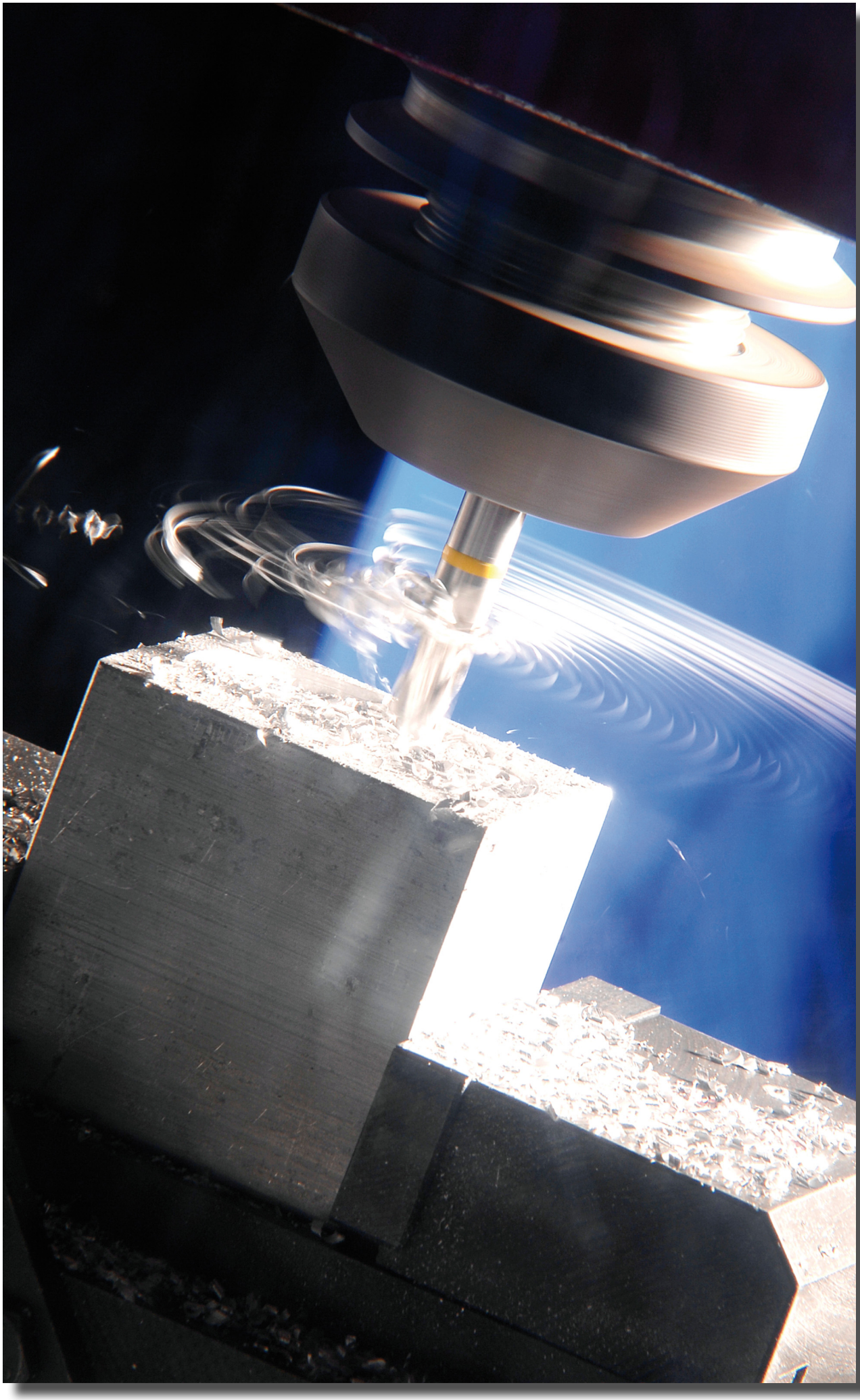
COUNCIL OF EUROPEAN EMPLOYERS OF THE METAL ENGINEERING AND TECHNOLOGY-BASED INDUSTRIES

FINAL REPORT

RAFFORZARE LA COOPERAZIONE TRA L'INDUSTRIA E L'ISTRUZIONE E FORMAZIONE TECNICA E PROFESSIONALE

VERSIONE PER L'ITALIA

CEEMET



INTRODUZIONE ALLA VERSIONE ITALIANA

a cura del Professor Emilio Bartezzaghi

Ordinario di Gestione aziendale - Politecnico di Milano

L'importanza e i problemi dell'istruzione tecnica e professionale

L'Italia è tra i Paesi nei quali l'industria ha il maggior peso sul PIL e per i quali la ripresa e il rilancio competitivo della base industriale costituisce un elemento fondamentale per l'uscita dalla crisi finanziaria ed economica e per la crescita.

Lo sviluppo dell'industria richiede la disponibilità di manodopera giovane, motivata e con una solida formazione tecnica di base. Il recente rapporto CNEL sul mercato del lavoro[1] evidenzia che nel prossimo decennio vi sarà un aumento rilevante della domanda di lavoro nelle professioni tecniche: infatti, oltre alla domanda *sostitutiva*, che fa fronte al turnover, di un milione e mezzo di unità, è prevista una domanda *aggiuntiva* di almeno un milione di unità. Tuttavia, a fronte di questo scenario, lo stesso rapporto evidenzia i rischi di un forte *mismatch* tra domanda e offerta di lavoro, anche e principalmente nel settore delle professioni tecniche.

Una delle principali cause di tale disallineamento è rappresentato dalle difficoltà che il sistema dell'istruzione tecnica e professionale sperimenta nel far fronte alle richieste del mercato del lavoro. Tale aspetto è approfondito dalla ricerca CEEMET, che mostra come questo problema non sia solo una caratteristica dell'Italia, ma tocca molti dei Paesi europei ed extra europei presi in considerazione dalla ricerca stessa. I punti critici comuni sono: il basso numero di studenti che intraprendono tali studi, il tasso elevato di abbandoni, la non adeguata qualità dell'istruzione, il limitato investimento delle imprese a supporto delle scuole e, in generale, l'immagine sociale negativa, che è sia causa sia effetto degli altri problemi dell'istruzione tecnica e professionale.

È necessario quindi fronteggiare tali difficoltà e favorire l'incontro tra domanda e offerta nel mercato del lavoro, a tutto vantaggio sia della competitività delle aziende sia dell'occupazione e della mobilità dei lavoratori europei.

Il ruolo della collaborazione tra imprese e scuole

Un contributo fondamentale in questa direzione, viene dal rafforzamento della cooperazione tra l'industria e le istituzioni scolastiche. La ricerca CEEMET, alla quale hanno contribuito tutte le 22 Federazioni nazionali che sono membri dell'organizzazione e circa 350 Aziende di diversi Paesi, affronta in modo efficace tale tema, a partire da un'importante mappatura dello stato dell'arte dell'interazione del mondo industriale e della istruzione tecnica.

[1] Consiglio Nazionale dell'Economia e del Lavoro, *Rapporto sul mercato del lavoro 2009-2010*, luglio 2010

Il volume raccoglie le migliori esperienze in uno scenario fortemente variegato, evidenziando le differenze di sistemi educativi, le tipologie di relazioni istituzionali tra imprese e scuole, gli attori di questa interazione, il numero di studenti coinvolti periodicamente, i casi di successo, il tipo di impiego usuale di queste risorse, il livello di eccellenza dei sistemi scolastici dei differenti paesi visti dall'ottica aziendale, gli skill richiesti e i gap da colmare. Tramite il confronto tra le varie esperienze, vengono identificate alcune linee guida o "ingredienti di base" per il miglioramento dei sistemi dell'istruzione tecnica e professionale e della loro attrattività, riassunti nei seguenti punti: *diversità* degli approcci alla cooperazione tra imprese e scuole, *flessibilità* delle scuole nell'adattarsi agli sviluppi tecnologici e ai cambiamenti nelle richieste del mercato del lavoro, ricerca dell'*eccellenza* dei programmi educativi, *orientamento* e *mobilità* degli studenti.

In particolare, la sezione 3 del rapporto (che identifica alcune *good practice*) riporta una serie di esempi concreti di collaborazione tra sistema delle imprese e sistema educativo. Questi esempi possono costituire stimoli importanti sia per gli operatori delle imprese che per gli operatori del sistema scolastico, perché consentono di identificare concrete applicazioni degli ingredienti di base sopra illustrati. Vengono infatti presentati progetti realizzati tra scuole e imprese (a livello di singola impresa, di comunità locali o a livello nazionale), che identificano diverse modalità operative attraverso cui i due sistemi possono interagire.

Ogni progetto declina tali modalità in modo originale, anche in relazione agli specifici obiettivi che si propone di raggiungere. Tali obiettivi, ad esempio, possono essere:

a) la promozione dell'istruzione tecnica presso gli studenti e le loro famiglie; esempi di progetti che rispondono a questo obiettivo sono:
    i. il progetto finlandese *Opiskelijaboxi*, che ha predisposto un sito internet – visitato annualmente da 200.000 studenti - in cui le imprese industriali presentano se stesse, i ruoli professionali e le competenze richieste, e annualmente 50 giovani neo-inseriti presentano il loro percorso di studio e professionale e i loro progetti di sviluppo. Questo sito è visitato direttamente dai futuri studenti e dalle loro famiglie ed è utilizzato nelle attività di orientamento realizzate nelle scuole;
    ii. il progetto spagnolo *Metalizate*, che include presentazioni aziendali presso le scuole, un sito web che presenta in modo accattivante il settore e le relative prospettive professionali, ed un concorso che premia gli studenti che sono stati in grado di progettare un oggetto innovativo il cui principale materiale sia costituito da un metallo;

b) la programmazione dei curricula formativi offerti dall'istruzione tecnica sulla base delle reali esigenze di professionalità del sistema delle imprese, anche considerando le specificità di alcune comunità locali; in questo ambito, ad esempio, il progetto olandese *Techiektalent* prevede che le imprese e le scuole operino in modo congiunto nella progettazione dei percorsi formativi rivolti a giovani che intendono avvicinarsi alle imprese industriali, facendo in modo che tutti gli attori del sistema siano in rete, costantemente impegnati nello sviluppo delle competenze dei giovani talenti;

c) l'incrocio tra la richiesta di personale tecnico delle imprese e l'offerta di diplomati delle scuole; in questo ambito, si segnala, tra gli altri, il progetto australiano *AiGTS*, in cui un centro servizi si occupa di facilitare l'incontro tra giovani in cerca di un apprendistato all'interno di aziende meccaniche e le aziende stesse; questo centro, che ad oggi ha già realizzato più di 7.000 inserimenti in azienda, fornisce alle imprese supporto nella selezione dei canditati, nella gestione delle pratiche amministrativo-burocratiche connesse all'inserimento; fornisce inoltre ai giovani servizi di orientamento e supporto all'inserimento in azienda e orientamento all'interno delle proposte formative in ambito tecnico – professionale.

d) la possibilità di periodi di formazione degli studenti nel centri di formazione delle stesse imprese, al fine di accedere a specifiche tecnologie e competenze; tra gli altri, i progetti che in merito a questo obiettivo appaiono molto interessanti sono:

    i. il progetto francese denominato *Classe en enterprise*, in cui alcune aziende ospitano delle intere classi per tre giorni, consentendo loro di svolgere un vero e proprio "safari" dentro l'azienda; questo percorso porta gli studenti a scoprire – nel vero senso della parola – lo stile e i contenuti del lavoro di chi opera in azienda, discutendo, a fine progetto, i loro apprendimenti con gli stessi operatori aziendali;

    ii. il progetto italiano *Techpro 2*, in cui un'azienda collabora con alcuni istituti scolastici offrendo agli studenti opportunità di stage e tirocini in azienda e soprattutto – durante il percorso formativo – fornendo agli istituti il materiale tecnico più aggiornato e i relativi manuali per l'apprendimento oltre che formando i professori e certificando la loro conoscenza dei sistemi più avanzati con gli stessi processi e criteri utilizzati per la certificazione del personale aziendale.

In termini generali, il lungo elenco di esperienze proposte nel report, può contribuire a sviluppare un approccio efficace e focalizzato su specifici obiettivi alle modalità di collaborazione tra scuola e impresa, all'interno del più ampio obiettivo di migliorare costantemente l'attrattività e l'efficacia dell'istruzione tecnico-professionale.

Infine, questo elenco di esperienze consente di rimarcare le due condizioni a livello di sistema che rendono questo scambio proficuo ed efficace: in primo luogo, vi è la necessità che i progetti tengano conto delle caratteristiche economiche, normative e culturali del contesto specifico (i progetti presentati prevedono l'inclusione *by design* del sistema degli stakeholder locali, al fine di contestualizzare al massimo il progetto sulle loro esigenze); in secondo luogo, vi è l'esigenza di un continuo confronto nell'ambito di *benchmarking* istituzionali a livello internazionale, quale ad esempio la presente esperienza in ambito CEEMET.

Il contesto italiano e la riforma dell'istruzione tecnica e professionale

Venendo al contesto italiano, la ricerca CEEMET rappresenta un importante e tempestivo contributo, visto che nel nostro Paese è in atto la riforma del secondo ciclo educativo di istruzione e formazione, che verrà attuata a partire dall'anno scolastico 2010/11. La riforma si pone l'obiettivo di rilanciare il sapere tecnico-scientifico, attraverso l'adozione di alcune linee guida:

- la sistematizzazione e razionalizzazione di un'offerta nel tempo divenuta fortemente dispersiva e non commisurata alle reali esigenze di conoscenza provenienti dal mondo del lavoro ed in particolare dalle PMI;
- la promozione delle attività di laboratorio intese come strumento efficace di formazione anche su insegnamenti di cultura generale; questa linea guida si è tradotta nella presenza di insegnanti tecnico-pratici nella misura crescente dal primo al quinto anno;
- la promozione dell'autonomia e flessibilità degli istituti che, nell'ambito di un quadro di coordinamento nazionale, sono chiamati a contestualizzare l'offerta formativa sulle specifiche esigenze di professionalità del contesto territoriale, anche attraverso un costante, anticipato ed organizzato confronto con il sistema locale delle imprese;
- un rafforzato rapporto con il mondo del lavoro e delle professioni, compreso il volontariato e il privato sociale, attraverso la diffusione di stage, tirocini e percorsi di alternanza scuola – lavoro.

La riforma prevede un meccanismo che, se ben attuato, è molto importante per rendere operativa ed efficace la collaborazione imprese - scuola. Si tratta dell'istituzione dei cosiddetti Comitati Tecnico Scientifici, che hanno una composizione paritetica di docenti e di esperti del mondo del lavoro, delle professioni e della ricerca scientifica e tecnologica; ad essi sono affidate funzioni consultive e di proposta per l'organizzazione delle aree di indirizzo e l'utilizzazione degli spazi di autonomia e flessibilità di ogni Istituto.

In termini operativi, il Comitato Tecnico Scientifico potrebbe essere l'organismo che accompagna il ripensamento del ruolo e del funzionamento dell'istituto scolastico e il suo adeguamento alle nuove normative ed essere nel contempo lo strumento per realizzare il collegamento organico tra l'istituto ed il mondo del lavoro. Perché questo avvenga, la riforma prevede alcune possibilità operative molto utili, quali: la già citata centralità dei laboratori, la promozione di forme miste (scuola e lavoro) nei percorsi di studio, l'organizzazione in dipartimenti (fondamentale se si vuole realizzare una progettazione formativa per competenze), la possibilità per ogni istituto di stipulare contratti con esperti esterni per sviluppare competenze specialistiche.

Il Comitato Tecnico Scientifico può contribuire alla definizione dei percorsi di apprendimento: dato che ciascun istituto potrà proporre delle opzioni e degli insegnamenti per rispondere a specifiche esigenze del territorio, il Comitato può mettere a disposizione i dati sul fabbisogno di figure professionali, sulle competenze richieste e sulle ipotesi di sviluppo, oltre che definire sia le opzioni che gli insegnamenti aggiuntivi o alternativi. Inoltre, il Comitato può contribuire alla definizione del profilo formativo in uscita e alla progettazione dei percorsi di apprendimento più efficaci ed efficienti.

Queste iniziative, che richiedono un forte impegno e coinvolgimento del sistema delle imprese, consentono di affrontare le due grandi sfide che riguardano il modo del lavoro e dell'industria:

- da un lato la sfida dell'*employment*, cioè la costruzione di percorsi di istruzione / formazione di base che siano effettivamente rispondenti alle richieste di professionalità del sistema delle imprese, anche coordinando la formazione svolta dalla scuola con la formazione in ingresso svolta dalle stesse imprese (valorizzando le opportunità offerte dall'introduzione dei contratti di ingresso a causa mista, quali ad esempio l'apprendistato nelle sue diverse forme);
- dall'altro la sfida dell'*employability*, che richiede processi di collaborazione tra scuola e imprese continuativi nel tempo, che accompagnino le persone in tutta la loro carriera professionale, favorendo uno sforzo congiunto di aggiornamento ed eventualmente riqualificazione della forza lavoro più specializzata.

Il contributo del sistema delle imprese

In tale quadro, la ricerca CEEMET costituisce un'occasione importante per declinare alcuni aspetti della riforma in attività concrete e per realizzare un raccordo sempre più strutturale tra scuola e imprese, che diviene centrale nello specifico del contesto italiano, in cui il settore manifatturiero, e le molte PMI che in esso operano, mantengono una forte rilevanza nel sistema economico. Questa rilevanza richiede, per poter essere sostenibile nel tempo, un continuo sforzo di istruzione e formazione continua degli operatori, oltre che una costante attenzione alla promozione del settore come di un contesto *technology & competence based*, al fine di attrarre i giovani tecnici più dotati ed intraprendenti.

Come dimostra la ricerca CEEMET, il ruolo che le associazioni delle imprese del settore possono giocare in questa partita è importante. In primo luogo, si tratta di promuovere spazi di confronto e benchmarking che possono anticipare il cambiamento e stimolare l'innovazione. Inoltre, è necessario favorire il confronto e il coordinamento con i principali attori coinvolti, quali il Ministero dell'Istruzione, dell'Università e della Ricerca, i responsabili scolastici e i Presidi e sollecitare e orientare le imprese a partecipare e contribuire nei territori alla realizzazione del processo di riforma.

Politecnico di Milano, luglio 2010

Emilio Bartezzaghi

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FINAL REPORT

IL CEEMET

CEEMET ("Council of European Employers of the Metal, Engineering and Technology-based industries") è l'organizzazione europea che rappresenta l'industria del settore metalmeccanico con un focus specifico sui temi sociali e delle relazioni industriali. Come tale, CEEMET ha una prospettiva privilegiata sulle condizioni socioeconomiche necessarie allo sviluppo delle aziende manifatturiere europee. Il suo ruolo è quello di sensibilizzare gli organismi politici e le parti interessate a livello europeo su tali necessità.

I membri CEEMET sono le organizzazioni e federazioni datoriali nazionali che rappresentano ***200.000 aziende in Europa****, in larga maggioranza PMI, e forniscono circa* ***12,7 milioni di posti di lavoro****, coprendo tutta la produzione del settore metalmeccanico. Tutte insieme queste aziende costituiscono* ***il più grande comparto industriale in Europa****, sia in termini di livelli occupazionali che di creazione di valore aggiunto, e sono quindi dei soggetti vitali per spingere in avanti e garantire il futuro sviluppo dell'Europa stessa.*

Con sede a Bruxelles, CEEMET è un organismo di consultazione e un interlocutore riconosciuto dalle Istituzioni europee, da BusinessEurope e da altre associazioni europee di settore collegate al manifatturiero (ACEA, ASD, CESA, CLEPA, EUROFER, Eurometaux, ORGALIME), così come dall'European Metalworkers' Federation (EMF), il sindacato europeo dei lavoratori metalmeccanici. CEEMET ed EMF sono inoltre parti sociali formalmente riconosciute del ***Dialogo Sociale Settoriale Europeo****.*

*Uno dei campi di azione prioritari per CEEMET è quello dell'****istruzione e formazione****, dimostrando così la grande importanza del ruolo e della partecipazione che le imprese svolgono in quest'area. Poter contare sulla disponibilità di personale altamente qualificato, in particolare con riferimento ai giovani lavoratori, è fondamentale sia per il futuro dell'industria che per il progresso dell'Europa. In questo contesto, CEEMET ha individuato un interesse specifico nell'****istruzione tecnica e nell'istruzione e formazione professionale iniziale (d'ora in poi iVET - initial Vocational Education and Training)*** *perché rappresenta il crocevia tra il proseguimento degli studi e il mercato del lavoro ma anche perché una forza lavoro qualificata è condizione essenziale per garantire il futuro del settore.*

PREFAZIONE

Una base industriale forte e competitiva è essenziale per la crescita, lo sviluppo e il lavoro in Europa e richiede una forza lavoro qualificata e motivata che progetti, sviluppi e realizzi i prodotti, processi e servizi necessari a poter competere sul mercato globale.

Ciò può essere ottenuto esclusivamente fornendo in tutta Europa una formazione e istruzione professionale iniziale (iVET) di alta qualità che dia ai giovani le capacità e le competenze necessarie a soddisfare le esigenze delle aziende. Nuove competenze necessarie sia per le nuove tipologie di lavoro che per le professioni tradizionali. Tuttavia, gli attuali sistemi iVET in Europa faticano ad andare incontro ai bisogni del mercato del lavoro, con il risultato che vi sono lacune, ampiamente riconosciute e identificate, in termini di capacità e competenze.

Migliorare la cooperazione tra l'industria e le scuole erogatrici di servizi iVET è un modo semplice ed efficace per affrontare il problema.

Il presente rapporto è il risultato di un **progetto** nato nel 2009 relativo al ***Rafforzamento della cooperazione tra imprese e iVET.*** Esso mira a fornire un quadro concreto sul **ruolo del settore metalmeccanico nel sistema iVET,** illustrando come, secondo le imprese, questo rapporto possa essere migliorato sia a livello nazionale che europeo. Sebbene siamo fermamente convinti che un'istruzione e una formazione di alta qualità – primaria, secondaria e superiore, nonché la formazione continua – siano importanti per l'industria, abbiamo deciso di concentrare la nostra attenzione sull'iVET come punto di partenza, considerando che il settore metalmeccanico confida in una forza lavoro con un'istruzione e formazione professionale di secondo livello.

Infine, la crisi finanziaria ed economica ha portato nuovamente l'attenzione sull'**importanza delle industrie manifatturiere** europee e sta mettendo in discussione alcuni presupposti fondamentali nel campo dell'istruzione e della formazione. Il problema di che cosa sia un "buon lavoro" – e quale tipo di istruzione permette a un giovane di trovarlo – appare oggi una questione molto più aperta che nel recente passato.

Anche noi, quali portatori di un interesse specifico, dobbiamo cogliere questa sfida per **migliorare la qualità e l'attrattiva dell'iVET**. Per le imprese questo significa assicurarsi che tutti gli stakeholder si impegnino a rafforzare la cooperazione tra impresa e scuola, promuovendo iniziative che spaziano dall'assicurarsi che vi siano tutte le condizioni ambientali propizie fino al convincere sempre più aziende ad aprire le proprie porte alle scuole iVET sul territorio.

Questo rapporto, che identifica le priorità chiave per il futuro e fornisce una serie di raccomandazioni su come i vari stakeholder dovrebbero agire, si propone di contribuire al dibattito su come meglio garantire che l'Europa abbia una forza lavoro competente e motivata per accogliere le sfide del Ventunesimo Secolo.

