Rapport 2/91

Continuing Education for Managers and Engineers

From a Study of Norwegian Firms and Course Providers

Ellen Brandt

Utredninger om forskning og høyere utdanning
NAVFs utredningsinstitutt
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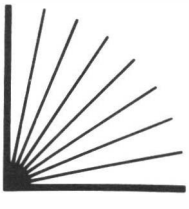

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ISBN 82-7218-249-1
ISSN 0802-9342

GCS A/S - OSLO

Preface

This report reviews continuing education courses for managers and engineers in Norway. The main themes are the division of labour and the cooperation between different providers of continuing education. Special focus is given to the actual and potential role of higher education institutions.

The report was written in the autumn, 1990, as a contribution to the OECD project "Recent Developments in Continuing Professional Education". A Norwegian summary has been added. The report is also a publication from the project "The Hidden University", in the period 1987 - 89 supported by the Norwegian Research Council for Applied Social Science (NORAS), the Ministry of Local Government and Labour, and the Adult Education Department in the Ministry of Church and Education.

Senior researcher Ellen Brandt of the Institute for Studies in Research and Higher Education has written the report, assisted by language consultant Sue Ellen Walters. The conclusions drawn are the responsibility of the author.

Oslo, March 1991

Johan-Kristian Tønder

Per Olaf Aamodt

Forord

Denne rapporten gir en oversikt over tilbud fra arrangører av etter- og videreutdanning for ledere, ingeniører og sivilingeniører. Sentrale temaer er arbeidsdeling og samarbeid mellom ulike utdanningsarrangører, med særlig fokus på hvilken rolle universiteter og høgskoler spiller - og bør spille.

Rapporten er skrevet høsten 1990 på engelsk som et bidrag til OECD prosjektet "Recent Developments in Continuing Professional Education", og nå med et sammendrag på norsk. Rapporten er samtidig en delrapport fra prosjektet "Det skjulte universitet" ved NAVFs utredningsinstitutt, som 1987 - 89 ble støttet av Norges råd for anvendt samfunnsforskning (NORAS), Kommunal- og arbeidsdepartementet og Voksenopplæringsavdelingen i Kirke- og undervisningsdepartementet.

Seniorutreder Ellen Brandt har skrevet rapporten, med assistanse fra språkkonsulent Sue Ellen Walters. Konklusjonene er forfatterens ansvar.

Oslo, mars 1991

Johan-Kristian Tønder

Per Olaf Aamodt

Innhold

Sammendrag

Etter- og videreutdanning for ledere, ingeniører og sivilingeniører
Rapporten "Continuing Education for Managers and Engineers - from a Study of Norwegian Firms and Course Providers" gir en oversikt over etter- og videreutdanningstilbud for ledere, ingeniører og sivilingeniører i Norge.

Rapporten er et bidrag til OECD prosjektet "Recent Developments in Continuing Professional Education" i 1990. Hovedtema for OECD prosjektet er hvordan arbeidsdeling og samarbeid er mellom høyere utdanningsinstitusjoner og andre arrangører av etter- og videreutdanning for profesjoner, og om dette kan forbedres. Mer spesifikke spørsmål var: "Hvilke opplæringsbehov dekkes av høyere utdanningsinstitusjoner? Hvilke opplæringsbehov kunne disse kanskje dekke? Hvilke opplæringsbehov er andre aktører på opplæringsmarkedet bedre egnet til å dekke?" På grunnlag av de nasjonale rapportene vil OECD, Education Division, i 1991/92 publisere en samlerapport. Etter- og videreutdanning for profesjoner innen helsevesen og undervisning var ikke inkludert i opplegget for OECD prosjektet.

Den foreliggende rapporten er også en delrapport fra prosjektet "Det skjulte universitet" ved NAVFs utredningsinstitutt. Formålet med dette prosjektet var å undersøke:"Hva slags tilbud om personalopplæring på høyere nivå gis i arbeidslivet? Hvordan organiserer og finansierer bedrifter og offentlige etater slik opplæring? Hva er bakgrunnen for bedrifters og etaters satsing på slik opplæring? Hvilke former for arbeidsdeling og samvirke finnes mellom ulike arrangører av opplæringstilbud?" Det siste spørsmålet er utgangspunktet for denne delrapporten.

Datagrunnlaget for rapporten er fra prosjektet "Det skjulte universitet", intervjuer med utdanningsarrangører i 1988 og 1990 samt intervjuer med opplæringsansvarlige i bedrifter i 1987 og 1989. Vi har med de viktigste arrangører av etter- og videreutdanning for ledere, ingeniører og sivilingeniører. Kursene er beskrevet nokså detaljert (varighet, innhold, antall deltakere, evt eksamen, type lærere, evt samarbeid mellom arrangører, finansiering) fordi dette var opplegget for OECD prosjektet. Dessuten er det lite empirisk kunnskap på dette feltet i Norge. Oversikten over etter- og videreutdanning er mangelfull i Statistisk Sentralbyrås statistikk over voksenopplæring og i departementet. Opplæringsansvarlige i bedrifter og etater kjenner i varierende grad kursmarkedet, men nesten ingen bedrifter og etater har statistiske oversikter over personalopplæring (betalt etter- og videreutdanning) som de ansatte får.

Vi skal i sammendraget ta opp følgende temaer: sertifisering av kurs, skreddersydde kurs, arbeidsdeling mellom arrangører av etter- og videreutdanning, samarbeid mellom arrangører, korte kurs vs lange programmer, videreutdanning ved

universitet eller høgskole, hvem skal betale videreutdanning, typer kompetanse som kan være yrkesrettet.

Sertifisering av kurs blir viktigere

"De gylne årene" med sterk vekst i kursmarkedet er forbi, det sier både norske kursarrangører og opplæringsansvarlige i bedrifter. Vi ser en tendens til å legge større vekt på at kurs er sertifiserte innenfor universitets- og høgskolesystemet. Både arbeidsgivere og ansatte er blitt mer kritiske til kvaliteten og kostnadene på kurs enn de var tidlig i 1980 årene, av flere grunner: økonomiske vansker, økt arbeidsledighet, misnøye med kurs.

Arbeidsgivere betaler for kurs samt ansattes lønn under kurset. I årene 1988-89 førte lave oljepriser, økte bankrenter og mindre privat forbruk pga lønnslov til økonomiske vansker for mange norske bedrifter. Arbeidsgivere forsøkte å kutte kostnader, også opplæringskostnader. På den annen side har det samtidig vært økt fokusering på hvor viktig det er å ha kompetente ansatte. Arbeidsgivere blir mer selektive på kursmarkedet, de forsøker å finne bedre og billigere kurs. Interne kurs eller kurs uten overnatting erstatter kurs på hotell. Kurs ved universiteter og høgskoler er ikke nødvendigvis billigere enn private arrangører, men kvaliteten på kursene er i større grad garantert - i motsetning til det helt uregulerte private kursmarkedet.

Ansatte trenger sertifisering av den kompetansen de får av kurs, for å forbedre karrieremulighetene - særlig hvis de skifter arbeidsgiver. Generelt forsøker arbeidsgivere å skape bedriftsinterne arbeidsmarkeder med opprykk for å kunne beholde ansatte som har fått omfattende og dyr etter- og videreutdanning. Sertifisering av denne utdanningen er ikke i arbeidsgiverens interesse, det øker sjansen for at ansatte går til andre bedrifter. Men med vanskelig økonomisk situasjon for bedriften kan arbeidsgiver måtte si opp også ansatte som det er investert mye i opplæringen av. Med økt ufrivillig mobilitet får både ansatte og arbeidsgiver interesse av at kurs er sertifisert.

Universiteter og høgskoler kan i større grad enn andre arrangører sertifisere de kurs de tilbyr. De garanterer kvaliteten, faglig og profesjonelt, på lærere og innholdet av kurset. Kursdeltakernes økte kompetanse kan testes ved eksamener og vises ved karakterer. En eksamen som evalueres av Det nasjonale koordineringsutvalget (NKU) blir godkjent som en viss andel av et års heltidsstudium. Flere kurs kan settes sammen til en lengre videreutdanning (f.eks.til bedriftsøkonom eller foretaksøkonom).

Sertifisering og eksamener passer for kurs som gir "operativ standard kompetanse" for en profesjon, kunnskaper og ferdigheter som kan brukes i mange bedrifter og organisasjoner. Slik etterutdanning oppdaterer kompetansen fra grunnutdanningen ("ajourføring") eller gir spesialisert kompetanse som den profesjonelle ikke fikk

eller valgte i grunnutdanningen. Et eksempel er de spesialiserte EEU-kursene ved NTH.

Sertifisering av et kurs ved eksamen er vanskelig å forene med den prosess- og utviklingstenking som er vanlig for lederkurs. Når prosessorienterte lederkurs inngår som del av et sertifisert program, kan eksamen f.eks. bli erstattet av en prosjekt-oppgave som blir bedømt.

Sivilingeniørenes organisasjon (NIF) har bygget opp sine "profesjonelle utviklingssertifikater" (PDC) av sertifiserte lange kurs ved universiteter og høgskoler, supplert med egne kurs bare hvis nødvendig. Organisasjonen garanterer kvaliteten overfor medlemmer som deltar og arbeidsgivere som betaler, men det er ikke snakk om noen offentlig godkjenning. NIF ser sin rolle som koordinator og pådriver for å få nye kurs startet ved universiteter og høgskoler, der lærekrefter og eksamensordninger finnes.

Flere skreddersydde kurs

"Skreddersydd" kurs vil si at en bedrift (eller offentlig etat) får en ekstern utdanningsarrangør til å utforme eller omforme et kurs bare for bedriftens ansatte ut fra bedriftens spesielle situasjon. Kurset holdes gjerne i bedriftens lokaler og er ofte obligatorisk for ansatte i en bestemt stillingsgruppe eller avdeling. Når bedriften har egne opplæringsfolk, deltar disse i utformingen og i undervisningen sammen med utdanningsarrangøren.

Markedet for skreddersydde kurs for ulike bedrifter og etater var i vekst i Norge i siste halvdel av 1980 årene, og vi venter at denne tendensen vil fortsette. Dette gjelder kurs og programmer innen ledelse, salg, service og "personlig utvikling". Slike kurs skal gi økt kompetanse i mellommenneskelige relasjoner (kommunikasjon, konfliktløsning osv), som skal knyttes til og kunne overføres til det daglige arbeidet i bedriften. Her skal "basiskompetanse" kombineres med "lokal kompetanse", spesifikk for bedriften eller bransjen.

