
- The partnership provides opportunities for closer cooperation with working life.
- The scheme can give vocational education increased status and a better reputation.
- VET Students may benefit greatly from being able to meet a professional worker with a high level of competence at school, who should also be in a position to use this competence in their company.

Risks:

- The challenge is that the brightest individuals become full-time teachers and are therefore lost to the trade or profession. This is a risk for the company, but hopefully it will be able to re-recruit or replace these individuals.
- Conversely, recruitment of skilled workers for school positions may be difficult. There is a reason why they are skilled workers, who are not necessarily eager to sit at the teacher's desk. There may, of course, be skilled workers who are tired of their profession and who apply to become teachers instead, but are such individuals what schools need?
- Getting younger people to apply for teaching posts is important but challenging, especially if there are pay gaps between teaching and professional work.













2. Increased use of **shared positions** enabling skilled workers to teach part-time while continuing to work in their respective professional roles

The central concept of the LeadVET model is that skilled workers actively contribute to teaching vocational subjects at the upper secondary education level. What sets this approach apart is that education is provided to those already working in the field, (companies) who hold a small percentage (5%-20%) of positions in upper secondary schools. Skilled workers primarily operate within companies but also hold part-time positions as "expert teachers" in schools facing challenges in recruiting vocational instructors. These "expert teachers" bridge this gap by providing subject-specific knowledge and occupational skills to students.

As stated, to ensure successful partnerships, we must create mutually beneficial situations. The education provided in the LeadVET model not only opens doors to potential teaching careers but also enhances workers' career paths within their respective fields, bolstered by enhanced pedagogical and didactic competence. The initial step involves offering tailored inservice training that aligns with both company needs and educational goals.

The central concept is that skilled workers actively contribute to teaching vocational subjects at the upper secondary education level.



The initial step involves offering tailored in-service training that aligns with both company needs and educational goals.

Figure 4Emstad/ChatGYP

3. Three **training modules** designed to facilitate entry into teaching for these skilled workers

The LeadVET model aims to offer educational training modules that support various career paths and simultaneously provide long-term opportunities to complete vocational teacher education and training. This means that training modules in professional subjects must be based on requirements for competence in vocational training and vocational school teaching. Three training modules are included in the teaching plans for vocational teacher education. These three modules aim to build on existing subject curricula, providing a comprehensive













training program that equips vocational teachers with essential skills and knowledge. As mentioned, in Norway these training modules have been selected based on input from all partners (schools, companies, and teacher education institutions). They address the interests of companies that provide guidance to apprentices and training for co-workers. Additionally, they cover essential knowledge and skills that teachers should have when instructing in vocational education and training (VET).

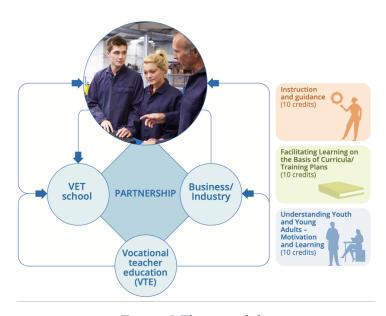


Figure 5 Three modules

The choice of course topics is not random, and stems from suggestions from partners and feedback received at multiple Norwegian workshops where skilled workers, representatives from NHO and LO, as well as teachers from VET and VTE, provided input on which topics would be useful for a skilled worker both in their workplace and in school. The three modules—Instruction and Guidance, Understanding Youth and Young Adults, and Facilitating and Learning based on Curriculum Plans—are considered equally important in both the workplace and education. In the workplace, apprentices need guidance, requiring an understanding of both youth and learning, as well as adaptations to apprenticeship plans and guidance around the goals of these plans. These topics are also covered in the vocational teacher education curriculum, making them relevant for all parties involved. The suggestions were then reviewed in conjunction with the current curricula for vocational teacher education and adapted to existing teaching plans.













Since the modules also encompass the vocational teacher education curriculum, it enables individuals to progress towards a complete teacher education program, providing a pathway for those who view this as a further career opportunity. Upon completing 30 credits, participants will have covered half of the Norwegian Practical Pedagogical Education (PPU). In accordance with the suggestions that emerged, these training modules cater to supervisors of students or apprentices and individuals involved in instructional roles within companies. By enhancing the quality of guidance and understanding of young learners' behaviors and characteristics, these training modules should prove valuable even for those not pursuing full-time teaching positions.

Training modules

Three training modules with its objectives, content and outcome:

1. Instruction and Guidance

Objective

• Equip vocational teachers with practical strategies for instructing and guiding students in various learning environments, including classrooms and workshops.

Content

- Effective teaching methodologies, including interactive and student-centered approaches.
- Techniques for providing constructive feedback and mentoring.
- Classroom management and fostering a positive learning atmosphere.
- Adapting instruction to different learning styles and abilities.