SOMMARIO

I. INTRODUZIONE

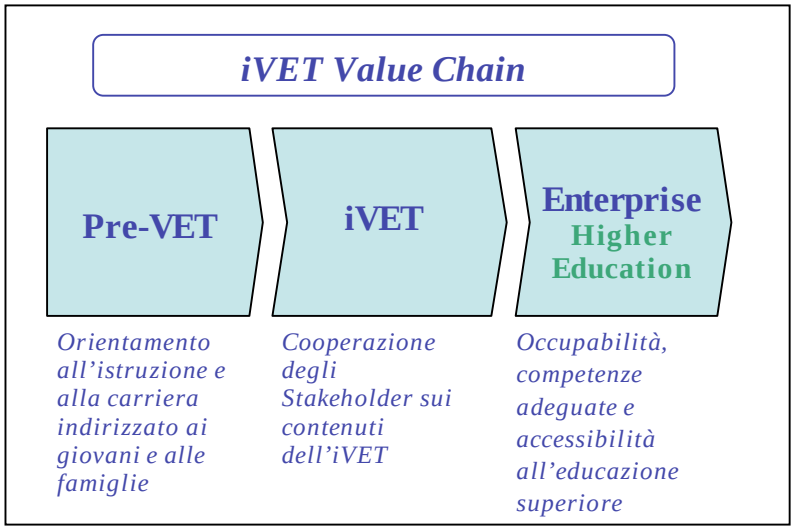
La formazione e l'istruzione tecnica e professionale, l'industria e il futuro dell'Europa

L'importanza dell'iVET per l'industria

L'industria metalmeccanica è il motore trainante dell'economia europea e le persone sono la sua risorsa più importante. Garantire la disponibilità di personale altamente qualificato, in particolare di giovani, è fondamentale sia per il futuro del settore sia per lo sviluppo dell'Europa stessa.

Il sistema iVET – principale fonte di approvvigionamento di nuove figure professionali per il settore metalmeccanico – è quindi un fattore centrale per il successo dello stesso. Parimenti, l'industria – principale utilizzatore, fonte di tecnologia e terreno di formazione per gli alunni inseriti nei percorsi di istruzione e formazione – è un fattore essenziale per l'iVET. Pertanto, le organizzazioni imprenditoriali e le aziende hanno un interesse prioritario – e quindi, un ruolo chiave da giocare – nei percorsi di istruzione tecnica dei giovani.

La "iVET Value Chain", dalla scuola primaria all'assuzione



Il problema

Capacità e competenze sono fattori chiave per garantire la competitività industriale. Ciò nonostante è ampiamente riconosciuto che gli attuali sistemi iVET in Europa non sono pienamente in grado di rispondere alle esigenze del mercato del lavoro, creando così un disallineamento tra domanda e offerta delle competenze necessarie per le imprese.

A questo disallineamento si aggiunge il problema legato all'immagine dei percorsi iVET, spesso considerati alla stregua di un'istruzione "di serie B": non di rado studenti fortemente dotati e motivati scelgono di non intraprendere un percorso tecnico.

Questi problemi sono strettamente collegati: se si vuole aumentare l'attrattiva e il prestigio dell'istruzione tecnica e professionale, devono essere migliorate la qualità della stessa e la risposta

che essa dà al mercato del lavoro, attraverso un'adeguata predisposizione di linee guida ed attività informative.

In altre parole, la disponibilità di persone altamente qualificate può essere garantita attraverso un sistema iVET altamente specializzato in tutta Europa, in grado di fornire ai giovani le capacità e le competenze per soddisfare le esigenze delle aziende. Le molteplici sfide che l'industria deve affrontare oggi rendono necessario **un sistema d'istruzione capace di rispondere alla concorrenza globale, a cicli di innovazione sempre più brevi e a un ritmo di sviluppo tecnologico in costante crescita.**

Il progetto CEEMET

Alla luce del ruolo fondamentale che le imprese possono e devono svolgere al fine di modernizzare i sistemi iVET europei, nel 2009 CEEMET ha lanciato un progetto a livello europeo ***sul rafforzamento della cooperazione tra l'industria del settore metalmeccanico e il sistema iVET***, con gli obiettivi di fornire **un quadro preciso del ruolo che l'industria metalmeccanica gioca nel sistema iVET** nei diversi Paesi; esplorare come, secondo le imprese, questo rapporto possa essere migliorato a livello nazionale ed europeo; e fornire dei modelli di buone pratiche individuate nei diversi Paesi UE – così come nei vari modelli iVET – che possano essere d'ispirazione per l'industria, le scuole e il mondo politico.

Il progetto è stato lanciato sullo sfondo di un dibattito molto sentito a livello europeo sulla cooperazione tra l'industria e le scuole e su come l'UE può promuovere una migliore comunicazione tra questi due sistemi. In questo contesto, il rapporto mira proprio a fornire una risposta comune da parte delle imprese metalmeccaniche a tale domanda, indirizzando priorità e istanze alle Istituzioni europee e agli altri stakeholder. Il progetto fornisce altresì una risposta all'***EU 2020 Strategy***, ove si sottolinea la necessità di "imprimere un forte slancio al quadro strategico per la cooperazione tra tutte le parti interessate a livello di istruzione e formazione".[1]

L'obiettivo del progetto è quello di sostenere **il rafforzamento della cooperazione tra l'industria e il sistema delle scuole iVET** per assicurare **competenze idonee a soddisfare la domanda proveniente dal mercato del lavoro** e **migliorare l'immagine delle scuole iVET.** A tale scopo, il presente rapporto evidenzia l'importante ruolo già svolto dalle imprese nei vari sistemi iVET europei, fornendo esempi di buone pratiche e consigli per un generale miglioramento.

Il progetto è stato articolato in **tre fasi**:

I. Un'**indagine internazionale** che ha coinvolto le 22 associazioni CEEMET, insieme ad alcune associazioni non iscritte a CEEMET, all'interno e all'esterno dell'Unione, al fine di raccogliere informazioni sul rapporto tra l'industria e i sistemi iVET nei vari Paesi europei. Questo sondaggio è stato effettuato nella seconda metà del 2009. Per completare questa panoramica fornita dalle associazioni è stato inviato un questionario a 350 aziende del settore metalmeccanico europeo incentrato sulla cooperazione pratica che quotidianamente le aziende e i fornitori di servizi iVET portano avanti e sul tipo di conoscenze e competenze che sono richieste dalle stesse aziende.

II. **Una conferenza a livello europeo,** tenutasi a Bruxelles a febbraio del 2010 e focalizzata sull'importanza di una **solida cooperazione** tra l'industria e le scuole al fine di fornire un sistema iVET sufficientemente flessibile da potersi adattare alle esigenze mutevoli del mercato del lavoro. In tale occasione sono stati presentati esempi di buone pratiche da

[1] **Comunicazione della Commissione COM (2010) 2020 del 03/03/2010 "EUROPA 2020 -** ***Una strategia per una crescita intelligente, sostenibile e inclusiva".***

aziende e scuole, individuati sulla base dell'indagine effettuata tra i membri CEEMET, cui è seguito un dibattito durante il quale i rappresentanti delle istituzioni e gli stakeholder più importanti a livello europeo, nazionale e locale – insieme a giovani studenti – hanno discusso come meglio sostenere e promuovere la cooperazione a tutti i livelli.

III. Un **documento conclusivo**, basato sui risultati del sondaggio e della conferenza e su alcune interviste fatte successivamente ai vari membri CEEMET. Tale rapporto comprende:

- una sintesi delle tendenze e delle tematiche più comuni;
- una panoramica Paese per Paese del ruolo svolto dagli industriali del settore metalmeccanico all'interno del sistema iVET;
- esempi di buone pratiche;
- suggerimenti per i vari stakeholder su come migliorare i rapporti tra il mercato del lavoro e il sistema iVET.

Il presente documento costituisce dunque **il *Final Report*** del progetto e mette insieme i risultati del sondaggio CEEMET del 2009, della conferenza europea CEEMET del 2010 e delle interviste ai membri CEEMET.

La prospettiva delle imprese

È importante sottolineare che lo studio sviluppato prende le mosse dalla **prospettiva delle aziende**, con l'obiettivo di riempire il vuoto di informazioni disponibili. Il presente documento mira a fornire un quadro concreto del rapporto tra l'industria e i sistemi iVET da una prospettiva pratica e descrive come le imprese reputino che questa relazione reciproca possa essere migliorata, sia a livello nazionale che europeo. Questo è in effetti il valore aggiunto di tale lavoro e ciò che lo differenzia da altri studi in questo campo.

Inoltre, i sistemi d'istruzione e di formazione differiscono tra loro in modo sostanziale da Paese a Paese, e conseguentemente le politiche a riguardo restano di competenza dei governi nazionali. Il CEEMET appoggia questa varietà e l'applicazione permanente del **principio di sussidiarietà** in questo campo. Tuttavia, come industria ci troviamo davanti ad **alcune sfide comuni** nel campo dell'istruzione e della formazione che travalicano i confini nazionali. Riteniamo pertanto che condividere informazioni e buone pratiche nazionali a livello europeo sia uno strumento utile, sia per l'industria che per i legislatori, per modernizzare i sistemi iVET.

Uno sguardo generale sul rapporto

La seguente sezione di questo rapporto fornisce una **breve sintesi delle tendenze e delle tematiche comuni** relative ai sistemi iVET che l'industria di settore, in Europa e oltre i confini europei, si trova ad affrontare; segue una **panoramica Paese per Paese sui sistemi iVET e sul ruolo delle singole imprese del settore metalmeccanico al loro interno**. Questa sezione comprende anche informazioni relative a ciò che i membri CEEMET ritengono funzionare nei loro rispettivi sistemi, ciò che secondo loro potrebbe essere migliorato e ciò che potrebbe essere fatto a livello europeo.

Questa panoramica è seguita da una sezione che fornisce **esempi di buone pratiche**, in Europa e altrove, nell'ambito della cooperazione tra industria e sistema iVET che possono essere fonte d'apprendimento e d'ispirazione per tutti. Il rapporto si conclude evidenziando quelle che riteniamo essere le **condizioni essenziali per una cooperazione efficace tra industria e scuole** e suggerendo **una serie di modalità per migliorare questa cooperazione tra industria e scuole iVET** per meglio venire incontro alle esigenze del mercato del lavoro, ivi compreso il ruolo che l'UE dovrebbe e potrebbe avere in questo ambito.

Il rapporto è stato redatto da CEEMET in collaborazione con un gruppo selezionato di esperti d'istruzione e formazione facenti parte delle associazioni appertenenti a CEEMET.

II. L'IVET E IL RUOLO DEGLI IMPRENDITORI

Sistemi diversi e tendenze comuni

I sistemi iVET e il ruolo che le imprese svolgono in essi variano notevolmente nei diversi Paesi europei e non solo. In alcuni sono gli imprenditori a provvedere alla formazione dei lavoratori, mentre in altri le aziende assumono un semplice ruolo consultivo informale. Le politiche concernenti istruzione e formazione professionale restano in gran parte una prerogativa degli Stati nazionali e sono modellate sulle diverse tradizioni scolastiche dei vari Paesi, nonché dei loro mercati del lavoro e culture industriali. In sostanza, nel caso dell'iVET **non vale la regola *"una misura unica calza tutti"***.

Panoramiche nazionali

Le panoramiche nazionali in questo rapporto illustrano quanto sia ampia la varietà di sistemi, sia all'interno che all'esterno dell'Unione Europea, e i diversi ruoli che giocano le parti sociali in generale – e le imprese metalmeccaniche in particolare – all'interno di essi. Evidenziano anche le priorità delle imprese metalmeccaniche in relazione ai sistemi iVET.

Queste descrizioni dei singoli Paesi si basano su informazioni fornite dalle associazioni di CEEMET estrapolate dall'indagine distribuita tra tutti i membri nel 2009, sul dibattito che si è svolto durante la Conferenza europea CEEMET e sulle interviste effettuate nel 2010 alle associazioni, integrate con informazioni reperite presso i governi nazionali e/o fornite dal Centro europeo per lo sviluppo della formazione professionale (CEDEFOP).

Esse contengono informazioni relative a diverse tematiche, come il tipo di sistema iVET, il numero di studenti inseriti nei percorsi iVET, la possibilità d'accesso all'istruzione superiore e i tassi di collocamento dopo il conseguimento del diploma. Esaminano brevemente, inoltre, il coinvolgimento delle imprese e delle parti sociali. Infine, ciascuna panoramica contiene una sezione che delinea ciò che i membri CEEMET del Paese descritto ritengono essere attualmente l'argomento più importante relativo al sistema iVET, ciò che funziona e ciò che non funziona nel sistema del loro Paese, come le imprese possono contrubuire al loro miglioramento e quello che ritengono debba esser fatto a livello europeo.

Strutture, problemi e soluzioni

Nonostante le differenze tra i sistemi iVET europei, emergono chiaramente anche delle **tendenze comuni** ai vari Paesi, e all'interno dello stesso settore metalmeccanico, in relazione alla struttura di tali sistemi (in particolare ove essi siano sottoposti a processi di riforma), ai problemi che hanno di fronte e, non ultimi, ai fattori chiave che potrebbero rafforzare la cooperazione tra l'industria e le scuole e migliorare l'istruzione e la formazione nel suo complesso.

Esistono due forme dominanti di iVET: **il sistema duale e il sistema scolastico**. Entrambi i sistemi associano, in misura diversa, istruzione e formazione in classe e istruzione e formazione sul posto di lavoro. Emerge chiaramente anche che **l'impresa è coinvolta in modo attivo e positivo** lungo tutta la catena iVET, dallo stabilire modelli e contribuire a elaborare i piani di studio fino alla valutazione dei risultati conseguiti e la convalidazione delle qualifiche in entrambi i sistemi. La struttura di un sistema iVET non è di per sè elemento decisivo per determinare il livello di cooperazione tra l'impresa e le scuole o quanto questa sia efficiente. Quindi, i rimedi possibili per riuscire a colmare il divario industria metalmeccanica/iVET e risolvere il problema del disallineamento tra le competenze offerte e quelle richieste dal mercato del lavoro non devono limitarsi a seguire dei modelli, ma devono andare oltre.

Molte delle associazioni e delle aziende che hanno partecipato al progetto hanno identificato problemi simili in diversi Paesi relativamente alle difficoltà incontrate dai sistemi iVET e dalla cooperazione tra imprese e scuole. Per molti la preoccupazione principale è l'ingiustificata **immagine negativa attribuita ai sistemi iVET**, che è **causa ed effetto** della debolezza associata all'iVET. I problemi frequentemente menzionati includono lo **scarso numero di studenti che si iscrivono ad un istituto tecnico o professionale**, **l'elevato numero di coloro che abbandonano prematuramente la scuola**, la necessità di aumentare il livello di ambizione nell'iVET in termini di qualità e competenza e le difficoltà associate a convincere le imprese a investire di più nei sistemi iVET.

Infine, dal punto di vista delle aziende, è evidente che per fare i conti con questi problemi, una serie di *ingredienti di base*, che riguardano tutti gli stakeholder, necessari per costruire una solida partnership tra l'industria e l'iVET, devono essere presi in considerazione. Nel lungo periodo, a loro volta, tali fattori garantiranno una formazione di alta qualità e una manodopera altamente qualificata.

I principali tra questi sono la **flessibilità** all'interno del sistema, in termini di curricula e apprendimento sul luogo di lavoro; un focus particolare su **eccellenza** e **qualità** in tutte le aree iVET; **il riconoscimento all'iVET della medesima dignità di fronte all'istruzione generalista**; un'accresciuta **permeabilità** tra iVET e istruzione superiore; e una maggior apertura da parte dell'impresa verso la cooperazione con le scuole iVET. I membri CEEMET hanno anche evidenziato le loro priorità per un'azione a livello europeo, alcune delle quali sono **la trasparenza** e **il riconoscimento delle qualifiche** per sostenere la **mobilità,** e un'ulteriore **promozione positiva della cultura d'impresa.**

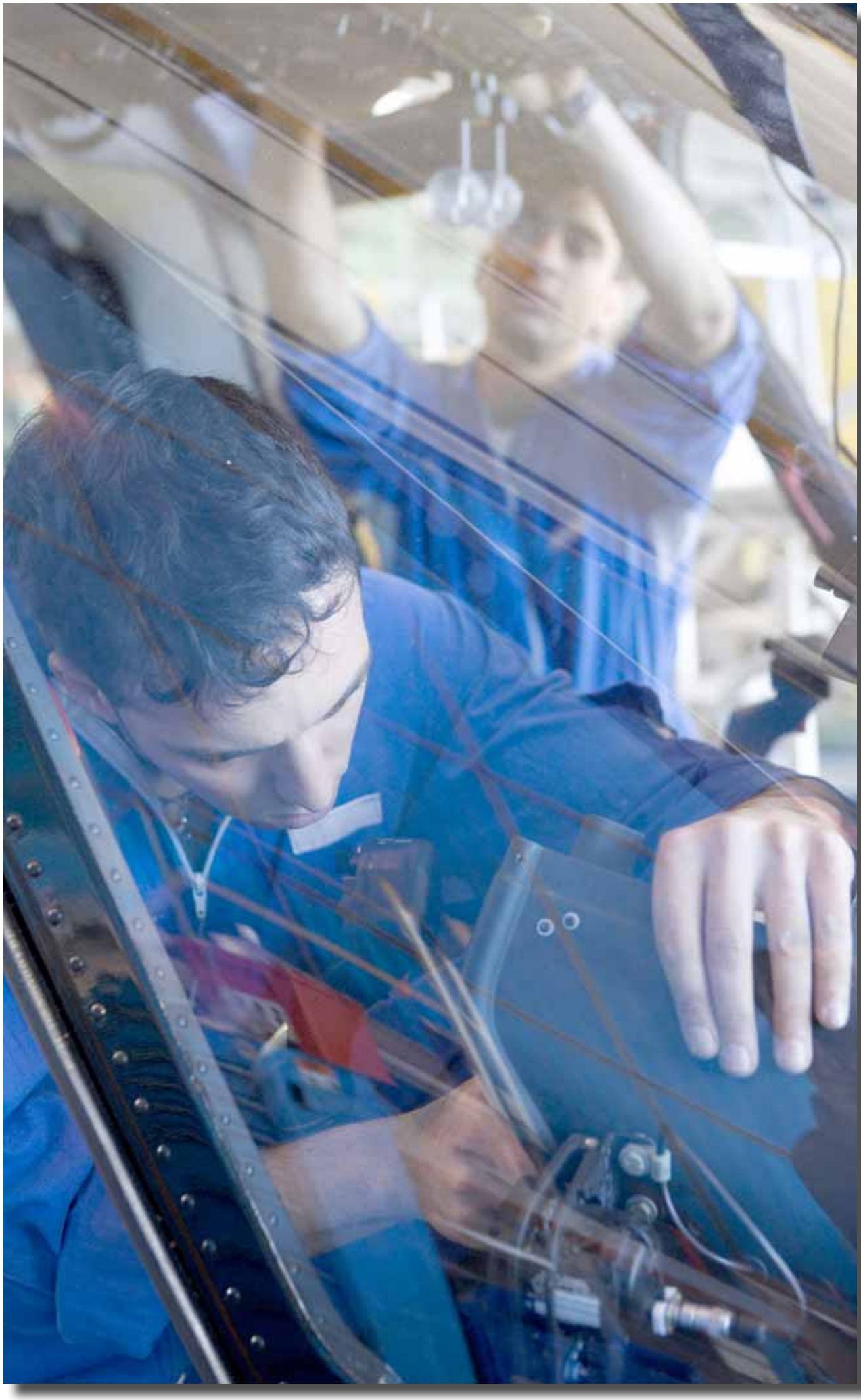
L'importanza della cooperazione

Complessivamente appare chiaro dai risultati del progetto che esiste, all'interno del settore metalmeccanico, una consapevolezza comune dell'**importanza di una cooperazione efficace** tra il mondo iVET e quello dell'industria di settore e della **necessità di rafforzare questa cooperazione** al fine di migliorare l'immagine del sistema iVET e di elevarne la qualità. Questo si riflette nei **relativamente cospicui investimenti di risorse (sia umane che finanziarie) intrapresi dagli stakeholder del settore metalmeccanico** in questo campo.

Esaminando l'attuale livello di cooperazione tra impresa e iVET, e dove essa ha luogo, l'indagine mostra che il 91% delle proprie associazioni già collaborano con i governi nazionali in materia di iVET e la medesima (elevata) percentuale di esse lavora direttamente con le imprese in questo campo. Di conseguenza, il ruolo degli imprenditori ricopre l'intero spettro dell'iVET, dalla predisposizione delle politiche a livello centrale all'erogazione quotidiana di istruzione e formazione a livello aziendale, tanto nelle piccole e medie imprese quanto nelle grandi aziende.

Questi dati dimostrano chiaramente non solo l'interesse degli imprenditori verso l'istruzione e la formazione, ma anche il loro impegno e la loro volontà di approfondire la cooperazione con tutti i soggetti interessati da questo tema di vitale importanza. Per le imprese ciò significa doversi adoperare per prendere parte con maggior intensità nella gestione del sistema iVET, nello sviluppo dei contenuti e nel controllo di qualità dello stesso.

L'indagine sottolinea pertanto il valore dell'impegno di CEEMET di continuare a concentrarsi su questa tematica, data la sua attuale e diffusa importanza.



AUSTRIA

Area: 83,872 km^2

Population: 8.3 million

CEEMET member: WKÖ – Wirtschaftskammer Österreich

Website: www.wko.at

Basics

Initial VET in Austria includes both a **dual (with apprenticeship)** and **school-based system** and starts at the age of 14, lasting from 2 to 5 years**.** Austria has a high participation rate in iVET with approximately **80 %** of upper secondary pupils attending a VET programme.

Approximately 40% of all VET students go into the dual-based system (*Lehre*) consisting of a two- to four-year apprenticeship in companies combined with theoretical technical schooling (approximately 20% of the time). The school-based system is full-time schooling providing two possible alternatives: VET School (*Berufsbildende mittlere Schulen*) (three to four years) and VET College (*Berufsbildende höhere Schulen*) (5 years). Both alternatives include obligatory work experience for pupils (VET school: 4 weeks; VET college: 8 weeks) during holiday time.

VET colleges finish with an examination (Reife- und Diplompruefung) that grants unlimited access to all tertiary studies (at universities and at universities of applied sciences). Graduates of VET schools and apprenticeship training can take the *Berufsreifepruefung* which likewise grants unlimited access to all tertiary institutions.

Governance and Actors

Austrian secondary schools can be **public, semi-public** and occasionally **private**. A tight structure of laws and decrees regulates the school system in Austria. According to the Federal Constitution (Bundesverfassung), various **national and regional institutions** share competences in VET. National and local governments are formally involved in the **governance of iVET system**, together with employers' associations and Trade Unions.

The **Federal Ministry of Education, Arts and Culture** is the supreme supervisory authority for all secondary education and its role includes drafting educational legislation and framework curricula. According to law, the **social partners** are entitled to comment on drafts of school-related acts, curricula and other regulations and play an important advisory role. They also participate in quality assurance of iVET in the area of diplomas.The **Regional Education Boards** (Landesschulrat) are responsible for the supervision of the schools within a Land. The most important body within the regional education board is the Board, whose tasks include the submission of proposals for appointing principals/head teachers on behalf of the Ministry. In addition, the Board is entitled to issue statements on draft legislation and draft regulations (e.g. on curricula) and adopt regionally applicable provisions.

In Austria, industry contributes to the **funding** of iVET by being responsible for **work-based learning**. **Apprentices** are entitled to a **remuneration** that is subject to a **collective agreement** and amounts to approximately 25-40% of the initial wage of a skilled worker in the first year of apprenticeship and then rises annually (to approximately 80% in the last year)**.** Employers also provide indirect financing such as **equipment** and **staff**.

Industry Involvement in iVET

Wirtschaftskammer Österreich (WKÖ) - Industry section, the Austrian Federal Economic Chamber, works with iVET on all levels. WKÖ has a formal advisory role on iVET vis-à-vis the Ministry of Social Affairs and the Ministry of Education and thus has influence on the **standard setting for iVET**, development of **education plans** and **curricula**.

WKÖ also works together with **Regional and Provincial Governments** as well as with other **national and regional interprofessional employers' organizations** on iVET issues. They also work directly with **iVET schools.** Their work on iVET has typically resulted in **apprenticeships, traineeships, curricula revisions, recruitment initiatives and joint projects.**

Our Point of View

One of the most important issues for WKÖ in terms of iVET is the issue of social competences (and lack of personal culture) of young people.

From an employer perspective, social competences should take priority in the vocational training schools and Austrian enterprises should have a more room in terms of on-the-job learning within the dual system.

In view of that, cross-country exchanges could be really helpful in order to enhance the competencies of young technicians and, in general, to increase the average level of knowledge across Europe. Hence, European law should not fix too many special burdens regarding health and safety-regulations for apprentices and young workers.