På markedet for skreddersydde kurs dominerer private arrangører, som ofte er konsulenter for bedriften samtidig.

I 1980 årene har noen høyere utdanningsinstitusjoner gjennom stiftelser eller sentra (NHHK, BI Senter for lederutdanning, ULA-NTH, SEVI ved Agder distriktshøgskole) gitt skreddersydde lederkurs til lokale bedrifter og offentlige etater. De markedsfører ikke dette, men får henvendelser fra tidligere deltakere på åpne lederkurs. Lærestedene har bare kapasitet til å holde skreddersydde lederkurs i noen få bedrifter og etater årlig. Deres motivasjon er ikke primært økonomisk, men å teste ut teorier og metoder innen lederopplæring og knytte dette til egen forskning. Det er positivt at universiteter og høgskoler gir skreddersydde kurs, men det vil neppe kunne bli noen stor del av etterutdanningsvirksomheten deres.

Arbeidsdeling mellom utdanningsarrangører

Ulike kategorier arrangører tilbyr etter- og videreutdanning for ledere, ingeniører og sivilingeniører som er ansatt i bedrifter eller offentlige etater. Figuren på neste side gir et bilde av dette for følgende kategorier arrangører: universiteter og høgskoler (tildels med stiftelser for etterutdanning), profesjonsorganisasjoner, bransje- og arbeidsgiverorganisasjoner (i privat, statlig og kommunal sektor), private kursarrangører, opplysningsorganisasjoner og brevskoler, bedrifter og etater. Pil ut fra "bedrifter, etater" til en arrangør betyr at ansatte kan delta på kurs hos arrangøren. Pil inn til "bedrifter, etater" fra en arrangør betyr at denne arrangøren tilbyr kurs (eventuelt skreddersydde kurs) i bedriften eller etaten. Pilen inne i "bedrifter, etater" betyr at arbeidsgiver tilbyr kurs for ansatte.

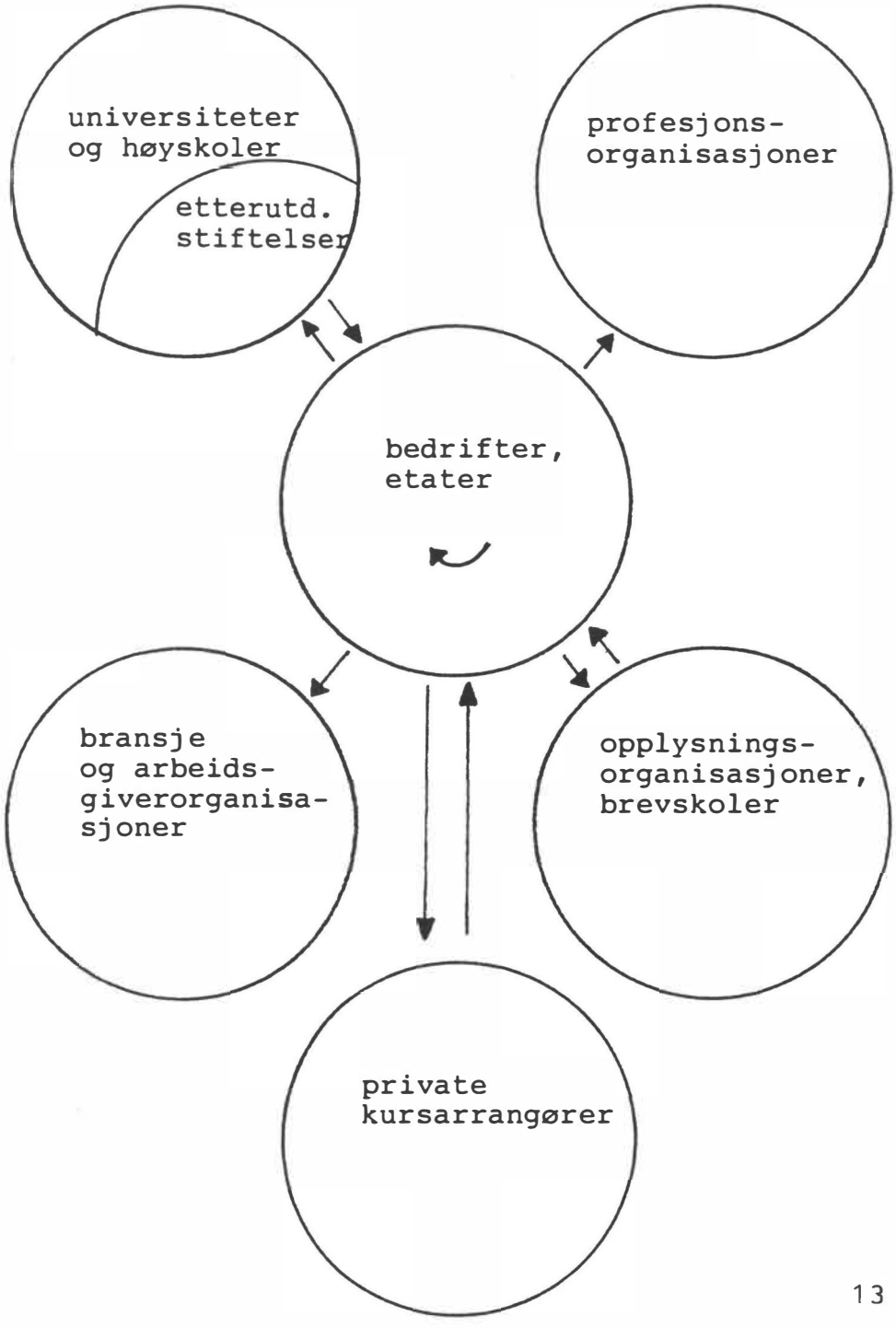
Vi vil nå gi en kort oversikt over hva som er typiske kurs fra de ulike kategorier arrangører av etter- og videreutdanning for ledere, ingeniører og sivilingeniører. Vi fokuserer spesielt på tilbudene fra universiteter og høgskoler, ut fra opplegget for OECD prosjektet.

Bedrifter og offentlige etater har i økende grad kollektive, tildels obligatoriske, lederprogrammer. Sivilingeniører og ingeniører innen teknisk service og salg får nødvendige produktkurs, eventuelt koplet til salgsopplæring. Kurs i prosjektadministrasjon tilbys sivilingeniører og ingeniører av bedrifter, men også av mange andre arrangører. En del bedrifter tilbyr kurs i presentasjonsteknikk og "personlig utvikling" (psykologi).

Private kursarrangører tilbyr i stor grad skreddersydde bedriftsinterne lederprogrammer, og de dominerer markedet for salgskurs og servicekurs. Alle disse kursene er ofte nært knyttet til arrangørenes virksomhet som konsulenter. Bortsett fra EDB-kurs tilbyr private kursarrangører ikke tekniske kurs på universitets- og høgskolenivå.

Profesjonsorganisasjoner tilbyr først og fremst faglig spesialiserte seminarer og korte kurs. Men sivilingeniørenes organisasjon (NIF) har laget mer omfattende "profesjonelt utviklingssertifikat" som kombinerer teknikk, økonomi og økologi innen ulike felter. Et sertifikat er satt sammen av flere kursmoduler med eksamener samt prosjektoppgave. Kursene er fra universiteter og høgskoler samt NIF selv. Mange sivilingeniører blir ledere, og NIF har lenge tilbudt utviklingsprogrammer i ledelse og administrasjon, nå også innenfor et sertifikat. Ingeniørenes og siviløkonomenes organisasjoner har derimot ikke tilbudt egne lederkurs.

Arbeidsgiver- og bransjeorganisasjoner tilbyr vesentlig lederkurs, ikke tekniske kurs for de profesjonene vi ser på. Den største arbeidsgiverorganisasjonen i privat sektor (NHO) har nå overlatt til bransjeorganisasjonene å holde lederkurs, for å oppnå bedre tilpasning til bedriftenes situasjon. Arbeidsgiverorganisasjoner i statlig sektor og kommunal sektor har en rekke lederkurs og lederprogrammer, tildels internt i etater og kommuner.


universiteter
og høyskoler
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stiftelser
profesjons-
organisasjoner
bedrifter,
etater
bransje
og arbeids-
giverorganisa-
sjoner
opplysnings-
organisasjoner,
brevskoler
private
kursarrangører

Opplysningsorganisasjoner og brevskoler er blitt mer yrkerettede i sine kurstilbud i 1980 årene, på grunn av økt interesse for slike kurs på markedet og mindre statsstøtte. Noen arrangører tilbyr skreddersydde lederkurs, særlig for små bedrifter og offentlige etater. Mange sivilingeniører og ingeniører tar videreutdanning i økonomisk-administrative fag ved fjernundervisning. Opplysningsorganisasjoner brukes i stor grad til språkkurs, også bedriftsinternt. Disse organisasjonene har lite tekniske kurs på universitets- og høgskolenivå, unntatt noen brevskoler og Teknologisk Institutt. (I motsetning til private kursarrangører er brevskoler statlig regulert fra departement og råd, selv om brevskolene tildels er privateide.)

Universiteter og høgskoler har sin styrke i å tilby mer langvarige kurs som er sertifiserte, med eksamen og godkjent som en viss andel av et års heltidsstudium. Disse kursene bygger ofte på spesialiserte kurs for studenter, men med tillegg av profesjonelle yrkesutøvere som gjesteforelesere. Institutt og professor er faglig ansvarlig, kursene arrangeres ofte av utdanningsinstitusjonen sentralt. Deltakere, eller vanligvis deres arbeidsgivere, betaler de fulle kostnader for kurs inkludert administrasjon. Overskudd på noen kurs dekker underskudd på avlyste kurs, som er en følge av usikkerheten i markedet. For å være mer fleksible har offentlige utdanningsinstitusjoner opprettet stiftelser for etterutdanning, Norges Handelshøyskole allerede i 1950 årene, noen distriktshøgskoler og Norges Tekniske Høgskole i 1980-årene. Universitetene har foreløpig ikke dannet stiftelser for etterutdanning på samme måte som for forskning.