Outcome

• Teachers will develop the skills to guide learners through theoretical and practical tasks, ensuring personalized support that enhances student outcomes.

2. Understanding Youth and Young Adults

Objective

 Deepen teachers' understanding of the developmental, social, and emotional needs of youth and young adult learners.

Content













- Adolescent psychology and the transition to adulthood.
- Social dynamics, peer influence, and the impact of technology on young learners.
- Motivational strategies that resonate with youth and young adults.
- Identifying and addressing potential barriers to learning, such as mental health issues and socio-economic challenges.

Outcome

 Teachers will be able to tailor their approach to meet the unique needs of young learners, creating an inclusive and supportive environment for personal and academic growth

3. Facilitating Learning on the Basis of Curriculum Plans

Objective

• Enable teachers to effectively interpret and implement curriculum plans to facilitate learning that meets educational standards.

Content

- Understanding the structure and goals of curriculum frameworks in vocational education.
- Developing lesson plans that align with learning outcomes and competencies specified in the curriculum.
- Assessment strategies that reflect curriculum requirements and student progress.
- Adapting curriculum to meet the needs of diverse learners and companies' demands.

Outcome

 Teachers will gain expertise in using curriculum plans as a foundation for designing and delivering effective instruction that prepares students for both exams and realworld applications.

4. Increased emphasis on **mentors as boundary spanners** across industry, VTE and VET school contexts (PR3)

In the LeadVET model, a mentor network connects people from the workforce (like the industry) teacher education, and vocational education institutions. As part of this model, the













mentor network serves dual purposes: as a tool for advancing teacher education and as a facilitator of flexible study paths for both experts and teacher students.

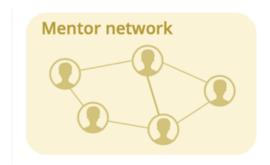


Figure 6 Mentor network

As outlined earlier in this report, the Finnish education system is characterized by its remarkable flexibility, allowing individuals to navigate diverse educational pathways easily. This adaptability extends to teacher education as well, encompassing elements such as the recognition of prior learning and the integration of on-the-job training.

Collaboration between representatives of industry and of vocational education institutions fosters the exchange of valuable insights into the competencies required of vocational teachers and the expectations of working life. Such exchanges contribute significantly to the continuous development of both vocational teacher education and vocational education. Additionally, the network facilitates discussions on recruitment needs and provides opportunities to give expert lectures, which often serve as a steppingstone for professionals aspiring to become vocational teachers.

In vocational schools, mentors play a critical liaison role, supporting student teachers in their transition to teaching. These mentors help bridge the gap between being an expert in a field and becoming a vocational teacher.

The mentor network also includes individuals from industry who have already completed their pedagogical studies but have not yet transitioned to teaching roles. These individuals stay connected to developments in vocational education, maintaining their readiness to step into teaching when the opportunity arises.

The mentor network disseminates information about alternative pathways into teacher education to individuals currently in the workforce. This allows professionals to complete







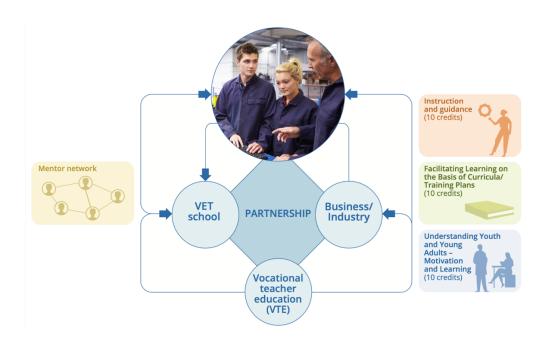






portions of their studies prior to beginning formal pedagogical training, earning additional admission points and having their prior learning recognized on the way towards full teacher qualifications.

By streamlining the learning path of experts moving into teacher education, recruitment efforts in vocational education are supported and motivation to become a vocational teacher is increased.



5. **Adjustment** of national systems and norms where necessary to accommodate the model

The partnership, with its participating actors, is the basis of the model. Completion of the various training modules is equivalent to completing parts of the regular teacher education program and qualifies individuals to complete the entire educational pathway. This requires being open to recognition of prior learning, which is common in Norway. Individuals can then proceed along the regular pathway and become certified vocational teachers.

To successfully implement the LeadVET model, adjustments to national systems and norms are necessary. This model aims to foster closer collaboration between vocational education and industries, providing mutual benefits for both sectors. Companies can enhance their employer branding and attract new talent by offering development opportunities and improving recruitment pipelines from vocational schools.







