FINNISH EDUCATION EVALUATION CENTRE

Transitions from Initial Vocational Education and Training Qualifications to Working Life in Finland – Observations and Reflections from an International Expert Panel

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EVALUATION REPORT VOCATIONAL EDUCATION

The Finnish Education Evaluation Centre (FINEEC) conducted a national evaluation (2024–2026) of the employment outcomes of graduates with initial vocational education and training (IVET) qualifications. As part of this work, an international expert panel reviewed the employment outcomes of IVET graduates in Finland from a comparative perspective, identifying key strengths, challenges and development needs to better support graduate employment. The panel's analysis drew on background documentation and a visit to Finland in early 2026, during which it interviewed representatives from key stakeholder groups, including the education administration, vocational education and training (VET) providers, labour market organisations, student organisations and other relevant actors.

Finland's VET system is internationally recognised for high enrolment levels, educational equality and strong permeability to higher education. The panel observed that unemployment among IVET graduates remains persistently high and concluded that this points to deeper structural challenges. The panel emphasises that the factors behind weak employment outcomes are multidimensional – shaped by economic cycles, transformations in the labour market, institutional configurations, and the ways in which VET is organised and linked to working life.

The Finnish labour market has undergone a significant transformation driven by technological change, economic restructuring and shifts in export-dependent industries. In this evolving context, IVET graduates often compete not only with academically educated peers but also with semi-skilled workers and migrant labour. The labour market position of graduates is related to the extent to which their skills directly match the job, the extent to which the programme signals sufficient learning skills and the risk of variation in quality of skills. The materials and interviews suggest that one factor underlying the high unemployment rate among Finnish IVET graduates is the weakness of links with working life, which may be reflected in shortcomings in the specific skills directly required for successful job performance. However, the situation varies across fields. Fields with a labour shortage and where IVET graduates develop a strong vocational identity and close ties with employers – such as health and social care – show relatively low unemployment. In contrast, in technical fields where employer engagement is weaker and opportunities for work-based learning are more limited, graduates face greater difficulties in securing employment.

Work-based learning emerged as a key factor influencing employment outcomes. Apprenticeships in Finland have low graduate unemployment rates, yet they remain marginal for young people and are predominantly used by adults. Although all IVET programmes include work-based learning, the regulatory framework is weak, the duration varies considerably, and employers receive no financial compensation for training students under training agreements. In apprenticeship training, employers may receive training compensation under certain conditions. The absence of cost-sharing mechanisms, combined with supervision requirements, limits employer participation, particularly among small companies. International evidence shows that

scaling up high-quality work-based learning requires institutional support structures such as intermediary organisations, shared financing models and clear quality assurance practices – areas in which Finland's system remains insufficiently developed.

A major strength of Finnish IVET is that it gives all students eligibility for higher education, which enhances its attractiveness and supports social equity. The panel also identified this as an important factor influencing employment outcomes. Strengthening the progression of IVET graduates, particularly to universities of applied sciences (UAS), could help reduce unemployment, as a proportion of graduates would continue directly to further studies rather than entering the labour market. However, the panel emphasises that stronger progression to higher education will enhance overall outcomes only if the vocational skills of those who do enter the labour market are simultaneously strengthened; otherwise, there is a risk that the remaining group will face weaker labour-market prospects. This illustrates a genuine policy trade-off: Finnish VET is expected to facilitate both smooth transitions to employment and broad access to higher education, even though international evidence suggests these objectives are not always easy to combine.

The governance of Finnish VET is highly decentralised and built on trust, giving education providers considerable autonomy to respond to local labour market needs. However, this decentralisation also leads to uneven practices and limited mechanisms for systematically sharing effective approaches across regions. Limited institutional structures for employer involvement also lead to variations in how well cooperation between providers and employers works. In recent years, governance has shifted towards a hybrid model that combines local autonomy with performance-based funding and negotiated targets. While this has sharpened the focus on outcomes such as employment, the panel stresses that – due to uneven regional economic conditions – these outcomes often fall outside education providers' control.

Another area the panel identified as underdeveloped is the role of VET within Finland's national innovation system. Interview data indicated that VET is still primarily viewed as a provider of skilled labour rather than as an active participant in innovation. While there are examples of successful local collaboration with UASs, these initiatives remain fragmented. There is considerable potential to better define and further strengthen VET's contribution to innovation and regional development.

Finally, Finland's highly flexible and modular VET system provides individualised learning paths and strong recognition of prior learning – features that are valuable for adult learners but can pose challenges for younger students. Extensive individualisation may weaken shared vocational identities and make it more difficult for teachers to provide consistent support. Although Finland's skills-anticipation system is rich in information, its steering influence remains limited: student choices are only weakly shaped by labour market data, and career guidance in lower secondary education does not appear sufficient to address this gap.

Overall, the panel concludes that Finland's VET system has notable strengths, particularly its strong commitment to equity, openness and permeability to higher education. At the same time, the persistently high unemployment among young IVET graduates highlights the need for more coherent skill development, stronger and more institutionalised collaboration with employers, mechanisms for sharing the costs of work-based training, more structured forms of work-based

learning, and a clearer, better-integrated role for VET within regional and national innovation systems. Solving these challenges will require sustained, coordinated and sector-specific measures that enhance both the labour market relevance of Finnish VET and the educational opportunities it provides.

Tiivistelmä

Kansallinen koulutuksen arviointikeskus (Karvi) toteutti vuosina 2024–2026 arvioinnin ammatillisista perustutkinnoista työllistymisestä. Osana arviointia kansainvälinen asiantuntijapaneeli tarkasteli perustutkinnon suorittaneiden työllistymistä Suomessa vertailevasta näkökulmasta ja kartoitti keskeisiä vahvuuksia, haasteita ja kehittämistarpeita, jotta valmistuneiden työllistymistä voitaisiin tukea paremmin. Paneelin analyysi perustui taustaaineistoon sekä Suomeen alkuvuodesta 2026 tehtyyn vierailuun, jonka aikana paneeli haastatteli opetushallinnon, ammatillisen koulutuksen järjestäjien, työmarkkinajärjestöjen, opiskelijajärjestöjen ja muiden keskeisten sidosryhmien edustajia.

Suomen ammatillisen koulutuksen järjestelmä tunnetaan kansainvälisesti korkeista osallistumisasteista, koulutuksellisesta tasa-arvosta ja hyvistä mahdollisuuksista siirtyä korkeakoulutukseen. Paneeli havaitsi, että ammatillisen perustutkintokoulutuksen suorittaneiden työttömyys on kuitenkin pysynyt korkeana, mikä viittaa syvempiin rakenteellisiin haasteisiin. Paneeli korostaa, että heikkojen työllistymistulosten taustalla olevat tekijät ovat moniulotteisia: niihin vaikuttavat talouden suhdannevaihtelut, työmarkkinoiden muutokset, institutionaaliset rakenteet sekä se, miten ammatillinen koulutus on järjestetty ja kytkeytyy työelämään.

Suomen työmarkkinoilla on tapahtunut merkittävä muutos, jota ovat vauhdittaneet teknologinen kehitys, talouden rakennemuutos ja muutokset vientivetoisilla aloilla. Tässä muuttuvassa tilanteessa ammatillisen perustutkinnon suorittaneet kilpailevat usein paitsi akateemisesti koulutettujen myös osittain ammattitaitoisten työntekijöiden ja siirtotyövoiman kanssa. Tutkinnon suorittaneiden asema työmarkkinoilla perustuu siihen, missä määrin heidän taitonsa vastaavat suoraan työn vaatimuksia, miten koulutus viestii heidän oppimisvalmiuksistaan ja miten suuri taitotason vaihtelun riski on. Aineiston ja haastattelujen perusteella vaikuttaa siltä, että yksi suomalaisten ammatillisen perustutkintokoulutuksen suorittaneiden korkean työttömyysasteen taustatekijöistä on työelämäyhteyksien heikkous, mikä voi näkyä puutteina niissä erityistaidoissa, joita työssä onnistuminen edellyttää.

Tilanne vaihtelee kuitenkin aloittain. Aloilla, joilla on työvoimapulaa ja joilla ammatillisen perustutkinnon suorittaneille kehittyy vahva ammatillinen identiteetti ja läheiset suhteet työnantajiin, kuten terveys- ja sosiaalialalla, työttömyys on suhteellisen vähäistä. Sen sijaan teknisillä aloilla, joilla työnantajien sitoutuminen on heikompaa ja mahdollisuudet työelämässä oppimiseen rajallisempia, valmistuneilla on suurempia vaikeuksia työllistyä.

Työelämässä oppiminen nousi keskeiseksi työllistymistuloksiin vaikuttavaksi tekijäksi. Suomessa oppisopimuskoulutuksen suorittaneiden työttömyysaste on alhainen, mutta oppisopimus on edelleen nuorille marginaalinen väylä, ja sitä hyödyntävät pääasiassa aikuiset. Vaikka kaikkiin ammatillisiin perustutkintoihin sisältyy työelämässä oppimista, sääntelykehys on heikko, työelämässä oppimisen kesto vaihtelee huomattavasti eikä työnantajille makseta taloudellista korvausta opiskelijoiden kouluttamisesta koulutussopimuksen perusteella. Oppisopimuskoulutuksessa työnantajille voidaan tietyin edellytyksin maksaa koulutuskorvausta. Kustannusten jakamisen mekanismien puuttuminen yhdessä ohjaukseen liittyvien vaatimusten kanssa rajoittaa työnantajien osallistumista erityisesti pienissä yrityksissä. Kansainvälinen

näyttö osoittaa, että laadukkaan työelämässä oppimisen laajentaminen edellyttää institutionaalisia tukirakenteita, kuten välittäjäorganisaatioita, yhteisiä rahoitusmalleja ja selkeitä laadunvarmistuskäytäntöjä. Näitä osa-alueita ei Suomen järjestelmässä ole vielä kehitetty riittävästi.

Suomalaisen ammatillisen perustutkintokoulutuksen merkittävä vahvuus on se, että se antaa kaikille opiskelijoille kelpoisuuden hakeutua korkeakoulutukseen, mikä lisää sen houkuttelevuutta ja tukee sosiaalista oikeudenmukaisuutta. Paneeli tunnisti tämän myös tärkeäksi työllistymiseen vaikuttavaksi tekijäksi. Ammatillisen perustutkintokoulutuksen suorittaneiden siirtymien vahvistaminen erityisesti ammattikorkeakouluihin voisi osaltaan vähentää työttömyyttä, koska osa valmistuneista jatkaisi suoraan jatko-opintoihin työmarkkinoille siirtymisen sijaan. Paneeli kuitenkin korostaa, että korkea-asteen koulutukseen siirtymisen edistäminen parantaa työllistymisen kokonaistuloksia vain, jos työmarkkinoille siirtyvien ammattitaitoa vahvistetaan samanaikaisesti. Muussa tapauksessa vaarana on, että tämän ryhmän työllistymismahdollisuudet heikkenevät. Tämä kuvastaa koulutuspoliittista jännitettä: suomalaisen ammatillisen koulutuksen odotetaan tukevan sekä sujuvaa siirtymistä työelämään että laajaa pääsyä korkeakoulutukseen, vaikka kansainvälinen näyttö osoittaa, ettei näitä tavoitteita ole aina helppo yhdistää.

Suomalaisen ammatillisen koulutuksen hallinto on erittäin hajautettua ja perustuu luottamukseen, mikä antaa koulutuksen järjestäjille huomattavan autonomian vastata paikallisiin työmarkkinoiden tarpeisiin. Hajauttaminen johtaa kuitenkin myös epätasaisiin käytäntöihin ja siihen, että tehokkaiden toimintatapojen järjestelmällinen jakaminen alueiden välillä on rajallista. Työnantajien osallistumista tukevien institutionaalisten rakenteiden rajallisuus johtaa myös vaihteluun siinä, kuinka hyvin koulutuksen järjestäjien ja työnantajien välinen yhteistyö toimii. Viime vuosina hallinnossa on siirrytty kohti hybridimallia, jossa paikallinen autonomia yhdistetään tulosperusteiseen rahoitukseen ja neuvoteltuihin tavoitteisiin. Vaikka tämä on terävöittänyt keskittymistä tuloksiin, kuten työllistymiseen, paneeli korostaa, että alueellisten taloudellisten olosuhteiden epätasaisuuden vuoksi nämä tulokset ovat usein koulutuksen järjestäjien vaikutusmahdollisuuksien ulkopuolella.

Toinen osa-alue, jota ei paneelin mielestä ole kehitetty riittävästi, on ammatillisen koulutuksen asema Suomen kansallisessa innovaatiojärjestelmässä. Haastatteluaineiston perusteella ammatillinen koulutus nähdään edelleen ensisijaisesti osaavan työvoiman tuottajana eikä aktiivisena innovaatioihin osallistuvana toimijana. Vaikka onnistuneesta paikallisesta yhteistyöstä ammattikorkeakoulujen kanssa on esimerkkejä, tällaiset aloitteet ovat edelleen hajanaisia. Ammatillisen koulutuksen panosta innovaatioihin ja alueelliseen kehitykseen olisi mahdollista määritellä nykyistä paremmin ja vahvistaa huomattavasti.