For sivilingeniører og andre tilbyr Norges Tekniske Høgskole nesten nitti ulike EEU-kurs (eksamensrettet etterutdanning), de fleste innen tekniske og teknisk-administrative fag, som heldagskurs med to en ukes-samlinger. Omtrent halvparten av deltakerne tar frivillig eksamen etter EEU-kursene. Både Norges Handelshøyskoles Kursvirksomhet (NHHK) og Bedriftsøkonomisk Institutt (BI) tilbyr spesialiserte kurs med eksamen innen økonomisk-administrative fag. Kursene tilbys som kveldskurs i ett semester, tildels også som konsentrerte heldagskurs med flere samlinger. Disse kursene blir etterutdanning for sivil- og bedriftsøkonomer, videreutdanning for andre utdanningsgrupper for å kunne gå inn i stillinger med administrasjon og ledelse. Også fem av fjorten ingeniørhøgskoler tilbyr etterutdanning i økonomisk-administrative fag, tilpasset lokale bedrifters behov. Etterutdanningssentret ved Oslo Ingeniørhøgskole planlegger sertifiserte programmer i økonomisk-administrative fag og i internasjonalisering. Ellers har etterutdanningstilbudet i tekniske fag i ingeniørhøgskolenes ekstra påbyggingsår i løpet av 1980 årene blitt en del av grunnutdanningen, som ble utvidet fra to år til tre år (på linje med minstenorm innen EF).

Universitetene tilbyr etterutdanning til sine egne kandidater: i stor grad til helseprofesjoner, lektorer og lærere, forskere, i noen grad til jurister og sosialøkonomer. For de profesjoner vi ser på, ledere og (sivil)ingeniører, tilbyr universiteter

kompetanse for internasjonalisering ved språkkurs (særlig i ikke-europeiske språk) og ved "regionkurs for næringslivet", som er tverrfaglige seminarer om en region eller et land.

Høyere utdanningsinstitusjoner har sitt fortrinn i å kople ledelse og fag, det vil si "basiskompetanse" og "operativ standard kompetanse" for profesjonen. Det er velkjent at Norges Handelshøyskole tilbyr etterutdanning for ledere gjennom sine stiftelser NHHK (seminarer, internasjonalt PRIDE-program) og AFF (Solstrandkurs med flere samlinger). Senter for lederutdanning ved BI tilbyr også lederprogrammer, som intensive kurs eller som flere samlinger over et år. Det er derimot mindre kjent at Norges Tekniske Høgskole tilbyr lederprogrammer, som EEU-kurs og gjennom Senter for utdanning i ledelse og administrasjon (ULA) tilknyttet Institutt for organisasjon og arbeidsliv. Programmene kombinerer ingeniørfag (prosjektadministrasjon, materialadministrasjon etc) med organisasjonsfag og sosialpsykologi, det kan ikke andre arrangører tilby. Både NTH og NHH startet med lederprogrammer sist i 1950 årene. I løpet av 1980 årene har også noen distriktshøgskoler kommet med. Alle disse arrangørene tilbyr egne programmer for ledere i offentlig sektor, et marked i vekst i 1980-årene.

Samarbeid mellom utdanningsarrangører

Det viste seg å være mye samarbeid mellom arrangører av profesjonell etter- og videreutdanninng. Ansatte ved universiteter og høgskoler brukes ved kurs arrangert av profesjons-, arbeidsgiver- og bransjeorganisasjoner. Private kursarrangører samarbeider med profesjons- og arbeidsgiverorganisasjoner, også i offentlig sektor. Det samme gjelder de store opplysningsorganisasjoner og brevskoler.

Det tetteste samarbeid mellom profesjonsorganisasjon og lærested blir vurdert, av dem selv og av andre profesjoner, å være mellom sivilingeniørenes NIF og NTH. Siviløkonomenes organisasjon ser nå dette som et forbilde, mens ingeniørene i NITO mener de vanskelig kan ha like tett samarbeid med de mange ingeniørhøgskolene.

En privat kursarrangør har hatt en særstilling, Norsk Institutt for Ledelse og Administrasjon (NILA) hadde i 1980 årene et nært og formalisert samarbeid med siviløkonomenes og sivilingeniørenes profesjonsorganisasjoner. Disse organisasjonene hadde sammen med arbeidsgiver- og bransjeorganisasjoner opprettet NILA i 1979. Siviløkonomene overlot til NILA å lage lederkurs, mens sivilingeniørene fortsatt hadde egne lederkurs. Imidlertid opphørte dette spesielle samarbeidet i 1989, da NILA fusjonerte med et svensk lederkursfirma.

Ingeniørenes og sivilingeniørenes organisasjoner (NITO og NIF) har lenge samarbeidet med en privat kursarrangør av språkkurs for profesjonelle. De formidler også til sine medlemmer tilbud fra stiftelsen "Electronic University" i Rogaland om amerikanske kurs i økonomisk-administrative fag via datamaskin. For videreutdan-

ning av ingeniører i økonomisk-administrative fag har NITO siden 1979 hatt en samarbeidsavtale med NKS Skolen om "Bedriftslederskolen", brevkurs med lokal undervisning og eksamen gjennom Teknologisk Institutt. NITO samarbeider nå med BI i Oslo for å tilpasse noen økonomisk-administrative kurs spesielt for ingeniører, med teknologiske eksempler og forelesere samt konsentrerte dagkurs istedenfor kveldskurs.

Profesjonsorganisasjoner og bransjeorganisasjoner som formidlere

Et universitet eller en høgskole kan arrangere vanlige kurs og utvikle skreddersydde kurs for ansatte i noen få lokale bedrifter og offentlige etater. Men denne direkte kontakten og kursplanleggingen krever mye ekstra av lærerstaben. Vi kan ikke vente at slik en-til-en kontakt skal bli særlig omfattende. Etter min mening kan samarbeidet mellom høyere utdanningsinstitusjoner og bedrifter (etater) best foregå ved å bruke profesjonsorganisasjoner og/eller bransjeorganisasjoner som formidlere på nasjonalt nivå. Dette vil trolig også fungere bedre enn å skulle gi et departement eller offentlig organ denne oppgaven. En profesjonsforening kan informere sine medlemmer om relevante kurs fra ulike utdanningsinstitusjoner, og den kan informere lærestedene om medlemmenes behov for etter- og videreutdanning. En bransjeorganisasjon gjør tilsvarende for sine medlemsbedrifter. En stor fordel ved å bruke disse organisasjonene mer aktivt som formidlere er at universiteter og høgskoler når fram med kurstilbudet også til ansatte og arbeidsgivere i små bedrifter. (Den direkte kontakten er vanligvis bare med store bedrifter.)

Korte kurs eller lange programmer?

Vi kunne tro at private kursarrangører og bedrifter tilbyr korte kurs, mens universiteter og høgskoler tilbyr lange kurs eller programmer. Tildels er det slik, men også det motsatte er tilfelle. Oversikten på neste side viser hvor lange kurs (antall dager i parentes) de ulike typer arrangører tilbyr for ledere, ingeniører og sivilingeniører.

De lengste programmene med mer enn en måned (20 dager) på kurs finnes på ulike felter. De lengste lederprogrammene gis ved universiteter og høgskoler for ledere i privat og offentlig sektor og ved Statens Forvaltningshøgskole. Andre arrangører tilbyr lange programmer i prosjektadministrasjon for statsansatte og i fremmedspråk, også bedriftsinternt i bl.a. oljeselskaper. Ellers har noen store EDB-bedrifter lange opplæringsprogrammer for serviceingeniører, salg og systemarbeid. De lange programmene er organisert som flere samlinger eller kursmoduler med jobbperioder imellom, slik at hele programmet varer fra et halvt år til to år.

Korte kurs (dager):	*Lange kurs/programmer (dager):*
Bedrifter og offentlige etater:	
Introkurs ledere (2 - 3)	Lederprogrammer (5 - 20)
Produktkurs (3 - 5)	Produktkurs for service-
Prosjektadm. (1 - 3)	ingeniører EDB (60 - 90)
Presentasjonsteknikk (2 - 4)	Produkt/salgskurs (40 - 70)
Personlig utvikling (3 - 5)	EDB
Private kursarrangører:	
Lederkurs (1 - 5)	Lederprogrammer (- 25 - 30)
Prosjektadm (5 - 10)	også bedriftsinternt
Salgskurs (3 - 5)	Salgsprogrammer (15 - 20)
EDB kurs (3 - 5)	
Profesjonsorganisasjoner:	
Siviløkonom seminarer (1 - 2)	NIF GILA program adm og
NIF tekniske seminarer (1 - 3)	ledelse siv.ing. (12)
NITO tekniske kurs (1 - 5)	NIF PDC-sertifikat teknisk,
adm og ledelse (25 -)	
Arbeidsgiver- og bransjeorganisasjoner:	
KS lederkurs kommune (2 - 12)	Statens Forvaltnings-
Pers.dir. lederkurs stat (2-5)	høgskole (75)
Tidl. NAF lederkurs (1 - 3)	Bransje lederprogrammer (5-15)
Prosjektadm (3 - 5)	Prosjektadm stat (50)
Opplysningsorganisasjoner og brevskoler:	
Lederprogrammer (3 - 10)	Økon.adm. brevkurs med evt
også bedriftsinternt	samlinger
Språkkurs (3 - 5)	Språkkurs (10 - 60)
Tekniske kurs (3 - 10)	også bedriftsinternt
Universiteter og høgskoler:	
NHHK lederkurs (1 - 5)	AFF/NHH lederprogram (40)
BI lederkurs (5)	PRIDE/NHHK " (30)
NHHK, BI økon.adm. kurs	BI " (12 - 30)
deltid (7 - 8)	SEVI/ADH " (- 60)
SEVU/NTH tekniske og adm	ULA/NTH " (10, 30)
EEU-kurs (10)	
IH tekniske kurs (2 - 4)	

Etterutdanning er for en stor del korte kurs på en uke eller mindre, både allment og for de profesjonene vi ser på. Lange fravær fra arbeidet skaper problemer med vikar eller forsinkelser, dessuten betaler arbeidsgiver lønn under kurset. Alle kursarrangørene har tilpasset seg dette, men det kan ikke være noe mål at universiteter og høgskoler skal satse enda mer på markedet for helt korte kurs. Profesjonsorganisasjonene har lengre erfaring med å tilby korte, spesialiserte, aktuelle etterutdanningskurs eller seminarer. Universiteter og høgskoler kan tilby etterutdanningskurs som tilsvarer et spesialfag i ordinær undervisning, disse kursene blir litt lenger, en til to uker. Her bruker utdanningsinstitusjonene ulike opplegg: to lange kurssamlinger (EEU-kurs ved NTH), flere samlinger ved ukeslutt inkludert lørdager (BI), kveldskurs i løpet av et semester (NHHK, BI).