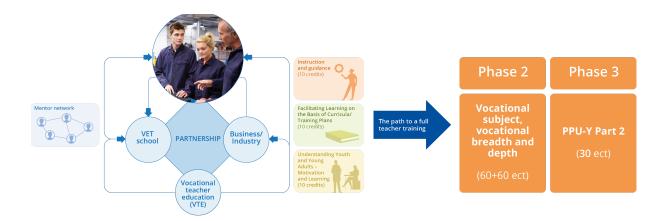






High qualification standards for teachers, particularly in countries like Germany, may discourage professionals from transitioning into teaching roles. We also see that in order to adjust the model, some countries need to shift work cultures to make part-time teaching attractive to professionals, requiring flexible arrangements and incentives. Based on the workshops we also see that technical professionals may be hesitant to leave lucrative careers for teaching roles. Offering clear benefits, such as flexible hours, competitive salaries, and professional development, is crucial for making the model appealing.

In addition to this, curricula need to include modular learning, allowing flexibility for both students and working professionals.















The steps in the development of the model:

"Partnership between School – Company – Teacher Education: The path to future skilled workers."

The foundation for the model was developed by the LeadVET partners (Figure 3). Based on literature reviews and interviews, the partners identified several criteria for the model that was to be developed.

- Recruitment would involve skilled workers contributing through shared instructional
 positions in schools, and they would be offered continuing education training modules
 that provide the knowledge and skills needed to teach vocational students.
- The training modules should be designed as modules, providing a flexible structure where different training modules can be selected, without any requirements regarding when the various training modules must be completed.
- Over time, these training modules should be expanded into a full teacher training program.
- The model should be built on a partnership approach, where schools and companies, with support from teacher education programs, find solutions to make shared positions possible.

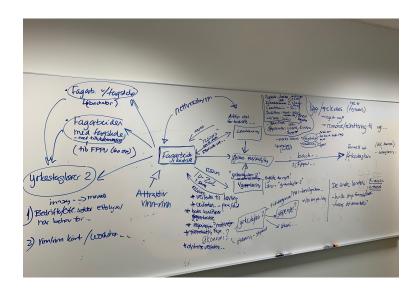


Figure 7First Draft model, TPM Helsinki













Based on this criteria's, the Norwegian partners created a draft of a model (Figure 4) which was presented at a workshop where vocational teachers, teacher educators, apprenticeship supervisors in companies, staff from training committees, and company representatives in Norway provided feedback and input on the model.

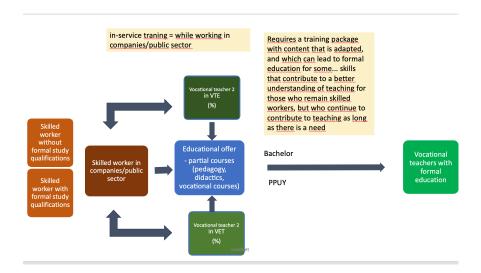


Figure 8First draft of model NTNU

Important points that emerged in these feedback sessions are that skilled workers did not like the term 'vocational teacher 2,' which was the term used in Norway; they wanted to be seen as experts who came in to contribute their expertise. They were also concerned that the focus should not be on phase 1, phase 2, and phase 3; the focus had to be on the partnership, where offers, training modules, and training relevant to all partners are provided. The possibility of becoming teachers should not be the main focus, as it could have the opposite effect. Therefore, the partnership model, with training modules and a mentoring scheme, is the most important. The possibility of becoming a full-time teacher and completing full teacher education is an opportunity, not a goal, according to this feedback. Based on this feedback, the model was improved and presented at a multiplier event in Trondheim, followed by another round of feedback and adjustments, and ended in the model presented in this report (Figure 5). (a summary of this feedback is provided in the next section of the report).













Norwegian Feedback: Opportunities and Challenges Opportunities:

- 1. Improving Recruitment of Vocational Teachers:
- Combined Positions as a Solution: One of the most promising solutions highlighted is the use of combined positions, where professionals can split their time between company work and teaching. This could help attract professionals from industries such as hospitality and catering, where recruiting vocational teachers is particularly difficult.
- Flexible and Module-Based Education: Offering module-based education and flexible solutions would allow professionals to combine their current jobs with teaching responsibilities, making it easier for them to transition into teaching without leaving their industries entirely.
- Closer Collaboration with Companies: Moving some teaching into company settings and fostering collaboration between companies and schools could make the teaching profession more relevant and appealing for company professionals, encouraging them to participate in education more actively.

2. Recognition of Vocational Experience:

- Credit for Work Experience: Recognizing the vocational qualifications and work experience that professionals bring into their teaching roles would ease the transition for potential vocational teachers. This recognition could reduce the additional training required and incentivize professionals to consider teaching.
- Financial Compensation for Companies: Offering financial incentives to companies that allow their employees to take part in teaching would encourage companies to participate. This could be crucial in fields where skilled workers are in high demand and employers might otherwise be reluctant to "lend" employees to schools.