Suomen erittäin joustava ja modulaarinen ammatillisen koulutuksen järjestelmä tarjoaa yksilöllisiä oppimispolkuja ja vahvaa aiemmin hankitun osaamisen tunnustamista. Nämä piirteet ovat arvokkaita aikuisopiskelijoille, mutta nuoremmille opiskelijoille ne voivat aiheuttaa haasteita. Laaja yksilöllistäminen voi heikentää yhteisen ammatillisen identiteetin muodostumista ja vaikeuttaa opettajien mahdollisuuksia tarjota yhdenmukaista ja jatkuvaa tukea. Vaikka Suomessa osaamisen ennakointijärjestelmä tarjoaa runsaasti tietoa, sen ohjaava

vaikutus on edelleen vähäistä: työmarkkinatieto muovaa opiskelijoiden valintoja vain vähän, eikä perusopetuksen uraohjaus vaikuta riittävältä tämän vajeen korjaamiseen.

Kaiken kaikkiaan paneeli katsoo, että Suomen ammatillisen koulutuksen järjestelmällä on merkittäviä vahvuuksia, erityisesti sen vahva sitoutuminen yhdenvertaisuuteen, avoimuuteen ja korkeakoulutukseen siirtymisen mahdollisuuksiin. Samalla ammatillisen perustutkintokoulutuksen suorittaneiden nuorten pysyvästi korkea työttömyys korostaa tarvetta johdonmukaisemmalle osaamisen kehittämiselle, vahvemmalle ja institutionalisoidummalle yhteistyölle työnantajien kanssa, työelämässä oppimisen kustannusten jakamisen mekanismeille, jäsentyneemmille työelämässä oppimisen muodoille sekä ammatillisen koulutuksen selkeämmälle ja paremmin integroidulle roolille alueellisissa ja kansallisissa innovaatiojärjestelmissä. Näiden haasteiden ratkaiseminen edellyttää pitkäjänteisiä, koordinoituja ja toimialakohtaisia toimenpiteitä, jotka vahvistavat sekä suomalaisen ammatillisen koulutuksen työelämärelevanssia että sen tarjoamia koulutusmahdollisuuksia.

Sammandrag

Det Nationella centret för utbildningsutvärdering (NCU) genomförde en nationell utvärdering (2024–2026) av sysselsättningsresultaten för utexaminerade efter yrkesinriktad grundexamensutbildning. Som en del av detta arbete granskade en internationell expertpanel sysselsättningsresultaten för utexaminerade efter yrkesinriktad grundexamensutbildning i Finland ur ett jämförande perspektiv och identifierade viktiga styrkor, utmaningar och utvecklingsbehov för att bättre stödja de utexaminerades sysselsättning. Panelens analys baserades på bakgrundsdokumentation och ett besök i Finland i början av 2026. Under besöket intervjuade panelen företrädare för centrala intressentgrupper, däribland utbildningsförvaltningen, yrkesutbildningsanordnare, arbetsmarknadsorganisationer, studentorganisationer och andra relevanta aktörer.

Finlands yrkesutbildningssystem är internationellt erkänt för ett högt deltagande, jämlikhet i utbildningen och goda möjligheter att gå vidare till högre utbildning. Panelen noterade att arbetslösheten bland utexaminerade från yrkesinriktad grundexamensutbildning fortfarande är hög och drog slutsatsen att detta tyder på djupare strukturella utmaningar. Panelen betonar att de faktorer som ligger bakom svaga sysselsättningsresultat är flerdimensionella – de formas av ekonomiska cykler, förändringar på arbetsmarknaden, institutionella strukturer och hur yrkesutbildningen organiseras och kopplas till arbetslivet.

Den finländska arbetsmarknaden har genomgått en betydande omvandling till följd av teknologiska förändringar, ekonomisk omstrukturering och förändringar inom exportberoende industrier. I detta föränderliga sammanhang konkurrerar utexaminerade från yrkesutbildning inte bara med akademiskt utbildade jämnåriga utan också med halvkvalificerade arbetstagare och migrerande arbetskraft. De utexaminerades ställning på arbetsmarknaden hänger samman med i vilken utsträckning deras färdigheter direkt motsvarar arbetets krav, i vilken mån utbildningsprogrammet signalerar tillräckliga inlärningsfärdigheter och hur stor risken är för variationer i kompetensens kvalitet. Materialet och intervjuerna tyder på att en faktor bakom den höga arbetslösheten bland finländska utexaminerade från yrkesinriktad grundexamensutbildning är svaga kopplingar till arbetslivet, vilket kan återspeglas i brister i de specifika färdigheter som direkt krävs för att lyckas i arbetet. Situationen varierar dock mellan olika branscher. Branscher där det råder brist på arbetskraft och där utexaminerade från yrkesinriktad grundexamensutbildning utvecklar en stark yrkesidentitet och nära band till arbetsgivare – såsom hälso- och sjukvård och socialvård – uppvisar relativt låg arbetslöshet. Inom tekniska områden, där arbetsgivarnas engagemang är svagare och möjligheterna till lärande i arbetslivet är mer begränsade, har utexaminerade däremot större svårigheter att få arbete.

Lärande i arbetslivet framträdde som en viktig faktor som påverkar sysselsättningsresultaten. Läroavtalsutbildningar i Finland har låg arbetslöshetsgrad bland de utexaminerade, men de är fortfarande marginella för ungdomar och används främst av vuxna. Även om alla program inom yrkesinriktad grundexamensutbildning omfattar lärande i arbetslivet, är regelverket svagt, lärande i arbetslivet varierar avsevärt i längd och arbetsgivarna får ingen ekonomisk ersättning

för att utbilda studerande inom utbildningsavtal. Inom läroavtalsutbildning kan arbetsgivare under vissa förutsättningar få utbildningsersättning. Avsaknaden av mekanismer för kostnadsdelning, i kombination med tillsynskrav, begränsar arbetsgivarnas deltagande, särskilt bland små företag. Internationell evidens visar att det krävs institutionella stödstrukturer såsom förmedlande organisationer, gemensamma finansieringsmodeller och tydliga kvalitetssäkringsmetoder för att bygga ut lärande i arbetslivet av hög kvalitet – områden där Finlands system fortfarande inte är tillräckligt utvecklat.

En betydande styrka hos den finländska yrkesinriktade grundexamensutbildningen är att den ger alla studerande behörighet till högre utbildning, vilket ökar dess attraktionskraft och stöder social rättvisa. Panelen identifierade också detta som en viktig faktor som påverkar sysselsättningsresultaten. Att stärka de utexaminerades övergång från yrkesinriktad grundexamensutbildning, särskilt till yrkeshögskolor, skulle kunna bidra till att minska arbetslösheten, eftersom en del av de utexaminerade då skulle fortsätta direkt till fortsatta studier i stället för att träda in på arbetsmarknaden. Panelen betonar dock att en starkare övergång till högre utbildning förbättrar de övergripande resultaten endast om yrkesfärdigheterna hos dem som faktiskt går ut på arbetsmarknaden stärks samtidigt. Annars finns det en risk att den återstående gruppen får svagare utsikter på arbetsmarknaden. Detta illustrerar en verklig utbildningspolitisk avvägning: Finlands yrkesutbildning förväntas underlätta både en smidig övergång till sysselsättning och en bred tillgång till högre utbildning, även om internationell evidens visar att dessa mål inte alltid är lätta att förena.

Styrningen av det finländska yrkesutbildningssystemet är mycket decentraliserad och bygger på förtroende, vilket ger utbildningsanordnare en hög grad av självständighet för att svara på lokala arbetsmarknadsbehov. Den här decentraliseringen leder dock också till ojämn praxis och begränsade mekanismer för systematiskt utbyte av effektiva strategier mellan områdena. Begränsade institutionella strukturer för arbetsgivarnas medverkan leder också till variationer i hur väl samarbetet mellan anordnare och arbetsgivare fungerar. Under de senaste åren har styrningen övergått till en hybridmodell som kombinerar lokal autonomi med resultatbaserad finansiering och överenskomna mål genom förhandling. Även om detta har skärpt fokus på resultaten, som till exempel sysselsättning, betonar panelen att dessa resultat – på grund av ojämna regionala ekonomiska förhållanden – ofta faller utanför utbildningsanordnarnas kontroll.

Ett annat område som panelen identifierade som underutvecklat är yrkesutbildningens roll inom Finlands nationella innovationssystem. Intervjudata visade att yrkesutbildningen fortfarande i första hand betraktas som en leverantör av kvalificerad arbetskraft snarare än som en aktiv deltagare i innovation. Även om det finns exempel på framgångsrikt lokalt samarbete med yrkeshögskolor så är dessa initiativ fortfarande fragmenterade. Det finns stor potential att bättre definiera och ytterligare stärka yrkesutbildningens bidrag till innovation och regional utveckling.

Slutligen erbjuder Finlands mycket flexibla och modulära yrkesutbildningssystem individuellt anpassade utbildningsvägar och ett starkt erkännande av tidigare lärande – egenskaper som är värdefulla för vuxenstuderande men som kan innebära utmaningar för yngre studerande. En långtgående individualisering kan försvaga gemensamma yrkesidentiteter och göra det svårare för lärare att ge konsekvent stöd. Även om Finlands system för prognostisering av kompetensbehov är rikt på information, är dess styrande inflytande fortfarande begränsat: de

studerandes val påverkas endast i liten utsträckning av arbetsmarknadsdata, och karriärvägledningen inom den grundläggande utbildningen verkar inte vara tillräcklig för att åtgärda denna brist.

På det hela taget drar panelen slutsatsen att Finlands yrkesutbildningssystem har betydande styrkor, särskilt dess starka engagemang för rättvisa, öppenhet och goda möjligheter att gå vidare till högre utbildning. Samtidigt belyser den ihållande höga arbetslösheten bland unga utexaminerade från yrkesinriktad grundexamensutbildning behovet av mer sammanhängande kompetensutveckling, starkare och mer institutionaliserat samarbete med arbetsgivare, mekanismer för att dela kostnaderna för lärande i arbetslivet, mer strukturerade former av lärande i arbetslivet och en tydligare och bättre integrerad roll för yrkesutbildningen i regionala och nationella innovationssystem. Att lösa dessa utmaningar kräver långsiktiga, samordnade och sektorsspecifika åtgärder som stärker både den finländska yrkesutbildningens arbetsmarknadsrelevans och de utbildningsmöjligheter den erbjuder.

1 Introduction

The Finnish Education Evaluation Centre (FINEEC) carried out an evaluation in 2024–2026 on employment outcomes after initial vocational education and training (IVET) qualifications in Finland. The aim of the evaluation was to produce information on the current state of employment after vocational education, how opportunities for employment can be supported during education, and what kinds of development measures are needed in VET to promote employment. In addition, the evaluation aimed to identify good practices at both national and international level for promoting employment.

The evaluation involved both a national evaluation group and an international expert panel. The task of the international expert panel was to examine Finnish IVET in an international context and to identify the strengths and areas for development of IVET from the perspective of promoting employment. In addition, the panel was tasked with highlighting good practices from other countries in supporting the promotion of employment. The panel consisted of the following members:

- Christian Helms Jørgensen, professor, MSc (Sociology) & PhD, professor emeritus, Department of People and Technology, Roskilde University, Denmark
- Rita Kask-Klesmann, adviser, Area of Vocational Education and Training, Vocational Education and Skills Policy Department, Ministry of Education and Research, Estonia
- Johanna Schumacher, investigator, Swedish National Agency for Higher Vocational Education, Sweden
- Rolf van der Velden, professor emeritus, Research Centre for Education and the Labour Market (ROA), Maastricht University, the Netherlands

The panel received background documentation from FINEEC (see Appendix 1 for an overview), had several online meetings to discuss the materials with FINEEC staff and had an online meeting with members of the national evaluation panel (see Appendix 2) on 3 December 2025. On 29–30 January 2026 the panel was in Helsinki for onsite interviews with several policymakers and stakeholders (see Appendix 3). The panel has prepared this report through a series of online meetings and a process of commenting on and refining a common online text available to all panel members.

The members of the panel are aware that they are presenting an outsider’s view on the Finnish IVET system. Although this has some advantages in terms of bringing a new perspective, it also comes with limitations as the experts do not have the deep inside knowledge that national experts have. The conclusions and recommendations in this report should therefore be regarded as food for thought, intended to offer ideas and perspectives to support reflection and the further development of Finnish IVET to strengthen employment outcomes.

The experts would like to thank the staff of FINEEC (Raisa Hievanen, Kirsi Hiltunen, and Jani Goman), for their excellent support and the interviewees for their open and thoughtful answers during the interviews. Any mistakes in the current report remain our responsibility.