Videreutdanning ved universitet eller høgskole

Denne rapporten tar vesentlig opp kurs spesielt laget som etter- og videreutdanning for profesjonelle yrkesutøvere. Men grunnutdanning ved universitet eller høgskole kan også brukes som videreutdanning av profesjonelle. Vi kjenner ikke det samlede omfanget av dette. I 1980 årene har det blitt flere deltidsstudenter og flere eldre studenter over tredve år, men bare en del av disse studerer som påbygging av tidligere fullført utdanning.

NAVFs utredningsinstitutts årlige undersøkelser av nyutdannede kandidater viser at flere høgskoleutdannede begynner rett på videreutdanning nå enn de gjorde tidlig i 1980 årene. Av nyutdannede fra distriktshøgskoler, de fleste med økonomisk-administrative fag, begynte 20 til 25 prosent rett på en ny utdanning sist i 1970 årene og tidlig i 1980 årene, 29 prosent i 1987 og så mange som 41 prosent i 1989. Av nyutdannede ingeniører begynte 30 til 40 prosent på en ny utdanning midt i 1980 årene, men en stor del tok et ekstra tredje år ved ingeniørhøgskolene - dette falt bort da grunnutdanningen ble treårig. Hvis vi ikke tar med dette, begynte 20 prosent av de nyutdannede ingeniørene rett på en videreutdanning i 1984 og 1985, mens 33 prosent gjorde det i 1989. De fleste tok teknisk videreutdanning, 15 prosent begynte heltidsstudier til sivilingeniør i Norge eller utlandet og 6 prosent begynte å studere realfag ved universitet. Ellers begynte 10 prosent å studere økonomisk-administrative fag, på heltid eller deltid. Det ser ut til at en økende andel av de høgskoleutdannede ikke finner to til tre års studier tilstrekkelig. Grunnene kan være ønske om faglig fordypelse, bedre muligheter for å få jobb, bedre karrieremuligheter, håp om at arbeidsledigheten vil avta innen videreutdanningen er avsluttet.

Hvem skal betale for videreutdanning?

Denne rapporten handler om "continuing education", begrepet omfatter både etterutdanning og videreutdanning. Imidlertid er det nødvendig å si litt om de ulike

rammebetingelser, økonomisk og organisatorisk, for etterutdanning og for videreutdanning.

Etterutdanning er nødvendig for at den ansatte skal kunne utføre sine nåværende arbeidsoppgaver. Den ansatte blir pålagt å gå kurs, som foregår i arbeidstiden og med full lønn. Dessuten betaler arbeidsgiver for kurs, eventuelle reiser og opphold. Dette gjelder både for vanlige korte kurs (en dag til et par uker) og lange opplæringsprogrammer (opp til flere måneder sammenlagt på kurs). Når utdanningen er en betingelse for å kunne fortsette i stillingen, kan utgiftene gi fradrag ved personbeskatning. Siden arbeidsgiver betaler slik utdanning, er dette til liten nytte for ansatte, men eventuelt for selvstendige profesjonelle yrkesutøvere.

Videreutdanning er påbygging av tidligere utdanning for å kunne utføre mer kvalifiserte arbeidsoppgaver. Som regel er videreutdanning sertifisert. Profesjonell videreutdanning er vanligvis langvarig, fra et semester (fire måneder) til flere år ved universitet eller høgskole. Det er høyst varierende om arbeidsgiver er villig til å betale for videreutdanning, siden alternativet er nyansettelse av mer kvalifiserte personer som allerede har høy utdanning. Det vanlige er at ansatte selv må betale utgifter til videreutdanning. Allikevel gir slike utgifter ikke rett til fradrag ved personbeskatningen. Et annet problem er å få permisjon fra arbeidet for å ta videreutdanning på heltid. Norge har ennå ikke ratifisert ILO konvensjon nr 140 fra 1974 om lønnet utdanningspermisjon. I motsetning til de andre nordiske land er heller ikke lovfestet rett til (ulønnet) utdanningspermisjon vedtatt i Norge, men spørsmålet har vært utredet og diskutert i 25 år.

Lønnet utdanningspermisjon har vært brukt av noen store offentlige etater, bl.a. har internt utdannede ingeniører i Televerket fått videreutdanning til sivilingeniør, med krav om plikttjeneste i like mange år etterpå ("bindingstid"). Meget få private bedrifter gir lønnet permisjon til heltidsstudier. Av tolv undersøkte opplæringsaktive høyteknologi- og servicebedrifter var det bare et oljeselskap som ga slik permisjon til noen få ansatte. Derimot ga elleve av de tolv bedriftene stipend til videreutdanning på deltid ved universitet eller høgskole. Kravene var at studiet var relevant for arbeid i bedriften og at studiet hadde eksamen(er). Siden deltidsstudier som kveldskurs eller brevkurs ved siden av arbeidet er krevende, søkte ansatte stipend på eget initiativ - i motsetning til etterutdanning. Stipendene dekket bøker og studieavgifter, vanligvis for studier fra et halvt år til maksimalt to år. Både rimelige offentlige høgskoler og universiteter samt dyrere private høgskoler ble brukt, kostnadene for de siste kunne bli opp til 20 000 kroner eller mer - men arbeidsgivere må betale like mye for noen få korte kurs fra private arrangører. Halvparten av bedriftene praktiserte "bindingstid" i ett til to år etter utdanningen, dvs den ansatte måtte betale tilbake hele eller deler av stipendet om vedkommende sluttet i bedriften da. Stipendordningene ble brukt av ansatte i ulike yrker. Ingeniører og sivilingeniører fikk tildels stipend til spesialiserte tekniske studier (geokjemi,

informatikk). Men de tekniske profesjonene brukte stort sett stipend til supplerende videreutdanning i bedriftsøkonomi, administrasjon og fremmedspråk. Dette er nyttig i tekniske stillinger og kan være kvalifiserende for å få lederstillinger.

Profesjonell etter- og videreutdanning er alltid "yrkesrettet", men gir ulike typer kompetanse

Prosjektopplegget fra OECD stilte spørsmål om "utviklingen av profesjonell etter- og videreutdanning innen høyere utdanningsinstitusjoner er et middel for å motvirke og kanskje hindre grunnutdanningen i å bli overdrevent yrkesrettet"? Mitt svar er "nei".

Dette skyldes det særegne ved profesjonsutdanninger. Disiplinorienterte grunnutdanninger (cand.mag., hovedfag) gir utelukkende det faglige grunnlaget for eventuell yrkesutøvelse som lærer eller forsker. Grunnutdanninger for profesjoner forbereder derimot for den felles kjerne av arbeidsoppgaver som yrkesutøvere innen profesjonen har, de er nødvendigvis yrkesrettet. De første årene i grunnutdanningen gir kunnskaper i ulike vitenskapelige disipliner, redskapsfag og noen profesjonelle teknikker. I de følgende årene må studentene i tillegg til et felles pensum velge mellom mange spesialiserte fag, relevant for ulike felter av profesjonelt arbeid. Dette gjelder f.eks. ingeniører, sivilingeniører og siviløkonomer.

Det ser ikke ut til at forekomsten av etter- og videreutdanning har ført til færre valgfrie fag i grunnutdanningen. (Etterutdanningskurs bygger vanligvis på spesialkurs i grunnutdanningen.) Den profesjonelle yrkesutøver kan gjennom etterutdanning få spesialiserte kunnskaper som arbeidsoppgavene krever, når slike kunnskaper ikke ble valgt - eller ikke fantes - i grunnutdanningen.

Profesjonell etter- og videreutdanning er nødvendigvis forbundet med den profesjonelles nåværende eller framtidige arbeid, den er yrkesrettet. Imidlertid kan den godt ineholde elementer eller fag som kunne kalles "allmenne", hvis de var tatt separat i en annen sammenheng. F.eks. er en forelesning om et lands litteratur en del av Regionkurs for næringslivet ved Universitetet i Oslo, for ansatte som skal arbeide i dette landet for norske bedrifter eller myndigheter. I dette to - tre dagers kurset settes litteraturen i sammenheng med landets økonomi, politikk, sosiale skikker osv. Hensikten er klart jobbrettet, yrkesrettet. En helt annen situasjon er når en profesjonsutøver tar et kveldskurs i litteratur ut fra personlig interesse og betaler det selv.

Det er misforstått å tro at bare spesialiserte fag som gir "operativ standard kompetanse" er yrkesrettet utdanning. Fra intervjuene i bedriftene og kursarrangørene var det overraskende å oppdage hvor mye av etter- og videreutdaningen som var ment å gi basiskompetanse i eget språk (muntlig og skriftlig presentasjon), fremmedspråk og ikke minst mellommenneskelige relasjoner (kommunikasjon, konfliktløsning osv). Tyder dette på at høyere utdanningsinstitusjoner ikke gjør

disse oppgavene godt nok i grunnutdanningen? Kan dette forbedres ved at studenter må gjøre mer prosjektarbeid i grupper? Eller bør det bli obligatoriske forelesninger i sosialpsykologi med eksamen? Etter mitt syn er det viktig at teorier om mellommenneskelige relasjoner blir forbundet med praktisk trening og diskusjon i grupper, både i grunnutdanning og i etterutdanning.

1 Main questions and research basis

The proposal for the OECD project "Recent Developments in Continuing Professional Education" states that the study is to focus on higher education (HE) institutions, but also to see these in relation to other actors on the training market. The main question is: In continuing professional education, what is the division of labour and cooperation between HE institutions and other providers of education? Could this be improved?

More specific questions (paragraph 45) are: " Which training needs do HE institutions provide an answer to? Which training needs could HE institutions possibly provide an answer to? Which training needs are other actors on the training market better able to provide an answer to?"

These questions may be answered by the providers of continuing professional education, that is representatives of HE institutions and other providers including firms (the OECD proposal, paragraphs 46-78). The questions may also be answered by the customers, that is the professionals and their employers.

Continuing professional education might be studied for "middle and upper management in the civil service, in private firms and for certain professions, e.g. architechts, engineers, accountants, the legal professions", as listed by the OECD. Based on my own research, this report will be limited to *managers and engineers* in Norwegian firms and public services.

The one main source for this report is informant interviews with, and course booklets from, different *providers* of continuing education and employee training: universities and colleges, professional associations, private training agencies, employers' federations and non-profit associations. Some material was collected at the start of the project "The Hidden University" in 1986-87. Regional colleges were interviewed on their continuing education, especially tailor-made courses, by S.Aga (unpublished). In 1990 I have updated the information.