Sources:

Wirtschaftskammer Österreich

IBW - Institute for Research on Qualifications and Training of the Austrian Economy

Cedefop

BELGIUM

Area: 30,528km^2

Population: 10.8 million

CEEMET member: Agoria

Website: www.agoria.be

AGORIA
no future without technology

Basics

Initial VET in Belgium is mainly a **school-based system**, lasting from 14 to 18 years of age. Compulsory education normally ends at the age of 18 for all secondary-level education. In some cases, students can accomplish compulsory education leaving school education (*education de plein exercice*) and instead opting for dual vocational training centers.

In the French community 36.5% of students within the age cohort 14 to 18 attend Technical and Professional Education, but only 2.4% of this group choose dual-based education.

In accordance with the political and territorial division in Belgium, responsibility for education is divided between the French and Flemish Community.

In Flanders, there are two different iVET options: **technical secondary education** (*Technisch Secundair Onderwijs - TSO*) and **vocational secondary education** (*Beroepssecundair Onderwijs - BSO*). In the last three years of BSO, students have part-time education combined with on-the-job training organized by the Centers for Part-time Education (CDOs). In the French Region the two iVET paths offered are the *Enseignement Technique* and the *Enseignement professionnel*. They both last for four years and lead respectively to the awarding of the *Certificat d'Enseignement Secondaire Supérieur* (CESS) and to a *Certificat de Qualificatin Professionnelle*. Only CESS gives access to further education.

IVET in Belgium can also be a **dual-based system with apprenticeship.** In the French speaking community it is provided by the so called CEFA (*Centre d'Enseignement et de Formation en Alternance*), and in the Flemish Region by the Flemish Agency for Entrepreneurial Training (SYNTRA). The apprentices are employed with an apprentice contract and entitled to an allowance linked to their age and their professional experience, paid by the company they work for.

IVET students who have obtained a CESS, TSO or BSO diploma can access post-secondary non-tertiary education or, in some cases, university education.

Governance and Actors

Belgian iVET schools **are publicly run by each regional community**. The only remaining federal responsibilities consist in defining the period of compulsory schooling, the minimal conditions for awarding diplomas and the pension scheme for teachers. Education is organised in networks: official networks (organised by the communities or by the provinces, towns or «communes") and free networks (e.g. catholic education).

In Belgium, social partners are involved in the **governance of the iVET system** together with local governments. In Flanders, the Flemish Education Council (Vlaamse Onderwijsraad – VLOR) has sector committees on which social partners are represented along with governments. In the French speaking region, the advisory tasks lay with the *Commission Communautaire des Professions et des Qualifications* - CCPQ. Both VLOR and CCPQ have influence on the legal framework and standard setting of iVET.

Industry is active in the area of **exams and diplomas** and in the **quality assurance** of iVET schools. Both Flemish and Walloon interprofessional employer associations **formally** cooperate with regional governments in **developing curricula**.

IVET schools are funded by the federal government and funding is distributed between the two communities. The basis for funding distribution is now calculated according to the average personal income tax. In the Walloon Region private schooling, in its strictest sense (i.e. schools that receive no subsidy from the French Community, but which may be recognised by it), is very limited. In Flanders, private education gathers a large number of students and is organised by private-law governing bodies but is subsidised by the Flemish Community.

Industry directly contributes to the dual system costs, paying apprentice wages and social contributions. Companies also cover part of travel expenses and other work-related costs.

Industry Involvement in iVET

The Belgian employers' association for the metal, engineering and technology-based industries, **Agoria, cooperates with VET schooling on a formal basis**, mainly with each Regional Community and Provincial Government.

Agoria plays an important role in iVET as part of the training institutions set up by the social partners. The association also **works directly with schools** respectively as part of the "Centre de competence" in the Walloon Region and the "RTC's" in Flanders. This work has resulted in **curricula revisions**, **partnerships**, **joint project** and **promotional actions**.

The centers managed by social partners in collaboration with employment services and education institutions (Forem, VDAB, Bruxelles formation and Actiris) target three groups: workers, unemployed people and secondary education students (technical or vocational). For the latter, the centers allow following complementary educational paths on high tech equipment which is not available in schools. These centers are also open to teachers for improving their knowledge and skills.

Our Point of View

One of the most important issues for Agoria is to improve the image of iVET as such, as there are not enough students in the technical education paths leading to the occupations in the sector. Young people do not know enough about the work done in the manufacturing industry and have a bad image of it. Two types of action are currently run in parallel to deal with this issue: an **awareness campaign** developed by Agoria and **valorisation of technical and vocational education** mainly through the development of competence and reference centers "centres de compétences ou de references" by the sector.

The concept of «centre de compétence ou de référence» is a model to reinforce and has been shown to work well. It is a place of exchange (workers-students), research and technological development responsive to the needs of industry.

As mentioned above, Technical and Vocational Education is underestimated by young people, and often they only choose this path because they failed in general education. Consequences are often a lack of motivation, behavioural problems which affect the quality of training (violence, lack of respect for the teachers), etc. Agoria is advocating an education system centered on two paths after basic education (first phase of secondary-level education): a general path called *enseignement général* and a technical path called *enseignement technique*.

From an employer perspective, the ideal iVET system should be more structured and better organized. A possible solution would be to divide it into three phases of equal duration including precise objectives and programs for each phase: basic education should be provided at school; the development of the education should be achieved within specials centers for competences; the knowledge gained should then be implemented via practical on-the-job training.

Employers can also take part in the improvement of the system, reinforcing the importance of traineeships in companies, possibly providing a dedicated tutor from their side. The content of the traineeship should be therefore included in the official programme of the education path.

The European institutions should also contribute to the amelioration of iVET not least promoting the establishment of the European Qualification Framework.

Sources:

Agoria

Vlaams Ministerie van Onderwijs en Vormi

Ministère de la Communauté française

Cedefop

CROATIA

Area: 56,594 km^2

Population: 4.4million

CEEMET associate member: HRVATSKA UDRUGA POSLODAVACA - HUP

Website: www.hup.hr

Basics

Initial VET in Croatia starts at upper secondary school at 14 years of age and can be **both school-based and dual system with apprenticeship**. **IVET** lasts for one to four years, providing students with the skills required to enter into the labour market. **70.9% of an age cohort** in the country chose vocational education at upper secondary level, including technical, industrial and craft schools.

There are **one-year** and **two-year** programmes, at the end of which pupils receive a basic professional degree, covering together **0.7%** of the total number of pupils in vocational education. There is also a **three-year** programme covering the **36.5%** of the iVET population. And finally there is a **four-year** technical vocational schooling leading to an upper secondary school diploma called *Matura*. This four-year path is the more popular, involving **62.8%** of the total number of pupils in vocational education in the country.

The **dual system** was introduced in 1995 and the programmes are based on the German model, with approximately **50-60% of the time spent in apprenticeship**. With the aim of promoting the competences of VET students, every year the Agency for Vocational Education and Training organises student competitions on a national level in around 80 different vocational disciplines.

Students in apprenticeship are entitled to a monthly remuneration: in the 1st year of apprenticeship 15%, in the 2nd year 20% and in the 3rd year 25% of the average net wage in the economy of the Republic of Croatia. Compensation is paid for the realized work time, which is planned by the executive plan and program of apprenticeship for the year in which the remuneration is paid.

iVET pupils awarded with the *Matura* diploma can enrol into two basic kinds of **higher education**: polytechnic schools (*veleu ilište*), a post-secondary education, and universities (*sveu ilište*), a higher education. However, only a small proportion of iVET students opt for this path as most of them prefer to look for employment directly after Vocational Education.

Governance and Actors Involved

Upper secondary schools in Croatia are mainly **publicly run** under the responsibility of the national Government. In particular, the Ministry of Science, Education and Sports is responsible for the governance of iVET schools, including the definition of programmes for general education within the dual system. The Ministry of Economy, Labour and Entrepreneurship is responsible for curricula development for both the educational and practical part of the dual system and all other apprenticeship-related issues.

In January 2005 the Government of the Republic of Croatia founded the **Agency for Vocational Education and Training (AVET)**. It is a public institution in charge of developing an available, flexible, progression-based VET system, linked with the economy and higher education. It is involved in the enhancement of the system's quality, guidance and assessment of the educational process as well as in the professional development and training of VET teachers, through organisation and implementation of professional exams, implementation of procedures for their promotion, and organisation and implementation of professional training.

Social partners are involved in the activity of the AVET having a representative appointed in the Expert Council of the Agency. A new strategy for 2008-2013 should permit the improvement of vocational education. The administrative capacity of the Agency was also increased in 2008.

The **state budget is the main source of financing** for iVET. EU funds also play a relevant role in improving the iVET system in Croatia. A secondary school may also be funded by a regional self-government unit and other legal or natural persons. Vocational schools are allowed to generate additional income through their own activities.

Industry can also contribute to financing the iVET system. In the dual system, companies can grant a pupil a scholarship covering the period the apprentice spends working in the company. Employers can claim a partial refund of the scholarship to the state.

Initial VET schools can also act as advisors to individual companies, namely in the area of production methods and introduction of new technologies.

Industry Involvement in iVET

HUP - *Hrvatska Udruga Poslodavaca*, the Croatian employers' association[2], **mainly works on the systemic level** with the Ministry of Science, Education and Sports and the Ministry of Economy on a formal basis. It also works with the AVET and participates in the **Mechanical Engineering, Shipbuilding and Metallurgy Council,** which is one of the **sector councils funded by the AVET**. The Council in composed by different stakeholders, such as government, social partners and the AVET's representatives and experts.

Due to the participation in sector councils, the Croatian employer's association has produced **analyses** of the labour market and put forward **proposals** for new job occupations in different sectors linked to the competitiveness of the industry. HUP plays also an important role in **designing new educational offers**, **developing programs** and **curricula revision**, according to market demands.

HUP's representatives can also take part directly in the **Committee of Quality** in charge of the periodical self-evaluation of iVET schools.

Our Point of View

From the Croatian employers' perspective, the ideal vocational education should serve to develop **professional competences and competences needed** for employment, for a **modern, competitive and flexible labour marke**t. The emphasis should be given to acquiring **wide knowledge** that enables a person to work professionally on various jobs, easier **employability**, and higher readiness to respond to new and faster requests by employers.

[2] Croatia has not established a specific employers' association for the sector of the Metal, Engineering and Technology-based industry. The Metal Industry Association has been established within HUP/CEA as a branch association.

This is why, for HUP, the most important issue regarding iVET is **proactively contributing to the work of the Croatian sector councils** with compulsory inclusion of social partners on:

1. The sector's profile, as well as subsectors
2. The profile of existing qualifications and educational offer - to be made with representatives of educational institutions from the Sectoral Council
3. Future development to be made based on results of points 1. and 2. – new qualifications or change of existing qualifications in accordance with needs on the labour market.

This, with the strategic objectives to develop qualifications based on competencies and learning outcomes, to harmonise permanently education with labour market needs and to create a system of vocational education and training that allows for lifelong learning and mobility.

Nevertheless, according to HUP, due to measures taken to improve iVET, the system has now showed itself to work quite well. The changes have mainly taken place in human resources development and the establishment of structures to ensure a successful development of VET through the founding of the Agency for VET (2005), the National Centre for External Evaluation of Education (2004) and the Agency for Adult Education (2006). A series of initiatives were also launched, the Strategy for the Construction and Development of the National Curriculum was drafted, the National Pedagogical Standard of the Secondary Education System was adopted, and the Croatian Qualifications Framework is currently being drafted.

Another positive aspect is the fact that a large number of **sectoral council members are businessmen** who have already given concrete proposals for the improvement of the education supply, by defining 323 professions that match the needs of the contemporary Croatian economy.

Shifts have also been made in raising the level of quality assurance in vocational education through national exams, preparations for the state graduation exam, the introduction of self-evaluation of schools, and by adopting the National Pedagogical Standard of the Secondary Education System. Still, these are only initial steps introducing the quality assurance elements into the system.

Further, the Act on Education and Guidance has abolished traineeship in elementary and secondary schools for would-be teachers who already have some work experience, which should make it easier to go into teaching.

Finally, a big breakthrough was made by developing the Vocational Education and Training Information System (VETIS) and the Project of Integrated System for Standardized Data Group Management (e-Matica).

However, **work still remains to be done in reforming Croatian iVET**. One of the drawbacks of the current system is the mismatch between the competencies that the labour market needs and those iVET students are equipped with by the education system. The updating of competencies and programmes provided is not fast enough according to the market demand. The contents of the great majority of the existing curricula and teaching programmes are outdated and offer no possibility of acquiring contemporary knowledge, skills and competencies, because the rate of modernisation does not follow the development of new knowledge and technologies. Essentially this is also a result of a lack of labour market analyses and statistics on students coming out from iVET education. In addition to this, the curricula and teaching programmes are created exclusively within the education system and are not oriented to competencies required or labour market trends.

This analysis is confirmed by some existing indicators which show that a considerable number of young people educated in vocational professions, and particularly in three-year programmes, have difficulties in finding work and/or are not employed in the discipline they were educated for. This is a heavy burden both for the education system and for employers, in spite of possibilities offered by the market.

Further, the current distribution of vocational programmes is problematic in terms of implementation of particular programmes, and the provision of the required quality and number of teaching staff. There is a huge dispersion of programmes in various schools and various environments, and a low average number of pupils who attend a particular programme per school (an example is mechanical engineering, attended by 16,041 pupils in 131 schools, that makes 122 pupils per school at average) This way, the system is very expensive, since every school should be equally equipped with necessary didactic, workshop and laboratory equipment. Besides, fast development of technologies dictates a continuous modernisation of school equipment. Such inadequate equipment of schools directly affects the quality of the teaching process. Moreover, schools and local communities face great difficulties when they need to adjust their supply of programmes to the labour market needs fast, due to the need to adapt both equipment and staff. In some environments, there are difficulties in providing conditions to implement practical lessons in realistic working environment, since it is inexistent at some local levels.

Finally, in terms of matching skills to labour market needs, HUP also consider that at the EU level sector councils on VET could be formed with members from key representatives of the sector including social partners and other stakeholders from the education and training system.

Sources:

HUP

Ministry of Science, Education and Sports of the Republic of Croatia

CZECH REPUBLIC

Area: 78,866 km^2

Population: 10.5 million

Employer Association (not a CEEEMET member): SPCR

Website: www.spcr.cz

Basics

Initial VET in the Czech Republic starts at upper secondary school (15/16 year-olds) and is a **school-based** system lasting **2 -4 years**. The number of pupils choosing iVET over general education has decreased rapidly since the 1990s (when around 70% went into iVET). Currently approximately 50% of pupils in upper secondary education go into iVET.

There are **two different iVET pathways**: a **four-year technical pathway** leading to a school-leaving diploma (*maturitní zkouška*) and **two** or **three-year courses** providing vocational (professional) education leading to an apprenticeship certificate (*výu ní list*). Approximately 2/3 of iVET pupils select the four-year iVET path.

The courses leading to an apprenticeship certificate are very profession and practice-oriented (however, training also includes a substantial part of general education) and the attained education does not enable pupils to enter tertiary education. This may explain why a relevant number of apprentices decide to go into a two-year post-secondary education after the apprenticeship certificate (attending *de facto* a five-year professional education) in order to obtain a school-leaving diploma.

Those who have obtained a school-leaving diploma (four-year course) can continue at tertiary level, namely in tertiary professional schools or higher education institutions. Recently, the number of applications for higher education has shot up, not least due to the serious difficulties iVET graduates have in finding employment after graduation.

Governance and Actors Involved

IVET schools in the Czech Republic are **generally publicly run** (and normally established by the regions). The Ministry of Education, Youth and Sports (MoEYS) develops the National Educational Programme in consultation with experts, central trade union bodies and national employers' organisations. The Ministry of Education, Youth, and Sports also runs the National Institution of Technical and Vocational Education (NUOV) which prepares strategies for further development of technical education together with the Ministry. The principle mission of the National Institution of Technical and Vocational Education is to provide comprehensive support for the development of technical education. The concepts of lifelong learning and Czech membership in the EU are the leading basis. The Institution is a coordination, educational-consulting, expertise, research, educational, informational, and library organisation dealing with secondary and tertiary technical education.

Industry Involvement in iVET

The involvement of **social partners** in iVET is voluntary and depends on the initiative of the parties concerned. There are no legal regulations fostering this involvement and the roles of social partners in this respect. The positions provided by social partners are **mostly for informal consultation**, for instance within the **National Institution of Technical and Vocational Education.** Nevertheless, social partners can be involved in the examination board for final examinations in vocational certificate programmes. **Industry** is also active in the **quality assuranc**e of iVET schools, in particular in the area of **exams, diplomas and ISO**.

At local level cooperation occurs mainly between schools and companies that employ graduates. Employers can be represented on school governing boards, and as iVET schools often do not have the latest technology available, the on-the-job introductory training is entirely up to companies.

All **public and state schools** providing initial VET are **funded by the Ministry of Education** via regional authorities, which allocate the resources to individual schools from regional budgets. **Private schools receive state contributions** towards their running costs from the Ministry of Education through the regional authorities. Capital expenditures are covered by school fees and other private sources. Public funding makes up the larger part of the overall resources

The role of **SPCR, the Confederation of Industry of the Czech Republic**, is mainly **advisory** and **consultative**. The organization has recently been involved in the work of ***Sectoral Councils*** where they can influence the organization of the legal framework and contribute to defining contents of educational programmes for particular professions. The councils have been established within the **National Institute for Vocational and Technical Education**.

Further, SPCR together with local governments, company representatives and parents can directly be members of the governing boards of iVET schools, depending on the decision of the director of each school.

Our Point of View

One of the most important issues for SPCR is the restoration of the general comprehension of the **prestige of technical education**. Both the industry and the iVET schools have need for a change of the "dirty overall" prejudice and for a better understanding of all the opportunities that crafts and similar professions give to young people and their careers.

In the Czech iVET system - as also stated by OECD study – "learning for practice" as a result of Sectoral Councils recommendations targeting iVET schools and similar establishment is something that works really well. However, there is still room for improvement in the system, in particular in terms of parity of diplomas. The school-leaving diploma ("baccalaureat, bachot, matura") is generally accepted as an appropriate passport for better jobs than the apprenticeship certificate can lead to. In the current rebuilding of the school system, it should be stated somewhere in the framework that **iVET should have parity of esteem with general education**. The Czech Republic is also trying to push this at the European level.

In an ideal system, employers should be founders of corresponding educational institutions as the dual system used in the country is obsolete. The iVET system should be complemented by an improvement of the National Lifelong Learning Programme and supported by special educational funds for social partners.

Czech employers should intensify cooperation with iVET schools concerning curricula. The labour market also has to be managed better and employers should therefore in their day-to-day work cooperate with the Public Employment Services as they are the basic players on the labour market. SPCR is currently setting up regional offices (14 so far, with aim of 18) where one of the tasks is to meet and coordinate with the regional and local employment services once a month and discuss labour issues as well as iVET.

The improvement of iVET should also be supported at **European level**, fostering programs for **mobility of VET students and trainees** in order to facilitate the shaping of more transnational curricula. There should also be a possibility for those institutions involved in the governance of the iVET system to apply for larger and better **targeted European Social Funds**.

Sources:

SPCR

Eurydice

Cedefop

DENMARK

Area: 43,098 km^2

Population: 5.5 million

CEEMET member: Danish Industry -

Website: www.di.dk

Basics

Initial VET in Denmark starts at upper secondary school (15/16 year-olds), and is a **dual-based (or sandwich-type) system,** with 60-70 % of education spent in apprenticeship. Approximately **38%** of a youth cohort obtain a vocational education.

Those who have completed iVET can immediately work within the line of industry or trade for which they have studied. IVET also provides limited access to Higher Education. Of the 38% of a youth cohort that obtain vocational education, 5% of these usually go onto higher education afterwards.

Governance and Actors

IVET schools in Denmark are semi-public with final responsibility resting at national government level. **IVET is governed at the system level by national government and the social partners, which have considerable influence on iVET**. The Danish Parliament decides the general framework for the VET system and the Minister for Education appoints a Council for Vocational Training which consists of members nominated by the social partners as well as representatives of managements, teachers and students. The Council is tasked to give advice on the educational issues concerning the VET system, including structure, accreditation of colleges and on the framework for content and assessment.

The social partners also set up trade committees (approx. 50) that are responsible for the detailed content of the iVET programmes within the general framework, including duration and structure of programmes, their objectives and assessment and distribution between school-based teaching and practical training. These committees also approve the companies to undertake training during an apprenticeship and are responsible for monitoring in-company training.

At the level of the individual school, the social partners represented in the trade committees appoint local education committees for each of the programmes offered at the school. These local committees are required to advise the school on planning of the programme and work on developing cooperation with local trade and industry, especially to obtain further apprenticeships.

The social partners furthermore appoint members to the Governing Board of the VET Schools. In most schools the social partner representatives form the majority of the Governing Board.

In Demark the **school-based part of iVET is publicly funded** on the basis of a taximeter system (pay per student), while the companies pay for training. When the students enter into a **training agreement with a company, they are paid wages** based on the collective agreement. The Employers' Reimbursement Fund reimburses the company for the apprentice's wages when the pupil is attending school. All companies, both public and private, contribute a fixed annual amount to this fund based on number of employees.

Industry Involvement in iVET

Active participation by social partners is a central element in the Danish VET system. DI, the confederation of Danish Industry, nominates members for the Council for Vocational Training and is responsible for setting up trade committees for the iVET programmes that correspond to the industries they cover. DI appoints approximately 100 members to the Governing Boards of Danish VET schools. DI thus has influence on the legal framework and standard setting for iVET. As a sector organization, they are also formally involved together with companies in developing curricula and new VET structures both at national and local level. They are also involved in quality assurance of iVET schools in terms of exams and diplomas and in many trades the social partners appoint examinators for the journeyman's exam.

Overall, DI works on iVET issues at the level of central government, with the interprofessional employers' organization, as well as directly with schools. Typically, their work has resulted in curricula revision, partnerships, recruitment initiatives, apprenticeships, joint projects and promotional actions. Occasionally, iVET schools can also act as advisors to individual companies upon specific request.

Our Point of View

There are currently **two issues that are of key importance to DI concerning iVET**: 1) absolutely making sure that pupils in iVET schools are challenged to their full potential; and 2) ensuring that pupils who come out of primary schools have the necessary level of qualifications to enter into iVET as many of them currently are not qualified in terms of basic skills. This does of course not imply that the door should be shut on those who are not prepared. Rather, all pupils should be offered the right level of education at the right time to ensure that as many as possible can stay in education.

DI considers that the Danish iVET system works well, much due to the heavy involvement and integration of companies in the system and the considerable amount of time pupils spend learning on the job. The system is expensive for companies, and they have a lot of responsibility, but can therefore also demand something in return.

There is, however, also room for improvement. Schools are currently dealing with a wide range of tasks beyond teaching and training, mostly relating to social problems. This takes away focus from being able to deliver teaching and training corresponding to the capacity of the pupils, with top performing pupils often left suffering. This is a concern for DI, who is working for excellence in iVET and further investment in high calibre students.

Further, it has become evident not least during the economic and financial crisis that companies sometimes have difficulties in taking on apprentices and if they cannot hire apprentices, the system does not work. Thus, and ideal system could be the current system but with a school-based supplement combined with whatever apprenticeship training is possible for contingency in difficult times.

Overall, it is also important to try and involve more companies in iVET, getting them to open their doors to apprentices. Simultaneously, DI works to put pressure on the system to ensure that it is an attractive deal for companies, that schools are well-functioning and of high quality, and in constant dialogue with companies. This is needed to keep the companies engaged in the system.

Sources:
DI
Cedefop
Danish Ministry of Education

ESTONIA

Area: 45,228 km^2

Population: 1.3 million

CEEMET associate member: EML

Website: www.emliit.ee

Basics

Initial VET in Estonia starts at upper secondary school (15/16 year-olds), and is a **school-based** system. **The minimum study period is three years** and vocation or profession-related studies must account for at least 50 % of the total volume of the curriculum. The volume of **practical study is at least 25 %** and the volume of work practice is also at least 25 % of the volume of vocational training.