3. Use of Split Positions (Vocational Teacher 2):

Maintaining Company Ties: Split positions allow vocational teachers to maintain their connections to their companies whilst in teaching positions. This would not only keep teachers updated with the latest professional trends but would also ensure that companies retain valued employees who split their time between teaching and professional work.













Tailored Agreements: Developing specific agreements that grant skilled workers the right to have their education accredited while continuing their professional work could motivate more professionals to enter teaching. Exemptions from regular duties to complete the necessary educational training would also make the process smoother.

4. Motivating Companies to Participate:

- Companies' Influence on Education: Giving companies a say in the modules and curriculum taught in vocational schools could increase their interest in the combined positions. Companies would see the benefits of having their employees not only teach future workers in vocational schools but also use their instructional skills in the workplace.
- Up-to-Date Expertise: Through closer cooperation with schools, companies could benefit from their employees gaining more up-to-date expertise through teaching, which would improve the overall quality of vocational education and the workforce.

Challenges:

- 1. Recruiting Qualified Professionals:
- Difficulty in Attracting Teachers: Despite the general demand for more vocational teachers, it remains challenging to motivate professionals to leave their current roles and transition into teaching. The hospitality and catering sectors are particularly hard-hit by this shortage. This requires:
- Making Teaching Attractive: To make teaching a viable and attractive option for professionals, significant incentives are required. Without clear pathways, support, and financial rewards, it is difficult to attract skilled workers into these dual roles.

2. Need for Flexible Systems and Agreements:

- Formalized Agreements: To make shared positions work, formal agreements between companies and schools must be established. These agreements would need to include exemptions from certain work duties, as well as provisions for accrediting professional experience towards pedagogical qualifications.
- Flexibility for Teachers and Companies: For this model to succeed, there must be enough flexibility in both school schedules and workplace demands to accommodate professionals who split their time between teaching and their company roles.













3. Financial and Structural Barriers:

- Incentives for Companies: Financial compensation is a key concern for companies. Without tangible benefits or financial rewards, it could be difficult to convince companies to participate in a system where their employees spend time away from their main jobs.
- Support from Employers: Even if the combined model seems promising, companies need to actively support their employees in taking on teaching roles. This support could include salary incentives, training leave, or the possibility to develop new skills that benefit both the company and the education system.

Conclusion:

The Norwegian feedback highlights both opportunities and challenges in adapting the model for vocational education. Key opportunities lie in developing combined positions that allow professionals to split their time between teaching and company work, as well as offering flexible, modular training that makes it easier for professionals to become teachers without leaving their jobs. Recognizing vocational experience as part of teacher qualification and fostering collaboration between schools and companies are also critical aspects.

However, significant challenges remain in recruiting professionals to take up teaching roles, especially in sectors like hospitality and catering. There are structural and financial barriers that must be addressed—particularly in providing incentives and support for companies and employees to engage in such roles. Successful adaptation of the model will require formalized agreements, flexibility, and clear benefits for both teachers and the industries involved.

Next - The model was adjusted, and each partner presented the model at workshops in the partner countries. Considering the contexts of the partner countries, opportunities and challenges were identified.













Feedback from workshops in Finland and Germany

Opportunities, and Challenges

Finnish Perspective:

Opportunities:

- 1. Tailored for Technical Fields:
- The model could help address Finland's shortage of vocational teachers, especially in technical fields like IT and engineering. It provides a clear path for vocational students to transition directly into teaching careers while gaining practical work experience.
- The model could also encourage students in technical fields to take pedagogical training modules during their bachelor's degree, raising awareness about teaching careers early on.

2. Flexible Study Options:

- Finland already has a flexible, competency-based curriculum for teacher training, allowing working professionals to study part-time while continuing their jobs. Integrating the model's modular structure into this system could be done without major changes.

3. Cross-Sector Learning and Expertise Sharing:

- By combining teaching roles with professional work, professionals could stay up to date with trends in their work field while teaching. This model would ensure that technical experts don't feel like they are losing their relevance when they transition into teaching.

4. Company Collaboration:

- The model would foster stronger partnerships between vocational schools and industries, encouraging professionals to bring new ideas into the classroom. It would also offer more chances for vocational students to visit companies and learn on-site about modern technology and practices.

Challenges:

- 1. Limited Applicability in Some Fields:
- In Finland, most teachers already have a bachelor's or master's degree before starting pedagogical studies, making parts of the model redundant. Phase 2 of the model, which focuses on obtaining a higher education degree alongside work experience, would only benefit a small minority of students (less than 10%).