The other main source is my study of employee training in twelve Norwegian *firms*, done as a part of the research project "The Hidden University".(1) In 1986-87 we interviewed nearly ninety employees in different white-collar occupations in six high-technology firms and six service firms. The firms were not "statistically representative", they were chosen as examples of "best practice" - known within the trade for extensive, good employee training. The firms were not to be anonymous, in the publication (1) they were presented with contact person, address and telephone number.

The trades selected were oil production (Elf Aquitaine Norway, Norsk Hydro), engineering consultants (Norwegian Petroleum Consultants), computer manufacturing (IBM Norway, Norsk Data), computer consultants (Enator), banking (ABC),

insurance (UNI), airline (Braathens SAFE), travel agency (Winge) and hotel (Grand, Stefanhotellet). Two firms had fifty employees, the rest had from 300 to over 2 000 employees, considered large firms in Norway. Several were part of multinational corporations or had subsidiary companies abroad. Only employees in the head offices or local offices in the Oslo area were interviewed, except in Elf Aquitaine in Stavanger on the west coast of Norway.

We got information about the firm, the work and the training from internal training booklets, statistics of employee training (only in two firms), employee booklets, organisation charts, firm newspapers and annual reports - but mostly from informant interviews. In average the interviews lasted one hour and a half, done by a team of two interviewers. In the twelve firms we interviewed: first, training managers and training coordinators in divisions (20 persons); then, representatives of different occupational groups, usually through unions and professional associations (57 persons); and lastly, personnel managers and other top managers (10 persons). Getting the views of both management and employees' organisations has been fundamental in Scandinavian work research for decades.

In the project "The Hidden University" we also used other data sources:

- Data on employee training in 70 engineering firms, both small and large firms, from a survey of "The Long-term Need for Competence in the Engineering Industries", done by our Institute for the trade federation and several ministries.(2)
- Data on internal education and training in eight public services (postal, telecommunications, railways, civil aviation, taxation, customs, social security, labour market services), in a survey of employees in 1982 as part of my earlier project "Education, Qualification Requirements and Job Content in Norwegian Public Services".(3)
- Data on types of continuing education taken by graduates from universities and regional colleges, during the first ten years after graduation, from an earlier survey of graduates by our Institute.(4)
- Surveys of costs for employee training to member firms of the Norwegian Employers' Federation and the Norwegian Manufacturing Federation.
- Annual statistics of adult education, published by the Norwegian Central Bureau of Statistics.

For the period 1986-89 the project "The Hidden University" was financed by the Norwegian Research Council for Applied Social Science (NORAS), the Ministry of Labour, the Department for Adult Education in the Ministry of Education, and our Institute for Studies in Research and Higher Education (NAVF-U).

What follows is not an official Norwegian report for the Ministry of Education and Research. The report is commissioned by the Secretariat of OECD, Education Division and it is based mainly on my own research. As there are so many myths and so little empirical knowledge in the field of continuing professional education, I have found it necessary to describe in some detail courses from different providers as the basis for my conclusions.

Notes

(1) Ellen Brandt: "Vi satser på kompetanse". NAVFs utredningsinstitutt, Oslo 1989.

(2) Lisbet Berg: Personalopplæring i verkstedindustrien. NAVFs utredningsinstitutt, Oslo 1987.

(3) Ellen Brandt: Interne arbeidsmarkeder og profesjoner i offentlige etater. NAVFs utredningsinstitutt, Oslo 1985.

(4) Rolf Edvardsen: Ti år etter eksamen. NAVFs utredningsinstitutt, Oslo 1986. Ellen Brandt: Videreutvikling av kompetanse i arbeidslivet etter universitet og høgskole. Pp 53 - 72 in Arnesen (ed.): Utdanning og arbeidsmarked 1988. NAVFs utredningsinstitutt, Oslo 1988.

2 Continuing education in Norway

To help foreign readers I will first give an overview and discuss Norwegian policy for adult education and participation in continuing education. (The term "adult education" in Norway includes both basic education for adults and continuing education.) As this report concerns continuing education for managers and engineers, I then describe the educational background of these professions in Norway.

2.1 Adult Education Act

From the middle of the last century to the 1950's adult education in Norway was dominated by voluntary organisations and popular movements, mainly using study circles. In 1932 the various organisations established the Norwegian Association of Adult Education. The first private correspondence school was established in 1914 with vocational and general courses. In 1948 the Correspondence School Act was established to regulate these activities. In the 1960's new providers of adult education became active: school authorities, manpower authorities and working life organisations. Government policy was expressed in a White Paper "On Adult Education" (1964-65). Adult education was defined as both vocational and general education, and should be on an equal footing with basic education for children and young people. In 1966 a department of adult education was established in the Ministry of Church and Education, in 1967 the first advisory State Council of Adult Education was appointed. State grants for the provision of adult education increased. In 1970 the Government appointed a committee to work out a proposal for an act on adult education. (1)

The Adult Education Act was passed in 1976 by the Norwegian Parliament (Storting). The act applies to:

1. Study work (study circles) in voluntary organisations and institutions entitled to state grants.
2. Basic education at primary and secondary school level, organised especially for adults.
3. Alternatives to basic education for adults at all levels.
4. Further education and short courses (not forming part of basic education) in secondary schools and higher education institutions.
5. Short-term courses for adults in Folk High Schools.
6. Vocational training for adults as part of the labour market policy.
7. Training given in or in connection with a firm.
8. Other provisions for adults, assessed on an individual basis.

The act does not establish a right to adult education. Needs for the provision of adult education are assessed and decided regionally or locally in county boards, local (municipal) boards, regional college boards (for all colleges within a county) and regular governing bodies of universities.

The main objective of the Adult Education Act was to achieve a higher degree of *equality* (with regard to age, sex, region) and *democratisation*. It was not particularly oriented towards continuing vocational education, and even less towards continuing professional education as professionals belonged to the educationally privileged part of the population.

Main arguments in the 1970's debate on adult education were increased equality and personal development, these were possibly stronger in Norway than in most other countries. Main arguments in the 1980's debate in Norway and elsewhere changed to satisfying educational needs in the market and the importance of a *qualified labour force* for innovation, increased quality of services and international economic competition. The Norwegian debate in the 1980's focused more on continuing education and employee education, but so far no new organisational or financial measures have been set up.

The question of *educational leave* illustrates this. Norway has not ratified the ILO Convention of 1974 on Paid Educational Leave, even though both employers' and employee organisations recommended it at the time. The Ministry of Social Affairs and the Norwegian Parliament wanted the question to be further investigated, this was done in 1980 by the Norwegian Institute of Adult Education. This question has now been discussed for twenty-five years. As early as 1964-65 a White Paper on adult education proposed paid educational leave. The Commission on Lifelong Learning referred to other European countries, particularly Sweden in its 1986 report, and proposed a law on unpaid educational leave. So did the Commission on Higher Education in 1988. Now the employers' organisations, however, are opposed to a general right to unpaid educational leave. In a White Paper on lifelong learning in 1988-89 the Labour Government did not propose a law on this matter, but left it to agreements between partners in working life. Recently two researchers in adult education have criticised the focus on educational leave, as most continuing vocational educations are short courses. (2)

2.2 Funding

Basic education in primary and secondary education for adults should be fully financed as for other pupils by the state, counties and municipalities. Further education and alternative basic education at universities should be financed by their *budgets* from the ministry. For most other types of adult education from "democratic" organisations *state grants* covered 80 per cent of the approved costs. (1)

During the 1980's these state grants decreased. But even in affluent times *no firms applied* for state grants from the Ministry of Education towards continuing education for their employees and workers. Why? First, firms do not have two-party bodies with union representatives in matters of education, and this was a requirement for "democratic" organisations able to receive grants. Secondly, firms have access to money from joint funds set up and paid for by the employers' federation and the federation of trade unions, both in the private sector, state sector and local government sector. This is used for courses by trade organisations and courses for union representatives. Thirdly, the Ministry of Labour has financed courses not only for unemployed persons, but also for retraining employees in firms in danger of closing down. Besides these reasons, training officers and managers in firms have probably not known the Adult Education Act or seen it as relevant for employee education.

In Norway fees for professional and vocational "refresher" updating courses necessary for doing the present job are *tax-deductible* for employers, self-employed and employees if they have to pay themselves. This is the kind of courses that employers are most likely to pay. In Norwegian this type of continuing education can be translated as "after-education", while "further education" is education at higher levels or in different fields to be able to do more qualified jobs. This last type of continuing education is not tax-deductible, even if it is usually more expensive and more likely to be paid by an employee.

2.3 Participation in continuing education

More than one third (37 per cent) of the adult Norwegian population during 1986 participated in some form of adult education or continuing education, according to the latest available survey. (3) Only 9 per cent participated in leisure-related adult education (defined as leisure courses, correspondence courses and circle studies). The greater part, 29 per cent, participated in work-related adult education (defined as training, courses and continuing education), where 19 per cent participated during working hours and 10 per cent participated outside working hours. These results are not as yet widely known, researchers call attention to the fact that "adult education today is *mostly firm-controlled or firm-related*" (2) (Here public services and municipalities are included in the term "firm").

Only 13 per cent of the unskilled workers participated in work-related training, courses or continuing education during 1986, while 45 per cent of higher-level employees did. The latter are managers and professionals, with whom this report is concerned. Participation was somewhat higher for employees and workers in the public sector, except for skilled workers.

Table 1 Participation in work-related training, course or continuing education and in leisure-related adult education in 1986 for Norwegian workers and employees in the private and public sectors. Percentages.

	Participation in leisure-related courses	Participation in work-related courses		
		Total	Private sector	Public sector
	%	%	%	%
Workers:				
Unskilled	5.8	12.6	11.9	16.7
Skilled	6.5	24.9	25.0	22.0
Employees:				
Lower-level	11.6	19.2	17.0	22.0
Middle-level	11.1	40.6	40.4	41.0
Higher-level	8.8	44.7	39.8	47.4
All	9.3	29.1	25.9	34.4

Source: Norwegian Living Conditions Survey 1987

It is often said that work-related education has increased in Norway during the 1980's. This is probably true, but there are no earlier comparable survey data. Surveys in 1971, 1978 and 1983 only registered participation in in-house courses, arranged by the firm or trade organisation, and held during working hours. In this period 8 to 9 per cent of the adult population participated in such education.(4) Probably this increased somewhat to 1986, but when 29 per cent participated in work-related education it shows that in-house courses are not the major part of work-related education.