Based on figures from 2008, approximately **33% of all students acquiring secondary education were in vocational education and training**

IVET provides access to higher education in terms of technical studies. Since the 2006/2007 academic year, pupils who have completed a secondary vocational education curriculum in a vocational school can study general education subjects of their choice for up to 35 additional study weeks (the so-called additional year) and take state examinations. This increases the competitiveness of graduates of vocational schools with regard to further studies at the tertiary education level. During the voluntary additional year, the pupils' studies take place in adult upper secondary schools or in the evening or distance learning departments of upper secondary schools and are free of charge. A total of **11.2%** of iVET graduates continue their studies in **higher education**.

Of the iVET graduates in 2006/07, **72% started working within 6 months of graduating**, but for those in 2007/08, finding a job was already significantly harder – after 6 months, 67% of graduates had started working. In line with the overall rise in unemployment, the number of unemployed graduates also increased – from only 2.6% in 2007 to 6.1% in 2008. The major share of graduates started working in the acquired or similar profession.

Governance and Actors

The majority of iVET schools in Estonia are **state run**, but schools can also be privately run or run by a municipality. At the level of legislative and administrative power, the *Riigikogu* (Parliament), central government and the Ministry of Education and Research administer the education system. However, **direct responsibility for iVET governance lies locally** with the county, local government and educational institutions.

The **Vocational Education Institutions Act** provides for the **participation and involvement of social partners** in all aspects of VET. The social partners are involved in planning strategic developments in VET (participation in relevant working groups and the VET Council advising the Minister of Education and Research), developing professional standards and national curricula, in professional examination committees etc. On a local level social partners are directly involved in the governance of iVET institutions through the iVET school councils and must constitute over 50% of the council members. Thus, **social partners have a strong influence both at the national and local level**. For instance, school curricula are prepared by schools and their boards on the basis of the national curricula for vocational education. The preparation of national curricula is coordinated by the National Examinations and Qualifications Centre (NEQC) and the work is organised in working groups of vocational education experts. The social partners hold a majority of the seats in the (NEQC).

Vocational education in Estonia (state, municipal and private) is **publicly funded**. In recent years, the learning environment in vocational educational institutions has been modernized, primarily with the assistance of **European Union structural funds**. More than half of the vocational education investments made over the last three years have been funded by foreign aid. In 2008, the Government of the Republic approved the investment plan for modernizing learning environments in institutions of vocational education until 2015, which contains investments totalling 3.6 billion EEK (ca 230 Mn EUR)

Industry Involvement in iVET

EML, the Federation of Estonian Engineering Industry, **mainly works on the systemic level** together with representatives for the Ministry of Science and Education on the regional/local government level as well as with the national interprofessional employers' organization.

They have an influence on the **legislative framework** for iVET in terms of professional standards and as a sectoral organization they are also formally involved in **curricula development** at the regional level.

The work EML does on iVET has resulted in the **creation of apprenticeships and traineeships, joint projects and promotional actions.**

Our Point of View

Currently an important issue for the Estonian employers association is to **continue raising the interest of young people for metalworking professions.** Another important matter is the **further development of the vocational allocation system**, transition from a 5-stage to an 8-stage qualification system.

EU fundraising is working well in Estonia. Due to EU financial aid, three vocational education centres had the opportunity to modernize their premises, machinery and equipment within their laboratories. The utilization of these funds have worked very well and resulted in an immediate increase in the number of young people interested in metalworking studies and professions.

A weak aspect of this system is the low relevance and popularity of VET paths within the previous education years. However, in general the system works quite well from EML's perspective, also due to the recent overhaul of the Estonian VET-system and the successful project INNOMET dedicated to the engineering industry.

There is still room for some improvement, including the **need to foster cooperation between vocational education centres and business enterprises**, namely in the area of traineeships and in the modernizations of curricula.

Sources:

EML
Cedefop
Estonian Ministry of Education and Research

FINLAND

Area: 338,424 km^2

Population: 5.3 million

CEEMET member: THE FEDERATION OF FINNISH TECHNOLOGY INDUSTRIES

Website: www.teknologiateollisuus.fi

Teknologia teollisuus

Basics

Initial VET in Finland starts at upper secondary school (15/16 year-olds), and is a **school and dual-based system. Initial vocational qualifications can be completed in 3 ways**: through school-based education, in apprenticeship training or by demonstrating the attained knowledge, skills and competences (KSC) directly in a test. Choosing the third option does not necessitate participation in any formal school-based education. Training that prepares for the KSC tests is however offered by the VET schools. All programmes leading to initial vocational qualifications are today learning outcome-based comprising 120 credits. In a school-based education the objective is that the qualification can be completed on average in three years. Time spent in on-the-job learning depends on the type of iVET. In the school-based system, a minimum of 20 credits must be achieved through on-the-job learning. **In apprenticeship programmes, approximately 70-80% of the time is spent in the workplace**. In 2008 about 127 000 pupils studied in iVET programmes at schools or in apprenticeship training. Out of these, 43% (55 000 pupils) aimed at completing an iVET qualification in technology. **Of the pupils in iVET programmes, approximately 10% are in apprenticeship training**. In addition, in the fields of technology annually some 28 000 pupils participate in training which prepares for KSC tests for VET qualifications. **Overall, of the 94% of school leavers that continue schooling immediately after basic education, 42 % go into iVET**.

In principle, those who have completed iVET have access to both university and polytechnic education in all fields of study. **In polytechnics, on average 40% of the new students have an iVET degree**. The universities usually have a quota for applicants who have not passed the matriculation exam.

Governance and Actors

IVET schools in Finland can be either **publicly or privately run**. Of the iVET schools, 46% are public and maintained by the municipalities or bodies founded by municipalities. The rest are private schools. However, in terms of school-based iVET, 86% of pupils attend a public school.

In terms of **governance of the iVET system**, the actors involved are national government, municipalities, social partners and companies. At national level, the **Ministry of Education and Culture** is responsible for the strategic and normative steering of VET and leads national development. There are several expert bodies supporting the work of the ministry, usually with social partner representation. The **National Board of Education** is a national agency under the Ministry of Education and is responsible for development, monitoring, supporting and evaluation of primary and secondary education as well as adult education and training. It designs the core curricula and provides the framework for initial vocational qualifications and competence-based qualifications. The criteria for state funding are also set at national level.

Municipal authorities play an important role in iVET as they are responsible for organising basic education and are partly responsible for financing it as the state financing goes to municipalities mainly as unearmarked. There is no statutory obligation for municipalities to organise VET, but they are obliged to contribute to its financing. Related to the structural changes in the municipalities system and the rise in competency requirements in working life, the **VET school system is being reformed** resulting in bigger and more effective institutions.

The most important channels through which the **social partners** can participate in planning VET aims and emphases are the **training committees**, the **Advisory Board for Educational Cooperation** and the **Adult Education Council** set up by the Ministry of Education. The task of training committees and the Advisory Board for Educational Cooperation is to plan and develop among other things vocational education and training and to promote interaction between education and working life in cooperation with the Ministry of Education and the Finnish National Board of Education.

In terms of **school governance**, all vocational education and training providers (be they public or private) are responsible for organising training in their areas, for matching provision with local labour market needs, and for devising curricula based on the core curricula and requirements. They also decide independently what kind of institutions or units they run. The responsibility for organising, developing and administrating education rests with an institutional board. In public VET schools the governing board consists mainly of the representatives of the municipalities. **Companies and social partners are, however, represented on advisory boards**. Also, vocational institutions must always have a student body.

In Finland, the **school-based part of iVET is publicly funded** while the **companies pay for training that takes place in companies and supervision during the on-the-job learning periods**. **Apprentice wages are paid by the employer** according to collective agreement. The pay varies in different fields, but is usually approximately 80 % of the wages of a skilled worker in that particular field. I**ndustry also directly funds training in a number of private schools.**

Industry Involvement in iVET

The Federation of Finnish Technology Industries is an active stakeholder in the area of iVET at all levels. The organization works together with **central government** on issues relating to the **National Qualification Framework (NQF), developmental initiatives related to the qualification structures and curricula and pedagogy**. They also have influence on the **legal framework** for iVET through regular dialogue with the Ministry of Education and political parties, through participation in preparatory work and through formal feedback on the new Bills.

Further, the Federation works with **regional/local government on developmental issues** with other stakeholders as well as with the regional Employment and Economic Development Centres. The Federation also works together with the **national interprofessional employers' organization** on iVET in their education and training working groups as well as with trade unions. At the local level, they work **directly with schools** on developmental initiatives with member companies and other stakeholders. This work has typically resulted in curricula revision, partnerships, recruitment initiatives, apprenticeships, traineeships, joint projects and promotional actions. Most of the initiatives are based on **broad cooperation among the different actors**. The industry's role in iVET has in the past 10 years gradually increased.

The industry is also involved in **quality assurance of iVET education** in the area of **exams, ISO and (sector specific) diplomas**. Both initial and further VET qualifications or their parts can be completed through demonstration of attained Knowledge, Skills and Competencies (see above). The industry is involved in designing these tests and in the assessment of the learning outcomes.

Our Point of View

One of the most important questions for the Federation of Finnish Technology Industries is the shortage of competent teachers working within the technology industry field. In some fields of mechanical engineering over 50 % of the VET teachers are anticipated to retire in the next 5 – 10 years. A new statutory order is expected to be issued by the end of 2010 to redefine the qualifications that capacitates for the VET teacher's positions. The new order would make it possible for people possessing at minimum 5 years work experience in industry and a further VET qualification in the relevant field to become selected into a teacher position at a VET school. Simultaneously, the Ministry of Education and Culture and the National Board of Education are expected to launch a programme together with the VET schools and the social partners, such as the Federation of Finnish Technology Industry and the Metal Workers Union, to support the VET schools in overcoming the shortage of teachers and to support the teachers in their capacity development, for example training in pedagogical skills, possible higher education studies, regular on-the-job learning periods in industry.

One of the positive and well-working factors in the Finnish iVET system is linked to the practical training provided during iVET. All the iVET programmes in Finland including the ones completed in formal public schools include an on-the-job-learning period, the extent of which is at minimum 20 credits out of the total of 120 credits. There is a common understanding between the industry and the iVET schools that on-the-job learning must be an integral part of iVET. The industry is committed to providing the pupils with placements for these periods and participates in the supervision.

However, according to the Finnish association **there is still some room for improvement of the grant procedure for the iVET school funding system**. About 98 % of the funding of the school-based iVET in Finland is still determined on the basis of the number of enrolled pupils. A larger share of the funding should be determined on the basis of the quality and impact of education. Furthermore, because of the different funding models applied to school-based iVET and apprenticeship vocational training, the VET schools seldom encourage the pupils to combine or move from a school-based to an apprenticeship programme even though it could be of interest for some pupils and local industry.

In Finland the technology industry companies and the iVET schools and other stakeholders have a long tradition in co-operation and the industry is involved in improving iVET in many ways as described above. Based on the feedback received from the companies, the industry is overall quite satisfied with the present iVET system, but **there is still some work to be done to reach what can be called an ideal system from an employer perspective:** a modular structure of the qualifications and a more open platform of training modules crosscutting the different study fields (e.g. mechanical engineering, electrical engineering, information technology, sales and marketing, foreign languages, etc.) and thus taking into account the emerging competence needs are needed and being worked out to improve the effectiveness, flexibility and renewal ability of the VET system.

Also employers should contribute to the amelioration of iVET, providing pupils, teachers and the managers of basic education and iVET schools with interesting and challenging on-the-job training placements.

The Federation of Finnish Technology Industries supports networks that promote long-term co-operation between companies and iVET schools. Such an approach to cooperation makes it possible to jointly develop different lifelong learning paths for iVET pupils as well as for the skilled workers employed by the industry based on the jointly anticipated future competence needs in the industry. To achieve the level of world-class excellence, special modules targeted to the most talented pupils/employees are worked out as well.

Finally, **also at European level there are some initiatives that must be taken to support the improvement of iVET**. The implementation of the EU 2020 Strategy is of course one of the fields of action. It is important that the Commission initiates as soon as possible the preparation of a comprehensive program of actions in support of improving the competitiveness of work and industrial production in Europe to the world class.

There is a need to continue emphasizing the **focus on learning outcomes and quality** in iVET at European level too and to ensure that the EQF/NQFs –process does not lead to a reduced flexibility and renewal ability in the VET systems.

The importance of the technology industry for Europe´s economy and people's everyday life should be highlighted and given a higher emphasis in the EU-funded programmes and European level communications.

Sources:

The Federation of Finnish Technology Industries

The Finnish Ministry of Education and Culture

FRANCE

Area: 674,843 km^2

Population: 65.4 million

CEEMET member: UIMM

Website: www.uimm.fr

Union des Industries et Métiers de la Métallurgie

Basics

Initial VET in France consists of both a **school-based system** and a **dual system with apprenticeship,** starting at 15 years of age. Education is compulsory till the age of 16. Approximately 40% of iVET students in France opt for the apprenticeship system.

Two school-based VET options are offered: the ***Lycée Technologique*** and the ***Lycée Professionnel***. The first one lasts for three years and leads to the award of a *baccalauréat technologique*. The second one leads to the awarding of the *baccalauréat professionnel* after the completion of three-year path. In the latter, students spend **40% to 60% of the time in practical training**. Students can also finish at the end of the second year obtaining the *Certificat d'Aptitude Professionnelle* (C.A.P.), which is intended to equip students with the skills required to enter the labour market.

A reform of *lycées* was implemented at the beginning of the 2008/09 academic year. In light of the Nation's objective to help 80% of any generation to obtain the *baccalauréat* and increasing expectations in terms of vocational qualification, *lycées* - including VET ones - are now all structured on a three-year system. With this reform the *Brevet d'Études Professionnelles* (B.E.P.) has been included into the *baccalauréat professionnel*.

The ***'Centres de Formation d'Apprentis'*** (C.F.A.) offer a **dual system with apprenticeship.** Apprentices follow the necessary training to obtain the same diploma available in the school-based system, attending the same programs and exams provided in the *lycées*. Apprentices are submitted to employee status and sign a paid contract lasting from 6 months to 3 years depending on the diploma offered.

Both *Lycée Technologique* and *Lycée Professionnel* allow students equipped with a *baccalauréat* diploma to access post-secondary VET, leading to the award of the *brevet de technicien supèrieur* or a *diplôme universitaire de technologie,* or to university education. Under the same conditions of Lycées, C.F.A. provide the same opportunities.

Governance and Actors

In France, secondary VET schools can be **public, semi-public** or **private**. At **national** level the Ministry of Education has the final say on curricula, guidelines for teachers, administration of the personnel and rules governing school administration. The Ministry of Education also organises examinations and awards national qualifications, in particular the certificate *baccalauréat*. **Social partners are involved** at this level in the **creation and definition of VET diplomas**. They cooperate in the frame of **consultative tripartite bodies** (composed of state, employers and trade unions' representatives), established by law.

At **regional** level the governments are responsible for pedagogy and for the construction and maintenance of public-sector school buildings. At this level, social partners are involved in the governance of C.F.A., which can be created by municipalities, chambers of commerce or directly by employers' organisations and companies.

Employers can dedicate apprenticeship taxes and levies to the funding of initial VET schools.

Industry Involvement in iVET

UIMM, Union *des Industries et Métiers de la Métallurgie*, cooperates at **national level** with the Ministry of Education, being consulted as advisor. UIMM is also active in **promotional actions** to improve the image of the sector, such as through the nation-wide initiatives called *Classe en enterprise* and *Bravo l'Industrie*. UIMM is also involved in **recruitment initiatives**, **joint projects**, **traineeships** and **curricula revision**.

At **regional level,** the association is involved together with local governments in **setting up and managing the so-called *Centres de Formation des Apprentis de l'Industrie* – C.F.A.I.** As a result of this activity, for instance, UIMM has been conducting since 1998 a survey on the employability of apprentices six months after their apprenticeship. In 2008 C.F.A.I. trained approx. 25.000 people and assured 92% of employment, showing a higher rate compared to the employment rate of other C.F.A. on average (65% in 2008).

In some cases, iVET schools can act as advisors to individual companies, but UIMM considers that this activity can be improved.

Our Point of View

One of the most important issues for UIMM is **to attract more young people in the training pathways which prepare for industrial jobs,** whether they are delivered by public or private vocational training schools or in training centres for apprentices. The difficulties stem from, on the one hand, a very bad guidance system which dissuades the «good students» to choose technical and occupational training pathways and, on the other hand, the negative image of industry.

What works well in the French iVET system is the fact that the Ministry for Education really **associates the professionals to the creation and renewal of the diplomas**. This is very positive as long as the professionals take advantage of this opportunity, are really committed and thus spend time on these tasks.

A drawback of the French system, which is an important point, is the l**ow level of general and basic knowledge of iVET students**, which only partially depends on the competence and commitment of the teachers, essentially linked to the bad system of guidance.

Regarding the role of employers in this, they can play a very important role in improving iVET. **Employers should be involved at all levels** to positively influence the system, welcome young people in their companies and participate in the elaboration and development of the programmes as well as in the evaluation. For UIMM it is important that, to ensure this, the persons in charge of these programmes at academic level understand that companies involved in this process spend precious time and therefore need to see it optimised.

In terms of the **European level**, Europe should recommend principles leading to progress such as the **definition of qualifications in terms of learning outcomes, quality assurance and making schools more responsible and open to the economic world**. The European institutions should also **promote and foster the exchange of best practices of the cooperation between industry and schools**.

Sources:

UIMM

Ministère de l'Education nationale

GERMANY

Area: 357,021 km^2

Population: 81,7million

CEEMET member: GESAMTMETALL

Website: www.gesamtmetall.de

Basics

Initial VET in Germany starts at upper secondary school (15/16 year-olds), and is a **dual-based system,** with 3-4 days a week spent in apprenticeship. IVET normally lasts for three years and approximately **53% of an age cohort** in Germany chooses vocational education at upper secondary level.

Those who have completed iVET can immediately work within the line of industry or trade for which they have studied. IVET can also provide **access to higher education in terms of entry to colleges** (Fachhochschule). In 2009 the **Stralsunder Agreement** was signed by the Standing Conference of the Ministers of Education and Cultural Affairs of the Federal States of Germany (Kultusministerkonferenz, KMK), which provides common **criteria for the access to higher education** for vocationally qualified candidates without schooling entrance qualification from 6 March 2009. Eight percent (**8%**) of iVET pupils **continue to onto higher education after graduation**. The placement rate for iVET graduates in Germany is very high, with **90% finding a job within six months of graduating**.

Governance and Actors

IVET schools in Germany are **publicly run** and both federal government and regional (*Länder*-) government are involved in the system level governance of iVET. Nevertheless, education is **primarily a competence of the *Länder***, with all legislation on schools being *Land* legislation. Hence, the regions are responsible for the governance of iVET schools, but harmonization is ensured at Federal level by the KMK. The KMK issues framework curricula for vocational schools, while curricula for general education at vocational schools essentially are developed by the individual regions.

Social partners in Germany play a significant role in iVET and are **formally involved in legislation, curricula revision and quality assurance**. At the federal level, they are active in the main committee of the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung, BIBB). The Institute's mandated tasks include conducting research on vocational education and training, developing vocational education and training, serving in an advisory capacity and providing services.

At the *Länder* level, the social partners are members of the competent ministry's VET committee as well as members of the regional Chambers of Commerce and Industry (Industrie- und Handelskammer, IHK). The IHK are responsible for organizing exams and examination boards, which are tripartite bodies including employers, trade unions and VET school teachers.

In Germany the **school-based part of iVET is publicly funded** while the **companies assume the costs of the on-the-job training and pay a training allowanc**e in accordance with the collective agreement in the sector.

Industry Involvement in iVET

Industry plays a vital role in iVET in Germany as they constitute the training partner in the system. The Social Partners of the MET industry together with the Federal government, notably the Ministry for Economics and Technology and the Ministry of Education and Research, draw up **training regulations** (Ausbildungsordnung) and **framework curricula**. They have been deeply involved in the reorganization of many occupations, e.g. the introduction and design of some two-year professions (Maschinen- und Anlagenführer, Industrieelektriker). They also work on a voluntary basis together with their regional members with the *Länder* governments, advising them on iVET in their sector while their member companies work directly with schools as training providers.

Typically, the work that Gesamtmetall has undertaken in iVET together with other actors has resulted in c**urricula revision, joint projects and campaigns** on, for instance, attracting young academics for engineering or more girls to technical education (support for the "Girls Day"- Event).

Our Point of View

One of the **most important issues** for Gesamtmetall is currently the **introduction of new occupations especially to offer low achieving school leavers a job perspective**. In addition, the development and ongoing discussions on the **implementation of the National Qualifications Framework (NQF)** also has high relevance.

In the German iVET system, there is a **well-functioning cooperation between the Social Partners** (e.g. responsibility for the content of the *Ausbildungsordnungen*). For the sector association, the dual system as such is also something which is working well, because of the close cooperation between companies and VET schools it has permitted.

However, there are still some difficulties to integrate low achieving pupils into the vocational training system. In fact, according to official data, around 20 per cent of the school leavers are not able to start VET courses.

From an employer perspective, the ideal system would be made of **more flexible and company-related training** (in terms of duration, content, etc.). Further, the EU should also participate in the improvement of the system, promoting **policies to increase the mobility of apprentices and transparency**, in order to allow companies to compare competencies on a transnational and Europe-wide level. Finally, iVET graduates together with future occupational qualifications have to be of **equal value** to general secondary school leavers and university graduates.

Sources:

Gesamtmetall

ITALY

Area: 301,338 km^2

Population: 6.2 million

CEEMET member: FEDERMECCANICA

Website: www.federmeccanica.it

Basics

Initial VET in Italy starts at upper secondary school at 14 years of age and is a **school-based system**. Compulsory education ends at the 2nd year of upper secondary school. In 2009/2010, approximately **57% of an age cohort** in the country chose vocational education at upper secondary level.

Initial VET in Italy constitutes **two different programs**: Technical Education, so called *Istruzione Tecnica* (about 34% of all upper secondary students) and Professional Education, so called *Istruzione Professionale* (about 23% of all upper secondary students).

The Technical VET is a 5-year program internally divided into two units of two years each, followed by a final year of further specialization. Only after the accomplishment of the whole 5-year cycle, students obtain the diploma called ***Diploma di istruzione tecnica***. The Professional VET is divided into three stages: after three years students obtain a professional qualification and can decide to enter the labour market or carry on studying; after another year they are awarded a special diploma, again allowing them to look for a job or to access to the last year of upper education. Only after the completion of the 5th year of school are VET students awarded with the ***Diploma di istruzione professionale.***

IVET students who want to enter University or other post-secondary studies, namely ITS and IFTS, have to be awarded with the *Diploma di istruzione tecnica* or the *Diploma di istruzione professionale*. About half of all Technical VET students go on to University compared to 8% within the Professional VET program.

Governance and Actors

Upper secondary schools may be **public, semi-public or private**. When schools are public or semi-public they are under the Minister of Education's responsibility. 90% of technical schools are publicly run.

At national level, **social partners are informally involved in the governance** of iVET systems, in particular in terms of legal reform of the whole structure, framework programs and curricula. Confindustria, the cross-industry employers' organization, is informally involved by the Minister of Education in the **legal reform of the general structure of upper secondary schooling**, signed on 4 February 2010. This reform will be implemented as from September 2010, starting to be applied only at the first year (9th). Governments at regional level have a role in the selection of the different programs and curricula to be offered on the territory. At **territorial level**, the governments are simply responsible for management and maintenance of schools' infrastructures.

So far, Social Partners have not been directly involved in the governance of **iVET schools**. However, as a consequence of the above mentioned reform, an employers' representative should be appointed to participate in the Scientific Committee to be established as from September 2010 within each VET school. These Committees will aim at strengthening the link between the school's education, the scientific research and technological innovations, the territorial needs and demands from business.

Each school is by law autonomous in organization, research and development and experimental activities. In virtue of this autonomy, technical schools are able to reach some forms of cooperation agreements at company level. This means that VET schools can benefit from some in kind contributions from the local companies or branches and local employers' organizations.

In Italy, iVET can be both **publicly or privately funded**, according to the respective public or private governance. Minor public funding, autonomously decided at regional level, can be granted for helping families to send their children to private iVET schools.