2. Recruitment of Technical Teachers:

- One of the largest challenges is attracting professionals from technical fields to become teachers. The model needs to offer a more enticing value proposition for professionals in these fields to consider part-time teaching roles, which they often see as a big career shift.

3. Cultural Shift and Flexibility:

- Shifting from corporate roles to teaching requires cultural change and flexibility in the working arrangements of both companies and educational institutions. This would require new scheduling and part-time teaching structures that are more appealing to technical professionals.

German Perspective:

Opportunities:

- 1. Existing Comparable Systems:
- Germany already has a similar system in place, particularly for vocational professions like hairdressing. The idea of combining teaching roles with professional work is familiar and could be expanded further under the proposed model.

2. Recruitment Benefits for Companies:

- Companies could benefit by allowing employees to teach part-time, potentially recruiting students who work with these teachers in vocational education. This would improve the company's brand and attract the best students into their workforce.

3. Job Rotation and Shadowing:

- The model could foster job rotation and shadowing between companies and schools, helping teachers stay updated on professional trends while allowing company employees to experience teaching. This would also promote cross-sector learning and personal skill development for professionals and teachers.

4. Strong Partnerships:

- The model encourages formalized partnerships between schools and companies. These partnerships could be strengthened through contractual arrangements, structured job exchanges, and the shared goal of professional development.













Challenges:

- 1. Strict Teacher Qualification Requirements:
- In Germany, a master's degree and a traineeship are required for teaching, which presents a significant barrier for professionals interested in transitioning into teaching roles. This is a key difference compared to countries like Norway, where a bachelor's degree suffices.

2. Complex Authorization System:

- Subject teachers in Germany must be authorized by the school supervisory authority, and headteachers need to make classroom visits and evaluations. This adds a layer of bureaucracy and makes it harder for professionals to enter part-time teaching roles quickly.

3. Corporate Flexibility:

- Employers in Germany would need to offer significant flexibility and incentives (e.g., additional salary, leave for training) to make teaching roles attractive. Many professionals may not want to take on dual roles, especially if teaching is perceived as too time-consuming or not aligned with their career path.

4. Cultural Shift Needed:

- As in Finland, a cultural shift is required for companies to see the value of their employees taking on part-time teaching roles. This shift would need to be supported by flexible scheduling and recognition of the mutual benefits for both companies and schools.

Overall Opportunities and Challenges:

Opportunities:

Closer Cooperation between Companies and Schools:

- Both Finland and Germany see the model as an opportunity to foster stronger cooperation between vocational schools and companies. This cooperation would allow students to gain practical skills in real-world environments while benefitting companies by developing a pipeline of talent.

Flexible and Modular Learning:













- The flexibility offered by the model—through part-time teaching, modular study options, and job rotation—appeals to professionals who might not want to fully transition into teaching but are open to combining their professional expertise with teaching.

Recruitment and Employer Branding:

- Companies could use this model to enhance their employer branding, attracting new talent by offering development opportunities and improving recruitment pipelines from vocational schools.

Challenges:

Professional Qualification Requirements:

The qualification requirements for teachers, particularly in Germany, create a significant challenge. The high bar for entry into teaching (master's degree and traineeship) could discourage professionals from transitioning into teaching roles.

Cultural and Structural Changes Required:

Both countries face the challenge of shifting work cultures to make part-time teaching attractive to professionals. Companies and schools need to create flexible arrangements and offer incentives to ensure professionals see value in becoming parttime teachers.

Attracting Professionals to Teaching:

Technical professionals, especially in fields like engineering or IT, may be hesitant to leave lucrative careers for teaching roles. Offering clear benefits, such as flexible hours, competitive salaries, and professional development, will be critical for making the model attractive to this group.

Conclusion:

The LeadVET model presents exciting opportunities for fostering closer collaboration between vocational education and industries, but it presents challenges related to qualifications, flexibility, and the cultural perception of teaching roles. Both Finland and Germany see potential in adapting the model, particularly for addressing shortages in technical teaching fields and enhancing cooperation between schools and companies.













However, for the model to succeed, significant structural and cultural shifts will be needed to make it appealing to professionals and ensure that both educational institutions and companies benefit.











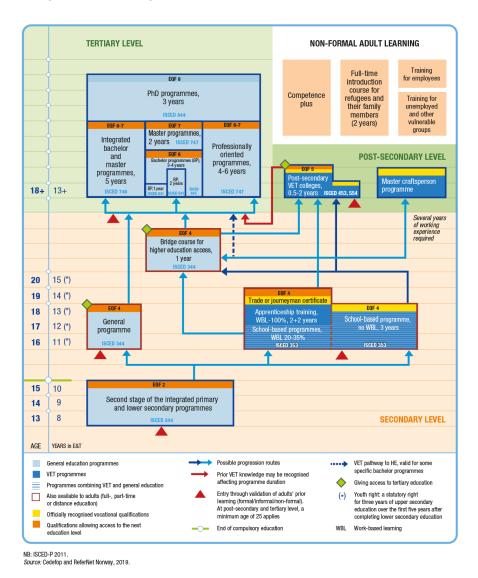


Appendix

Becoming a Vocational Teacher in Europe

The Path to Becoming a Vocational Teacher in Norway

The educational system in Norway:



Paths to becoming a vocational teacher

In Norway, there are two paths to becoming a vocational teacher, after receiving a trade/craft certificate.