2.4 Lack of statistics and course registers

Norway has no statistics from *firms* on the proportion of employees getting continuing education or on what kinds of education from which providers. (France has annual statistics from all firms, Sweden has surveys to firms.) Around 1980 the Norwegian Central Bureau of Statistics, the Norwegian Employers' Confederation and the Norwegian Federation of Trade Unions discussed doing a survey on a representative sample of firms in different trades. This was not carried out, partly

because the Register of Firms was not operative then. Even with a survey, the difficulty remains that few firms know the distribution of continuing education (paid by the employer) among their employees. Firms do not register courses or course days, or connect these to the participants' position, wage level, basic occupational education, sex, age etc. Firms do not see any reason for doing this. The goal of continuing education is to get the work tasks better and more qualified done to increase the profit of the firm, the goal is not to distribute courses justly between employees. Firms more often know, at least approximately, how much money they use for courses for employees.

The Norwegian Bureau of Statistics publishes an annual statistics on adult education, with data on courses and participants (number, sex, region) from *providers of education.* Courses from non-profit associations and public institutions are registered. Most private training agencies are not included, neither are in-house courses in firms and public services. Continuing education arranged by professional associations is included and specified. Otherwise we do not know how much adult education is taken by professionals, since the course providers do not register the occupation or basic education of their participants. Lately, to save staff and money, the Bureau has cut down on the extent of the adult education statistics. This is unfortunate, as the research interest in continuing education has increased. The Ministry of Education and Research and other institutions are working to restore and preferably increase statistics in this field.

The Ministry of Education and Research has no register of continuing education courses offered by *universities and colleges*, neither in the Department of Universities and Colleges nor in the Department of Adult Education. In 1983 the Commission on Lifelong Learning tried to get an overview of continuing education from the universities including professional schools, but not all institutions responded and the information given was not fully comparable. The colleges were not contacted. In this situation I had to contact universities and colleges directly for this report, and my information does not cover the whole field. In a White Paper on lifelong learning in 1988-89 it is said that "the extent of continuing education within higher education institutions must be clarified".

Governmental agencies are perhaps not the best bodies to continually register continuing education courses, their motivation is control or research. Employers or organisations using such courses benefit more directly from setting up registers. *Training departments* in large firms collect course materials from all kinds of providers, both public and private. In some firms this is computer registered and continually updated. Small firms do not have staff to do this. But perhaps *trade organisations*, as intermediaries, could set up computer based registers of continuing education courses relevant for different groups of employees in their member firms. Recently this has been done by the Training Service in the Norwegian Association

of Local Government (KS) in cooperation with their computer experts. The data base includes their own courses, courses from professional associations and unions, public education and private course providers. Managers and employees may use the 80 000 terminals in the municipal computer network to search for courses in different subjects: Economics, Computer Science, General, Health and Social Work, Religion, Culture, Organisation and Management, Technical, Teaching.

2.5 Basic education for managers

As a background for continuing education, what kinds of basic education do Norwegian managers usually have? Law graduates and economics graduates fill most of the managerial positions in the ministries (5) and in some public services like the National Insurance Service and the Taxation Authorities (6). Law graduates are also used as managers in private firms, as are different kinds of business education. Graduate engineers have been widely used, both in manufacturing firms and in technical civil services like the Telecommunications Agency and the State Railways (6). College engineers are not so often managers. During the 1980's, business administration has become "the" managerial education, filling most top executive positions in large firms and a growing number of other managerial positions. But graduate engineers are still used as technical managers and top executives in high-technology firms.

2.6 Basic education for engineers and graduate engineers

Norway has fourteen engineering colleges throughout the country in addition to a military engineering college and a private engineering college based on correspondence courses plus local teaching. Until 1986 the Norwegian Telecommunications Agency had its own electronics engineering college. Degrees in engineering colleges have taken two years, but in the 1980's they have been extended to three years. Around two thousand engineers are educated annually, of these 20 per cent are now women. In the middle of the 1980's nearly ten per cent of the new engineers immediately started to study to become graduate engineers in Norway and abroad.(7)

Since 1910 Norway has had only one educational institution for graduate engineers (M.Eng., Diplomingenieure), the Norwegian Institute of Technology (NTH). It is located in Trondheim, three hundred miles north of the capital Oslo. It resembles a "Grande Ecole", with restricted admission and high prestige. It was called a "scientific college" and recognised as of university level, also before it was formally made part of the University of Trondheim in 1968. Degrees take four years plus half a year to one year for diploma work. Around 700 graduate engineers are educated annually here, of these 26 per cent are now women.

During the 1980's two years of extra study at two engineering colleges produced some graduate engineers, but only in certain specialities connected to local industry. University scientists with special subject combinations in their five to six year education were also allowed to call themselves "graduate engineers", but few chose to do so. In addition to these groups, one hundred to three hundred graduate engineers are annually educated outside of Norway.

2.7 Higher education abroad

Among the industrialised countries, Norway has had an exceptionally high percentage of students studying abroad. The main reason is restricted admission to most professional studies, except law. The students' choice of country has changed from Germany and Switzerland to the United Kingdom and the United States, because of greater familiarity with the English language. For the period from 1960 to 1979, 51 per cent of the business administration graduates and 32 per cent of the graduate engineers were educated abroad.(8) Study abroad has continued and been stimulated in the 1980's. Thus, many Norwegian managers and graduate engineers have high level competence in at least one foreign language and some cross-cultural understanding. They have probably contributed to Norwegian business becoming more internationalised, in the future they will be even more important for a small export-oriented country like Norway.

Notes

(1) Hallgjerd Brattset and Sturla Bjerkaker: Adult Education in Norway. A Brief Introduction. The Norwegian Association of Adult Education Organisations, Oslo 1984. Pages 3-6.

(2) Paul Gooderham and Jørgen Lund: Voksenopplæring uten styring (?) Norsk Voksenpedagogisk Institutt, Trondheim 1990. Page 35-36.

(3) The Norwegian Survey on Living Conditions 1987.

(4) Gooderham and Lund, page 19.

(5) Per Lægreid and Johan P. Olsen: Byråkrati og beslutninger. Universitetsforlaget, Oslo 1983.

(6) Ellen Brandt: Interne arbeidsmarkeder og profesjoner i offentlige etater. NAVFs utredningsinstitutt, Oslo 1985.

(7) Arbeidsmarkedet et halvt år etter eksamen. Kandidater uteksaminert fra ingeniørhøgskolene 1984 og 1985. NAVFs utredningsinstitutt, Oslo 1986.

(8) Ellen Brandt: Minervas sønner og døtre. Kandidater fra universiteter og høgskoler 1890 - 1979. NAVFs utredningsinstitutt, Oslo 1986.

3 Relations between work and continuing education

3.1 Employee training and continuing education

The two concepts "employee training" and "continuing education" are not equivalent, but overlap somewhat.

	Education paid by:	
	employer (firm,public service)	employee (student)
Basic education	1	2
Continuing education	3	4

"Employee training" is paid by the employer, some of it is basic education (1), but most of it is continuing education (3).

"Continuing education" may be paid by the employer (3) or by the employee (4). For professionals probably the greater part is paid by the employer (3).

This report will mainly deal with continuing education for professionals paid by the employer (3).

3.2 Types of continuing education

The OECD proposal (pages 6-8) classifies different types of continuing education, resulting from different objectives. In this report I will only go into continuing education serving professional objectives, because this was the concern of my research.

I will use the distinction (from the OECD proposal) between specialised training within a field, complementary training in new areas and training for conversion to new organisational roles.

3.3 General competence or specific competence?

I will also use another classification of continuing education. One dimension is whether the resulting competence is general or specific to a firm. Another dimension is whether the resulting competence is general or specific to a work task. These two dimensions combined give four types of competence from continuing education.(1)

		Firm specificity	
		low	high
Task specificity	low	basic competence	local competence
	high	operative standard competence	unique competence

Basic competence is an individual "infrastructure" of knowledge, skills and abilities for doing all kinds of tasks in all kinds of firms, now and in the future, important for the ability to learn.(2) To this category belong language (oral and written, native and foreign), analytical ability, creativity and what we call "interpersonal skills": communication, cooperation and conflict solving. This report discuss "presentation technique"- courses in Norwegian language (chapter 4) and foreign language courses (chapter 8). Courses in "interpersonal skills" are given, separately or integrated in other courses, to managers (chapters 4, 5, 9) and sometimes to engineers and other employees (chapter 4).

Operative standard competence is primarily learnt in basic vocational or professional education. This competence is practical or technical, specific for certain work tasks. But the competence is so general that it may be used in different firms and work organisations. (This is the essence of the term "professional labour markets".) In continuing education, the higher education institutions have a special responsibility for up-dating the operative standard competence from the basic professional education (chapter 9). The professional associations are also important here (chapter 6). Private training agencies give courses for business administration tasks, seldom for technical tasks except for computers (chapter 5). Within the firms, few courses give only operative standard competence. One example is project administration courses for engineers (chapter 4). But in-house courses often contain operative standard competence, as in business administration for managers with varying educational background and sales training for engineers (chapter 4).

Local competence (3) is mainly learnt in daily work and from informal talks. But knowledge of the firm's policy, production, organisation, rules and routines, results and more broadly "culture" is also brought to the employees through in-house courses in the firm (chapter 4):

- introductory courses
- product courses
- trainee programmes
- management development programmes

This type of competence is especially important when there are internal labour markets, with all or most manager positions and senior positions being filled by promoting employees (4).

Unique competence, specific both to a task and to a firm, is mainly learnt on the job. But this may be supplemented with in-house courses for the employees having this task.

3.4 Responsibility for the training

The high-technology firms and service firms we interviewed, all have a department of employee training or at least a training manager, usually connected to the personnel department. (The exception was a computer consultancy firm with forty employees, where the director herself had this task.) In firms with autonomous divisions, each division has its own training budget and training coordinators. The training staff, both centrally and in the divisions, collect information on external courses and education, arrange and coordinate in-house courses, etc. Their main task is to support and help managers on all levels. But each manager is responsible for his/her subordinates getting the necessary training for the present job and for further development. The employees, however, are also responsible for their own development, they must take initiatives and not passively wait to be sent to courses.

3.5 Access to training

Where no relevant vocational education exists elsewhere, the firms have to give basic education, compulsory for new employees. This has been the case in banks and in most public services like the railways and the postal services. But, at least in Norway, this has not been typical for firms in the private sector.

Within continuing education, most *in-house courses* are *compulsory* for the employees in relevant positions. The courses are short, lasting two to five days. For the professionals in this report, managers and engineers, compulsory courses are (see chapter 4):

- introductory courses for new employees, held for the firm and sometimes also for its divisions
- product courses for engineers
- sales courses for sales consultants and system consultants
- service courses for service engineers
- management courses or programmes.