Industry Involvement in iVET

Federmeccanica, the Italian employers' association for the metal, engineering and technology-based industries, **mainly works on the systemic level via Confindustria** together with Ministries on an informal basis (it has become customary practice). They are called for advice when issues specifically concern the MET sector. Federmeccanica took part in the ongoing reform as advisor for the part concerning the curricula and training objectives of VET school programs linked to the MET sector.

Our Point of View

The most important current issue for Federmeccanica in terms of iVET is to work towards **overcoming the gap between the needs of local industry and the qualified technicians available**, both on a quantitative and qualitative basis. To tackle this problem, a reform for the iVET school system and post-secondary VET (ITS) school system has been approved. For Federmeccanica, the most important aspect of this reform includes the participation of companies on proposed technical-scientific boards of schools. Federmeccanica is now involved in the implementation of this reform by informing and inviting employers to be active and to participate on these boards. This way it would be possible to adapt programs and education paths to labour market needs and skill requirements.

What works well in the Italian iVET system is the above mentioned **school autonomy established by law**. This means that **schools are autonomous** in organisation, research and development/experimental activities, so that they can better focus on the **vocational needs of local industry and to establish cooperation with local companies**.

However, Federmeccanica can see **difficulties in putting into practice the theoretical possibility of close collaboration** between the technical school system and local industry, taking advantage of the potential of the school autonomy mentioned. Not least, it is difficult to persuade employers of the long-term benefits of investing into this type of cooperation due to the human and financial resources it requires from the company.

Together with this problem, there is **an image problem** with regard to technical schools and the MET sector. Accordingly, VET schools are not able to attract the best pupils and proactive and motivated teachers.

From the employer perspective, **it would be ideal to set up a permanent national dialogue between school and industry. From this, cooperation as well as the anticipation of industry's needs and the capability of the schools to be flexible and adapt to new technologies and labour market demands might emerge**. Moreover, **information for families** should be made available in order to set up high-quality guidance.

Employers could improve the situation by being more conscious of the importance of school-industry cooperation and by opening their doors to the school system. They are one of the main actors within the within the iVET system and have an important role to play which ultimately will benefit their competitiveness.

Federmeccanica considers that at **European level** there is also some work to be done. In particular, a **greater mobility of students** and an **easier exchange and transfer between EU countries** should be promoted together with campaigns aimed at **improving the image** of technical studies and the European manufacturing industry.

Sources:

Federmeccanica

Ministero dell'Istruzione, dell'Università e della Ricerca

LATVIA

Area: 64,589 km^2

Population: 2.2 million

CEEMET associate member: Association of Mechanical Engineering and Metalworking Industries of Latvia

Website: www.masoc.lv

Basics

Initial VET in Latvia starts at upper secondary school (15/16 year-olds), and is a **school-based system.** The general study period ranges from **two to four years** depending on path and practical **on-the-job training comprises at least 20-25% of studies**. Approximately **30%** of pupils in Latvia who enter upper secondary school choose vocational education and training.

There are two types of iVET in Latvia: **1) Vocational education programmes** lasting two or three years focussed on theoretical and practical knowledge/skills for the pursuit of an occupation. Completion of training does not confer right of entry to higher education; and **2) Upper secondary vocational education programmes** lasting four years, focussing on higher-level occupational knowledge, with an extensive general educational component. Passing the course confers right of entry to the Latvian higher education system. In 2008/2009 approximately **91% of pupils** going into vocational education chose **upper-secondary programmes**.

Governance and Actors

IVET schools in Latvia are mainly publicly run and the iVET system is formally governed by national government and local government. As the majority of VET schools are state-owned and run, the national budget is the main source of funding.

The Vocational Education Law and other related laws and regulations determine the role of social partners in VET development. On the strategic level, iVET issues are addressed within the social dialogue process by the **National Tripartite Cooperation Council** (NTCC). The NTCC is a collaborative body that includes representatives from government, employers' organisations and trade unions. Within the NTCC, which is chaired by the Prime Minister, there is a special **sub-council on Vocational Education and Employment**. The role of the sub-council is to participate in the development of the State Development Plan, provide advice on human resources development and employment and participate in the development of the occupational standards determining the curriculum and content of vocational education programmes.

At the regional level social partners are involved in promoting cooperation as well as the establishment and coordination of regional VET.

Based on the relevant standards and sample programmes, schools develop their own training programmes in accordance with the needs of the local labour market.

Industry Involvement in iVET

MASOC, the Latvian Association of the Mechanical Engineering and Metalworking Industry, works on iVET issues at national government level as well as at regional government level. They also work together with the national interprofessional employers' organisation and directly with schools.

At the central level MASOC is represented on the **Vocational Education and Employment** sub-council in the NTCC and thus has an advisory role in the iVET legislative procedure. As a sector organisation, they also have **formal influence at national level on curricula**

development and development of new iVET structures together with the interprofessional employers' organisation as well as companies. On a regional level, it is MASOC's member companies who work on curricula and iVET development together with regional authorities and iVET schools.

The industry is also involved in the **quality assurance of iVET schools** in the area of **exams and diplomas**.

Overall, MASOC's work in the area of iVET has typically resulted in **curricula revision, creation of traineeships, joint projects with other stakeholders and promotional actions**. MASOC is also coordinating implementation of joint training programs for member companies aimed at qualification improvement and promoting lifelong learning.

Our Point of View

One of the **top priorities** for MASOC in terms of iVET is to develop a module-type training system, introducing a credit point system. The aim of the module-based system is to promote faster retraining and opportunities for further training according to the needs of the labour market.

One of the things that works well in the Latvian iVET system is that the sector association has a well developed and unified **system for development of professional standards**, based on which training programs are being developed. Employers develop profession descriptions that are further developed into profession standards jointly by employers and representatives of education establishments. The final version of a profession standard is approved by the Vocational Education and Employment sub-council in the NTCC.

In Latvia there is a unified examination system established with a common database of examination questions and unified system for evaluation of practical work. However, MASOC believes that **general image and prestige of vocational education needs to be improved to attract more students**. Currently there is an approximate ratio of 30% / 70% for pupils choosing vocational education and general secondary education. The objective is to change this ratio to at least 50% VET students. Lack of financing and comparatively low wages for teachers in VET is also an issue.

From an employer perspective an **ideal VET system** ensures the supply of a qualified labour force according to market needs. **Flexibility** is one of the top priorities in order to reduce time needed to retrain or improve qualification according to the changes in market situation or technology.

Also, the salary level for VET teachers should be at least at the same level as specialists working in the sector.

Employers play an important role in the improvement of the iVET system. Besides participating in development of profession standards, the employers should play a crucial role in supplying a field for practice and opportunities for VET players.

At the **European level, different exchange programs and internship schemes should be further developed t**o allow VET students and teaching staff to exchange experience and improve their qualifications.

Sources:
MASOC
Latvian Ministry of Education and Science
VIAA/SEDA

LITHUANIA

Area: 65,200 km^2

Population: 3.3 million

CEEMET associate member: LINPRA – Engineering Industry Association

Website: www.linpra.lt

Basics

In Lithuania, the initial VET system is flexible as regards the education and age requirements – from primary education (4 years) with the age of 14 and above, to the lower (10 years in total) or upper secondary (12 years in total). Vocational education may be combined with secondary education, and in this case it takes one year longer than regular secondary education. iVET is a **school-based system usually lasting for two or three years**, with **practical training comprising 60-70% of the total time allocated** to teaching vocational subjects. This training is usually carried out in school-based workshops and companies. Apprenticeship is also possible based on availability of contracts with companies or organisations. In 2008, **23 %** of pupils after lower secondary education were enrolled in vocational education and training, while this percentage among graduates of upper secondary education was only 8,3 **%.**

Governance and Actors

Those who acquire an upper secondary education diploma may **continue their studies in higher education** (university of college study programmes). The most successful graduates or those with work experience in the field of acquired qualification are awarded additional entrance points when applying to higher education, which increases their opportunities for receiving state funding for their studies. Of the iVET graduates in 2008 that chose to go directly into employment, **around 95 % got jobs within 6 months**

Responsibility for the development of the iVET system lies with the **Ministry of Education and Science**. However, other state institutions, municipalities and the social partners also participate in governance of iVET at the systemic level through the **Vocational Education and Training Council**, which functions as an advisory body operating at the national level. Regarding strategic issues on the regional level, county councils play an advisory role.

On the **sectoral level**, there are 14 **Industrial Lead Bodies** equally representing sectoral employers, trade unions and education providers and these are the main consultative bodies of the Ministry of Education and Science in developing **VET standards and curricula.**

The main VET providers in Lithuania are approximately 80 **vocational schools**, which in the future will have the status of self-governing institutions (public entities). The process of reorganization from state-governed institutions to public entities is under way, and about 20 **% of them have been reorganized so far.** This will enable different stakeholders (enterprises, social partners, regional and municipal government, etc) to participate in the management and funding of iVET providers. VET programmes are developed by the providers, in cooperation with employer representatives (sectoral organizations and the chamber of commerce) and follow the VET standards and requirements approved by the Minister of Education and Science.

Recently, the **sectoral practical training centres** (SPTC) framework was introduced. The main aim of the SPTC is to ensure that learners, using the latest technologies and equipment, gain practical skills matching the needs of the labour market. These regional centres are expected to start their activities in 2011-2012, and will be open to VET pupils, higher education institutions, employees from sector enterprises, vocational teachers and others.

IVET is **funded mainly by the state budget** in accordance with a methodology for calculating training costs for each student.

Industry Involvement in iVET

LINPRA, the Lithuanian Engineering Industries Association, works with iVET issues on the national level together with the Ministry of Education and Science through the Vocational Education and Training Council and the Industrial Lead Bodies. **Most of LINPRA's work with iVET on the central level is informal**, consisting of participation in work groups, projects and case-by-case meetings on actual problems of developing the iVET system. In terms of curricula, sectoral industry associations are seeking to strengthen their role as currently it is the Chamber of Commerce that formally participates in curricula development.

LINPRA also works together with the **national interprofessional employers' association** on iVET issues, as well as with the **Vocational Education and Training Development Centre** (formerly the Methodological Centre for Vocational Education and Training), established by the Ministry of Education and Science to ensure the developments of the Lithuanian qualifications system corresponds to the needs of the economy as well as national and international initiatives. Further, LINPRA works **directly together with iVET schools** (LINPRA has VET schools among its members).

LINPRA's work with these actors on iVET issues has resulted in **curricula revision, partnerships, recruitment initiatives, creation of apprenticeships and promotional actions**. The industry also participates in the **quality assurance of iVET schools** in the area of **exams and diplomas**

Our Point of View

There are two main issues in iVET for LINPRA:

1. **Quality of iVET** (namely, ensuring compliance of the curricula and practical skills with the industry requirements, development of the infrastructure of training, development of the trainers' competencies)
2. **Enhancement of motivation** for career of pupils and improvement of the initial level of their actual general knowledge.

What works well in the Lithuanian iVET system according to Linpra is the open **web-based system of information, counseling and career guidance called AIKOS** (www.aikos.lt), which has been in operation for 6 years, as well as the **exchange of experience** among counterparts from different countries. For instance, LINPRA has participated in European projects with many partners, especially with NORDMETALL and UIMM.

A drawback in the Lithuanian national iVET system is linked to the **lack of career motivation for technology-oriented education** (especially, vocational) due to a distorted public approach to career/education, where most of young people are seeking "easy" university studies after secondary school. Also, vocational, higher and university education do not correspond to the requirements of industry today.

In an ideal system, **employers should have more influence on the strategy and practice of vocational and other training**. The whole system of education must be improved starting with setting priorities and tasks for it in accordance with the socio-economic development of the society, i.e. **directly contributing to the growth of competitiveness of the economy**, etc.

There are a lot of measures which should be done by **employers to improve iVET**, starting first of all from the **improvement of the social image of technology-based industries and private training centres**. However, a real partnership with all the other stakeholders involved is essential.

Regarding the **European level,** LINPRA would like to see the European institutions **develop, monitor and maintain the model of the European qualifications system (together with related professional standards, curricula, etc.)** which is to serve as a reference (or template) for national authorities to adapt and implement in their own country. This would be very helpful and cost-efficient for many countries which do not have their own specific system.

Sources:
LINPRA
Lithuanian Ministry of Education and Science

NETHERLANDS

Area: 41,526 km^2

Population: 16.6 million

CEEMET member: FME

Website: www.fme.nl

Basics

Initial Vocational Education and Training in the Netherlands can be **both school-based** and **dual system** and starts at the age of 16. Students must attend compulsory full-time education till the age of 18. Approximately 50% of the students between 16 and 18 years of age undertook VET in 2009/2010.

Within upper secondary vocational education (*Middelbaar beroepsonderwijs* - MBO), there are two learning pathways: the **apprenticeship training** (*beroepsbegeleidende leerweg* – BBL) which is a **dual VET system**, and **vocational training** (*beroepsopleidende leerweg*-BOL), which is **school-based**. BBL is a learning pathway which can have **up to 80% of time spent in apprenticeship** in a company, and the rest at school. BOL is a more theoretical pathway where the proportion of practical occupational training (*beroepspraktijkvorming*, BPV) is **between 20% and 60%**. In the Netherlands, approximately 75% of a VET pupil cohort opts for the school-based system.

Both these VET courses are structured in 4 different levels, corresponding to respective diplomas. Each level's diploma serves as the entry requirement for the successive level. BBL and BOL give access to higher technical higher education (called HBO), after the completion of level 4. Having completed the HBO bachelor level, students have access to University (called *Maaster level*). Approximately **50%** of the level 4 VET BBL and BOL students go into further education, i.e. HBO.

Governance and Actors

In the Netherlands, iVET schools are **mainly public** and the national government usually has the final say. Together with the national government, **social partners** are **directly involved in the governance of the VET system**. At **enterprise** or **branch level** the social partners are also involved in **sector platforms**, setting the standards of the NQF for competence-based curricula. This standard framework gives input to the schools, which are directly responsible for the implementation of the NQF and the exam within vocational education.

Further, some companies are involved in the **supervisory boards of the VET schools**. While social partners are formally involved at national level in developing curricula and in designing new vocational education structures, company representatives are involved on an informal basis at different systemic levels.

The school-based system (BOL) is almost 100% publicly financed for the theoretical education, while the dual system (BBL) is 50% publicly financed.

Industry also contributes to funding of the iVET system bearing expenses related to the internship in the BOL system as the practical training is 60% backed by company contributions, and a relevant part of the costs related to the apprenticeship in the BBL as apprentices are **employed and paid by the company** they work for.

In the last three years, the industry role and contribution, in particular in terms of investment at regional and local level, has seen a significant increase. A variety of public-private partnerships exists. The technical sector (industry + building sector) is investing approximately € 300 million yearly in VET.

Industry Involvement in iVET

FME-CWM, the Dutch association of the employers of the Metal, Engineering and Technology-based industry, works at national level together with the Government on iVET-related issues. The association is in charge of managing and promoting **internships** and **apprenticeships** and also promotes **recruitment initiatives** and **joint projects**. Among these projects, FME promotes the **exchange of expertise** between companies and schools, providing personnel from the company side to teach in iVET schools as well as hosting teachers from iVET schools for an experience in the industry.

FME has influence on the standard setting of iVET, not only via its role formalized by law, but also through promotional activities such as the programme TechniekTalent.nu, which is a bank for several national good practices in the sector.

Our Point of View

Currently, the most important issues for FME in iVET are the establishment and management of regional networks for **setting a common agenda between iVET schools and companies** as well as the **promotion of formal public and private partnerships**.

The sector association is currently managing some strategic projects:

- An **exchange of expertise** between companies and schools, also hosting teachers from iVET schools for an experience in the industry.
- A start-up of an Associate degree program (higher education) preparing company personnel to teach in iVET schools
- Collaboration between public and private institutions for regional labour market information.

The competence-based iVET system in the Netherlands is considered to work really well. However, some weaknesses have been reported, namely the **quality of skills**, which do not completely meet the demand from the industrial sector, and the image of the iVET system, which sometimes is underestimated.

Employers can play an important role in improving the reported weak points and should give more input for future improvement of the iVET system. They should, for instance, build **tighter relations with students and schools**, try to be **more involved in the governance** of school institutions, invest in **sustainable public and private partnerships** and promote and provide advice on the establishment of qualification frameworks.

The **EU** institutions can also give an **important boost to the improvement of the system**, promoting exchange programs for students, young apprentices and education providers. This goal can also be better reached with the setting up of the European Qualifications Framework.

Sources:
FME
Cedefop

NORWAY

Area: 385,252 km^2

Population: 4.8 million

CEEMET member: NORSK INDUSTRY

Website: www.norskindustri.no

Basics

The first stage at which VET is provided in Norway is at lower secondary level through elective programme subjects, which enable 8-10th year students to try out subjects from different upper secondary level programmes.[3] VET programmes are available at upper secondary level (16-18 year-olds), and fall within a **dual-based system,** with **50 % of education spent in apprenticeship.** The standard model for iVET in Norway is the 2+2 model which refers to a four year programme divided into 2 years of school-based training followed by 2 years of company-based training which corresponds to one year in school. In 2006, **52%** of the pupils that enrolled in upper secondary schools **applied to a VET programme**.

Those who have completed iVET can immediately work within the line of industry or trade for which they have studied. In terms of Higher Education, iVET provides access to study for a Bachelor in Engineering.

Governance and Actors

IVET schools in Norway are publicly run with responsibilities divided between the national and regional level. On the national level, the Ministry of Education and the Directorate for Education and Training are responsible for curricula, the VET structure and the legislative acts, while the authorities at county level are responsible for VET dimensioning, dispensing VET financing including apprenticeships (from the state budget), for providing apprenticeships and for supervision. The governance of the IVET system is based on **tripartite cooperation** at both the national and the regional level and **strongly involves the social partners as well as the teachers' organisation and pupils' organisation**. The cooperation is mandated by the Education Act.

At national level, the social partners are represented on the **National Council for VET**, which is an advisory body. Each VET programme has its own Council. At the regional level, there is a vocational training board in each county, which has specific advisory tasks relating to the competences at county level. Social partners and teacher and pupil organisations are all active on these respective bodies.

IVET in Norway is publicly funded and employers receive a government subsidy for the apprenticeship training they undertake, equivalent to the cost of a student spending one year in school-based VET.

Industry Involvement in iVET

Active participation by social partners is a central element in the Norwegian VET system. **The Federation of Norwegian Industries** (Norsk Industri) works both with national and regional government on iVET and is very active on the National Council for VET. Industry has a **formal role** in developing curricula as well as new vocational education structures both at the national level and regional level.

[3] *Vocational Education and Training in Norway*, Norwegian Directorate for Education and Training, 2009

Outside of the National Council for VET, the Federation of Norwegian Industries is in regular contact with the relevant Ministers and civil servants, consulting on the legal framework for iVET. Overall, the work that the Federation has done on iVET has resulted in c**urricula revision, partnerships, recruitment initiatives, apprenticeships, traineeships, and promotional actions**.

Industry also participates in the **quality assurance** of secondary VET schools in the areas of **exams and diplomas**.

Our Point of View

By far, the **high dropout rate is currently the most important issue within VET** for **Norsk Industri**. Only half of those that begin VET finish it. Though they so far stand without a magic bullet solution, there has been an increased focus on this from the government, the schools and businesses lately. Increased focus on the **quality of the schools** and lower secondary education, and increased research on dropout, will hopefully yield results.

The **tripartite cooperation** between the employers' organizations, the employee organizations and the government is something that is working well in the Norwegian iVET system. It is based on a great amount of openness and trust. This gives the system the **flexibility** needed to make necessary adjustments without conflicts.

The Norwegian association has emphasized lack of good statistics and in-depth knowledge about VET. Most of the research on the Norwegian education system has not focused on VET. There is also a lack good statistics on when students drop out and how many receive a training contract with businesses. Some more data, national tests and research on VET is needed.

In order to improve iVET, national **employers can be more active in cooperating with schools** so that students are introduced to the industry as early as possible during their studies. Overall, there should be more cooperation between schools and businesses.

From an employer perspective, the ideal system should have more focus on VET also with regard to education in general subjects such as English (to be able to read manuals, etc.)

There is also room for action at the **European level**. The establishment of the European Qualifications Framework will probably lead to **more possibilities for exchange within Europe**. Systems for translating/understanding each other's education systems and diplomas will help when hiring international workers.

Sources:
The Federation of Norwegian Industries
Norwegian Directorate for Education and Training

PORTUGAL

Area: 92,090 km^2

Population: 10.7 million

CEEMET member: ANEMM

Website: www.anemm.pt

Associação Nacional das Empresas Metalúrgicas e Electromecânicas

Basics

Initial VET in Portugal includes a **school-based** as well as a **dual system**. It starts at upper secondary school (15 year olds) and lasts for 3 years.

There are two school-based pathways: **Technological courses** (*Cursos Tecnologicos)* with a compulsory internship and **Vocational courses** (*Cursos Profissionais)*. The curriculum structure of Technological courses favours the world of work, be it in the introduction of the technological project over three years, or with the compulsory inclusion of an internship. A large part of the Vocational course is dedicated to technical and technological training and permits students to develop specific competencies for a profession and directly access the labour market. Both courses lead to a *level 3 vocational qualification* diploma or to an *upper-secondary studies completion diploma* necessary to access higher education.

Pupils can also opt for a **dual-system course with apprenticeship** where the apprenticeship takes up a **minimum of 30%** of the total time spent in education, completed with simulated practical training. The education is provided by Vocational Training Centers and other accredited training bodies. The apprenticeship contract is between the trainee and the training body. Apprentices receive meals and transport payment. Depending on the family economic status, they can receive a small training grant. Apprentices receive a Level 2 vocational qualification or a Level 3 vocational qualification with a certificate of completion of secondary education, depending on the trainee's profile on entry.

After three years of both iVET paths, students can subscribe to a one-year **post-secondary non-tertiary education** (*Cursos de Especialização Tecnológica* - CET) or to **higher education,** which can be either polytechnic or university education. Some **5-6%** of students from MET industry-related iVET courses go into higher education.

One of the advantages of the dual system in Portugal is the relatively high placement rate for iVET students after graduation. Before the crisis, around 70% of school leavers from the MET industry-related courses found employment (the last 3 years of downturn have contributed to a decrease in placements).

Governance and Actors

In Portugal, secondary VET schools can be **run by the state** (via the Ministry of Labour or the Ministry of Education) or **by private institutions**.

Apprenticeship courses are run by Vocational Training Centres and other accredited training bodies. These training providers are under the control of *the Instituto do Emprego e Formação Profissional*. IEFP is a public body that belongs to the Ministry of Labour and gathers representatives from local authorities, social partners, companies and other stakeholders.

Social partners have a formal role in the governance of iVET, institutionalized by the Comprehensive Law on the Education System. This implies that they can give opinions and recommendations on **designing of new vocational education structures** and on **curricula development.**

The industry contributes to **funding of the dual-based system** via the IEFP. The contribution varies from 5% to 95% according to the respective protocol signed with the Ministry of Labour. In terms of practical training, private companies can apply and benefit from financial compensation for costs incurred by taking on a trainee and providing them with a tutor from the company staff. The theoretical courses are mainly publicly funded.

IVET schools can act as advisors to companies, i.e. on introduction of new technologies, production methods and sharing of know-how.

Industry Involvement in iVET

Associação Nacional das Empresas Metalúrgicas e Electromecânicas (ANEMM), the Portuguese Employer Association of the Metal, Engineering and Technology-based industry, together with other sector associations, has an **active role in the VET system**. They formally cooperate with the government, having a seat on the **IEFP** and other official committees. They also act as advisors to the national interprofessional organization. ANEMM also has a **direct influence on the standard setting for iVET**, in particular in the case of some training centers, where they are part of the administrative bodies.

Finally, ANEMM participates directly in the management of certain iVET schools/training centres as **member of the governing boards**.

Our Point of View

One of the most important issues for ANEMM in terms of iVET education is the **need for flexible systems guided by knowledge skills and competences (KSC) as well as the promotion of "Employer Qualifications".** The latter is a response to the majority of Portuguese employers having low education levels. ANEMM considers that VET schools can provide important training to rectify this problem.

The apprenticeship system (dual system) in Portugal has showed **positive results** on the acquisition of the right skills by the future workers and on their **employability**. The company oriented training provided in this kind of education system ensures that companies can satisfy their skills demand and results in higher employment levels. It is therefore essential that companies have access and can contribute effectively to this process.