1. Vocational Teacher Education (Three Years):

This program is designed for individuals who hold a craft certificate or its equivalent and have a minimum of two years of relevant work experience.













The study program prepares teachers to work in various education programs within Upper Secondary Education and qualifies them to teach their subject.

2. Practical-Pedagogical Education for Vocational Subjects (PPU-Y):

- This option is based on one of the following qualifications:
 - A relevant profession-oriented bachelor's degree* and a minimum of two years of relevant work experience.
- or 0
- A trade certificate (fagbrev) or completion of a three-year vocational education at the upper secondary level, along with general study competence and at least two years of additional theoretical vocational education beyond upper secondary level, combined with a minimum of four years of relevant work experience.

These pathways aim to prepare skilled educators who can contribute to vocational training and enhance the quality of vocational education in Norway. The model is adapted to the last option (PPU-Y) and starts with a trade certificate.

In PPU-Y (Practical-Pedagogical Education for Vocational Subjects), it is currently a requirement that all educational formalities are in place. However, in our model, individuals begin their journey towards becoming vocational teachers whilst employed as skilled workers in companies. They are given the opportunity to receive in-service training to improve teaching, mentoring, and instruction. This training is essential for vocational teachers but also benefits the company where the skilled worker is employed.

What sets this model apart from the "conventional" path to becoming vocational teachers is its emphasis on recruiting vocational teachers who work within companies. These teachers hold combined positions as VET instructors and skilled workers. They are offered further education that benefits the company and provides schools with access to skilled workers in subjects where they lack expertise.













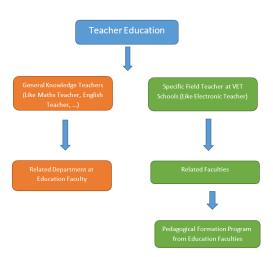
The path to becoming a Vocational Teacher in Turkey

Requirements for Admission to Higher Education Institutions in Turkey

All students who graduate from high school have to enter the Higher Education Institutions Examination (YKS) and gain points to register at any University faculty. The YKS exam consists of two stages: TYT (Basic Ability Test) and AYT (Field Proficiency Test). TYT includes tests in Turkish, Social Sciences, Basic Mathematics and Science. AYT comprises tests in Turkish (language, literature and social sciences), Social Sciences, Mathematics and Science. In AYT, students complete the tests required for the type of score they want to achieve.

Teacher Education in Turkey

Students who aim to become General Knowledge Teachers (such as English or Maths Teachers) have to register with an Education Faculty, but for students who aims to become vocational Teachers (i.e. in fields such as automotive technology, electronics) at VET schools, there is no specific faculty. They must study their field in an undergraduate program and then take pedagogical training from an Education Faculty to qualify for a certificate, in order to apply to become a VET teacher. General Knowledge Teachers who graduate from an Education Faculty take these pedagogy training modules during their four-year undergraduate program.



Pedagogical Formation Curricula in Turkey

Students can only become VET teachers by taking pedagogical training at Faculties of Education after completing an relevant undergraduate program. Pedagogical training generally













lasts one semester (3-4 months).

Teacher professional knowledge (common to all programs) training modules in pedagogical formation education are as follows:

Main Courses	Elective Courses	
Introduction to Educational	Action Research in Education	Turkish Education History,
Science		
Educational Psychology	Guidance	Developmental Psychology,
Instructional Principles and	Program Development in	Turkish Education System
Methods	Education	and School Management,
Instructional Technologies	Use of Technology in	Teaching Professional Ethics,
and Material Design	Education	
Classroom Management	Education History	Character and Values
		Education,
Measurement and	Educational Philosophy	Lifelong Learning,
Evaluation in Education		
Teaching Practice	Educational Sociology	Special Education,
Special Teaching Methods	Turkish Education History	Individualized Teaching and
		Computer Aided Education
Introduction to Educational	Developmental Psychology	
Science		

Teaching Practice Implementations in Teacher Education Undergraduate Programs/ Pedagogical Formation Programs in Turkey

In Pedagogical Formation training there is a total of 8 hours of teaching practice, 2 hours of theoretical work and 6 hours of practice. Teaching practice builds the professional experiences of teacher candidates in their field and relative to their education level.