Besides these compulsory courses, how does one assess employee training needs in relation to a firm's need for competence? Managers and employees may discuss

this informally during daily work. But to ensure that nobody is overlooked and that a manager has the time needed, a firm may use *employee talks* (also called appraisal interviews or development talks). This was done in all the high-technology firms, bank, insurance company and tourism firms (except the hotels) we looked at. Both managers and employees shall prepare for these talks, held once or twice a year. Usually these talks are voluntary for employees, but compulsory for managers if employees request them. The employee talk focus on both work and training, with evaluations of the past year and planning for the year to come. Both parties agree upon a training programme for the employee, a copy of which is sent to the training department in the firm. If an employee cannot take a planned course, because there are no vacancies or the work load is too heavy, he or she is guaranteed participation in the course later. Busy professional employees in project work or sales work need this, as mentioned by engineers in an oil company. The training department is a "guardian" if the managers do not follow up the agreed courses.

No one knows how many Norwegian firms that use employee talks. From our interviews and other evidence we will say that employee talks are usual: in large firms and corporations (with more than one hundred employees), in firms with few manual workers and more office employees (bank and insurance), in firms with mostly professional employees (like engineering consultants), in later years also starting in ministries, public services and municipal administration.

The employee talk is an *individualised* method, as it originated for higher-level employees in the United States. The division of work between employee talks and unions is not clear, and strong unions have objected to employee talks for workers. From our interviews it seemed that female office employees in some firms had difficulties with getting their educational needs accepted by managers, they were sometimes helped by the training department. Managers, engineers and other professionals had far better chances of getting the continuing education they wanted.

3.6 Continuing education and wages

In Norway an employee taking continuing education does not as a consequence get higher wages in general. One reason is that most continuing educations are short courses necessary for doing the job in the employee's present position, and these courses are also paid by the employer.

Another reason is that even longer courses preparing for more qualified work do not lead to higher wages in the present position. (In our research one exception was non-professional employees in an insurance firm.) Generally *wages are connected to positions* and not to education in Norway. If two persons with different educations, say a college engineer and a graduate engineer, are both considered qualified for a certain position and employed, they will get the same

wage. This is especially clear in the public sector. (Usually college engineers start at lower positions and wage levels than graduate engineers, but there are many position levels where both kinds of engineers are found.) Wage increase within a position is by seniority in the public sector. Years of seniority do not give higher pay in firms, but professional experience does which often amounts to the same.

A wage rise is the result of longer continuing education only if the employee gets promoted, and this is a possibility, not a guarantee. Important criteria for *promotion* are professional skills, results (measured in economic terms in firms) and seniority (more in the public sector). In addition come social skills and personal qualities like "potential for management" as judged by superiors (the employee must be "visible"). In the competition between professionals for promotions, neither basic professional education (which was the "entrance ticket") nor professional courses are important. Continuing education giving complementary competence may however better the chances for promotion, as when college engineers or graduate engineers study business economics.

Most professional associations of university graduates and some of college graduates are members of the Federation of Norwegian Professional Associations (AF), which *negotiates* with employers' federations on the national and municipal level on wage levels for positions typically filled by graduates. In the private sector there are no national wage agreements between professional associations and employers' federations. Some large firms have collective wage agreements with in-house groups of professional associations of graduate engineers and engineers, like Norsk Hydro among the firms we interviewed. The national professional associations collect wage information from members and publish wage statistics, the median wage according to professional seniority (years since graduation) is considered a guideline for their wage policy by many firms.

3.7 Certification and mobility

The question of how to document one's "real competence" (not from formal schooling) was taken up by the Commission on Lifelong Learning in its report in 1986 and continued by the Labour Government in a White Paper in 1988-89. The goals are "to obtain greater justice for individuals and better societal use of human resources". However, the need for flexibility in the *documentation and use of competence* to some degree conflicts with the need for quality standards in a profession or occupation. The proposed measures relevant for continuing professional education are:

- Course providers ought to give detailed course certificates to participants. The Ministry of Education and Research will draw up guidelines.

- The Ministry of Education and Research will coordinate existing institutions which *evaluate* courses as to level and hours. The National Coordinating Committee (NKU) is important, it registers and approves of outside examinations as equivalent to university or college examinations. Students are spared from taking these subjects and examinations once more when they enter university or college from trade schools, public service schools, etc. The Committee also evaluates outside education as equivalent to a certain number of points, with twenty points as one year full-time study. The Committee is consulted when a private college seeks approval from the Ministry.

In present Norwegian debate on continuing professional education, certification of courses is seen as securing quality for the price paid (often by the employer). This is positive for both employee and employer, common interests and consensus are focused. *Mobility is not discussed*, the risk that the employee moves on to another employer after taking (or getting) certified continuing education. For one thing, most continuing education is not certified: short in-house courses and courses by private course providers. If an employer pays (often as grant) for long certified continuing education, the employer may try to secure that the employee does not leave too soon.(chapter 4.11) Some of my informants, however, discussed the relation between certification of courses and mobility. Non-professional employees in banks have had good opportunities for getting a part-time business education in the Academy of Banking, wholly financed by the employer. But the education is not much recognised outside the bank trade, and employees have been more mobile in the 1980's. The trade education does not count for much in the higher education system, even if it takes up to six years part-time study. Many employees found it more strategic to take a two-year part-time course at the private Norwegian School of Management (BI), with grants or paying for it personally. This is recognised as one year full-time study, if they should want to study further. And the certificate is valuable for work outside banking, as some chose in the early 1980's and many were forced to in the late 1980's after bank mergers and rationalisation.

Notes

(1) Odd Nordhaug: Kompetanseutvikling gjennom opplæring for voksne. Chapter 16 in O. Nordhaug (ed): Læring i organisasjoner. TANO, Oslo 1990 (coming).

(2) Called "metacompetence" by Nordhaug.

(3) Called "intraorganisational competence" by Nordhaug.

(4) Peter B. Doeringer and Michael J. Piore: Internal Labor Markets and Manpower Analysis. Lexington Mass. 1971.

4 Firms: collective management programmes, product courses and non-technical courses for engineers

This chapter describes in-house continuing education in rather large firms and public services, when the employers also are the course providers. (In-house courses from other course providers are described in the following chapters.) In-house courses mainly transfer local competence and unique competence (chapter 3.3), to both managers and engineers. Firms leave specialised technical courses for engineers to higher education institutions and professional associations.

The general questions of relationships between firms and different course providers (in the OECD proposal page 12) are difficult to answer, as "some do this and some that" and nobody knows the whole story. Large firms and public services continue and develop over time their contacts with satisfying course providers instead of trying new providers. We may describe this as going from "spot market" relations to *"contractual market"* relations. It may be more difficult for small firms to do this, but some high-technology firms do it. Small firms cannot blame their size for everything, among the firms we interviewed a hotel with only sixty employees had a very innovative and comprehensive training policy.

4.1 Interpersonal skills and daily work

It is all right to use a course offered on the market, when employees from different firms can learn the same things - when the course gives operative standard competence. But many firms have experienced that this is not the case for more process-oriented courses in sales, service, personal development and management. These courses are supposed to give basic competence in interpersonal skills (called "social and human relations training" in the OECD proposal).

The major problem has been to transfer the interpersonal skills taught in the course to daily work, and not fall back to habitual modes of behaviour. Instead of one single course, it is better to have a programme over some time, with several course meetings and working periods in between. Also, the connection between theory and practice becomes difficult for the participants if the examples and casework are from trades and industries too different from their own. These problems may be overcome by having a "tailor-made" course programme for the firm or the trade. This has occurred to a greater degree in the 1980's, and we expect this to continue. The firms are satisfied with this type of commissioned education, which combines basic competence and local competence.

4.2 Collective in-house management programmes

Ten of the twelve firms we interviewed about employee education in 1986/87, had some form of collective in-house management programme. (1) The two hotels did not have such programmes. IBM has always used in-house management programmes. The other firms had changed from using scattered external management courses to developing in-house management programmes for several or all managers. Collective participation was realised in several ways, often combined within a firm:

- compulsory introductory programme for all new (lower level) managers, lasting in total only five to ten days
- programme for new middle-level managers
- development programmes for experienced managers, over a period of half a year to two years
- additional short courses in skills like negotiation
- compulsory programmes for all managers in a department, a division or local offices within an area
- international management programmes in multinational corporations.

These management programmes are expected to give both local competence (procedures, the philosophy and culture of the firm), possibly some operative standard competence (budgeting, decision making) and basic competence in "interpersonal skills" (team building, communication, conflict solving, creativity and problem solving etc).

The ten firms had not developed their management programmes by themselves, nor had they used higher education institutions for this. All of them had cooperated with private training agencies. I will give two examples of how they had proceeded.

4.3 Travel agency managers

The Winge travel agency earlier let some managers, who wished so, participate individually in management courses from private training agencies. But one short course is only a "happening". Becoming a better manager is a process, which requires time to get familiar with theoretical concepts, to practice, reflect and discuss within a development programme. Individual participation was another weakness. By changing to in-house courses, all managers can discuss their work situation within a common frame of reference. Before putting up an internal programme, the training manager had deliberately sent managers to test different courses in the market, as there are many unserious management courses. He had chosen a programme based on "situational management", with several course

meetings within a year, jointly held by the training manager and the external consultant. The programme was compulsory, but with separate meetings for managers from Oslo (head office and local offices) and from the nearly twenty local offices and affiliated agencies in the chain. The managers read theoretical literature during the working periods between the course meetings. The meetings focus on practical training, the managers get tasks connected to their daily work, this is the basis for lectures and discussions. A young middle-level manager said the programme had led to better communication between the managers in his department. They discussed areas of responsibility and no longer took the organisation of work as given. They talked through how to solve problems, from theories and the firm's strategy.

4.4 Computer manufacturer managers

When Norsk Data was still a small firm with one hundred employees early in the 1970's, there was "not much need for management courses", we were told. During its growth in the 1970's, managers would themselves decide which external management courses to attend individually. This was also legitimised by the decentralised philosophy of the firm. But when one or two managers returned enthusiastically from a course, the other managers did not understand or accept their new ways of thinking and speaking. It was difficult to bring about changes. In the early 1980's, when Norsk Data had grown to two thousand employees in Norway and several hundred abroad, they started to establish internal management courses. The initiative came from the personnel department, who from their contacts knew the managers' needs. They established one course in interviewing and recruitment, and a sequence of three courses in motivation and goal attainment, communication and management, conflict solving. External consultants were used, partly together with own training officers, for these three days courses. The courses were voluntary, consistent with the company culture stressing autonomy for the individual and for the working groups.