Overall, ANEMM considers **"on-the-job training" essential in the success of the iVET system**, increasing employment, not least in the present downturn.

In terms of drawbacks, training in iVET is regulated by law which makes it rigid. Together with complex rules of procedure laid down at European level for co-financing, this makes the important flexibility needed in an effective iVET system difficult to achieve**.**

Consequently, it would be **ideal from the association perspective** to have a **less rigid framework**, able to adapt skills to changing technologies and company needs.

In order to improve iVET, **employers should play their part in recognizing the importance of lifelong learning programs, participating in the training of workers and facilitating the participation of the employees in those activities**. Employers should also provide feedback and diagnoses of training needs in order to help education providers assess market demands.

Finally, in terms of action at the **European level, the implementation of the ECVET (European Credit for Vocational Education and Training) system**, although a long and difficult road ahead, must be furthered. All the stakeholders should be involved and participate in this process: public administrations, social partners, enterprises, training centres, teachers and trainers. It is crucial to implicate all actors in the process from the beginning and establish a correct dissemination policy, as a structural project, to the training centres, teachers and trainers. An integrated approach at national and European level will be the success of the implementation of the ECVET system.

Sources:

ANEMM

Cedefop

SLOVENIA

Area: 20,273 km^2

Population: 2.0 million

CEEMET OBSERVER: GZS-MPA Chamber of Commerce and Industry

Website: www.gzs.si

Basics

Initial VET in Slovenia starts at upper secondary school (15 year-olds), and is a **school-based system** with **four types of iVET** lasting between 2.5 and 5 years: technical upper secondary education (4 years); vocational upper secondary education (3 years, with **new programmes offering at least 24 weeks of practical training with employers**) and vocational/technical upper secondary education (3+2 years); and short-cycle vocational upper secondary education (2.5 years). Approximately **50%** of pupils in upper secondary school are enrolled in technical and vocational education.

Regarding higher education, **technical upper secondary education provides access to vocational higher education and professionally-oriented higher education**. Secondary vocational education leads to a diploma which also enables the holder to continue education in a 2-year vocational-technical programme (3+2). **The vocational-technical upper secondary education provides the same access to higher education as technical upper secondary education**. An additional exam at the end of the technical and vocational-technical programmes provides access to academic programmes. All vocational and technical courses provide sufficient knowledge to enter the job market.

Governance and Actors

IVET schools are **publicly run** and responsibility for the administration, planning, programming and provision of iVET is divided between **national authorities, local authorities, social partners and schools**. The **Ministry of Education and Sport** is responsible for developing pre-university education policies; inspection procedures; allocating funds; implementing laws and administrative decisions relating to pre-primary institutions, compulsory, upper secondary and higher vocational colleges.

At national level, the Ministry has appointed a **Council of Experts for Vocational and Technical Education**. The chairpersons and members of the Council of Experts are appointed by the Slovenian government from the ranks of experts in the relevant fields of education, science and arts and from the ranks of relevant ministries, chambers and trade unions. The Council defines standards of knowledge, approves new programmes and proposes them for adoption to the government. It determines the contents of educational programmes, approves textbooks and educational material, and proposes criteria and standards for school equipment. The Council of Experts can also nominate special commissions as working bodies in various areas of its authority.

Another public institution at the national level, the **National Institute for Vocational Education and Training,** is responsible for expert and research work in VET while implementation of maturity exams and technical education is the responsibility of the **National Examination Centre**. Its other responsibilities include developing methodologies and procedures of assessment and validation of professional knowledge and competences. It is also the main body responsible for monitoring the work of the examination bodies for validation and assessment of national vocational qualifications.

IVET **in Slovenia** is funded by the State as well as industry. **The Chamber of Industry and Commerce (GZS) is a co-funder** while **companies are responsible for on-the-job training, which is a compulsory part of iVET**.

Industry Involvement in iVET

GZS-MPA, the Slovenian metal processing industry association, works actively on iVET issues at all levels, including central government, regional/local government as well as directly with schools. Their work with various actors has typically resulted in **curricula revision**, **partnerships** and **recruitment initiatives**. GZS-MPA also works on iVET together with the interprofessional employers' association.

GZS-MPA has a **formal role in developing curricula and new iVET structures at both national and regional level**, together with the interprofessional employers' organization and also has influence on the legal framework for iVET. GZS-MPA is represented on the **Council of Experts for Vocational Education and Training** and thus contributes to setting standards, new programmes and iVET contents. Further, industry is also involved in the **quality assurance** of iVET schools in the area of exams and diplomas.

Our Point of View

Currently, the most important issues for GZS-MPA regarding iVET include a **better definition of professional competencies** and placing **more emphasis on the importance of practical on-the-job learning**.

A factor which is works well in the Slovenian iVET system is the process applied to the implementation of renewed programmes. There is also a good provision of workplaces for iVET students within the member companies.

Nevertheless, although the legal framework of the iVET system in Slovenia is well set up, its implementation still presents some weaknesses. In addition, there is also an insufficient availability of financial support from the Government.

What should be done at **European** level is the **establishment of European guidelines for general competencies** (at different levels) contributing to more **comparability and transparency** of iVET qualifications.

Sources:

MZS-MPA

Cedefop

Slovenian Ministry of Education and Sport

SPAIN

Area: 504,043 km^2

Population: 45.9 million

CEEMET member: CONFEMETAL

Website: www.confemetal.es

Basic

Initial VET in Spain is a **school-based system** starting at upper secondary school at the age of 16, once pupils have accomplished compulsory education. VET studies are structured into different cycles (‘*ciclos formativos’*, i.e. **intermediate and advanced level**), with both theoretical and practical contents, divided in modules. The module on Training and Guidance in the Labour Market and that concerning on-the-job training (‘*Formación en Centros de Trabajo’*) may represent between **15 and 25%** of the teaching time of the whole ‘*ciclo formativo’*.

Intermediate training cycles constitute the path for vocational specialization for young people having finalized their compulsory studies of secondary education (as from 16 years) who want to join the labour market. They are designed to provide specialized and skilled labour to occupy jobs in direct production in industry or in service sectors. Successful completion of these cycles lead to the award of a **technician certificate** for the corresponding vocation called *‘Técnico medio’*. Having obtained this certificate, pupils can either enter the labour market or apply to an ***advanced-level cycle,*** which is classified as **non-university education** and leads to the award of a *‘Técnico Superior’* certificate. The number of pupils in both VET cycles in the academic year 2007/2008 was approx. of 464.500, with a gross schooling percentage of 26.6% for intermediate training cycle and of 23.7% for the advanced.

Access to **university education** from iVET is possible for pupils holding the *Técnico Superior* diploma in any advanced vocational training specialization but only for those university studies relating to their certificate. According to a report from the Ministry of Education and Social Policy for 2008, the demand for higher education is larger for university studies at 61% whilst the non-university higher education has a 39% of students.

Governance and Actors

In Spain, iVET is **mainly public**, but can also be **semi-publicly or privately** run. In the academic year 2007-2008, 74% of the students in intermediate cycles and 78% in advanced cycles were enrolled in public centres, although there are many differences between autonomous communities.

If they are run publicly or semi-publicly, the **central government** is responsible for the general organization of the education system; the **regional governments** have responsibility within their territories for the creation and authorization of institutions, staff management, student guidance and support, financial support and aids, or the diagnostic evaluations in the institutions. The **local administrations** provide sites for building public schools and deal with the maintenance and refurbishment of schools.

Each **VET school** has at least two collegiate governing boards: the Governing Council of the School (‘*Consejo Escolar’*) and the Teaching Staff Board (‘*Claustro de Profesores’*). The first one is composed of several stakeholders, such as parents, students, teachers and school managers. The second one is composed of teachers responsible for the design, coordination and management of the educative aspects of the school.

Industry Involvement in iVET

Confemetal participates through CEOE (the Spanish interprofessional employers' organization), in the **definition of curricular contents for professional qualifications**. As part of the **Spanish VET Council,** made up by the most representative employers, Trade Union organizations and Public Administrations, the sector organizations must firstly be consulted on the definition of the Vocational and Occupational Qualification Certificates setting up the different training offers.

Via a **Foundation** established by Confemetal, with the aim of providing services to companies and workers especially in the field of training, Confemetal also signs **agreements** with the Ministry of Education providing support to iVET schools, i.e. for the provisions of training simulators. The Foundation equally teaches courses directly in schools aiming at training students in issues directly linked to the MET sector**.**

Our Point of View

For Confemetal there are currently two important issues in iVET: **1) Making iVET more attractive for young people (anticipating, acting at an earlier stage)**: the students in initial vocational training in Spain are usually much older than what is envisaged for entry into each cycle. For example, in the 2006-2007 course, 48.8 percent of the students in the intermediate level cycles were older than 18 years of age and 58.1 percent of students in advanced cycles were 21 years of age or older. It could be said that iVET is becoming more and more like the concept of continued training; **2) Making iVET more flexible and company-oriented** in order to facilitate coordination of supply and demand, in particular regarding the needs of SMEs. The necessary instruments need to be put in place so that vocational training centres can efficiently manage their **adaptation to the training needs of their business environment**.

A **sector-based approach to training** is particularly important for Confemetal, especially when put **a**gainst the increasingly relevant territorial approach, which brings in many problems. For example, the extent to which vocational training is established in the local labour market highly influences current existing differences between areas.

The iVET system in Spain has been improved over the past few years and works in general well according to Confemetal. The introduction, accelerated with the application of the 2006 Act on Education (LOE, 2006), of increased **flexibility and permeability between the different educational levels, between vocational training and the labour market and between general education and vocational education** has resulted in a significant renovation of the basic structure of vocational training, while maintaining its coherence and simplicity.

Also, the **internships in companies** have contributed to improving the relationship between the centres and the productive world. Many young people are hired by the companies where they have done their internship.

Nevertheless, there are in the view of Confemetal several areas of iVET where change still is needed. In general, **the overall quality of *training* should be improved**, including the training experience of the own teaching staff that has to be conveyed to pupils, as it reveals gaps regarding their professional experience in production in the specialties they impart (the time spent by teachers in workplace internships is not sufficient to counteract these deficiencies). Also the **quality of internships**, particularly when they are done in small businesses or in little developed production networks, is still **far from the level desirable**. In addition, there is a **low level of specialization in initial training**, since its structure is based on the acquisition of competences of wide transversal reach and besides the subject preferences of young people in iVET are given more weight than labour market needs, thus shaping the iVET offered.

The high level of young people leaving the Spanish educational system with insufficient preparation for the labour market is a very serious and complex problem making more difficult to achieve the objectives of competitiveness, quality and qualification of the workforce to confront the challenges of a globalized economy. The **high rate of school failure in Spain**, well above the average of other European countries, is a fundamental underlying issue closely interlinked to this problem.

Further, many problems are identified in the **management of educational centres**: rigidity in the planning of training cycles, difficulties in adapting and making the curricula flexible according to the demands of the local production networks, difficulties in building a team of teachers according to the needs of the centres, or obstacles to the demand from companies to organize training activities.

Finally, there are **regional imbalances in Spain**. As mentioned before, how well established vocational training is in the local labour market may be influencing the large differences currently existing between areas. A lack of agreed objectives on the part of the autonomous communities regarding results is noticed in Spain, resulting in a development of vocational training that is too differentiated among regions.

For all these reasons, even if employers are generally fairly satisfied with the current model, they consider that **it could be more flexible**, particularly by making internships available any time of the year (at present, internships at the company are only carried out at a fixed time in the year, officially established, which is the same for all VET Schools).

Confemetal thinks that employers can improve the situation further on their side by **acknowledging and enhancing the role of iVET as a key element of the companies HR Strategy**. This implies making iVET part of an integrated/holistic business plan, subject to an in-depth analysis of goals sought and means devoted to accomplish the objectives identified. Monitoring of actions adopted and further evaluation is equally crucial. This aim may entail a **broad shift of 'business culture'**, which must not be overlooked. **Training** actions, and those related to iVET in particular, should then be considered **as an investment** rather than a cost.

Regarding the European level, Confemetal considers that Member states and the European Commission need to adapt their actions to the benchmarks they both generate in the field of education while **respecting Member State diversity**. Coordination on education issues opened up at European-level and in the initiatives taken should also be improved.

Further, action should be taken to consolidate and improve programmes like *'Leonardo da Vinci'*, promoting the interchange of students, teachers of vocational training and young professionals, whether to complete their studies or to do on-the-job training in companies in other countries. Thematic networks on vocational training should equally be supported. **The objective must be to contribute to strengthening the quality of training, the interchange of best practices and the transfer of innovation in Europe.**

Finally, It will be an important challenge to find an agreed upon and coordinated formula for the involvement of the national autonomous communities in European issues, as in the end it will be them that will have to apply and integrate the European dimension into the daily operation of the system within the framework of their competences

Sources:
Confemetal
Cedefop
Eurydice

SWEDEN

Area: 449,964 km^2

Population: 9.3 million

CEEMET member: Teknikföretagen

Teknikföretagen

Basics

Initial VET in Sweden starts at upper secondary school (15/16 year-olds), and is a **school-based system**. Approximately **44%** of upper secondary level **pupils** are currently in **VET programmes**, and the rate is increasing. 72% of pupils graduate.

IVET provides general access to higher education. To gain access to a degree programme in engineering, iVET students have to study for an additional year in adult education (Komvux). The aim of upper secondary adult education is to provide adults with the same level of skills and knowledge corresponding to general upper secondary education for young people. IVET provides general access to higher vocational education.

Governance and Actors

Upper secondary schools may be run by **municipalities**, **independent organizations or the two together**. When co-owned, the companies (independent organization) own 51% of the school and the municipality 49%, and it is treated similarly to a private school. In iVET, very few schools are privately run. **The Swedish National Agency of Education** has the final say when someone wants to start a school.

National and local government as well as social partners are involved in the **governance** of the **iVET system**. The government defines national goals and guidelines while central and local authorities together with education providers are responsible for ensuring that the system is implemented in accordance with national goals.[4] **Social partners** play a significant role in iVET via **advisory committees** for vocationally oriented programmes at upper secondary schools that exist on the national, regional as well as local level. Industry, including to some extent trade unions, also participates in quality assurance of iVET through exams and diplomas at various levels.

In terms of **governance of individual schools**, it is local government and the education committee (politicians) within the municipality where the school is located that take the overall decisions concerning the school if it is a VET school run by the municipality. If privately run, it is the board of the organization that owns the school that has the overall decision-making power. Within the national guidelines, education providers have considerable freedom to determine how activities are implemented and resources utilized. [5]

IVET is **publicly funded in Sweden**. However, **companies are responsible for on-the-job training, which is a compulsory part of iVET**.

In 2011 there will be a **reform of the Swedish iVET system**, primarily introducing a professional diploma upon graduation, aimed at raising the level of ambition in the iVET system and the competence level of the pupil.

[4] Cedefop report on VET in Sweden 2009
[5] Cedefop report on VET in Sweden 2009

Industry Involvement in iVET

Teknikföretagen, the Swedish employers' association for the metal, engineering and technology-based industries, **mainly works on the systemic level** together with central, regional and local government regarding education and has influence on the legal framework for iVET. The organization is regularly in contact with the Minister for Education, both on a formal and informal level, as well as with the state secretaries on the political level and civil servants in each division. The organization also frequently works together with all levels of the Swedish National Agency for Education and the Swedish Schools Inspectorate.

Further, Teknikföretagen works **directly together with schools**. This cooperation has resulted in, among other things, curricula revision, recruitment initiatives, traineeships, joint projects, promotional activities and, not least, **Teknikcollege**.

Teknikföretagen has ownership of **Teknikcollege**, the enterprise-based upper secondary schools that have been set up over the past decade. The engineering industry (companies and social partners) set up Teknikcollege because competencies required by the industry were not being met by the educational programs and the image of industry and VET had to be improved to attract people. Teknikcollege represents a methodology where upper secondary schools, adult education and vocational education work together with local and regional companies. Through Teknikcollege a new form of cooperation at regional level was established between municipalities, schools and colleges, social partners and companies. So far, approximately 91 schools have been approved in 23 regions across Sweden and the number is growing.

One of the great achievements of Teknikcollege is the high placement rate of graduates after graduation. Essentially, the employability of iVET pupils increases dramatically when industry and schools cooperate in this way.

In general, Teknikföretagen also works together with other stakeholders such as the **interprofessionsal employers' organization, sector organizations and company representatives on the national, regional and local level** on issues related to initial vocational education and training.

Our Point of View

The most important issue for Teknikföretagen is to i**ncrease awareness of the fact that skills and competence requirements are steadily rising in the industry** and that it is essential to educate young people for the requirements of tomorrow. **Education and training has to be able to adapt more quickly to changing needs**, the level of ambition for iVET programmes has to be raised, more 'theoretical practitioners' coming out from the education system are needed and in general there is a need to be able to take pupils further in order to meet the challenges of tomorrow.

A beneficial feature of the Swedish iVET system is that iVET provides **general access to higher education** and prepares pupils for continued training in the workplace. This is necessary in order to participate in a company's **competence development**. This flexibility opens up a wide range of options and may explain why iVET programmes in Sweden are more popular than apprenticeship schooling abroad – they are not perceived as predetermining a person's career options.

Teknikforetagen is continuously working to improve the iVET system. Before Teknikcollege was initiated, it was incredibly difficult to ensure any cooperation between schools and companies. Teknikcollege was created to overcome this problem and increase the involvement of companies in iVET. There is of course room for improvement in terms of company involvement as well as schools' openness towards company involvement.

Also, apprenticeship does not work in the system as far as the MET industry is concerned, and should not be pushed onto the stakeholders. Although the government has tried to reintroduce apprenticeship, none of the actors in the engineering and technology industry has shown any interest as they have found other well-functioning solutions.

For Teknikforetagen, an ideal system is simply a system where the number of theoretical practitioners and iVET engineers (gymnasieingenjor - 4 year programme) increases.

In terms of what employers can do to improve the situation, they should **increase their involvement in both the governance of and content development for iVET**. When they become involved in governance they usually also begin to take an interest in content.

At the **European level** there should be efforts aimed at **raising the skills level in Europe overall.** The EU should also work to **improve the recognition of the importance of European manufacturing industr**y. It is a question of survival for Europe that the skills required for a competitive industry are available.

Sources:

Teknikföretagen

SWITZERLAND

Area: 41,284 km^2

Population: 7.7 million

CEEMET member: SWISSMEM

Website: www.swissmem.ch

Basic

Initial VET in Switzerland starts at upper secondary school (15/16 year-olds), and is a **dual-based system,** with **3-4 days of training per week** spent in the company. Approximately **two thirds of young people coming out of compulsory education enroll in iVET**.

There are generally three types of iVET ranging from 2-4 years schooling: the **2-year basic vocational education and training** leading to a basic federal certificate of vocational education and training; the **3-or-4-year basic vocational education and training** leading to a federal certificate of vocational education and training; and the **vocational baccalaureate programme** leading to a federal vocational baccalaureate ("Berufsmaturität"), which is an extended in-depth general education course and constitutes an enhancement of the 3-or-4-year basic vocational education and training.

Those who have completed iVET can immediately work within the line of industry or trade for which they have studied. IVET courses lasting 3-4 years also provide access to **tertiary level professional education and training** (PET). Those with a federal vocational baccalaureate (FVB) are entitled to enroll in any of Switzerland's universities of applied sciences without having to take an entrance examination and may later on proceed to enroll at university. Alternatively, FVB holders may take the University Aptitude Test to obtain admission to a cantonal university or either of Switzerland's two federal institutes of technology (accompanied by measures to make up for educational gaps).

Governance and Actors

IVET schools in Switzerland are generally publicly run. According to the Federal Law on Vocational Education and Training, vocational education and training is the joint responsibility of the Confederation, the cantons and professional organisations and thus social partners have some influence on the iVET system.

The **Confederation**, represented by the Federal Office for Professional Education and Technology (OPET), is responsible for the overall strategic management and further development of iVET, involving legislation, quality assurance and encouragement of innovation. The **cantons** organise the implementation of federal legislation and are responsible for supervision of vocational education and training, including apprenticeships, and for operating information and career guidance centres for VET.

The trade associations are largely responsible for curricula and apprenticeships and they are also involved in the governance of iVET schools. In terms of curricula, they formally define the curriculum and national qualification procedures and are also involved in the development of new courses. They are also responsible for creating apprenticeship positions.

In terms of funding, iVET schools in Switzerland are **publicly financed. Companies mainly finance in-house training of their apprentices**.

Industry Involvement in iVET

Active participation by employers is a central element in the Swiss VET system as they, together with trade unions and trade associations have the **main responsibility for curricula and apprenticeships. Swissmem**, the Association of the Swiss Mechanical and Electrical Engineering Industries, works on iVET issues especially at the national level, and has a strong working relationship with the national interprofessional employers' organisation (on iVET and other issues). Swissmem has influence on the legal framework and standard setting for iVET and were recently involved together with government in an **industry-led reform** of a number of professions in the iVET framework. In addition, their work on iVET has resulted in **curricula revisions and creation of apprenticeships**. Swissmem also works to improve the image of the sector and to attract young people for professional careers in the sector (mechanical and electrical engineering companies) through, for instance, the Swissmem campaign 'Techmania' (www.techmania.ch).

Industry is also involved in the **quality assurance** of iVET schools and inter-company courses. For the latter, Swissmem edited specially designed quality standards (other than ISO).

Our Point of View

The current most important issues for Swissmem are to finalise the ongoing reform in iVET, to further improve the cooperation between partners, i.e. company, school and inter-company course centre (pilot project running) as well as the issue of subsidising inter-company courses.

What has showed to work well in Swiss iVET is the dual system itself, based on a long tradition, and the considerable investment by employers into educating young professionals

While the system works well, **there are certain factors that can be improved**. For example, subsidies for inter-company courses are a big issue every few years and they should be resolved. Moreover, numerous funds for the support of VET have been created in the past 6 years, some controlled by cantons, others by (smaller) employers' associations. Larger companies with mixed activities and, thus, employees of various trades, are forced to pay in such funds, although they are engaged in training activities themselves. Swissmem sees a need to tackle the funds issue as it would improve the iVET system. Nevertheless, **by far the biggest problem is the recruitment of qualified apprentices**. This is due to both the still high prestige of the gymnasium and the demographic development.

There is a role for employers in improving iVET. Employers could participate more in the working groups of Swissmem (or other employers' associations), and contribute more during the reform of professions and training of apprentices.

At the European level, the institutions should create a competence-based system in order to compare professions.

Sources:

Swissmem

Swiss Federal Department of Economic Affairs

Swiss Federal Office for Professional Education and Training (OPET)

TURKEY

Area: 783,562 km^2

Population: 72.5 million

CEEMET member: MESS

Website: www.mess.org.tr

Basics

Initial VET in Turkey starts at upper secondary school (15/16 year-olds) and is a **school-based system** with a **component of practical training**. In 2009/10, almost **43%** of the students in secondary education were in vocational education and training.

There are two different possible VET paths: *Meslek Lisesi* (**Vocational High Schools**) and *Teknik Lise* (**Technical High Schools**). In both vocational and technical education institutions, the pupils receive full-time school education during the first year (9th grade). In the following 10th, 11th and 12th grades, students receive theoretical and practical education two days per week and on-the-job practical training for the remaining three days. For the educational year 2009/10, 55.6% of the students in VET went into Technical High Schools, while 34.5% went into Vocational High Schools, with a remaining 9.9% following other paths.

Technical and vocational high schools provide **four-year education courses** qualifying people for various professions or preparing them for higher education. Upon graduation, iVET students are awarded a *Lise Diplomasi* which is the prerequisite for entry into higher education.

There are no non-university level post-secondary studies in the Turkish higher education system. Higher technical and vocational post-secondary studies are affiliated to the universities, lasting respectively four and two years. They offer vocational training in various professions and confer an *Önlisans Diploma* following completion of two-year university studies and a *Lisans Diploma* on completion of four-year university studies. In the educational year 2008/09, 54.5% of new admissions were placed in *L sans* programs, while the remaining 45.5% were placed in *Önlisans* programs.

Governance and Actors

IVET schools in Turkey are mainly **publicly run,** although private schooling is also available.