The outline of the report is as follows. Section 2 presents the problem statement that guided our review. Section 3 provides a more general overview of factors affecting the labour market position of IVET graduates. Section 4 discusses the role of work-based learning and Section 5 the role of transitions to the Universities of Applied Sciences (UASs) in terms of graduate unemployment. Section 6 addresses other reflections regarding IVET in Finland.

2 Problem statement

The international expert panel's work is based on the observation that, in Finland, unemployment among those with an IVET qualification has long been higher than that of UAS graduates and higher than that of IVET graduates in the other Nordic countries (Høst, 2012; Albaek et al., 2015; Education Statistics Finland Vipunen, 2026).

The persistently high unemployment for IVET graduates indicates that this is a structural problem related to the transition of graduates to employment and higher education. In addition, the current unemployment figures for IVET graduates are aggravated by the cyclical weak situation in the labour market. When general unemployment rises, the number of job openings declines and it becomes difficult especially for new entrants to enter the labour market. This was demonstrated in 2020, when the effects of the COVID pandemic hit the Finnish labour market (see Appendix 4). In addition to this, other reasons for IVET graduate unemployment can be identified. The structural changes in the employment structure, entailing a shift from manufacturing to more knowledge intensive jobs and human services can explain some of the high variation in the unemployment levels of IVET graduates between industries. The structural changes are also considered to reduce the overall demand for IVET graduates and increase the demand for higher education graduates (OECD, 2025a), which can result in higher unemployment rates for IVET graduates. On top of this, the Finnish labour market has been seriously affected by the geopolitical situation with regard to the war in Ukraine and the resulting export restrictions to the Russian Federation. Another reason is imbalances between the students' choices of IVET programmes and the demand in the labour market for specific types of IVET graduates. Furthermore, youth unemployment varies significantly between regions and over time. Considering the multiple factors contributing to the unemployment of IVET graduates, we conclude that the problem does not have one simple cause and hence has no simple or uniform solution, and should instead be addressed with consideration for the specific conditions and opportunities of different sectors and localities.

3 The labour market position of IVET graduates

A common factor expressed during the interviews was a worry about the persistently high unemployment rates of young IVET graduates. The interviewees pointed out that Finland is facing a deep economic crisis ("Finland is the new Greece" as one interviewee remarked), and that this situation is relatively new for Finland. The crisis is the result of several factors, such as the pandemic and the closing of the border with Russia (bad for the export industry), but also structural changes in the labour market. These structural changes relate to the transition from manufacturing to more knowledge intensive jobs. More specifically, traditional, routine, low-skilled jobs are shrinking in relative importance while demand rises sharply for higher-level cognitive, digital, technological, and STEM-oriented roles. This trend is linked to technological change, automation, digitalisation and economic restructuring (OECD, 2025a). Therefore in a high-technology economy with intensive demand for skills, like Finland's, higher unemployment among certain IVET graduates can reflect a structural misalignment between education output and labour-market demand, especially as jobs increasingly require deeper digital, analytical or tertiary skills. The interviewees also pointed out that IVET is more sensitive to the business cycle compared to graduates from higher education, as many programmes educate for sectors that are strongly dependent on export (like industry) or that are more sensitive to the business cycle (like construction).

These structural and cyclical factors certainly play an important role, but it is also good to look at other factors explaining why IVET graduates have such a high unemployment rate. This unemployment rate is high compared to other countries, and, even more importantly, also high compared to the unemployment rate for Finnish graduates from UASs. This suggests that economic conditions are not the main driving factor. The high participation rate of young people in IVET (compared to Sweden, for example) also implies that the group participating in IVET is not a marginal group. Though in most countries this group has a weaker socioeconomic background than students in general upper secondary education (OECD, 2021), the high unemployment rate cannot be attributed to a negative selection of students by enrolment in IVET. This seems to suggest that IVET graduates do not have a good comparative advantage in the labour market and lack specific niches for which they face little competition. Instead, they seem to be in competition with un- and semi-skilled workers and with graduates from UASs for similar jobs. In this competition they apparently lose more often than their competitors.

Why is this the case? To understand this, it is important to realise that in regulated labour markets like we see in Rhineland and the Nordic countries, wages are primarily determined by the characteristics of the job rather than the productivity of the job holder. This means that job applicants with a low productivity cannot 'sell' their labour for a lower price than peers with a higher productivity level. In the words of Thurow (1975), the labour market is characterised by job competition rather than wage competition. An exception to this situation is when employers can circumvent collective agreements by using cheap foreign migrant labour, as is done in sectors such as construction or agriculture (Alsos & Eldring, 2021). However, in a labour market based on job competition, employers look at expected training costs when ranking potential applicants for a job in the 'job queue' (Thurow, 1975). The labour market position of graduates

of any study programme in this queue is dependent on three factors that together determine these expected training costs for an employer (Glebbeek, 1988; Van der Velden & Wolbers, 2007):

1. The extent to which the study programme provides the specific skills directly needed to perform the job adequately.
2. The extent to which the study programme signals that graduates have sufficient generic skills and learning ability to overcome any discrepancies between the specific skills that are needed in the job and the skills they have.
3. The risk that graduates from a certain programme will underperform or put another way, the extent to which the diploma is a reliable and transparent signal of underlying skills for all graduates.

These three factors work in combination and reinforce each other. For employers, training costs are lowest when graduates already have the specific skills they need. If they lack such skills, they will look for indications that they have sufficient general skills and learning ability to quickly overcome such discrepancies. Finally, as it is difficult for employers to directly assess the skills of the graduates, they rely on diplomas when hiring newcomers. The problem for employers is that these diplomas can still mask considerable variation in the quality of skills among graduates. Programmes that are more selective mitigate this risk. Others show more variation, which involves a risk for employers. If this risk is substantial, they will select applicants from other (e.g. more selective or higher level) programmes.

How does this relate to the labour market position of Finnish IVET graduates? In principle, IVET graduates may compete on the labour market with all other newcomers, in particular graduates from UASs and graduates from general upper secondary education, but also those such as migrants who offer (or rather are forced to offer) their work at a lower wage (e.g. in the construction, hospitality or agricultural sector). When the ranking of applicants would be primarily determined by indications of general learning ability, they would lose that competition to their more academically trained peers. The first and most important way they can secure a higher place in the job queue than their more academically trained peers is by having more of the specific skills that are needed to perform the job. This higher level of specific skills gives them a comparative advantage vis-à-vis their more academic trained peers. There are several indications from the interviews that this comparative advantage is achieved in some sectors, such as the health care sector, where there are stronger links with employers and where work-based learning plays an important role. In this sector, the unemployment rate is also relatively low. In other sectors however, such as the technical occupations, the high unemployment rate seems to be related to the poor linkages between school and work, indicating a lack of specific skills.

So having a clear vocational profile provides a safety net for IVET graduates (Shavit & Müller, 2000). The more specific their skills are, the higher this comparative advantage. But the position of IVET is also partly determined by its role of providing education for young people at the lower end of the skills distribution scale. IVET in Finland cannot be selective (like higher education) and must cater to all students who apply, as one of the interviewees remarked. This also means that you cannot simply compare the unemployment figures of Finnish IVET graduates to those

of other countries such as Germany where, for example, the apprenticeship is more selective and where there is higher unemployment among those who have only Hauptschule. The problem of non-selectivity was probably aggravated by the education reform in 2021, in which the minimum school leaving age was raised to 18 years. While this probably will raise enrolment in IVET and reduce the proportion of young people not in education, employment or training (NEETs), it may have a negative impact on the image of IVET (Rintala & Nokelainen, 2020). If IVET is seen more as an instrument for social policy than as a high quality provider of skills, this could weaken the position of IVET graduates in the labour market.

This means that the extent to which VET providers can accommodate the needs of the lower skilled group may be restricted by the need to ensure a minimum quality of skills among all graduates. The moment employers think that there is too much variation in the quality of graduates of a certain programme (even if the average quality is sufficient), they will raise their standards and hire graduates from a higher level. Similarly, when the diplomas do not give a transparent signal of the underlying competencies of job applicants, employers will prefer graduates from other programmes for their jobs. This means that variation in quality may also be driving the higher unemployment rates. There is some evidence from the interviews that this is indeed the case. Although the employers are generally satisfied with the individuals they hire, according to the interviewees they are much more critical about the skills of the graduates that were not hired. This does not suggest a general lack of vocational skills, but does indicate a problem with variation in quality.

Summing up, this means that the weaker labour market position of IVET graduates is probably caused to a substantial extent by a lack of specific skills in some sectors and by a relatively large variation in quality in the skills that graduates have obtained. It is therefore crucial that in IVET more attention be paid to developing these specific skills and maintaining minimum standards to ensure quality. The most effective way to realise this is by having a strong emphasis on work-based learning and apprenticeships to develop relevant specific skills and on establishing strong institutional linkages with employers in sectors where this is not the case, as well as by working towards diplomas that reliably and transparently signal a minimum level of skills. These topics will be elaborated on further in sections 4–6.

4 Work-based learning

Strong vocational skills are decisive for students' transition to employment. This chapter focuses on the importance of work-based learning, the importance of institutional linkages for successful work-based learning. Attention is also paid to trade-offs for policies to strengthen work-based learning in VET.

4.1 The importance of work-based learning – potential and trade-offs

The Finnish model is institutionally school-based, with apprenticeships as a flexible alternative rather than the core structure of IVET. An effective way to support the employment of graduates from IVET is by preparing the students for working life through work-based learning during the programmes. Through work-based learning the students can:

- Develop working life skills by participating in authentic productive work tasks.
- Develop a vocational identity by socialising with experienced and skilled colleagues.
- Build social networks that can help them gain employment after graduation. Good work-based learning can play a role in finding employment because work-based learning can form an important part of the student's social network (*Interview*).
- Acquire company-specific skills that enable them to gain employment in the company providing the training.

Work-based learning can be organised in different forms of internships, traineeships and apprenticeships. The highest effects on subsequent employment of work-based learning in IVET are attained when the students participate in authentic productive work processes and are recognised as participants in a community of practice in the workplace. This is most fully realised when the IVET student has the status of employee and receives a wage paid by the company, similarly to other colleagues, as is the norm in Germany, Denmark and Norway. In the Finnish VET system more widely, the trainees are mostly not recognised as employees (Rosin, 2025). However, we find clear indications of the positive effects of current apprenticeships in Finland on subsequent employment. *"One year after graduation, the employment rate of those who had completed their qualification through apprenticeship training was 89%, while the employment rate of other qualification holders was 61%."* (Hievanen et al., 2024:2).

In school-based and state-led VET systems like that in Finland, work-based learning is usually an important part of the qualification requirements, but still carries less weight than in dual systems. However, there are strong differences across sectors: In the health care and restaurant sector, for example, this is much better organised (*Interview*). Generally, the transition to the labour market is for most students left to the individual after completion of the programme (Ahola, 2012). International research has demonstrated that VET systems that include and support the transition to employment as part of the VET programmes have lower unemployment among IVET graduates (Gangl, 2001; Van der Velden & Wolbers, 2003;

Marczuk, 2024; Schmid, et al., 2023). This effect is highest in apprenticeship systems, where the apprentices learn in workplaces as employees for extended periods during the VET programmes. IVET in Norway and Denmark is based on the apprenticeship model, and there more than half of all IVET graduates continue as regular employees in their training company directly after completion (Jørgensen & Tønder, 2018). They have already completed their transition to employment when they complete the IVET programme.

The structure of apprenticeship programmes in Europe varies considerably when it comes to the structure of governance, apprentices' status as students/employees, their participation in workplace communities and the combination of school-based and work-based learning (Markowitsch & Wittig, 2022). In the Finnish VET system "*All qualifications can be acquired through apprenticeship training",* but only 9% of IVET students are studying on apprenticeship programmes, and the number has decreased (Finnish National Agency for Education, 2019:7). Apprenticeships in Finland are mainly aimed at adults. Apprenticeships function more as a continuing training route for employed adults than as a primary transition pathway from school to work**.** In neighbouring Estonia the situation is the same, with apprenticeships not a dominant entry pathway for young IVET students. Various structural, economic and cultural observations can be made about the role and challenges of apprenticeships in Finland.

The programmes for other students in VET in Finland include work-based learning, but no minimum requirements for the duration are set and the regulatory framework could be further strengthened. At the moment the requirement is *"as much as possible" (Interview)*, while previously it was at least 30 competence points. The argument for dropping the minimum requirement is that sectors are different (*Interview*), although setting these minimum requirements is quite normal in other countries such as Denmark, Estonia and the Netherlands. The assessment of students in IVET is organised through competence demonstrations in a workplace in collaboration with companies, and students are in most cases satisfied with the implementation of competence demonstrations (Hievanen et al., 2022).