The teacher candidate teaches under the supervision of a mentor teacher at a practice school. Their advisor from the university also attends the teacher candidates' lectures at least twice in the term and makes suggestions to support the professional development of the teacher candidates.

The university advisor and the mentor teacher who guides the student in the practice school













have a common responsibility for the implementation and evaluation of teaching practice. Success is determined by observing the teacher candidates' performance in the classroom and evaluating their internship file.

Teacher candidates who complete undergraduate program and get a pedagogical formation certificate can apply to be appointed to vocational education institutions. They must enter the Public Personnel Selection Examination (KPSS) to become a VET teacher in public schools. Having gained sufficient points from KPSS Exam, the candidate teacher must then have an interview at the Provincial Directorate of the National Education. The validity period of the KPSS score is one year. If the candidate cannot be appointed at the end of the period, he/she has to take the KPSS exam again.

The Ministry of Education has announced that there will not be any more pedagogical formation certificate programs after the 2020-2021 Education Year. All students who complete any undergraduate programs and want to become a teacher will be required to take a master's degree instead of this certificate program. However, they have not announced the details of this new system.









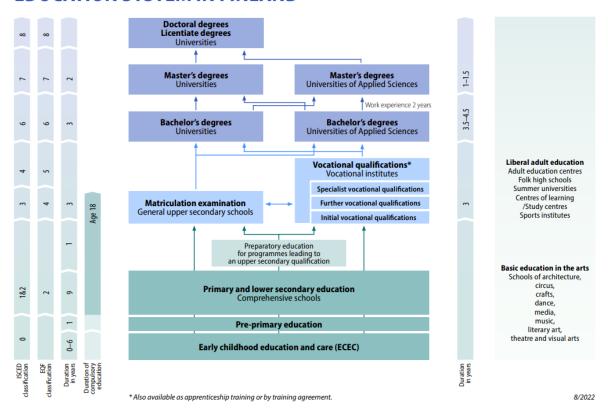




The path to becoming a Vocational Teacher in Finland

The educational system in Finland:

EDUCATION SYSTEM IN FINLAND



In Finland, the path to becoming a vocational or professional teacher is structured within the framework of the Finnish educational system, emphasizing pedagogical training, practical experience, and strong links to the labor market. Vocational teachers play a critical role in Finland's dual education system, which includes general education and vocational training pathways. In the image above, the general education path is on the left-hand side, and vocational path is on the right. Vocational teachers prepare students for careers in specific trades or professions, ensuring that the workforce is skilled and adaptable to labor market demands. They are usually employed in the educational institutions operating on the vocational path (on the right in the image); however, the vocational teacher qualification does yield a general pedagogical eligibility to work as a teacher in any level of education, excluding early childhood education, pre-primary education and the grades 1-6 of primary education. The background degree is a major factor determining the final eligibility of a teacher in each level of education.













The vocational teacher's training programs are typically post-graduate diploma-level studies. The teacher qualification is not a degree and therefore the student teachers are not entitled to student allowances or similar student status as the degree students. On the EQF framework, the Finnish vocational teacher education is regarded as being on level 7.

Eligibility Requirements

To apply for vocational teacher education, candidates must have 1) a relevant higher education degree (e.g., a bachelor's or master's degree in a specific field relevant to vocational education);

- 2) a minimum of three years of relevant work experience in the field they intend to teach; and
- 3) for some technical or artistic fields, extensive work experience may substitute for a formal degree.

Vocational Teacher Education Programs and Pedagogical Training

The education is provided by universities of applied sciences (UAS), such as Haaga-Helia, TAMK, or JAMK, which offer pedagogical training programs specifically for vocational teachers. The program leads to a Vocational Teacher Qualification and typically lasts one year full-time or can be completed part-time over 1–2 years, depending on the candidate's circumstances.

The Finnish model prioritizes practical expertise combined with strong pedagogical skills. Candidates are carefully selected to ensure a close alignment between their professional background and teaching qualifications. The system's flexibility allows working professionals to qualify as teachers without disrupting their current employment. This approach ensures that vocational teachers are both industry experts and effective educators, contributing to the high quality of vocational education in Finland.

The core of the program focuses on pedagogical studies (60 ECTS credits), which include:

- Educational theory
- Teaching methodologies
- Assessment techniques
- Guidance and counselling skills
- Developing teaching practices that integrate digital tools and innovative approaches.













Candidates engage in supervised teaching practice in vocational institutions, gaining hands-on experience in real classroom settings. This is crucial for understanding the practical aspects of vocational education. Vocational teachers are expected to continually update their skills and knowledge to keep pace with changes in their fields and in teaching methodologies.