There are different actors involved in the governance of the iVET system: together with national and local governments, social partners and companies play a relevant role. Social partner representatives take their place in VET and Employment Commissions at local and national level, participating in the governance of the VET system. Within these Commissions, social partners are involved in the preparation of national qualifications, bringing together representatives from companies in a specific sector for the **preparation of national occupational standards and qualifications**. Involvement of representatives from different companies is vital to fully meet the competence requirements of employers.

Industry works together with the central government on iVET issues; at **national level** industry acts through the cross-sectoral Turkish Confederation of Employer Associations (TISK), while at **local level** this role is devolved upon the sector associations, which take their place in VET and Employment Commissions on behalf of TISK. By law 3308 "Vocational Education", they take part in planning and coordination, training, certification, auditing and financing phases of the VET system.

In the framework of law 3308, sector associations represent their members in **quality assurance commissions** which are responsible for the quality of training and education in schools and companies. In addition, sector associations prepare various **surveys** and **questionnaires**, and conduct **analyses** for auditing training activities.

While the **main part of iVET is publicly funded**, **industry contributes** to financing the iVET system through the **training activities** that students undertake within companies as well as through **voluntary donations**.

In the case of private schools, the majority of the tuition fee is covered by the pupil, although private education institutions can also make use of public investment incentives.

Industry Involvement in iVET

Members of MESS, the Turkish employers' association for the metal industry, cooperate with iVET schools at regional and local levels. This participation produces joint **training projects**, **recruitment initiatives** and **partnerships**.

MESS also has influence on the **standard setting of iVET**, as it is consulted on changes and updates in the legal framework for iVET.

The most important issue for MESS in terms of iVET is **to find a solution for the mismatch** between the level of competences of newly graduated iVET students and the competence required by the industry.

The fact that the **curricula are not adapted to industry demand** has been detected as one flaw of the Turkish iVET system. For this reason, **the ideal system** from the Turkish employer association's perspective would be one where iVET curricula comply further and better with the needs of the industry.

Sources:

MESS

UK

Area: 243,610 km^2

Population: 62 million

CEEMET member: EEF

Website: www.eef.org.uk

Basics

The UK has a devolved system of governance for education and training. Therefore, there are differences between the education and training systems of Scotland, Northern Ireland, Wales and England. For practical reasons, we have here chosen to focus on iVET in England.

There are several different types of iVET in England, beginning either at the age of 14 or 16 with different levels of completion. IVET can also be **school-based** or **dual-system** depending on the programme. After compulsory education (age 16), young people may choose to continue in school, move to a sixth-form college or a further education (FE) college, enter employment with training such as an apprenticeship, or enter employment without apprenticeship. Normally, the upper secondary phase lasts two years, from age 16 to 18 or 19.

Within the full-time school- and college-based pathways, a range of different vocational qualifications is available. The following are the main applied vocationally related and occupational qualifications relevant to the MET industry available through full-time education: Higher National Diploma (HND) and Higher National Certificate (HNC); National Vocational Qualifications (NVQs); BTEC introductory, first and national qualifications; and City and Guilds qualifications. A programme of specialist vocational diplomas for 14-19 year old students was introduced in 2008 and sits alongside GCSEs and A-levels. The diplomas are available in 14 subjects, including engineering and combine classroom-based learning with work-related practical experience. Depending on level of completion the above pathways can lead either to tertiary level education or into skilled employment.

Regarding apprenticeships, there are three levels available for those aged 16 and over: 1) **Apprenticeships**: These provide the skills you need for your chosen career and allow entry to an Advanced Apprenticeship; 2) **Advanced Apprenticeships**: To start this programme, the applicant should ideally have five GCSEs (grade C or above) or have completed an Apprenticeship; 3) **Higher Apprenticeships**: Higher apprentices work towards qualifications such as an NVQ Level 4 and, in some cases, a knowledge-based qualification such as a Foundation degree.

Apprentices can also progress to higher education, including university degrees.

Governance and Actors

In England, iVET providers can be either publicly or privately run. Several government departments look after administrative affairs related to education and training, but in general, the overall policy for iVET is handled by the Department for Education. After a reform in April 2010, local authorities are now responsible for the commissioning and funding for iVET, while curricula are set at the national level and at education provider level. In April 2010 the Young People's Learning Agency, sponsored by the Department for Education, was also set up to support the delivery of training and education to all 16 – 19 year olds in England. The YPLA champions young people's learning by providing financial support to young learners, funding academies for all their provision and supporting local authorities to commission suitable education and training opportunities for all 16 - 19 years.

Industry Involvement in iVET

There is **no formal role for social partners at the national level** regarding iVET, and the primary mechanism for involvement is **consultation**. Also, regional and local bodies advise on the provision of learning opportunities to meet local needs, within the overall national policy and funding arrangements and social partners are present in many of these bodies. **Sector Skills Councils** (SSCs) are among the more prominent actors in this context. They are employer-led bodies responsible for identifying skills needs in economic sectors and for defining the occupational standards on which occupational qualifications are based, work across the UK. SSCs are also responsible for the **design of apprenticeships**, while the **National Apprenticeship Service** helps to fund the training. Business representatives from the relevant industry sector work with the Sector Skills Councils to develop the course content.

Regarding apprenticeships, **employers who take on a 16-18 year old apprentice pay their salary**. The Government will fund their training. A minimum wage of £2.50 per hour for apprentices under the age of 19 will be introduced from 1st October 2010. Many manufacturing employers pay more and research shows that the average salary is approx £170 per week.

There have been many changes to vocational education and training in the UK over the past decade, and as the new government's (2010) policies are put into place and the 2010 Spending Review finalised, there will be further changes to the system.

The EEF, the Engineering Employers Federation, work on issues related to iVET primarily in terms of **apprenticeships at national and regional level** particularly through **SEMTA**, the Sector Skills Council for Science, Engineering and Manufacturing Technologies. Within SEMTA they also work together with other sector stakeholders and awarding bodies.

Our Point of View

For the EEF, the most important issue in terms of iVET is to **increase the number of pupils and apprentices who choose vocational education and training,** and who might also choose to continue their studies at university level. To this end an improvement in, among other things, the **permeability** between iVET and higher education is needed. Linked to this concern is also the issue of the **negative image of the sector**, which the industry needs to tackle.

Further, the EEF would also like to see **better careers advice** in schools as well **good quality science, technology, engineering and mathematics (STEM) skills** being taught in schools so that upon graduation young people have a solid basis in these subjects.

The English iVET system is currently very fragmented and there are many stakeholders involved which makes it a complicated to deal with and therefore improvements should be sought to simplify the system. Overall, the EEF supports **flexible vocational education and training** systems at *all* levels to ensure that VET is **responsive to labour market needs** and leads to good quality output.

AUSTRALIA

Area: 7,617,930 km^2

Population: 22.3 million

CEEMET associate member: AUSTRALIAN INDUSTRY GROUP

Website: www.aigroup.com.au

Basic

IVET in Australia starts from the age of 15, and can operate concurrently with the last 2 or 3 years of secondary school. Students can undertake a senior secondary certificate alone, or with a combination of iVET units, or can leave secondary school and undertake an iVET qualification on a full time basis with a training provider. Approximately 220,000 secondary students, or **about 40%** of the total school student population in years 11 and 12, **undertook some form of VET program in combination with their school qualification during 2008**. Additionally, a further 440,000 young people aged 15-19 years not in school were enrolled in a VET qualification during 2008.

In Australia iVET programs can be provided in school, with possible support from a specialised technical college. Some schools have iVET facilities funded through the Australian Government's Trade Training Centre or the former Australian Technical Colleges programs. Schools will often cluster together to share facilities to enable them to offer a broader range of programs. School students are also able to undertake apprenticeships on a part time basis administered by Australian Apprenticeship Centres (AACs).

Australian **apprentices are paid a training wage or apprentice wage** for the time they spend "on-the-job" and are covered by a training contract, which links to an industrial award or agreement. Apprenticeships also lead to the attainment of a VET qualification.

Initial VET can provide access to higher education, but this is more exception than rule. Students can do apprenticeships from school but these rarely articulate to university.

Governance and Actors

IVET schools, specialised technical colleges and vocational colleges are generally public providers in Australia, but private secondary schools do offer VET to their students. IVET is governed at the system level by national and regional governments as well as social partners. All actors are involved in governance at different levels. Secondary schools are regulated by regional governments, however, the system is currently moving to a national curriculum. VET qualifications generally are already national. VET competency standards are nationally developed and endorsed through the **Industry Skills Councils** (ISC).

Apprenticeship administration is handled by the **Australian Apprenticeship Centres** (AACs), contracted by the Australian Government to provide one-stop shops for those seeking to hire apprentices or to take up an apprenticeship as a career path. AACs can provide information on apprenticeship options to employers, apprentices and trainees and other interested parties; administer the Australian Government's Apprenticeships Incentives Programme, including the processing of applications and claims; and work with the State/Territory Training Authority to provide an integrated service.

Social partners are involved in both system and school governance. At the national level they are represented via formal councils/committees and statutory bodies. Individual companies tend to be involved in governance at the local level, i.e. schools and colleges. There are variable **iVET school governance models** across the States within the Country, and **increasingly employers are involved in local school councils, etc.**

Overall, employers have a broad and varied role in iVET, including school/industry partnerships, offering Structured Workplace Learning placements (SWL), apprenticeship opportunities and careers advice. **Employers are formally involved at both national and regional level and are major contributors in the development of curricula competency standards upon which courses are then based.** They are also involved in determining the framework for quality assurance but are not involved in measuring/testing the outcomes as this occurs through the quality and regulatory framework.

In Australia, the **schooling system is operated and funded through the state government departments (regional)**. **Industry often contributes to funding of iVET system with an in-kind contribution through time and equipment**. In the case of school-based apprentices, the employers may be eligible for Commonwealth Australian Apprenticeship incentives including the Australian School-based Apprenticeship Commencement Incentive, Australian School-based Apprenticeship Retention Incentive and special State Government incentives for skill shortage occupations.

Industry Involvement in iVET

Australian Industry Group (Ai Group), the industry association in Australia representing many major Australian and global companies operating in a range of industries, works with **central government** on committees, industry skills councils and other similar bodies and with **regional and provincial governments** through being part of state level training commissions and boards of study**.** Ai Group also has a strong role in influencing the standard setting of iVET as these are set by Industry Skills Councils (ISC). There are eleven ISCs and Ai Group has a board member on three ISCs and chairs one. They also have a strong relationship with the others. Further, they are a member of the **National Quality Council** which is the body that endorses Training Packages, i.e. the products containing the competency standards and the qualifications.

Ai Group also works directly with schools from time to time. Typically, their work in this area has resulted in **curricula revision, partnerships, recruitment initiatives, apprenticeships, joint projects and promotional actions**. Ai Group's members also engage directly with schools and students. Finally, Ai Group acts as an adviser to its member companies as well as for students seeking employment.

Our Point of View

According to AI Group, one of the best features of the Australian system is its openness to industry influence. All parties, from the central government to individual secondary schools recognise the importance of industry involvement if students are to obtain genuine vocational outcomes from iVET programs. This does not apply to the many schools more interested in preparing students for university entrance.

Another good feature is the diversity in the Australian system. Students are generally able to choose from a variety of different offerings in their locality, ranging from schools specialising in VET provision for all students to select entry schools that have no VET programs. There is less diversity in more remote regions.

There is however room for improvement. One of the problems with iVET in Australia is the low status it has compared to higher education and this is reflected in how iVET is provided in the school systems. Generally, iVET programs are designed to provide pathways for students not expected to progress to university, although they can contribute to tertiary entrance calculations. These pathways will lead to apprenticeships, traineeships or higher level VET qualifications (Diplomas or Advanced Diplomas) that lead to para-professional occupations. Schools seeking to position themselves in terms of academic achievement will promote academic studies, and their careers advisers will promote university courses at the expense of other options. Students with other aspirations, or of a less academic bent, may be encouraged to look to other schools to meet their needs. Because VET programs

articulate poorly into higher education qualifications, they are rarely promoted to students as an alternative pathway to professional occupations.

Thus, according to AI, **two issues that need to be addressed are to change the perception that trade, technical and para-professional occupations are not as valued in society as professional occupations, and also to improve the process for enabling VET qualifications to articulate into university degrees**. Some work has been done in these areas in recent years but it is very much a work in progress.

Further, iVET in Australia has long been influenced by all levels of government. Programs alter with changes in government, and regional governments introduce local initiatives that are not replicated in other states. Different regions have different industry profiles and different priorities, and each state jurisdiction has unique senior secondary school qualifications. All of this contributes to inconsistencies across the country. Nevertheless, **the recent move towards national secondary school curriculum and national vocational qualifications is aimed at moderating this and overcoming inconsistencies.**

For Ai Group, the ideal iVET system is a system that allows for diversity, and for students to try different iVET and academic programmes that do not close pathways to other programmes. There would be consistency in delivery between jurisdictions, both in terms of qualifications offered and funding provided for programmes. Careers advisers would **promote different types of pathways depending on the needs, abilities and aspirations of the students**, not the preferences or prejudices of the school.

Industry as represented by its associations is mainly involved at the central and regional government levels. Its main influence is over the competency standards and qualifications used for iVET programs and in strategic direction for the VET system**. Industry has little to no role in or influence over the mainstream secondary school qualifications, so there is scope for greater involvement there.**

Individual schools are often keen to develop better links with industry members in order to improve potential pathways for their students. Some employers are generous with their time but often they can feel swamped by requests. There is scope to **improve communication channels between schools and employers**.

Finally, the currently prevailing view is that governance arrangements are overly cluttered and need to be streamlined. **Keeping industry's 'voice' in a central position is an ongoing challenge**.

Sources:

Australian Industry Group

Australian Government, Department of Education Employment and Workplace Relations

Industry Skills Councils

III. BUONE PRATICHE

Gli esempi di buone pratiche comprese nel rapporto sono stati selezionati dai membri CEEMET e si concentrano su differenti aspetti del rapporto tra l'industria metalmeccanica e i sistemi iVET, descritti come particolarmente efficaci. Questa lista di esempi di migliori pratiche, che non intende essere esaustiva ma che vuole semplicemente mettere in evidenza particolari casi di ciò che si sta facendo e si potrebbe fare, è stata tratta da:

- l'indagine distribuita alle associazioni membri di CEEMET;
- il questionario inviato ad alcune aziende del settore metalmeccanico in Europa;
- le interviste con gli esperti d'istruzione e formazione delle associazioni di CEEMET;
- il dibattito svoltosi durante la conferenza CEEMET tenutasi a Bruxelles.

Il punto di partenza

Questi esempi evidenziano alcuni aspetti specifici della cooperazione e coinvolgono attori diversi. In alcuni casi l'iniziativa in esame è stata lanciata da un governo nazionale e coinvolge l'industria a livello nazionale (**VETIS**). In altri casi, il principale promotore è l'associazione di imprese settoriale in collaborazione con i comuni, le parti sociali e gli altri stakeholder a livello locale (**Teknikcollege, Centres of Excellence**) o regionale (**TPCA**), in collaborazione con le aziende e le persone in cerca di occupazione a livello nazionale (**AiGTS**) oppure con un gruppo più specifico, formato da studenti e famiglie (**Classe en enterprise**, **Opiskelijaboxi**). Queste iniziative possono essere state intraprese dall'associazione delle imprese a livello regionale (**Metalizate**) o da una rete di stakeholder regionali in sinergia tra loro (**Techniektalent.nu**). Infine, alcuni progetti nascono direttamente per iniziativa dell'azienda: un'azienda può cominciare a cooperare direttamente con scuole e università a livello nazionale (**Siemens**) e internazionale (**Techpro2**) o semplicemente locale, con gli istituti iVET presenti in un particolare distretto produttivo (**Forgital**).

Obiettivi

I casi presi in considerazione nel rapporto sono stati selezionati in quanto esemplificativi di ciò che CEEMET e i suoi membri considerano fattori chiave per il rafforzamento della cooperazione e il miglioramento dell'immagine, della qualità e dell'efficienza del sistema iVET. Questi comprendono:

- Piattaforme per raccogliere informazioni relative alle imprese, idonee a fornire agli studenti e al grande pubblico informazioni aggiornate sugli sviluppi recenti e futuri nel settore (**Classe en enterprise**, **Opiskelijaboxi** e **AiGTS**) e a promuovere inoltre l'industria manifatturiera, incrementando le motivazioni degli studenti (**Metalizate, Classe en enterprise, Opiskelijaboxi, VETIS, TPCA**).
- Banche dati per aiutare le aziende a trovare il personale con le competenze adeguate (**AiGTS** e **VETIS)**, per conservare gli standard di eccellenza ed evitare l'abbandono scolastico (**Siemens, Techniektalent.nu**).
- Centri di formazione dove la futura forza lavoro possa ricevere un'istruzione all'avanguardia per fornire le competenze attuali e future che le imprese richiedono (**Techpro2**, **Teknikcollege, Siemens, VETIS**).
- Soluzioni che rendano possibile l'adattamento dell'istruzione alle esigenze delle imprese a livello locale (**Forgital, Techniektalent.nu**).

Le descrizioni degli esempi indicati evidenziano gli aspetti fondamentali e forniscono solo delle linee guida circa le buone pratiche proficue e multi-dimensionali. Ma servono anche a illustrare *il modo* in cui le imprese del settore metalmeccanico credono di poter rafforzare la cooperazione.

Non tutti questi esempi possono "calzare" necessariamente tutti i sistemi nazionali – e infatti l'obiettivo non è quello di offire soluzioni preconfezionate. L'idea è piuttosto quella secondo cui anche un singolo aspetto di una specifica pratica può essere fonte di ispirazione per modificare o migliorare i propri modelli al fine di ottimizzare il rapporto tra impresa e istruzione e formazione tecnica e professionale.

COUNTRY INVOLVED	Denmark
TYPE/GOALS	**AN AMBITIOUS PROJECT SETTING UP TWO CENTRES OF EXCELLENCE TO DEVELOP HIGH LEVEL COURSES FOR EXCELLENT iVET STUDENTS WITHIN THE AREAS OF "CLEANTECH" AND "MANUFACTURING".** THE OVERALL AIM OF THE PROJECT IS TO INCREASE THE NUMBER OF TALENTED SKILLED WORKERS RELATIVE TO THE SITUATION, OTHERWISE WE WILL FACE. TO ACHIEVE IT, SERVING UP THE TWO CENTERS SEVERAL PURPOSES: • TO ENSURE SKILLED YOUNG PEOPLE IN VOCATIONAL TRAINING ARE MORE CHALLENGED • TO INCREASE THE PRESTIGE OF IVET AND THUS ATTRACT MORE RESOURCEFUL YOUNG PEOPLE TO THE LABOUR MARKET • TO DEVELOP NEW TEACHING TECHNOLOGIES AND METHODS AND NEW FORMS OF INTERACTION BETWEEN BUSINESS SCHOOLS, CORPORATIONS AND OTHER INSTITUTIONS • TO IMPROVE USAGE OF THE VET SCHOOL ENVIRONMENT AND SHOW THAT MORE QUALITY DOES NOT NECESSARILY REQUIRE A MASSIVE INJECTION OF EXTRA RESOURCES • SHARE EXPERIENCE ACQUIRED WITH OTHER IVET SCHOOLS
ACTORS INVOLVED	DI and the Danish Industry Foundation in cooperation with four VET-schools. The activities of the centres are co-financed by The Danish Industry Foundation and the participating schools for a period of three years
DESCRIPTION	The centres' activities can be divided into three main groups: 1. Shorter courses for talented students at a high level; 2. Laboratory for new educational technologies and the teaching methods; 3. Short courses for teachers from other schools. The target is the 10-20% ratio of excellent pupils in related VET programmes, which means 1 500-3 000 pupils. The project's success also depends on how and to what extent it succeeds in spreading good experiences from the centres to other areas and vocational schools than those where the centres are set up. Therefore, the project will seek support, alliances and partners to facilitate project implementation and ongoing acceptance and dissemination of results
CONTACTS	http://foreninger.di.dk/CoE/Pages/forside.aspx

CLASSE EN ENTERPRISE

Union des Industries et Métiers de la Métallurgie

TYPE & GOALS	**A PROJECT SET UP BY A SECTOR ASSOCIATION IN ORDER TO IMPROVE THE IMAGE OF THE INDUSTRY AND PROMOTE SCHOOL-COMPANY MEETING PLACES.** THE AIM IS TO MAKE IT POSSIBLE FOR PUPILS AND TEACHERS TO DISCOVER INDUSTRIAL TRADES.
COUNTRY INVOLVED	France
ACTORS INVOLVED	UIMM, the association of the French employers of the Metal, Engineering and Technology-based industries and directly some member companies, teachers, school institutions and children.
DESCRIPTION	UIMM has decided to develop an initiative in the frame of which a company hosts an entire class during three days so that **the pupils can discover the company and its activities while continuing their normal class curricula**. For the normal class curricula education, the company provides an appropriate room. For the discovery part, specific time is scheduled in advance within the normal programme to talk with pupils about trades, and go on a "real pathway through the company". Much like a safari, young people make their own discoveries by observing people in their routine work and through meeting them during their stay. This initiative goes in parallel with a public project implemented by the ministry of education consisting in « training and job discovery » courses, delivered both at *collège* and *lycée*. The discovery description: • Each hour of discovery is in 4 parts • Briefing with the employee animator (10-15') • Concrete discovery of trades (15') • Debriefing with the animator (15') • Talking with the professionnal (15-20')
CONTACTS	www.uimm.fr

TYPE & GOALS	**PROMOTION ACTIVITY OF THE INDUSTRIAL SECTOR AND THE COMPANY'S IMAGE.** THE AIM IS TO ENGAGE WITH YOUNG PEOPLE IN THE LOCAL AREA WITH PARTICULAR EMPHASIS ON INTRODUCING THE CONCEPT OF ENGINEERING FROM A YOUNG AGE.
COUNTRY INVOLVED	United Kingdom
ACTORS INVOLVED	The **company** with a **network of schools** and their students in the vicinity.
DESCRIPTION	AugustaWestland organizes several initiatives, covering an age cohort from 9/10 (primary education) to 16/17 years of age (end of secondary education). Among these initiatives, there are two to be mentioned in connections with initial Vocational Education and Training: 1. **Industry Days/Ad-hoc in-class presentations:** Representatives from AgustaWestland (generally trainees/graduates) attend industry days at some of their Priority 1 secondary schools on a yearly basis. This provides an opportunity to promote the company and also give students the opportunity to ask questions and prepare themselves for the world of work. **Purpose and success:** Attending industry days has proven to be a valuable tool in promoting company opportunities to students of company target age. Last year a good number of students requested an application form after their session. Links have been successfully maintained with the schools, which are always keen on company input. 2. **Work Experiences:** The Company has put in place a new programme for Work Experience which includes one week of activities, presentations and guided tours around the facilities and is managed by the Resourcing and Development Department. **Purpose and success:** Work experience has a key role to play in preparing young people for the adult world. Enhancing employability through work experience involves a **three-way partnership between school, student and employer**. The school should set the tone, creating positive expectations and briefing students about the objectives of work experience. The student should engage with the process and make the most of the opportunity. The role of the employer is to create the right balance of briefing, tasks, activities and assessment. The success comes when the students apply for apprenticeships.
CONTACTS	www.agustawestland.com

FORGITAL ITALY SPA & ISTITUTO ITIS ROSSI DI VICENZA

TYPE & GOALS	**INFORMAL FRAMEWORK OF COOPERATION** BETWEEN A MEDIUM-SIZE COMPANY AND A LOCAL IVET SCHOOL.
COUNTRIES INVOLVED	Italy
ACTORS INVOLVED	Forgital Italy Spa and Istituto Itis Rossi, an enterprise and a school, both present in the industrial cluster of the town of Vicenza.
DESCRIPTION	This cooperation dates back many decades (both Forgital and ITIS Rossi are 140 years old and have always cooperated) and it is still a dynamic and evolving process. It is part of an informal framework of cooperation, based on tradition. Well-tested and flexible, this cooperation has always showed the capacity to adapt to industry's demands and to lead schools to develop the right curricula according to the actual skills demand. However, due to the informality, the project requires the involvement and the support of other stakeholders, beyond the personal commitment of Forgital and ITIS Rossi management. Particularly, the support from and collaboration with the students' families are essential to assure the feasibility of the periodical internships Forgital and ITIS Rossi organize within their partnership. Some figures: Year 2007: 5 plant visits and 14 internships Year 2008: 3 plant visits and 12 memberships Year 2009: 3 plant visits and 10 internships
CONTACTS	**Forgital Italy SPA** Via G. Spezzapria, 1 36010 Velo d'Astico loc. Seghe (VI), Italy Tel. +39 0445 731 313 Fax +39 0445 731 490