In recent decades, many European countries with mainly school-based VET systems have tried to implement or expand apprenticeships, some supported by the European Alliance for Apprenticeships, which Finland is associated with. The Finnish and Swedish VET systems are, in comparative VET research, categorised as state-led and mainly school-based. Much of this research has emphasised the continuity and path-dependency of national VET systems, but it has also studied the development of mixed VET systems that combine elements from different models of VET.

It is a major strength of the Finnish IVET system that it offers eligibility for higher education for all students, and this is difficult in apprenticeships due to the long periods of work-based learning (Deissinger et al., 2013). However, institutional innovation in continental VET systems and in the Nordic countries demonstrates that apprenticeships can be combined with acquiring entrance qualifications for higher education (a third *påbygningsår* year in Norway, the 'EUX' programme in Denmark, the 'BBL-level 4' programme in the Netherlands).

Sweden: Reinventing apprenticeships

Sweden demonstrates that it is possible to reinvent apprenticeships with some success in a VET system that had previously abandoned them (Panican & Paul, 2019; Andersson, et al., 2015; Olofsson & Panican, 2019). After a long period of local experimentation, Sweden in 2011 introduced a national apprenticeship programme, which after a slow start currently accounts for more than 13% of all VET students. When the programme was introduced, a reform limited the eligibility of IVET graduates to higher education. Currently, all students in IVET are offered eligibility for higher education.

4.2 The importance of institutional linkages for work-based learning

If work-based learning and apprenticeship programmes are to work effectively, they require an institutional infrastructure and governance that involve the labour market partners. The interviews indicated that most local/regional networks in Finland are typically personal in nature rather than institutional. Collaboration therefore needs to be local (*Interview)*. This may preclude having another layer of formalised intermediary organisation as in other countries (e.g. Germany). The interviewees also indicated that in Finland employers do not want a very strict and formalised system of cooperation (*Interview*).

An institutional infrastructure for collaboration between VET and working life can include institutional linkages at national, regional and local levels. Key examples are the intermediary institutions linking education and working life in the dual systems of VET and the new institutions in other Nordic VET systems (Norwegian local training agencies and Swedish vocational colleges) (ILO, 2019; Michelsen et al., 2023; Persson & Hermelin, 2022). It is significant that these institutions are employer-initiated and employer-led and driven by employers' interest in high-quality training.

As indicated in Chapter 3, the problem of high IVET graduate unemployment is not only related to less developed institutional linkages or limited local cooperation. Structural factors may also play a role: Labour market segmentation, wage competition from foreign labour, a lack of entry-level positions and a structural mismatch between the supply of IVET graduates and the demand for skilled labour. This suggests that institutional linkage alone does not guarantee employment outcomes. The problem might be economic and structural rather than purely educational. However, a strong institutional infrastructure for collaboration between VET and working life could benefit the quality of work-based learning in VET.

Some of the key tasks for this institutional infrastructure are the cultivation of agreements for sharing of the costs of work-based learning and remuneration of apprentices/students, the

authorisation of companies to train student or apprentices, the monitoring of the quality of training, supporting students during work-based learning, organising competence demonstration and certification and the continuous adaptation of the programmes to changing skills requirements (Markowitsch & Wittig, 2022; Cedefop, 2021).

In Finland, employers participating in apprenticeship training may receive training compensation if the training results in costs for the employer and if the VET provider and the employer agree on the payment of the compensation. When a student is learning in a workplace under a training agreement (without an employment relationship), no compensation is paid to the employer. Interviews emphasised that Finland is currently in a difficult economic situation and that companies have difficulties retaining employees. Therefore, they have difficulties taking on students for work-based learning. It is not always easy for students to find a traineeship, and limited access to traineeships and training placements seems to be one reason for the weaker role of work-based learning in Finnish VET. Interviewees mentioned that it is difficult to realise apprenticeships in small and medium-sized enterprises (SME).

According to the interviews, the wage structure in Finland creates disincentives for small companies. The barrier can be that apprentices must be paid at least a minimum wage (the same is true in Estonia). For small companies the apprentice is costly in the early phase (low productivity, high supervision demands), there is no guarantee that the apprentice will stay after qualification (interview), and students may move to better-paying employers at the final stage. This creates a risk-investment problem for the companies. A possible solution could be to have a training fund, where companies collectively finance apprentice wages. Such training funds exist in other countries, but in the interviews this idea attracted no support. This reflects Finland’s liberal labour market tradition and reluctance to embrace collective levy systems. However, economic risk allocation is central. Currently, employers bear the training costs but do not capture the long-term returns on the investment. If Finland wants to reduce youth IVET unemployment through expansion of apprenticeships, reforms would need to address employers’ costs and risk-sharing, students’ readiness in terms of baseline skills, and institutional coordination, which potentially would move the system slightly closer to the Nordic or continental dual models, while adapting to Finnish governance traditions.

One interviewee said that it is a challenge that some sectors do not take students under the age of 18 for work-based learning. It was emphasised that work-based learning includes meaningful and appropriate work tasks, not just being present at the workplace. Work-based learning should be of high quality, which requires qualified supervision and monitoring of students’ learning, which involve costs for the employers. However, neither the government nor the employer organisations have established schemes for sharing these costs between employers. This could be realised, for example, as subsidies for training placements paid by the state or paid by a training levy on employers who do not train. In Denmark, all employers pay a sum into the ‘employers' reimbursement scheme’ (AUB), which funds VET for both young people and adults (UNESCO, 2022). Employers are given an annual quota of apprentices they should take on, and employers who exceed the quota receive a bonus, while employers who do not reach the quota pay an additional contribution to the fund.

A well-trained workforce is a common asset that all companies can potentially benefit from. However, the Finnish VET system has no mechanisms for sharing the costs of work-based learning between companies. This can be one of the reasons why previous initiatives to strengthen work-based learning have not been very successful. *"Some companies do not take students for work*-based learning *because they do not receive funding for them, but this varies by industry and by company." (interview*). Policy makers have for years encouraged work-based learning in all VET programmes. However, the VET system does not provide financial support for employers' investment in the training of VET students: *"employers say that they are not always very willing to take trainees, as it involves costs and is not financially compensated*" *(interview*). Consequently, securing high-quality workplace training in IVET requires a strong institutional framework.

Initiatives to raise the quality of work-based learning

First, the financing of extended periods of work-based learning requires an institutional mechanism for sharing the costs of training, as high-level skills are like collective goods in nature. The engagement of employers in training in accordance with uniform standards set by others (the state or collaborative institutions) is supported by an arrangement for the sharing of costs. In Norway, companies receive a state subsidy for training proportional to the apprenticeship's duration. In Denmark, the apprentices' wages are set in collective agreements in the labour market and a national training levy shares the cost of training between all employers by means of a national fund (UNESCO, 2022). In addition, apprenticeship contracts lasting several years are based on employers' investment in the first year(s) and profits gained in the last year(s) and apprentices' wages being significantly lower than the wages of skilled workers. Hereby, apprenticeships can be advantageous for employers without state subsidies, as in Germany.

Second, to guarantee the high quality of work-based learning, institutions for monitoring of training and supervision of trainees are required. Extending the duration of work-based learning without quality assurance is no improvement. Companies might train for different reasons and trainees must be safeguarded against being exploited as cheap labour. Companies are becoming more specialised, and increasingly the individual company can offer only part of the broad range of vocational skills involved in learning a vocation/profession. This can necessitate procedures for organising supplementary training in schools and other workplaces or arrangements for shared responsibility for the training between multiple employers (Jørgensen, 2015).

Third, the quality of the workplace instructors is critical for securing high-quality training. Not all workplaces are equally good at integrating inexperienced young people and supporting their learning and socialisation into the workplace culture. This requires support for and certification of workplace instructors and workplace supervisors. The VET providers can support companies in developing the pedagogical competencies of the in-company trainers/instructors as they

currently do in Finland. In addition, VET providers can offer assistance in terms of mediating in conflicts between trainees and other staff.

Fourth, students in IVET learn in two different learning environments and their boundary crossing should be supported to help them develop coherent professional skills (Pylväs, Rintala & Nokelainen, 2018). To be effective, this cannot be left to the individual trainee and instead requires institutionalised collaboration between VET providers and companies. Examples of this are the Swedish tripartite supervision meetings in the workplace (Andersson, 2018), the Norwegian training agencies (‘opplæringskontorer’) and E-portfolios and ‘thematic assignments’ (Choy et al., 2018; Øgård et al, 2025), and the *Practicum* model and use of ICT-based boundary objects in the Danish VET system (Riis & Brodersen, 2021).

In Finland, VET reforms have repeatedly given priority to work-based learning and closer links to the labour market. However, the Finnish VET system has no regulatory framework to ensure the financial sustainability of work-based learning for the employers. Due to the short duration of many traineeships, the students’ economic contribution to the production process is limited and might not cover the employers’ costs of training.

To raise employer engagement in work-based learning, employers who train students and apprentices should be given stronger financial incentives to employ them and to train workplace instructors.

4.3 Trade-offs for policies to strengthen work-based learning in VET

The Nordic model of education emphasises that all students should have an opportunity to progress to higher levels of education. This contrasts with the interest in providing separate ‘practical’ and less demanding programmes for disadvantaged students in work-based programmes and apprenticeships that can be ‘dead ends’ in the education system (Triventi et al., 2016).

Compared to the other Nordic countries, upper secondary vocational education in Finland has strong linkages to higher vocational education and offers eligibility for progression to tertiary level for all students in VET. While this is an advantage for the students, the strong linkages to higher education are usually associated with weak linkages to the labour market.

Strengthening the linkages between VET and the labour market by increasing specific vocational skills and work-based learning can weaken the links to higher education. This was a result of the Swedish reform of VET in 2011, which aimed at strengthening the links to the labour market. An unintended consequence of this reform was reducing the level of esteem associated with and enrolment in IVET (Hall, 2012).

In general, the promotion of smooth transitions to employment tends to reduce transitions to higher education, especially in apprenticeship systems, where most of the training programme is located in workplaces. The acquisition of a broad range of specific vocational skills tends to come at the expense of advanced general qualifications. However, these trade-offs are not

static and can to some degree be overcome through innovative policies. For example, by combining vocational and general skills in hybrid-type integrated programmes, like the EUX programme in Denmark, the *Lehre mit Matura* in Austria (Deissinger et al., 2013), the Dutch BBL-level 4 or the Swedish apprenticeship programme that offers eligibility for higher education.

The strong links of IVET in Finland to higher education are also associated with less inclusion of non-academic young people, as concluded by Ollikainen & Karhunen in their analysis of the effects of the Finnish VET reforms (2021:9).*"The results highlight a trade-off between higher demands placed on students and increased drop-out rates, which should be acknowledged by policy makers when designing educational reforms.*" This result is in line with the effects of a similar reform to increase the permeability from VET to higher education in Sweden in the early 1990s (Hall, 2012).

Extending work-based learning in IVET can improve students' employment chances after graduation. It can also improve the inclusion of disadvantaged young people in VET. However, extending work-based learning, especially through apprenticeship programmes, tends to weaken the links to higher education. Providing access to employment or to higher education represents a trade-off for VET policy (Bol & Van de Werfhorst, 2013; Jørgensen, 2018). In comparative research, this has been expressed as a trade-off between VET being a safety net and a diversion from higher education (Shavit & Müller, 2000).

"The safety net effect (sheltering from unemployment and unskilled jobs) of VET is observable mostly in countries with highest occupational specificity of VET (in countries with dual systems)" (Saar & Martma, 2021:439). An indicator of the strength of institutional linkages between the VET system and the employment system is the specificity of the employment of IVET graduates (Blommaert, et al., 2020). In Denmark, this varies significantly between occupational fields, with, for example, a large majority (> 75%) of VET graduates from the electrician, carpenter, hairdresser and elder care programmes being employed in the specific industries that also train most of the apprentices in these vocational programmes. In contrast, the employment of office clerk graduates from IVET are less specific and they are dispersed over many different occupational fields.

Extending work-based learning in IVET can also give rise to stronger and earlier tracking in upper secondary education and thereby stronger reproduction of socioeconomic background in education (van de Werfhorst, 2018; Schindler et al., 2024). In addition, the advantages of work-based learning and specific vocational skills for the immediate employment of IVET graduates seem to be associated with lower flexibility and long-term employment rates (Bol & Van de Werfhorst, 2013).

Currently, no minimum requirements are set for the duration of work-based learning in Finland, because this is meant to be adapted to the individual student's needs and interests. In line with other European countries, Finland has introduced flexible and individual learning paths in VET with modularised qualifications emphasising students' ability to choose and to combine subjects even across the vocational and academic tracks of upper secondary education (Rintala & Nokelainen, 2020). This flexibility can make it easier to include various opportunities for work-based learning in the VET programmes. However, it can also reduce the transparency of the

IVET programmes for students and employers and reduce the education-to-job matching (Levels et al, 2014). This constitutes a trade-off for policy between individually tailored learning pathways that can make IVET more attractive for young people, and loss of transparency of IVET and thereby also the portability of skills in the labour market.