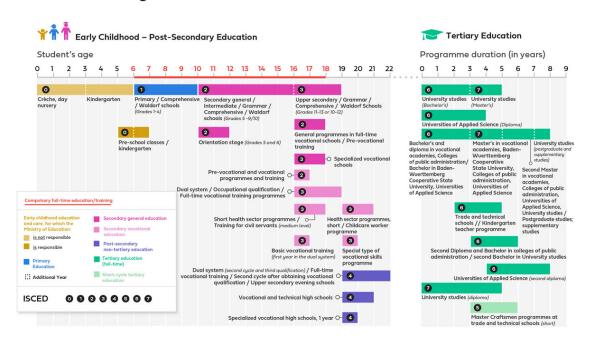




The path to becoming a Vocational Teacher in Germany

The educational system in Germany:

Germany



The education system in Germany is federally organized, which leads to differences in teacher training in the individual federal states. The following section uses the example of the federal state of Bavaria and the degree courses in business and vocational education (*Wirtschafts- und Berufspädagogik*) to illustrate how teachers at vocational schools are qualified. It should be noted that teacher training at vocational schools (*Berufliche Schulen*) differs fundamentally from training at general education schools (*Allgemeinbildende Schulen*), particularly regarding the structure of studies. While the qualification for the teaching profession at vocational schools is based on bachelor's and master's degree courses, training for general education schools is predominantly based on the state examination.

Teacher training is divided into two phases: a university phase, which includes the acquisition of academic and pedagogical knowledge, and a practice-oriented phase in the preparatory service.

The first phase of the business and vocational education course begins with a university degree, which ends with a bachelor's and master's degree. As a rule, a general or subject-













specific higher education entrance qualification is required for admission to this course. In individual cases, a professional qualification is also possible as a route to admission.

The bachelor's degree course in Business and Vocational Education comprises six semesters and combines subject-specific content, for example from the economic or technical sciences, with educational science and pedagogical principles. Students of Vocational Education must choose a second subject (e.g. mathematics, business informatics, English, German or politics and society), but students of Business Education do not have to choose a second subject, instead studying further modules from the business/economics subject area. The bachelor's degree alone does not entitle students to work as a teacher. However, due to the polyvalent structure of the degree course, the bachelor's degree opens up further career prospects, for example in education management or in-company training.

The subsequent master's course, which usually lasts four semesters, serves to deepen subject-specific and pedagogical-didactic knowledge. It builds on the foundations acquired in the bachelor's degree course and expands on these, particularly regarding the chosen second subject. Successful completion of the master's degree qualifies graduates for entry into the preparatory service (traineeship, German: *Referendariat*).

In Bavaria, the traineeship lasts two years and is divided into several parts. The prospective teachers gain independent teaching experience, which is supplemented by supervised classroom visits. Parallel to this, seminars are held in which didactic and methodological skills are further developed. At the end of the preparatory service, there is a second state examination, which includes practical, written and oral parts.

After successfully completing the preparatory service, one can be be employed as a teacher. In Bavaria, this is either a permanent civil service position or employment in the public sector. The practical orientation of the course should also be emphasized, which guarantees additional flexibility and employment opportunities in later professional life through the choice of a second subject.

The path to becoming a vocational specialist teacher

Accessing the role of a vocational specialist teacher in Germany, explicitly Bavaria, involves a well-defined process with specific requirements for qualifications, professional experience,













and aptitude. This process is detailed in the guidelines provided by the Bavarian State Ministry of Education and Cultural Affairs.

Admission Requirements

To be admitted, candidates must meet several criteria. First, they must provide proof of professional qualifications, which vary by subject area. Recognized qualifications include master craftsman certificates, degrees from vocational schools or academies, university degrees, or completed vocational training programs with additional professional development. Additionally, at least three years of relevant professional experience after completing training is required, except in the healthcare field, where one year of professional experience following a university degree is sufficient. Furthermore, candidates must meet the general requirements for civil service, including the condition that they must not have reached the age of 45 at the start of the preparatory service. Lastly, passing the aptitude test in all components is mandatory for admission to training.

Aptitude Test

The aptitude test is conducted at the school where the candidate is intended to work. It consists of two parts: a teaching demonstration, during which a lesson is evaluated, and a 45-minute interview assessing professional, personal, and linguistic competencies. Only those who pass the teaching demonstration may proceed to the interview. The final score, calculated from both components, determines whether the candidate is admitted to training at the State Institute.

Preparatory Service

Upon successfully passing the aptitude test, candidates enter the preparatory service, which begins in mid-September and lasts one year. This phase combines practical school placements with theoretical instruction. The curriculum includes pedagogy, psychology, didactics, subject-specific didactics, school law, and communication. The preparatory service concludes with a qualification exam, which includes written and oral components, two teaching demonstrations, project-based assessments in communication, and an evaluation report.