KARLSTAD TECHNOLOGY CENTRE (Teknikcollege)

TYPE & GOALS	**A NATION-WIDE REGIONAL-LED PROJECT SETTING UP IVET CENTRES COMMUNICATING DIRECTLY WITH ENTERPRISES.** AN IMPORTANT RESOURCE FOR THE REGIONS' INDUSTRY, COOPERATING CLOSELY WITH INDUSTRIAL COMPANIES. IT HELPS INDUSTRY TO LEARN ABOUT NEW TECHNOLOGIES AND PROVIDES TECHNICAL TRAINING FOR PRACTICING ENGINEERS AND TECHNICIANS.
COUNTRY INVOLVED	Sweden
ACTORS INVOLVED	The initiative for Teknikcollege was taken by companies and social partners within the Swedish engineering industry in 2003.
DESCRIPTION	Creation of a new form of network for regional competence centres within industrial education. The purpose of establishing Teknikcollege is to improve **quality and efficiency** in vocational and educational training. Improve the **skills** and **competence** of the students. Improve the **image** of education for the industry, without necessarily introducing an apprenticeship system. Through Teknikcollege a new form of cooperation on a regional level is established between municipalities, schools, social partners and companies. • Positive effects you may expect to see • Companies in the region influencing and contributing to the content of the educations • Municipalities sharing costs for sometimes unusual and expensive education programmes. Some figures: 26 active regions About 52 school set up in the regions
CONTACTS	www.teknikcollege.se

TYPE & GOALS	**A REGIONAL ASSOCIATION-LED PROJECT WITH SCHOOLS AND COMPANIES.** TO FOSTER KNOWLEDGE OF THE REAL CURRENT LABOUR NEEDS OF COMPANIES FROM THE MECHANICAL METAL SECTOR AMONG THE EDUCATION COMMUNITY AS A WHOLE (SCHOOLS, TEACHERS, PUPILS)
COUNTRY INVOLVED	Spain
ACTORS INVOLVED	Involves a large number of companies that are members of Femeval (a **Confemetal member organisation from the province of Valencia**) and regional iVET providers
DESCRIPTION	The project aims at facilitating young students getting into **real contact with the business environment** as a pre-step to choosing a concrete training path or deciding on their professional future. Actions carried out within the framework of this programme include **company visits to schools** (consisting of conferences, presentations etc), activities related to the so-called "**metalízate bus**", and further activities organized by the businesses of the metal sector. There is also a school competition "Layout Metallics" where students who compete must design an innovative object whose main manufacturing material is metal. The goal is to **maintain and develop a permanent interchange of information and dialogue among school centres and companies**. An interactive website geared towards young people with information about the metal industry and its history, different educational paths as well as professional paths has been established. Some figures: In 2009, around 35 VET Schools in the province of Valencia, involving approximately 2.519 pupils and more than 25 companies, participated in the project.
CONTACTS	http://metalizate.femeval.es/default.aspx metalizate@femeval.es

OPISKELIJABOXI

(Student boxset)

TYPE & GOALS	**TOOLS TO PROVIDE EDUCATION WITH UP-TO-DATE INFORMATION ABOUT THE INDUSTRIAL SECTOR**
COUNTRY INVOLVED	Finland
ACTORS INVOLVED	COOPERATION BETWEEN THE THE FEDERATION OF FINNISH TECHNOLOGY INDUSTRIES, THE MEMBER COMPANIES AND THE WORLD OF EDUCATION (BASIC, VET AND UNIVERSITY EDUCATION)
DESCRIPTION	The Federation of Finnish Technology Industries provides, together with its member companies, the pupils in basic education as well as in iVET and university education with up-to-date information through internet about the industry, the different kinds of jobs that the industry offers, the types of competencies, skills and knowledge needed in the different jobs and examples of co-operation that the industry and companies are involved in with basic and VET schools as well as with universities. Every year more than 200,000 pupils and students visit the internet site www.opiskelijaboxi.fi and more than 50 new young employees from the industry introduce themselves and the company they work for, writing about their jobs and their study backgrounds as well as their future prospects. This site also serves the school teachers as a tool to inform the pupils of the different study options and career possibilities. The teachers can get hands-on experience in technology industry and in how to integrate industry visits and on-the-job learning into school-based education through training workshops and projects organized or supported by the Federation and the member companies in 12 regions in Finland. Some figures resulting from the cooperation: Every year more than 200,000 pupils and students visit the project's internet site. Every year more than 50 new young employees from the industry introduce themselves and the company they work for via videos loaded onto the web platform.
CONTACTS	www.opiskelijaboxi.fi

SIEMENS

DUAL STUDY COURSES

TYPE & GOALS	**COOPERATION BETWEEN A MULTINATIONAL COMPANY AND NATIONAL VET /HIGHER EDUCATION** PERMEABILITY BETWEEN SECONDARY EDUCATION AND TERTIARY EDUCATION, BALANCING THEORETICAL AND PRACTICAL TRAINING
COUNTRY INVOLVED	**Germany**
ACTORS INVOLVED	SIEMENS' GERMAN BRANCH, 25 COOPERATIVE STATE UNIVERSITIES, UNIVERSITIES FOR APPLIED SCIENCE AND UNIVERSITIES
DESCRIPTION	Siemens Professional Education is an education provider established within Siemens in Germany, training students coming from Siemens as well as from some other companies. The programme consists of 4 years of university studies as follow: **I YEAR** ▪ Students coming form iVET – often from Siemens – 9 weeks of basic vocational training within Siemens training centre ▪ 2 semesters of regular university courses **II YEAR** ▪ Vocational Education and Training (training centre + company) **III and IV YEAR** ▪ University courses **As a result: ¼ training centre, ¼ company and ½ university** The cooperation is a win-win situation for all the partners: • **University** - Students are pre-selected and motivated - Decreasing number of early leavers • **Student** - Combination of vocational training and practical studies - Excellent professional entry chances - Full concentration on studies because of trainee allowance • **Company** - Individual potential of students within four years of education assessable and controllable - Arrangement of practical phases and custom-designed knowledge by the company without additional costs or downtimes Some Figures: 750 students per year are involved in the programme; 50% of Siemens trainees come from the Dual Study Courses.
CONTACTS	www.siemens.com

TECHNIEKTALENT.NU

TYPE & GOALS	**PROMOTING IMAGE AND RETRAINING TALENTED WORKERS**
COUNTRY INVOLVED	Netherlands
ACTORS INVOLVED	National employers' organization representing several manufacturing sectors
DESCRIPTION	TechniekTalent.nu is a unique partnership between business, education funds, umbrella organizations and schools. There is a strong need for this type of partnership to anticipate and skills shortages in the coming years. With combined forces it aims to look for new talent for the technology sector and find a way to retain the talent already in the industry. TechniekTalent.nu connects the various parties and supports them wherever possible and necessary. Metal and electrical to construction, from installation to the mobility industry: all sectors come together in TechniekTalent.nu. Together they work towards a more comprehensive technology inflow and retention of technical talent, paying special attention to a realistic picture of the technical and professional field. The activities are divided into four TechniekTalent.nu programme lines, each of which includes some practical projects of cooperation: Line 1: Talent retention in engineering Line 2: Technical companies in the region Line 3: Imaging technique Line 4: Collaboration and business education
CONTACTS	TechniekTalent.nu Korenmolenlaan 4 Korenmolenlaan 4 3447 GG Woerden www. techniektalent.nu info@techniektalent.nu

TYPE & GOALS	**AGREEMENT BETWEEN A MULTINATIONAL COMPANY AND A NETWORK OF IVET SCHOOLS IN DIFFERENT COUNTRIES**. TECHPRO2 PROVIDES TECHNICAL AND VOCATIONAL TRAINING TO YOUNG PEOPLE RESPONDING TO THE DEMAND OF HIGHLY QUALIFIED TECHNICAL STAFF FROM THE GROUP'S NETWORK OF PLANTS.
COUNTRIES INVOLVED	10 Italian sites 19 Spanish sites 1 Polish site
ACTORS INVOLVED	A **multinational company** such as Fiat Group with plants around Europe and a **network of iVET schools** part of the Salesian Education Institutes.
DESCRIPTION	Example of collaboration which brings together a group of iVET schools and the technical expertise of Fiat Group Automobiles. The programme consists of three phases: • **recruitment** of young people; • theory in the **classroom** (equipped, due to the industrial partner, with all the necessary tools: the latest products, engine components, diagnostic instruments, **cutting-edge equipment** and up-to-date manuals) and **practical experience** gained through apprenticeship; • promotion of trainees who have achieved certification as **candidates for the service network of garages** belonging to the industrial group. A web area soon to be launched will facilitate the **continuous evaluation** of processes and results of the programme (students participating, academic results, requirements of the service network and courses offered), while at the same time guaranteeing the transparency of objectives and efficient management that are fundamental to the project.
CONTACTS	www.techpro2.com

TOYOTA PEUGEOT CITROËN AUTOMOBILE

TYPE & GOALS	**DIRECT COOPERATION BETWEEN A UNITED BRANCH OF MULTINATIONAL COMPANIES AND A LOCAL IVET SCHOOL, WITH THE SUPPORT OF EUROPEAN FUNDS** VIA THIS PROJECT, THE INDUSTRY WANTS TO BE A GOOD NEIGHBOUR AND A PARTNER PLAYING AN IMPORTANT ROLE IN THE ECONOMICAL AND CULTURAL DEVELOPMENT OF THE YOUNG POPULATION OF THE REGION OF KOLÍN
COUNTRY INVOLVED	Czech Republic
ACTORS INVOLVED	Toyota Peugeot Citroën Automobile (TPCA) was established as a joint-venture of Toyota Motor Corporation and PSA Peugeot Citroën.
DESCRIPTION	Cooperation of TPCA and VET school in Kolín financed by the European Social Fund. A new textbook is being prepared within this cooperation. The textbook will consist of topics like automation, robotization, ecology and soft skills. Texts are created by teachers in cooperation with TPCA experts. Students will then undergo a 14-day compulsory traineeship in the company.
CONTACTS	Prumyslová zóna Ovcáry 280 00 Kolín Tel.: 321 777 111 info@tpca-cz.com

VOCATIONAL EDUCATION AND TRAINING INFORMATION SYSTEM

VETIS

TYPE & GOALS	**A PLATFORM TO IMPROVE IVET QUALITY AND EXCHANGE OF INFORMATION**. VETIS PROMOTES COOPERATION AND MOTIVATION OF STUDENTS QUALITY ASSURANCE OF TEACHER SKILLS AND TEACHING METHODS
COUNTRY INVOLVED	Croatia
ACTORS INVOLVED	The Agency for Vocational Education and Training is a **public institution**, founded 13 January 2005 by the Decree of the Government of the Republic of Croatia directly **supported by the Ministry for Science, Education and Sports**. It directly encompasses representatives of all partners and stakeholders in Vocational Education and Training
DESCRIPTION	VETIS is an information system which compiles and enables processing of all relevant data regarding schools, students, employees, school equipment, school buildings and facilities, student homes, student registrations for competitions, teacher registrations for professional gatherings etc., needed for analysis, planning and management of vocational education and training. VETIS modules are: • Support for regional and state competitions in all disciplines • In-service teacher training • Support for the development and maintaining of pedagogic standards • Registrations and enrolments • Professional exams and promotion of teachers • Croatian Central Office for Training Firms (SUVT) It aims at developing skills of **VET students**, organizing **national competitions** (in some 80 VET disciplines) and giving a lot of attention to the professional development and **training of VET teachers**, through organisation and implementation of professional exams, implementation of procedures for their promotion, and organisation and implementation of professional training.
CONTACTS	Agency for Vocational Education and Training Address: Lastovska 23, 10 000 Zagreb, Croatia Phone: +385 1 62 74 666 Fax: +385 1 62 74 606 E-mail: ured@aso.hr

AUSTRALIAN INDUSTRY GROUP TRAINING SERVICES

(AIGTS)

TYPE & GOALS	**A BODY IN CHARGE OF PUTTING TOGETHER INDUSTRY DEMAND WITH YOUNG JOB SEEKERS** IT PROVIDES QUALITY TRAINING AND EMPLOYMENT SERVICES FOR EMPLOYERS, APPRENTICES AND TRAINEES IN AN ETHICAL, RESPECTFUL AND RESPONSIVE WAY THAT: • MEETS EMPLOYERS' NEEDS FOR STAFFING AND SKILLS • MEETS VOCATIONAL TRAINING NEEDS OF APPRENTICES AND TRAINEES • ALLOWS FLEXIBILITY THROUGH GROUP EMPLOYMENT • OPTIMISES JOB SEEKERS' ABILITY TO ATTAIN APPRENTICESHIPS OR TRAINEESHIPS • SUPPORTS OUR OPERATION AND GROWTH • RECOGNISES OUR PEOPLES' SKILLS AND VALUES THEIR CONTRIBUTION
COUNTRY INVOLVED	Australia
ACTORS INVOLVED	AiGTS is owned and operated by the Australian Industry Group (Ai Group), Australia's leading industry association providing services to more than 12,000 businesses.
DESCRIPTION	On the one hand, AiGTS provides expertise and consultancy to those who are looking for an apprenticeship opportunity in industrial sector, on the other hand, it takes the commitment of employing an apprentice, trainee or cadet with the following award winning administrative and management services: apprentice/trainee recruitment and selection service; payroll and administration; apprentice/trainee counselling and support; liaison with training bodies. This project contributes to the **growth, quality and competitiveness of Australian industry** and the **intellectual development and skill enhancement of people**. Some figures: AiGTS has more than 45 years experience in providing quality training to industry. It has already placed more than 7000 people in successful careers and helped find the right apprenticeship, traineeship or cadetship for young Australians, as well as looking after them while in training.
CONTACTS	www.aigts.com.au

IV. CONCLUSIONI

Questo studio dimostra che gli imprenditori sono consapevoli dell'importanza della cooperazione tra mondo scolastico e aziendale e pertanto sono pronti a compiere uno sforzo per **rafforzare ulteriormente tale collaborazione** – non soltanto al fine di migliorare l'incontro tra domanda ed offerta di competenze professionali, ma anche allo scopo di **adeguare e migliorare l'immagine dell'industria in funzione delle esigenze delle giovani generazioni**.

Per raggiungere questo scopo, gli imprenditori devono lavorare con l'obiettivo di divenire parti attive nella *governace* del sistema iVET, nello sviluppo dei piani studio e nel controllo di qualità di tali percorsi educativi. In definitiva le imprese, affrontando la sfida di un approccio olistico e integrato di lungo termine per l'iVET e promuovendo la cooperazione con le scuole tecniche e professionali, devono **considerare l'iVET come un investimento in competitività dai benefici di lungo termine**.

Garantire una solida cooperazione tra iVET e mercato del lavoro non è evidentemente responsabilità esclusiva dell'industria. Si tratta infatti di una **sfida condivisa** tra tutti i soggetti interessati che può portare a ottimi risultati solo se le giuste condizioni vengono concretamente poste in essere.

L'esistenza di un'ampia varietà di sistemi iVET e di modelli di cooperazione iVET / mercato del lavoro in Europa implica che sono possibili approcci diversi per avvicinare reciprocamente il mercato del lavoro e l'iVET. Tuttavia, **sulla base delle informazioni raccolte nel corso di questo progetto, è apparso chiaro come vi sia un certo numero di *ingredienti di base* comuni, ritenuti indispensabili dagli imprenditori per ottimizzare la cooperazione e i risultati dell'iVET: diversità, orientamento, flessibilità, mobilità ed eccellenza**.

Per raggiungere questi obiettivi, una serie di priorità fondamentali devono essere affrontate ed indirizzate alle diverse parti interessate, come indicato di seguito.

Diversità

Sia l'iVET che la cooperazione tra aziende e scuole richiedono **approcci differenziati** per poter essere efficaci. Non esiste "*una misura unica che calzi tutti*" nell'iVET e il CEEMET sostiene questo approccio diversificato, che riflette la diversità dei mercati del lavoro europei e delle competenze richieste.

*A tal fine, l'**UE** dovrebbe:*

- Essere di supporto agli sforzi compiuti a livello nazionale per la riforma dei sistemi iVET, per il miglioramento della cooperazione tra l'industria e le scuole, e per l'innalzamento della qualità dell'iVET mediante il continuo mantenimento del livello d'attenzione su tali temi in ambito comunitario, nel rispetto del principio di sussidiarietà nel campo dell'istruzione. L'obiettivo deve essere quello di rafforzare la qualità e l'immagine dell'iVET e lo scambio delle migliori pratiche.

- Assicurare che la diversità e la flessibilità dei sistemi nazionali di istruzione - e la loro capacità di adattarsi al mutare delle circostanze - non trovino una limitazione nelle iniziative a livello UE.

Orientamento

Per migliorare la cooperazione e rafforzare il sistema iVET nel suo complesso, sia le scuole che le aziende devono diventare migliori ambasciatori di una carriera nell'industria metalmeccanica, così da attrarre i giovani nell'iVET e nei percorsi professionali del settore. A tale scopo la fase di orientamento assume un ruolo centrale nell'aiutare gli alunni a conoscere le alternative a loro disposizione fin dai primi anni del percorso scolastico e a garantirne una scelta consapevole.

A tal fine, gli ***attori nazionali e locali*** *dovrebbero:*

- Attivare iniziative di orientamento di qualità e di facile fruizione per gli alunni fin dai primi anni di scuola, anche con il coinvolgimento delle scuole e dell'industria, ad esempio mediante la creazione di centri indipendenti per l'orientamento, fornendo ai consulenti un aggiornamento continuo di alta qualità (ivi compresa l'esperienza pratica), sfruttando le possibilità offerte da internet e dai social media.

- Promuovere una cultura dell'apprendimento pratico nella scuola primaria e nell'istruzione secondaria inferiore così da accompagnare con anticipo gli studenti verso i percorsi dell'istruzione tecnica professionale iniziale, assicurando altresì che anche i genitori siano ben informati sulle offerte formative disponibili.

Flessibilità

La **flessibilità** nei sistemi iVET, ivi inclusa la capacità delle singole scuole di adattarsi rapidamente agli sviluppi tecnologici e ai bisogni mutevoli del mercato del lavoro, è cruciale per rafforzare la cooperazione tra imprese e scuole.

A tal fine, ***gli attori nazionali e locali*** *dovrebbero:*

- Sostenere un dialogo efficace e di riconosciuto valore a livello nazionale e locale, partendo dalla fiducia e da un'apertura reciproca scuola-industria-governo, dando così al sistema la flessibilità necessaria per rendere effettivi gli adeguamenti necessari.

- Assicurare che i sistemi di istruzione tecnica e professionale consentano un coinvolgimento attivo delle imprese nella *governance* dell'iVET e nello sviluppo dei curricula, ad esempio, prevedendo o migliorando la partecipazione degli imprenditori negli organi direttivi delle scuole.

- Consentire una maggior flessibilità dei piani-studio e concedere più spazio all'apprendimento sul luogo di lavoro nei programmi scolastici, anche, ad esempio, mediante l'introduzione di strutture modulari.

- Evitare di concentrarsi esclusivamente sulle competenze tecniche o sulle competenze di base, poiché diversi programmi e professioni richiedono la combinazione di entrambe. Al contrario, flessibilità e forte cooperazione tra industria e iVET dovrebbero essere promosse come la via per raggiungere il giusto equilibrio tra competenze tecniche e competenze di base in ogni situazione, assecondando le esigenze del mercato del lavoro e aumentando l'occupazione.

Mobilità

La **mobilità** degli studenti iVET e degli apprendisti contribuisce allo sviluppo di importanti competenze "trasversali" (lingua, cultura, capacità di adattamento) che sono fondamentali in un mondo e un'industria globalizzati e caratterizzati dal rapido sviluppo tecnologico.

*A tal fine, l'**UE** dovrebbe:*

- Facilitare e promuovere una maggiore mobilità e un più facile interscambio di studenti, apprendisti, insegnanti, *trainers* professionali e giovani professionisti tra i paesi UE (sia che l'esperienza concerna il completamento degli studi sia che riguardi la formazione in azienda).

- Continuare il lavoro per migliorare la trasparenza delle qualifiche a tutti i livelli, basandosi sul principio delle conoscenze, abilità e competenze acquisite.

Eccellenza

La promozione dell'eccellenza a tutti i livelli dell'iVET (compreso quello comunitario) è certamente tra gli ingredienti *essenziali* per avvicinare l'iVET alla domanda proveniente dal mercato del lavoro. Pur essendo indubbio che l'istruzione e la formazione debbano ispirarsi all'equità, la **priorità va data alla promozione dell'eccellenza**. Questo deve essere uno sforzo congiunto a tutti i livelli da parte dei soggetti interessati al fine di passare con successo da un "preconcetto di iVET" diffuso tra studenti, insegnanti, genitori e politici all'idea di un percorso educativo di "prima scelta". Ciò significa altresì aumentare le opportunità per gli alunni delle scuole tecniche e professionali migliorando la permeabilità tra iVET e istruzione superiore, in modo che l'iVET sia considerato una vera alternativa per i giovani studenti - sia quelli che desiderano accedere direttamente al mondo del lavoro, sia quelli che intendono proseguire nei livelli successivi del loro percorso di studi.

*A tal fine, **tutte le parti interessate** dovrebbero:*

- Concentrare l'attenzione sull'eccellenza, elevando gli standard qualitativi dei programmi della scuola tecnica e professionale e degli alunni, riconoscendo all'iVET la medesima dignità dell'istruzione generalista.

- Enfatizzare il bisogno di un migliore e più rigoroso sistema di selezione del personale nell'iVET e conseguentemente attrarre gli studenti più meritevoli.

- Migliorare e facilitare la permeabilità tra iVET e istruzione superiore per agevolare il passaggio degli studenti dall'uno all'altro.

- Prestare maggior attenzione ai metodi di insegnamento e apprendimento al fine di migliorare le conoscenze, abilità e competenze acquisite e promuovere l'eccellenza; nello specifico:

- rendendo più facile per gli insegnanti l'aggiornamento delle loro conoscenze e competenze;

- motivando gli studenti più dotati e fornendo a coloro che mostrano maggior talento percorsi di apprendimento personalizzati.

• Riconoscere l'importanza dell'industria manifatturiera europea e promuovere l'immagine positiva di questo settore multiforme, grazie anche al pieno sostegno delle politiche europee e nazionali.

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Il ruolo di CEEMET

Garantire che la voce dell'industria assuma una posizione centrale nel dibattito per il migliore sviluppo dell'istruzione e formazione tecnica e professionale è una sfida continua che deve necessariamente essere affrontata a tutti i livelli, vista l'importanza che ricopre per la competitività futura dell'Europa.

CEEMET è in prima linea nel lavorare per una più stretta cooperazione tra l'industria, l'istruzione e il mondo scolastico a tutti i livelli e continuerà ad attirare l'attenzione verso tale impegno a livello europeo con questi strumenti:

Comunicando le opinioni e le istanze del settore metalmeccanico, sostenendo lo scambio di buone pratiche e promuovendo un'immagine positiva del settore.

Coordinando le posizioni delle organizzazioni imprenditoriali nazionali affinché possano esprimersi con una sola voce nelle materie legate all'istruzione e formazione di cui si discute a livello europeo.

Cooperando con le altre parti interessate nelle diverse sedi a livello europeo, ivi incluso ove opportuno il Dialogo Sociale Settoriale, per creare un network europeo di esperti e operatori del settore, capaci di lavorare insieme per un'istruzione e formazione tecnica e professionale più solida.

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CEEMET aisbl

Bd. A. Reyers 80 | B- 1030 Bruxelles
Tél. +32 2 706 84 65 | Fax +32 2 706 84 69
secretariat@ceemet.org | **www.ceemet.org**

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