While apprenticeships support the transition to employment very effectively, they are also associated with higher dropout rates and lower completion rates (Finnish National Agency for Education, 2019:15). In Norway and Denmark, the apprenticeship programmes start with one or two years of school-based training. The transition from this school-based part of IVET to becoming employed as an apprentice in a workplace involves a risk of students dropping out. This can be due to difficulties in finding an apprenticeship placement and in fitting into the social environment of the workplace with adults. This risk can explain why the non-completion rate of students in upper secondary education is significantly higher in Denmark and Norway than in Finland and Sweden (Albaek, et al., 2015). This indicates that the extension of work-based learning and apprenticeships in IVET involves trade-offs for policy.

Work-based VET is generally more socially inclusive for disadvantaged young people than school-based VET. However, apprenticeships in particular tend to be less inclusive for gender and ethnic minorities (Imdorf, 2017). Gender segregation is generally stronger in vocational education than in general education (Estévez-Abe, 2012; Reisel et al., 2015). One reason is that apprenticeships are mostly distributed through informal social networks and a training market, and access to apprenticeships is difficult for ethnic and gender minorities.

These and other trade-offs for policy have been observed in a variety of VET systems. However, they can be managed and to some extent overcome through policy innovation and through learning from good examples from other countries (Jørgensen, 2018). It should be observed that it takes time to realise VET reforms, as the Swedish apprenticeship reform, for example, has demonstrated.

There are various barriers to the expansion of apprenticeships. In industries with no prior tradition of apprenticeships, employer interest can be limited, while they might be more engaged in the traditional crafts and construction industry. An evaluation in Finland found that employers were not sufficiently aware of the potential of apprenticeship agreements (Hievanen et al., 2022). In addition, the interest of young people in apprenticeships might be limited, as we have seen in Sweden, even in industries with labour shortages (Skolverket, 2021:33). Developing an apprenticeship programme can also be constrained by lack of qualified VET teachers, as seen in Sweden.

5 Transitions to universities of applied sciences and their impact on graduate unemployment

It is a key strength of the Finnish VET system that it offers eligibility for higher education for all students. In contrast to the situation in many other European countries, IVET in Finland does not look like a ‘dead end’ in the education system. When young people leaving lower secondary education choose IVET, they do not have to fear becoming locked into a specific occupation. They can continue, not only in further and specialist VET, but also at UASs and universities. It is considerably more common for IVET graduates to continue their studies at a UAS than at a university. This is one reason why VET in Finland has retained a high esteem and high enrolment of young people (Rintala & Nokelainen, 2022).

The VET system in Finland offers a pathway to higher education that is considered more flexible and less pressurised than general upper secondary education and thus represents a good option for practice-oriented students (Knight et al., 2022). VET provides a pathway to higher education for young people from non-academic families and can thereby reduce social inequalities in higher education enrolment (Haltia, et al., 2022).

Students who graduate from IVET have two main options: they can seek skilled employment or progress to higher education. This is especially important in occupational fields that have high graduate unemployment rates and for all fields in periods of cyclical downturns. If IVET graduates have difficulties finding an adequate job, they can apply for a study place, for example at a UAS. Frequently, they can continue their studies in the same field where they achieved their IVET certificate and can maintain continuity in their career plans. Progressing to a UAS can be a new and upward career opportunity for graduates who face a risk of unemployment. This is important, as long-term unemployment can have serious negative effects on graduates’ later labour market careers.

UASs have a strong tradition of recruiting and educating VET graduates as almost half of all UAS students have a background in VET. UASs are interested in taking in more graduates from VET (*interview*) and many UASs provide additional support in the first year for students coming from VET (*interview*).

Even though the general qualifications of graduates from IVET are lower, their completion rate at UASs is at the same level as students from general upper secondary education (Hakamäki-Stylman et al., 2024). One interviewee stated that higher education institutions are autonomous and do not necessarily recognise the skills acquired through VET (*interview)*. However, others find that the UASs generally recognise vocational competence, work experience and workplace skills as strengths in students from VET (Hakamäki-Stylman et al., 2024). These students generally have weaker skills in general academic subjects, like maths and sciences, but they have stronger skills in the vocational subjects and in addition, they may have experiences from working life. They can contribute positively to the learning environments at UASs with their

vocational skills in collaboration with students from general upper secondary education *(interview)*.

The opportunities for progression to a UAS are not just an advantage for the individual IVET student; they can also help to reduce unemployment of VET graduates. In some sectors, like arts & humanities and ICT, unemployment is high and the proportion of graduates who are full-time students is also high. In contrast, in engineering, services, natural sciences and other similar areas, unemployment is high, but the proportion of full-time students is low or moderate. Here, there could be potential for raising the progression rate to UASs or specialist vocational qualifications. It could be relevant to examine why the transition rate to UASs in some fields is low or moderate, even when graduate unemployment is high.

- Are these fields lacking relevant vocational progression routes and destinations (as was the case in Denmark, where new short-cycle tertiary programmes were introduced after 2009 to increase the transition)?
- Can cultural barriers explain the reluctance of some groups of VET graduates to apply for higher education when they are unemployed (fear of being strangers in an academic world)? Could this be relieved through targeted introduction programmes?
- Do the unemployed VET graduates in some fields lack the relevant entrance qualifications for UASs? If so, could initiatives, like preparatory courses, help increase the permeability from VET to the UAS?

5.1 Strengthening pathways to higher vocational education in Finland

An OECD report (2025b), recommended development of further education pathways both within vocational education and from vocational education to higher education (interview). Educational attainment at tertiary level in Finland has been stagnating for two decades (OECD, 2025a), and it is currently at a lower level (39.1%) than the EU average (44.1%) and that of the other Nordic countries. Finland is behind the other Nordic countries in terms of the share of highly-skilled workers in the total workforce (Norlén, G. et al., 2024:131). This has been recognised by Finnish governments, and initiatives have been taken to raise participation in higher education. In the mid-1990s, the UASs were upgraded by shifting the emphasis from short-cycle tertiary degrees to bachelor's degrees. The UASs have become an attractive destination for IVET graduates, as entrance to universities is highly competitive. Just 3% of the students at universities have only completed a VET programme (Rintala & Nokelainen, 2022).

The labour market now requires more multi-skilled workers with higher levels of skills. Young graduates from IVET are not yet at that level. In addition, entry-level jobs in the labour market are disappearing and the traditional IVET-to-job transition model may no longer fit with current labour market structures. The European Commission (2025) and OECD (2025b) point to a growing demand for graduates from higher education in Finland, especially in fields such as engineering, ICT and the service sectors. These are also fields with high unemployment rates for VET graduates. Promoting the progression of IVET graduates to UASs in these fields could reduce unemployment among IVET graduates and increase the supply of UAS graduates

needed in the labour market. This is included in the current education strategy (Ministry of Education and Culture, 2022).

Achieving this will require initiatives in several areas, like targeted career guidance in IVET, increased funding to increase the number of study places at UASs, widening opportunities for enrolment of IVET graduates and strengthening activities to build wider pathways from IVET to UASs. This could include more joint development projects between VET and UAS students *(interview)* and more courses at UASs for IVET students. The IVET graduates most likely to enrol at UASs are not the unemployed graduates from IVET, because there might be negative social selection in the competition for jobs among newly graduated students. But the expansion of the group of IVET graduates who enrol at UASs could reduce the number of IVET graduates competing for jobs. However, this is only likely to occur if the vocational skills of graduates who do not progress to UASs are simultaneously strengthened. As indicated in Chapter 3, employers are currently not satisfied with the skills of those graduates who were not hired and this is regarded as an important cause of their high chance of unemployment. If more IVET graduates progress to UASs, the relative skill level of the remaining IVET graduates is weakened. So the widening of the progression of IVET graduates to UASs will only be successful if the skills of the remaining group are strengthened (see Chapter 4).

Initiatives could have a regional target, as the potential for progression differs regionally (*interview*). The regional differences in higher education attainment are also significant, at 46% in cities and 27.6% in rural areas (European Commission, 2025). Initiatives to raise male participation in higher education could also be relevant, as the gender gap in higher education in Finland is higher (15.5 pps) than the EU average (11.2 pps). In addition, initiatives should consider adults in VET, who make up half of students. Adult students with family obligations might need more financial support to succeed in full-time studies.

Finnish governments have initiated reforms to raise the enrolment rate in higher education of younger cohorts *(interview)*. "*The aim is that by 2030 at least half of young adults will complete a higher education degree, and more often than at present, those with a vocational qualification will also continue their studies at tertiary level."* (Ministry of Education and Culture, 2022:16). In line with this aim, FINEEC (Hakamäki-Stylman et al., 2024) has carried out an evaluation of the qualifications acquired in IVET in relation to the entrance requirements for UASs.

However, the demand for study places still significantly exceeds the supply, and in 2025 only 38% of all applicants to higher education gained a study place (Opintopolku.fi). As two-thirds of all applicants are left without a study place each year, further expansion of study places at UASs is required. In addition, targeted initiatives are needed to ease admissions and support the retention at UASs of graduates from VET. Realising this will be difficult in the context of cuts to public spending on higher education.

In addition, the risk of ending up in debt due to study loans can prevent some young people from applying for higher education: *"I have always dreamed of higher education studies, but I cannot afford them"* (*interview*).

5.2 Trade-offs for policies to increase progression from VET to UASs

Increasing the progression rate from VET to UASs could require stronger general qualifications of VET students. However, if IVET puts stronger emphasis on general qualifications like maths, sciences and foreign languages, this could have negative effects for practice-oriented students from non-academic backgrounds in IVET. This negative effect was identified with the previous strengthening of general qualifications in VET by the reform that provided eligibility for higher education for all IVET students (Ollikainen & Karhunen, 2021). The goal of the government is for all young people to complete at least upper secondary education, but around 15% of each age group enter the labour market without an upper secondary qualification (Ministry of Education and Culture, 2022). Strengthening the academic orientation of IVET could result in higher dropout rates of practice-oriented students.

This effect could be countered by introducing new forms of streaming in VET based on earlier selection of IVET students in UAS-preparatory streams and employment-oriented streams. Earlier streaming and selection could result in stronger socioeconomic status (SES) background effects in educational attainment. This negative effect on equity could be countered by establishing better opportunities for acquiring higher education entrance qualifications in adult education. Or by learning from European experiences with IVET programmes that give both easy access to employment and eligibility for higher education (Deissinger, et al., 2013).

5.3 How can progression from VET to UASs be increased?

Multiple initiatives to increase the transition from VET to UASs have been proposed, such as those included in the FINEEC report (Hakamäki-Stylman et al., 2024):

- stronger careers guidance in VET to inform of opportunities at UASs, for example by inviting former VET graduates studying at UASs to tell current students about their experiences;
- inviting more students in VET to participate in courses and other activities at the UAS;
- targeted preparatory courses at UASs to compensate for the lower qualifications of VET graduates in maths, sciences and foreign languages.

In addition, initiatives to link VET with UASs could seek international inspiration from, for example:

- the Dual Study programmes in Germany, which combine upper secondary VET with higher vocational education (Ertl, 2020);

- the special pathways to higher vocational education for vocationally qualified students in Norway (Schmees, et al., 2025);
- the EUX programme in Denmark that combines apprenticeships with eligibility for higher education by integrating the learning for vocational and general qualifications (Jørgensen, 2017);
- the Swedish apprenticeship programme (*gymnasial lärlingsutbildning*) that includes general eligibility for higher education (Regeringen 2022).

5.4 Innovative ways to manage the trade-offs for VET

The expert panel above points to two diverging initiatives to reduce IVET students' high graduate unemployment. First, to improve the linkages of IVET to the labour market and improve work-based learning in VET. Secondly, to boost the transition of IVET graduates to further and higher education. These initiatives relate to the dual aims of IVET, which might not be easy to combine. Therefore, upper secondary education in some other European countries has to some extent reserved the aim of preparing for higher education for the general track, and the aim of preparing for employment for the vocational track, the VET system. When both tracks have more unequivocal aims, these can be pursued more easily. However, this involves stronger tracking in upper secondary education, stronger stratification and stronger social background effects on the educational attainment of students (Esser, 2016; Triventi et al., 2016). This does not align with the strong emphasis in Finland on educational equality.

In Finland, the dual aims of IVET means that it simultaneously prepares students for employment and for progression to higher education. This is reflected in key policy documents, like the *Education Policy Report of the Finnish Government, 2021*. It emphasises that the proportion of upper secondary students progressing to higher education should be increased, so that by 2030 at least half of all young adults in Finland complete a higher education degree. The pathway to achieving this includes initiatives like widening the access of IVET graduates to higher education by providing more flexible pathways from IVET to a UASs and recognition of the competencies of IVET graduates at UASs. At the same time, it is emphasised that the links of IVET to the world of work should be strengthened to boost the employment of IVET graduates.

The question is how the relationship between these two different aims of VET is understood and managed by the Finnish VET system. In policy documents and in the interviews, the two aims were mainly seen as easily compatible. Interviewees argued that the strengthening of the basic skills and common subjects in IVET is needed both for successful progression to UASs and for the graduates' future employment. General and generic skills are required for employment in increasingly complex and interdisciplinary work tasks undergoing rapid technological change.

However, international VET research has demonstrated trade-offs between different aims for VET (Shavit & Müller, 2000; Saar & Martma, 2021). This can be seen in European VET systems where work-based learning placements make up a large part of the programmes (especially dual systems), and it is difficult to provide entrance qualifications for higher education for all students (Deissinger et al., 2013; Levels et al., 2014; Cedefop, 2022). Conversely, the mainly

school-based VET systems that provide eligibility for higher education for all VET students find it difficult to provide direct access to the skilled labour market. This is the situation in Finland.

Another trade-off for VET is that preparing the VET students for future changes in working life, further training and lifelong education generally comes at the cost of their immediate employability (Shavit & Müller, 2000; Bol & Werfhorst, 2013). A strong emphasis on specific vocational skills and extended work-based learning in IVET supports graduates' easy access to employment, but it may come at the cost of their long-term employability.

These trade-offs seem to be a common challenge for modern VET systems. The Finnish answer to this is to give priority to social equality and vertical permeability. Upper secondary education has clear tracking between schools (general–vocational), and very few students from IVET get access to universities. However, IVET is not an educational 'dead end', because all VET students are, after graduation, eligible for higher education. The price of this strong linkage to UASs is the prolonged transitions to employment of IVET graduates in Finland.

Other Nordic and European countries have managed the trade-off in different ways, from which Finnish education policy might gain inspiration. Strong linkages to higher education can be combined with strong linkages to the labour market. Apprenticeship programmes in Sweden, Norway, Denmark and the Netherlands have previously not offered direct access to higher education (only to various forms of post-secondary vocational education). However, innovative solutions to this weakness could provide inspiration for developing Finnish youth apprenticeships.

Apprenticeship systems and access to higher education - Case Sweden

Sweden in the 1990s extended comprehensive unified schooling and abolished tracking in upper secondary education. This came at the price of higher non-completion rates of students from non-academic backgrounds (similar to what happened in Finland in the same period). In response to this, in 2011 Sweden introduced a separate apprenticeship programme, which has gradually become successful. Even though this was not included in the first place, the apprenticeship programme today offers eligibility for higher education in line with other upper secondary programmes. This youth apprenticeship programme provides smooth access to employment without being an educational 'dead end'. It demonstrates that in countries with no strong tradition of youth apprenticeship systems, such systems can be introduced.

Apprenticeship systems and access to higher education - Case Norway

In 1994, Norway based the VET system on the apprenticeship model and included several initiatives to avoid making it appear to be an educational 'dead end'. First, after the first two years of mainly school-based training in VET, the students can shift to the

general track of upper secondary education and gain entrance qualifications for higher education. Second, students in IVET can in the ordinary four-year course duration acquire eligibility for higher education (in 'Yrkes- og studiekompetanse', YSK). Third, after IVET students complete their two-year apprenticeships they can continue on a one-year course that gives eligibility for higher education. Fourth, some higher vocational education institutions offer special programmes for VET graduates (Y-veien) (Schmees, et al., 2025). These initiatives may explain why IVET in Norway has maintained high enrolment levels comparable to enrolment levels in Finland (Høst, 2014).

Apprenticeship systems and access to higher education - Case Denmark

Denmark maintained the most traditional type of apprenticeship system with very strong links to the labour market and weak connections to higher education. Therefore, IVET appeared to be a 'dead end' and enrolment declined. In response to this, the VET system in 2011 introduced a new EUX pathway based on the apprenticeship model, with longer periods of school-based learning that give eligibility for higher education. These qualifications are to some extent provided in an integrated form, as hybrid qualifications (Deissinger et al. 2013). EUX is provided in all fields of VET and has become quite popular for young people, because it offers a journeyman's certificate and entrance qualification for studies at tertiary level (Jørgensen, 2017).

Apprenticeship systems and access to higher education - Case The Netherlands and German speaking countries

The Dutch VET system represents an interesting mixed model with two parallel types of learning paths, one mainly school based (BOL) and one apprenticeship based (BBL). In apprenticeships, students combine work-based learning (at least 60% of study time) with school-based instruction. Typically, this is organised as four days of work-based learning and one day of learning at school every week. These apprenticeships are aimed at young people, but more than half of all apprentices are above the age of 23 years. The school-based and apprenticeship pathways in IVET culminate in diplomas that have equivalent status. Both tracks are provided at four different levels (resp. one-, two-, three- and four-year courses). All level four courses (both school based and apprenticeship) provide access to higher vocational education. This demonstrates that apprenticeships can offer a viable and attractive pathway for both young people and adults, parallel to a mainly school-based pathway, and offer the same diplomas.

The German speaking countries with dual systems also demonstrate cases for apprenticeships that provide access to higher education. In Austria, this is the *Lehre mit*

Matura, in Switzerland the *Berufsmaturität* and in Germany similar programmes are provided by vocational colleges (Deissinger, et al., 2013).

6 Other reflections on IVET

This chapter approaches several other topics relevant to improving employment outcomes of IVET graduates: Governance and dissemination of good practices, VET's role in national innovation policy, institutional structures for employer involvement in VET, flexible and individual learning paths, skills anticipation and career guidance.

6.1 Decentralised governance and horizontal dissemination of good practices

The governance of education in Finland is characterised by high levels of trust (Cerna, 2014). The central authorities and the Ministry of Education and Culture have strong confidence in the managers of local and regional VET providers. This is associated with a highly decentralised model of governance that affords high degrees of autonomy to VET providers and gives them room for local initiatives. A major strength of this model is that it allows adaptation of educational provisions to the specific needs of local and regional labour markets. This is particularly important given the significant differences between urban and rural regions.

However, decentralisation also brings challenges. Greater variation in practices between providers may reduce transparency regarding the quality and comparability of outcomes, for example the skills of VET graduates. The testing of skills through competence demonstrations in cooperation with local working life is one way to address this risk.

Another issue concerns the dissemination of good practices. In a decentralised system, innovations developed locally are not automatically shared across regions. Our interviews show examples of strong collaboration at local and regional levels, but we did not identify any organised mechanisms for systematic cross-regional learning. There seems to be room for strengthening evaluation, dissemination and mutual learning between providers, for example through more structured exchange programmes or stronger national coordination.

Many reforms in a short time

Several interviewees reflected critically on the number and pace of governance reforms introduced in recent years. The changes have been extensive and have concerned multiple aspects of VET governance – funding, steering mechanisms, accountability requirements and performance indicators.

Some respondents questioned whether it is fair to attribute high unemployment rates primarily to VET. They argued that VET is often negatively portrayed in national debates and that policymakers sometimes treat VET as an “easy target.” Compared to higher education,

interviewees felt that VET has been subject to more frequent reforms. As one respondent put it: “Every government wants to experiment with VET; this is less so the case for universities”.

In several cases, reforms were introduced before earlier reforms had been fully evaluated. One interviewee commented: “We are sometimes repairing something that is not broken”.

VET in Finland is characterised by long-standing traditions, and several interviewees noted that change takes time. Rapid policy shifts, especially when multiple reforms are introduced simultaneously, may create pressure at provider level.

Expanding expectations and classroom-level complexity

Within the same regulatory and funding framework, Finnish IVET plays a central role across several policy areas. It is expected to respond to labour market needs, support youth transitions, provide adult reskilling, promote social inclusion and contribute to regional development. These multiple objectives place high demands on providers’ capacity and ability to adapt the provision.

Interviewees pointed out that this complexity is also visible at classroom level. Teachers, who have traditionally enjoyed a high degree of professional autonomy, are now expected to manage diverse objectives and reporting requirements. Providers therefore need stable long-term conditions for planning, recruitment and investment. Without sufficient stability, it becomes difficult to develop capacity and support teachers in their daily work.

From trust steering to financial incentive steering

The interviews reflected a view that the governance model is shifting. The system is moving from predominantly normative trust steering towards steering based more strongly on financial incentives. The state continues to express trust in providers, but this trust is now combined with outcome-based accountability. As one interviewee noted: “Funding is the easiest way to steer”.

Funding has increasingly become linked to measurable outcomes, such as completion rates and employment results. This marks a shift from a model that mainly incentivised enrolment growth to one that emphasises performance and efficiency. Before the 2018 reform, funding for vocational education was based mainly on a student volume-based model. The 2018 reform set the objective of moving to a model in which performance-based funding and effectiveness-based funding were introduced alongside basic funding, thereby strengthening incentives to align the provision of education more closely with qualification completion, employment and progression to further studies. However, the target model was not implemented unchanged. The funding proportions were later revised so that the proportion of basic funding was increased and the performance-based elements were softened. In the most recent reform, performance- and

effectiveness-based funding have again been strengthened, particularly with regard to employment and progression to higher education.

While autonomy formally remains in place, the stronger emphasis on measurable outcomes and negotiated targets introduces a more managed form of governance. Outcome-based funding may also create tensions, since employment outcomes are influenced by regional labour market conditions that providers cannot fully control.

In several interviews we explored how these changes had been perceived. The interviews did not indicate any major problems with the introduction of performance-based funding. Instead, they suggested a shared understanding of the government's governance approach and that "something needed to be done." The interviews also confirmed the view that the reforms have contributed to a strengthened focus among providers on increasing the proportion of students who enter employment after VET.

Towards a hybrid governance model

Currently, Finnish VET governance seems to be developing into a hybrid model. The new operational steering pilot (2026–2033) in VET involving 40 providers was mentioned as an interesting attempt to explore how governance can be redesigned and how such changes affect quality and outcomes. Several interviewees emphasised the importance of giving reforms time to unfold before introducing new ones.

Trust-based autonomy and decentralisation remain important principles, but they are increasingly combined with financial steering, performance indicators and structured negotiations. A challenge now is to balance flexibility, equity and accountability.

6.2 VET and innovation: an underdeveloped role

In several interviews, we explored the perceived role of VET within the national innovation system. VET was primarily described in the interviews as a supplier of skilled labour, rather than as an actor directly contributing to innovation processes. Innovation was more often associated with universities, research institutions and UASs. According to the interviews, VET is not explicitly mentioned in the recently developed national innovation policy.

At the same time, interviewees provided examples of collaboration between VET providers and UASs, particularly in regions with strong industrial sectors. However, such cooperation appears to be locally initiated and driven, without structured support at national level. There is no dedicated funding instrument specifically aimed at strengthening VET's role in innovation.

Several respondents pointed to potential for deeper and more systematic collaboration between higher education research, UASs, VET and employers in innovative industries. Employers have signalled a need for easier and more coordinated access to education providers. Given institutional linkages between education and working life were described as relatively weak in

some sectors, there is a risk that the potential for workplace-based innovation is not being fully utilised.

Our reflection is that VET's role within the broader innovation system remains somewhat unclear and under-institutionalised. There is potential to clarify and further strengthen VET's contribution to innovation and regional development.

The Netherlands: The role of Dutch VET institutes in innovation

As a point of comparison, the Dutch government realised that alongside fundamental research at research universities and applied research at UASs, there is a need for more practice-oriented research. The ministry of education therefore introduced *practorates* at VET colleges some 10 years ago. These *practorates* are responsible for practice-oriented research in collaboration with industry and other work organisations. They also drive innovation in VET and are structurally financed. On top of that they are eligible for additional research funding from the Dutch National Education Institute (Nationaal Kennisinstituut Onderwijs (NKO), which finances all education research. The funding scheme is such that collaboration between research universities, UASs and VET is stimulated. While such models cannot simply be transposed directly into different contexts, they illustrate possible ways of strengthening VET's position within innovation ecosystems.

6.3 Limited institutional structures for employer involvement

An aspect of the Finnish system with its high degree of decentralisation and trust is that cooperation between providers and working life can be organised and structured in different ways. In comparison to other countries, the institutional structures for collaboration between providers and working life, as well as the structures for employer involvement, are less established.

The interviews showed, on the one hand, that there are several examples of collaboration at both local and regional levels that work well, but on the other hand indicated that there are differences between providers in how well it works. In several interviews it was confirmed that the level of cooperation varies or that there is a need to improve it.

For example, it was described how cooperation depends on personal relationships and that a heavy responsibility lies with individual teachers. From the employers' and companies' perspective, the need for easier and less bureaucratic ways to contact the education sector was highlighted. In two interviews the interviewees described various attempts to strengthen

cooperation, but explained that these efforts have not worked sufficiently well or did not continue once the funding ended.

The interviews indicated that there are differences between different occupational fields. For example, it was mentioned that the unemployment rate in technical fields is high due to poor linkages, while it is better in the health care sector where the link between providers and employers is stronger. The interviews also indicated that there is weaker cooperation in fields dominated by smaller companies.

One of the reasons for the changes in financing, with increased elements of performance-based funding, is to strengthen the incentives for providers to establish strong cooperation with employers.

A central question in this context is, of course, what the purpose of cooperation should be – in what ways it is valuable for providers and, in particular, for working life. When asked about collaboration between providers and employers, most of the interviewees focused on cooperation related to work-based learning and, to some extent, skills anticipation. Other types of cooperation with employers – for example creating vocational modules tailored to specific employers' needs, company involvement in teaching, or student/work-life activities – were not mentioned. Nor was any involvement from employers in matters relating to monitoring the quality or outcomes of vocational education. We are, however, aware that the competence demonstrations where employers are involved in the assessment of the quality of the students' skills, work well.

This type of cooperation may require more long-term and stable structures in order to develop and function well. The opportunities to build more stable structures for this type of cooperation are likely to be greatest in occupational fields where the demand for labour is high. There are also examples of cooperation structures in other countries that may serve as inspiration, for example in the literature on 'collective skill formation' (Busemeyer & Trampusch, 2012).

> **Sweden: Strong structure for employer involvement with local steering committees**
>
> The employer involvement in higher vocational education (Yrkeshögskolan) programmes in Sweden is high. Employers contribute to both the shaping and running of the programmes. The programmes are tailored to suit an evolving labour market and the range of programmes and specialisations will therefore change over time. Each programme has a local steering committee where employers representatives are in the majority. The steering committee takes an active role in shaping curriculum content and in quality management of the programme. Through their involvement in the steering committees, employers are directly involved in analysing the attractiveness of the programme and the percentage of students that graduate from the programme. They are also involved in monitoring and analysing how well the programme meets the needs of

including information on whether they are employed in the field for which the programme prepared them. Employers also take part in the programme by offering placements for work-based learning and providing guest lectures and other activities for students regarding working life.

From 2024 to 2028 there is a pilot where programmes for adults at IVET-level are provided within a similar framework with steering committees where employer representatives are in the majority. This new type of education is called National Vocational Education and Training (NVET, Nationell yrkesutbildning). The main purpose of NVET study programmes is to respond to labour market needs and to complement the VET already provided today at upper secondary level. Another purpose is to enable students to quickly find work in deficit professions.

- Information on Higher Vocational Education (Yrkeshögskolan) in English
- Information on National Vocational Education and Training (Nationell yrkesutbildning) in English
- Further information on Higher Vocational Education (Yrkeshögskolan) and National Vocational Education and Training (Nationell yrkesutbildning): Startsida - Myndigheten för yrkeshögskolan

Sweden: Vård- och omsorgscollege – an arena for collaboration between education and working life

Vård- och omsorgscollege (VO-college) is an arena for collaboration between education and working life that focuses on strengthening the quality and relevance of health and social care education. It operates at national, regional and local level and brings together public employers, private employers and trade unions with education providers.

VO-college is involved in aligning curricula with employer needs, raising the quality of skills, and developing structures for validation of prior learning and measures to attract students to the field. VO-college has an important role in facilitating high-quality work-based learning. It is used for coordinating placements for work-based learning, certifying employers and training supervisors/mentors to ensure high quality training for students during their work-based learning. VO-college also offers structures for quality assurance and is involved in other measures regarding skills supply.

VO-college is governed by a national association jointly run by trade unions and employer organisations. The national board, composed of representatives from these organisations, is ultimately responsible for operations, supported by a national office and an advisory council.

- Information on Vård- och omsorgscollege: Vård- och omsorgscollege
- A similar platform for collaboration has been established within the technical field: För svensk industris framtid | Teknikcollege

6.4 Flexibilisation

The Finnish VET system has a very flexible, modularised and individualised structure that offers all students a personal competence development plan. This includes the recognition of the students' prior learning and adjustments to suit their special learning requirements. It also includes an opportunity for VET providers to adapt education and training to specific local and regional conditions.

The Finnish VET system focuses on the students' common learning outcomes and allows for different individual pathways to attain them. National qualification requirements are determined by the Finnish National Agency for Education and VET providers are subject to regular evaluations of their quality by FINEEC. Employer surveys conducted by the Confederation of Finnish Industries and the Federation of Finnish Enterprises indicate that the graduates' vocational competence and transferable skills corresponded to the companies' expectations either well or moderately.

In relation to the problem of VET graduates' unemployment, the panel considered the possible disadvantages of high flexibility in VET. The matching of education to working life depends on the certification of standardised occupational profiles. With standardised skills profiles of VET graduates, the employers have few costs for screening and assessment of potential employees who can easily be matched with jobs. Standardisation also improves job mobility between companies in the labour market. Therefore, highly differentiated skills profiles of VET graduates could hamper their smooth and fast transition to employment, because their skills are less transparent for employers. Without commonly recognised occupational profiles, the value of the VET certificates in the labour market could be reduced.

In addition, the opportunities for the student to develop strong and common vocational identities could be weakened. The panel also questioned the relevance for young people of each compiling an individual VET programme, considering their lack of experience with the labour market. Moreover, we question the opportunities and resources of VET teachers to teach and guide students with individually different learning paths.

According to the interviews and documents, the aim is that even while the students' learning paths are individual, their final skills should match the national standards for VET. However, the interviews showed that it is not always clear if the students achieve the same level of learning outcomes set in the qualification requirements, due to these individualised learning paths. It was mentioned in the interviews that certain compulsory studies for everyone ensure that all the students have the same basic skills. At the same time, the interviewees pointed out the risk that if there is too much individualisation, it is of course risky and learning outcomes depend on how much responsibility the individual takes. The interviews also showed that it is difficult for the

VET providers and teachers in VET to adapt teaching to the students' different learning paths. It was expressed as follows: "Everything is possible – nothing is easy".

The Finnish VET system is inclusive for both young people and adults and they can study in the same programmes. They all have high flexibility when drawing up their personal competence development plans. However, the panel considers the importance of flexibility and accreditation of prior learning to be different for young and adult students. Young people from lower secondary education have weak backgrounds for drawing up their own personal competence development plan and they have little or no prior learning to be validated. Young people in VET also benefit from being part of a strong social community in a class. Learning is not only an individual process, but also a social process. Students learn together and from each other. This can be difficult when students follow individually divergent learning paths.

The interviews also demonstrated the advantage of the personal competence development plan, as it gave the students a stronger ownership of and responsibility for their education. The interviewees were quite positive about the flexibility, which gave the students opportunities to shift easily between programmes. According to the interviewees, the option to change specialisation during the course of the studies was not well known among students and could be marketed better. Moreover, the option to take part in modules from UASs that facilitate the transition to a UAS was not well known either among students.

In the interviews we learned that some of the individualisation and flexibilisation in the latest reform in 2018 had been rolled back.

Examples of flexibility in other countries illustrates different ways countries balance responsiveness, permeability, modularisation, and labour market alignment.

Denmark: Experiences with flexibility in the Danish VET system

Since a VET reform in 1990, all students in VET start their study by drawing up a personal and flexible study plan (Cedefop, 2025). This was introduced in response to the high diversity of students in VET regarding age and prior work experience. One the one hand, a growing number of adults had enrolled in VET, like the situation for VET in Finland. On the other hand, many disadvantaged young people also enrolled in VET, partly due to the Youth Guarantee and the youth activation policy. Many adults benefitted from shorter study times after having their prior learning recognised. However, some adults preferred to follow the normal-length study programme in order to be part of a continuous social community in VET.

For younger students, the individualisation of VET had the aim of reducing the dropout rate by adapting the study plan to their personal requirements. The results were, however, disappointing as the dropout rate subsequently increased. The personal study plan gave the individual student greater responsibility for completing their own learning

difficulties taking responsibility for their personal learning path and suffered from the lack of strong social community with fellow students (Jørgensen, 2016). Furthermore, the teachers had difficulties adapting to the diverse needs of individual students and therefore tended to help the most mature and dedicated students. Some years later, the individualisation was partly rolled back and substituted with more structured programmes with stronger and more stable social environments (Jørgensen et al., 2018).

Recognising that the learning requirements of young and adult students are different, a VET reform in 2015 introduced separate VET programmes for young and adult (> 25 years) students ('EUV'). This benefitted many dedicated adult learners in VET, who did not feel comfortable in classes of mainly young students. However, many young students benefitted from learning together with older peers, who could help them develop a vocational identity and working life skills. In addition, vocational schools in peripheral areas with few students had difficulties filling parallel classes for young and adult students.

This illustrates the complexities of organising flexible and individual learning paths in a VET system with very diverse students and serving many diverse occupational fields. The lessons are that flexibility can have advantages for students, but the flexibility should be adapted to the needs and resources of different learners. In addition, flexibility involves a trade-off between individual learning paths and strong social learning environments, and this should be acknowledged and managed in VET.

Norway: Flexibility mechanisms in the Norwegian VET system

The Norwegian VET system is designed to provide flexible learning pathways that accommodate different learner needs and life situations. A key structural element is the 2+2 model, in which students typically spend two years in school-based education followed by two years of apprenticeship training in a company. The system also allows for further progression: VET graduates may complete an additional supplementary academic year that provides a general university admission certification, enabling access to higher education. Flexibility is further supported through recognition of prior learning, which allows adults to enter VET through shortened or individually adapted pathways based on previously acquired skills. In addition, political efforts have been made to ensure access to apprenticeship placements, including policies aimed at securing training opportunities for students who wish to complete the work-based component of their studies. Together, these features illustrate how the Norwegian VET system combines structured training with opportunities for progression and flexible access.

Information on flexibility in the Norwegian VET system:

- Norwegian Directorate for Education and Training (Udir): The Norwegian Education System – Upper Secondary Education and Training: https://www.udir.no
- Norwegian Government: Education Act (Opplæringslova). https://lovdata.no
- CEDEFOP (2023): Vocational education and training in Norway – Short description. Luxembourg: Publications Office of the European Union.
- OECD (2019): OECD Reviews of Vocational Education and Training: Strengthening the Governance of Skills Systems – Norway.

Austria: Flexibility in the Austrian VET system

The Austrian VET system incorporates several mechanisms that allow for flexible learning pathways while maintaining strong links with the labour market. A central component is the dual apprenticeship system, which combines workplace training in companies with part-time vocational schooling and is based on legally regulated training curricula. To increase flexibility within this structure, modular apprenticeships have been introduced in certain occupations. These programmes consist of a basic module, a main module and, where relevant, an optional specialisation module, allowing apprentices to tailor their training to specific occupational profiles.

The system also provides opportunities for educational progression. Apprentices can obtain a university entrance qualification alongside their apprenticeship through additional examinations, enabling access to higher education. For young people who are unable to secure a company-based training placement, the state provides training through publicly funded training centres, ensuring that they can still complete vocational training. In addition, recognition of prior learning allows experienced workers to access qualification examinations and obtain formal certification based on their existing skills. Together, these features illustrate how the Austrian VET system combines strong employer involvement with mechanisms that support flexibility, inclusion and progression.

Information on flexibility in Austrian VET system:

- CEDEFOP (2023): Vocational education and training in Austria – Short description. Luxembourg: Publications Office of the European Union.
- Austrian Federal Ministry of Labour and Economy: Apprenticeship Training in Austria (Lehrlingsausbildung). https://www.bmaw.gv.at
- Austrian Federal Ministry of Education, Science and Research: VET in Austria – Facts and Figures.
- OECD (2022): Education at a Glance – Austria Country Note.

Estonia: Flexibility in the Estonian VET system

The Estonian VET system incorporates several mechanisms that support flexible learning pathways and responsiveness to labour market needs. A key feature is the use of modular, learning-outcomes-based curricula, which allows programmes to be structured into smaller units and enables learners to progress through training in a flexible way.

To support informed study choices and reduce early specialisation, Estonia introduced the preparatory studies programmes for basic school graduates in 2018. These programmes focus on strengthening general skills and providing career guidance before students choose a specific vocational field. They do not immediately lead to a full qualification and instead aim to support better-informed decisions and reduce the risk of students dropping out. From 2026 onwards, preparatory vocational study programmes will be offered at both state-owned VET institutions and in general upper secondary schools (gymnasiums). In this sense, while Finland's highly individualised VET system allows for flexibility mainly within qualifications, Estonia illustrates flexibility at an earlier stage — before specialisation, at the point of entry into vocational education.

Flexibility is further strengthened through a well-established system for recognition of prior learning and work experience (VÕTA), which allows adults to validate competences acquired through non-formal and informal learning and, where appropriate, complete shortened study pathways. In addition, Estonia operates a centralised labour market foresight system (OSKA), coordinated by the Estonian Qualifications Authority. This system produces sector-based forecasts through collaboration with employers and sectoral experts and directly informs state training orders and funding decisions, creating a strong link between skills anticipation and education planning.

According to Cedefop data, Estonia also performs relatively well in labour market outcomes for young graduates: the employment rate of 20–34 year olds with vocational education was around 83.5% in 2022, while unemployment remained below roughly 16.5%. Together, these features illustrate how Estonia combines flexible entry pathways, recognition of prior learning and data-driven labour market steering within its VET system.

Information about flexibility in the Estonian VET system:

- CEDEFOP (2023): Vocational education and training in Estonia – short description.
- Estonian Ministry of Education and Research: Vocational Education and Training in Estonia. https://www.hm.ee

- OECD (2020): Vocational Education and Training in Estonia.
- Eurostat / CEDEFOP data on employment outcomes for VET graduates.

6.5 Skills anticipation and career guidance

Part of the problem with high graduate unemployment could be as a result of a mismatch between the supply of VET graduates and the labour market demand for these graduates. The key question is then how the VET system matches students' interests with labour market requirements. A central task of the VET system is to balance the demand of young people for education on the one hand with the demand for skilled labour on the other hand.

Skills anticipation – information-rich, but softly steered

Across the interviews, Finland's skills anticipation system was consistently described as information-rich and network-based. However, the steering power of this information appears limited.

One interview highlighted dissatisfaction with earlier national forecasts, which were perceived as too general to support programme-level decisions. In response, anticipation has become more regional and locally embedded. Some providers engage intensively with employers – in one case conducting approximately 150 employer interviews annually. These dialogues can result in concrete adjustments, such as closing programmes with weak employment prospects or limiting intake in oversupplied fields.

This reflects the broader governance logic of Finnish VET: rather than binding national quotas, steering relies on trust, data and local responsibility. Coordination exists, but it operates through information and dialogue rather than directive control. As one observation summarised, the system is data-rich and network-based, yet primarily guided by soft steering.

At the same time, the reliance on local initiative raises capacity questions. Not all providers will have equal resources to conduct systematic employer engagement, potentially leading to uneven responsiveness. There is also a question mark over whether the local VET providers have the capacity to make reliable long-term forecasts regarding structural shifts in the national economy and the consequences of the green transition, and the shift to defence industries, health and elder care, ship building, etc.

Incentive reform and limited behavioural change

Several interviewees raised concerns about a persistent mismatch between educational supply and labour market demand. Before the 2018 reform, funding was largely enrolment-based, which structurally favoured student demand over labour market considerations.

The 2018 reform introduced outcome-based funding elements linked to graduate employment and progression to higher education. This marked a shift toward stronger, incentive-based steering. However, interviewees suggested that the reform has not yet fundamentally altered provider behaviour. The mismatch remains visible, and some sectors continue to struggle to attract learners.

The launch of a new operational steering pilot in VET involving 40 VET providers (2026–2033) indicates recognition of these limitations. The pilot introduces targets negotiated between the Ministry of Education and Culture and individual providers and explicitly acknowledges that learner demand does not always align with labour market needs. This development suggests a gradual shift from pure soft steering toward more contractual and targeted governance instruments – without abandoning institutional autonomy.

At the same time, one interviewee emphasised that rapid structural shifts – related to the green transition, defence industries, healthcare and ageing populations – complicate long-term forecasting. Even well-developed regional models face uncertainty. The interaction between national foresight and local autonomy therefore remains a structural governance challenge.

Labour market signals and student choice

While institutional anticipation mechanisms appear relatively strong, the interviews point to weaker links between labour market signals and student decision-making.

The interviews indicate that students only learn about bad employment prospects after they have chosen the programme, and that information on this should be provided earlier. In one interview it was noted that a national information website (osaamispolku.fi) has recently been introduced, but its impact is still unclear. The concern was that the system remains highly information-oriented. Educational choices are influenced not only by employment statistics but also by perceptions and social image. One interviewee reported limited career guidance in lower secondary education. Students may receive little structured support when choosing study pathways and sometimes become aware of weak employment prospects only after enrolling in a programme. This suggests that labour market intelligence is not systematically translated into early guidance processes. One interview provided the example of welding in the shipbuilding industry: despite clear labour shortages, attracting students remains difficult. This illustrates how image, identity and media narratives shape educational demand independently of labour market data. Information on career opportunities must also adequately reflect needs over the coming decades (green transition, defence, health care etc.).

Geographic constraints further limit responsiveness, as students often choose programmes close to home. Thus, even when providers adjust supply, behavioural and spatial factors may sustain a mismatch.

Governance implications

The findings illustrate a central tension within Finland's hybrid VET governance model. On the one hand, there is strong institutional autonomy, dense regional employer networks and a relatively sophisticated data infrastructure. On the other hand, steering instruments remain predominantly indirect.

Skills anticipation generates information, and funding reforms introduce incentives, but neither mechanism sufficiently guides educational behaviour. Student choice remains largely autonomous, and labour market uncertainty limits predictive precision. In this sense, skills anticipation and career guidance demonstrate both the strengths and constraints of Finland's trust-based governance model: the system produces substantial labour market information and coordination, but it has limited tools to actively steer students and providers towards fields with the greatest labour market demand.

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Appendices

Appendix 1. Overview of material

General material:

- Finnish VET in a nutshell – overview of Finnish VET;
- Education in Finland 2023 – presentation by the Finnish National Agency for Education, covers all sectors of education.

Recent evaluations:

- Together for a skilled workforce – a summary based on several publications by FINEEC;
- Partnering with working life – evaluation of workplace education and training and working life cooperation in vocational education and training;
- The qualification system and changing competence needs – evaluation of the development processes and effectiveness of the qualification system in vocational education and training.

Material relating to this evaluation:

- project plan;
- overview of the employment of VET graduates;
- companies' views on the competence and recruitment of young initial vocational qualification graduates and how VET corresponds to companies' needs;
- public sector employers' views on the competence and recruitment of young initial vocational qualification graduates and how VET corresponds to companies' needs;
- initial results of the survey of VET providers;
- initial results of the survey of teaching and guidance staff;
- initial results of the survey of initial vocational qualification graduates.

In addition, FINEEC provided other material on request:

- Arene's and AMKE's press release: Results of a recent survey: Cooperation between vocational institutions and universities of applied sciences strengthens regional vitality (translated by AI) (dated 24.10.2025).
- The Ministry of Education and Culture's guidelines for developing vocational education and training - National Objectives for Vocational Education and Training (translated by AI).
- Finnish Government's press release: The roadmap for research, development and innovation paves the way to sustainable growth and wellbeing (dated 23.4.2020).
- Kilpeläinen, P. & Rumpu N. (2025): School Dropouts in Upper Secondary Compulsory Education. Kansallinen koulutuksen arviointikeskus. Tiivistelmät 3:2025 (translated by AI).

- FINEEC's description of the Operational Steering Pilot in Vocational Education and Training (translated by AI).
- Education Statistics Finland Vipunen 2026: Employment and further studies of IVET graduates one year after graduation 2023.
- Education Statistics Finland Vipunen 2026: IVET students – progress of studies 3, 3.5 and 4 years from the start date, years 2018–2022.
- Education Statistics Finland Vipunen 2026: IVET graduates – employed and unemployed 1 and 5 years after graduation, years 2009–2023.
- Information on pathways from VET to UASs. The information provided was based on FINEEC's evaluation "Transitioning from VET to universities of applied sciences – an evaluation of the competences provided by vocational education and training in relation to the requirements of studies at universities of applied sciences" and Education Statistics Finland Vipunen's statistics.
- A compilation of sources concerning innovation activities in VET, UAS and rural areas.

Appendix 2. Interviews with members of the National Evaluation Panel during an online meeting on 3 December 2025

- Peer Haataja, deputy managing director, Tampere Chamber of Commerce & Industry
- Jukka Mäntymaa, business services manager, Vamia, City of Vaasa
- Riina Nousiainen, senior advisor, education and competence, The Finnish Confederation of Professionals (STTK)
- Heta Rintala, principal research scientist, HAMK Edu, Häme University of Applied Sciences HAMK
- Pekka Tauriainen, principal, Vantaa Vocational College Varia.

Appendix 3. Interviews on-site 29–30 January 2026, Helsinki

Interview 1: Ministry of Education and Culture

- Petri Lempinen, director general
- Kati Lounema, director
- Ville Heinonen, ministerial adviser.

Interview 2: Finnish National Agency for Education (EDUFI)

- Marko Aaltonen, senior adviser, head of unit
- Heli Tirri, senior adviser, head of unit.

Interview 3: Stakeholders

- Mikko Vieltojärvi, adviser, Confederation of Finnish Industries (EK)
- Kirsi Rasinaho, specialist, Central Organisation of Finnish Trade Unions SAK
- Maria Nyroos, digital and innovation policy specialist, Federation of Finnish Enterprises.

Interview 4: Stakeholders

- Eira Bani, leading special adviser, The Trade Union of Education OAJ
- Sari Aarnio, project manager, Finnish Education Employers (FEE)
- Peter Pahlman, adviser, The Finnish Association for the Development of Vocational Education and Training AMKE
- Kari Puumalainen, vice chairperson, Finnish Association of Vocational Education Leaders (SAJO).

Interview 5: Student unions

- Kaisla Kanerva, chairperson, Finnish Union of Vocational Students (SAKKI)
- Elif Manilaci, chairperson, Finnish Student Alliance (OSKU).

Interview 6: Ministry of Economic Affairs and Employment of Finland, Economic Development Centre, The Rectors' Conference of Finnish Universities of Applied Sciences Arene

- Markku Virtanen, ministerial adviser, Ministry of Economic Affairs and Employment of Finland
- Jarkko Tonttila, head of department, Economic Development Centre of Uusimaa
- Jari Multisilta, chairperson, The Rectors' Conference of Finnish Universities of Applied Sciences Arene.

Appendix 4. Number of employed persons with an upper secondary qualification 2009–2025

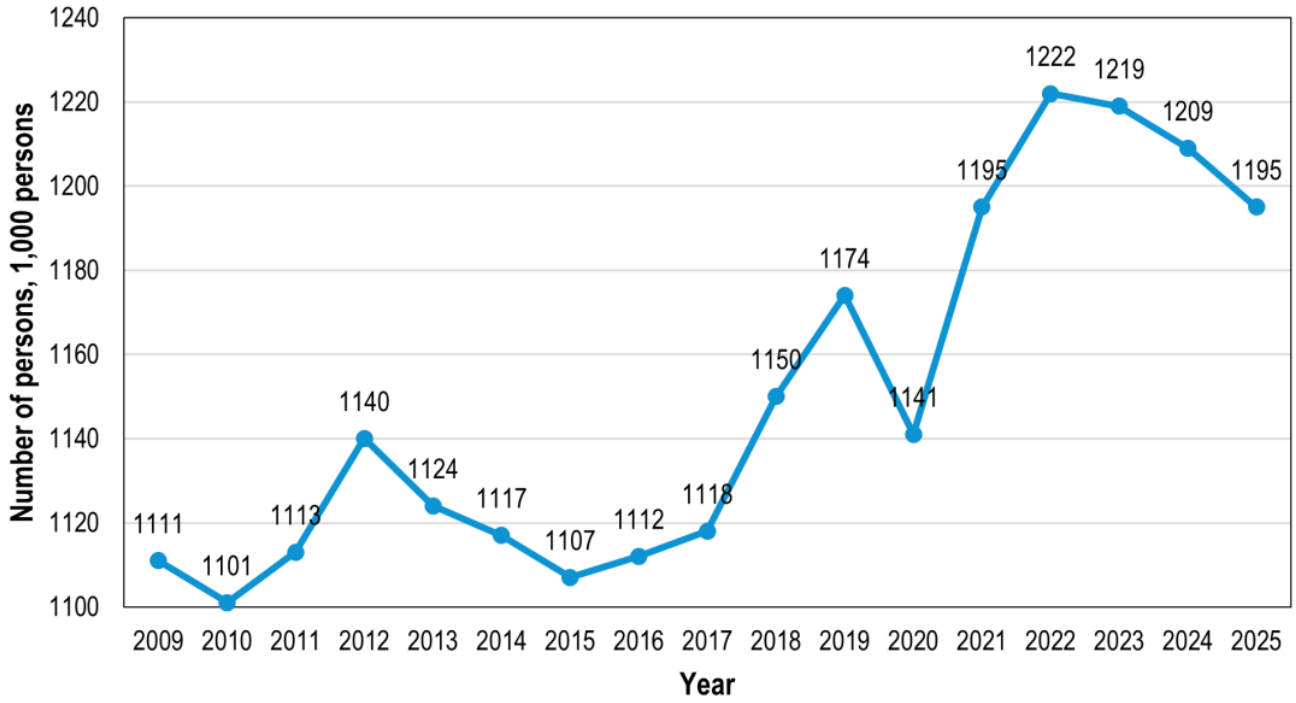

Figure 1. Number of employed persons with an upper secondary education qualification, 2009–2025, ages 15–74, 1,000 persons. Source: Statistics Finland