The break with this voluntary approach came in 1986, a two days basic course for new managers were made compulsory. The goal was to get to know the personnel routines, the economy routines and the organisation through meeting the top management in Norsk Data. The course was first held for managers in the technical service division. It was a success, and the course was then held for all new managers. The year after, a management programme with external consultant was made compulsory for all managers in the technical service division. The consultant adapted the programme to Norsk Data. Individual managers, also top managers, had earlier participated in this external programme focusing on "interpersonal skills" with three meetings during a year. Our informants said that

a great advantage with compulsory courses is including the managers who need it the most, but who are sceptical about such courses.

4.5 Internal labour markets

Extensive management programmes are even more important when there is an internal labour market for managers. That is, all or most managers are recruited from within a firm and few leave the firm. The norm is lifelong employment.(2) Among our firms, the most typical cases were IBM and Norsk Data. But also the other high-technology firms (oil, engineering) and some of the service firms (bank, insurance, air travel) had much internal recruitment of managers.

Among our firms, four high-technology firms had international internal labour markets, two foreign owned firms (IBM, Elf Aquitaine) and two Norwegian owned firms (Norsk Data, Norsk Hydro). The possibility for getting managerial positions abroad for some period, underlined the necessity of competence in one or more foreign languages. (See chapter 8)

Internal labour markets have for years been typical of most public services in Norway. They, like the Postal Services and the Telecommunications Agency, have also developed internal management programmes during the 1980's. They have programmes for low-level, middle-level and top-level managers. There is Nordic and European cooperation in courses and conferences, for instance through the International Teleunion. (3) These services have as many employees as the largest corporations in Norway. But while almost all managers in large firms have higher education, more than half the managers in the large public services in the early 1980's had only internal service education. The services have started taking in more business administration graduates, as part of becoming more market-oriented.(4)

4.6 Interpersonal skills courses for non-managers

One of the goals of management courses is to increase basic competence in interpersonal skills. But other employees too may need such increased competence, to improve their relations to customers, colleagues and supervisors. Engineers were offered several interpersonal skills courses in the high-technology firms we interviewed: service, transactional analysis and personal development. Typical themes were communication, conflict solving, developing groups and cooperation, responsibility and service, creativity and problem solving, body language and self presentation, giving and getting feedback to behaviour, barriers to professional and personal development, goal setting and motivating.

We may ask: Have not adults acquired interpersonal skills through family, education, work and other activities? Certainly we have lots of practice, but this is seldom reflected upon and discussed - except in quarrels. In the world of work

today, the bottle-necks are not technical problems but problems in organisation and interpersonal relations. (This is my opinion as a graduate engineer and sociologist.) Courses in interpersonal skills are just one measure to deal with these complex problems. The participants are positive in their evaluation, the courses started or brought further the processes of professional and personal development.

From our interviews in the firms and my own participation in two such courses I consider important traits of interpersonal skills courses to be: Psychological and social-psychological theories are tools for analysis of the behaviour of oneself and others, not subjects to be remembered for examinations. Participants learn by first doing (role playing, etc), then reflection and discussions. Participants are active in giving praise and constructive criticism. Humour is used to counteract aggression and sex role stereotyping. The participants must define their own development goals and work to realise them, the results and the process are discussed in a later meeting.

Three of the six high-technology firms we interviewed in 1986/87 had personal development courses open for all employees, where engineers too participated. In Norway these courses have been nicknamed "self-confidence courses", they originated in the 1970's as external courses for female office workers to raise their self-confidence, inspired from the feminist movement. In the early 1980's many high-technology and service firms hired consultants and made in-house personal development courses, first for only female employees to improve their career motivation. In high-technology firms the courses were soon made open to all employees, partly because male engineers and other professionals wanted to participate, partly because female ex-participants said that "the boys too could need this". Late in the 1980's Norsk Hydro oil division still has personal development courses ("Conflict Handling", "Everyday Psychology"), while Elf Aquitaine cut out their courses in 1989 as they gave priority to technical courses within a smaller training budget.

Engineers participated in transaction analysis (TA) courses in two of the high-technology firms. Elf Aquitaine had a four day intensive course, Norsk Data had an evening course over ten weeks (which is unusual for a process-oriented course). Employees in development programmes within departments or sections had first priority to the course in Elf, as stated in the internal course catalogue. In a department with cooperation problems, all the employees had participated in the Transaction Analysis course with good results. Sections and departments in Elf had used this course for "team building". Managers who had experienced this, were positive to the course. Others, called "technocrats", were sceptical to a course being able to change people.

Service engineers are sometimes better in technical work than in relating to customers, as judged by their employer. Too much outspokenness, criticizing the

salespeople from the firm to customers, not understanding what it means to be a representative of the firm, have been considered problems. To try to improve this, Norsk Data had set up a two days course in Customer Relations for new service engineers and technicians. Experienced service engineers were teachers, using role play and group discussions. Service engineers are expected to take on responsibility for the firm's products towards the customer and discuss problems arising later on within the firm.

4.7 Presentation courses for professionals

Higher education institutions are supposed to build upon their students' basic competence in their own language, and extend it to professional use, both oral and written presentation. There are many complaints, both in Norway and other countries, that new graduates are not competent enough. One strategy is to influence the higher education institutions to train the students better in professional presentation. Another strategy is for firms to set up in-house presentation courses for their professional employees; all our interviewed high-technology firms did this. For written presentation Norsk Data had a two days course, Norwegian Petroleum Consultants had a seminar in Report writing (Elf Aquitaine had such a course in English, but not in Norwegian). For oral presentation these three firms plus IBM and Norsk Hydro oil division had three to four days courses, usually called "Presentation Techniques". The participants prepared a professional lecture, their presentations were videotaped and then discussed. A few weeks later the participants held another presentation of their revised lecture. Cryptic lectures on technical sub-specialties, not understood even by other graduate engineers, became exiting after revision.

4.8 Project administration courses for engineers

Project groups in a small scale are used in many firms today for solving a problem within limited time. Engineering students may learn some of this from project work in groups in basic education. But individual work is still dominant, as examinations and marks are of individuals. Anyhow, large-scale and long-lasting projects require special competence in how to organise the work. Many engineers need such competence as project organisation is widely used in engineering, the oil industry and construction industry.(5)

Organisational relations are quite complex in the oil industry.(6) A temporary project organisation is set up with employees hired from several base organisations specialised in certain tasks (planning, engineering, building, catering, etc). The operator (or client) organisation puts up the contracts and approves of the work on behalf of the oil companies with rights in the field.

We interviewed in Norwegian Petroleum Consultants (NPC), a firm established in the mid 1970's to do tasks in project management and engineering for clients in the oil industry. Their division for project management, with more than two hundred employees, had developed a course programme in Project Management in the mid 1980's. The programme consisted of forty short courses, each lasting a day or two. Course contents were within the different working areas of the division: Contracts, buying, material administration; Quality securing; Project administration including computer systems; Project management.

These NPC courses were developed for their own engineers and managers. But there has been such a growing demand for courses in Project Management that the firm NPC has also gone into the market as a course provider. It has held courses for firms in the oil industry and for state government. NPC employees have also lectured in Project Management courses arranged by the professional association of graduate engineers (NIF) and by the Norwegian School of Economics and Business Administration (NHH).

4.9 Product courses for engineers

This must be left to the firms. Engineering colleges and universities cannot give their students product knowledge (of for instance computers). They have less practical "hands-on" training than vocational secondary schools, and they use products from different firms.

Among the firms we interviewed (1), the two computer manufacturers IBM and Norsk Data had several product courses which were updated with the products. Service engineers, doing maintenance and repair on machines or programmes, need more detailed product knowledge than sales consultants and system consultants.

For "hardware" service work on the machines the two computer firms recruit directly from engineering colleges. The new service engineers get in total three to four months of product courses during their first year as trainees. At IBM they first get a common base of knowledge from textbooks and an international IBM computerized test programme called Field Instruction Service, all in English. The programme has replaced some basic product courses. The interviewed engineers said this was useful, but it was somewhat boring to sit in their office alone with the computer. Next come local courses in the machines they shall work on, courses lasting from one day to two weeks, with Norwegian IBM instructors. Then the service engineers attend several product courses abroad, lasting from two to four weeks at IBM centres, mostly in Belgium, England or Germany (not in the United States). The course language is English. In between courses the new service engineers have work periods at home. The computer firm Norsk Data has the same alternation between courses and work, but most of their product courses last only a week and are held in Norway. After the trainee year, the service engineers must

take new product courses for new or modified products, and when they expand their work to other products. IBM uses courses abroad, usually one week, but sometimes up to four months.

For "software" service work the computer firms recruit graduates with some knowledge of programming and systems work, from a few years at college to five years at university. Few are educated as engineers or graduate engineers. But the firms call them "service engineers", as their colleagues in hardware. The software service engineers have the most extensive product courses, in total six months of courses during their first year as trainees.

4.10 Product and sales courses for engineers

Computer firms recruit many engineers and graduate engineers as sales consultants and systems consultants. (But all types of graduates are used, it is important to have prior knowledge of the potential customers' field from education and professional work. It is easier to supplement this with computer knowledge than the other way around.) Engineers will be used as sales and systems consultants to "technical customers": oil, engineering, manufacturing, technical research laboratories etc. Contact with customers is done in a team of sales and systems consultants. The team has specialised for a certain kind of customer, for instance local government.

Engineers in positions as sales or system consultants get, through product and sales courses and in the work, some competence in administrative subjects which may be useful for getting managerial positions later on.

In Norsk Data the sales and systems consultants attended the same basic product courses in hardware and software as customers did, courses arranged by the Technical Training Division and lasting three to five days. New consultants had to take sales courses arranged by the Marketing Division: one week course for employees in Norway and abroad held in English, one week course for Norwegian employees, two week sales workshop for Norwegian and Swedish employees. During their trainee period the new sales and systems consultants in Norsk Data had to take eight weeks of courses. Some said it was too much, it was commonly said that technical employees were better at attending courses than sales employees.

IBM had integrated product courses and sales courses. During their trainee year new sales and systems consultants in IBM must take fourteen weeks of courses as a programme. Each course period lasts for two to three weeks and is held in Sweden for Nordic employees. The courses shall give basic knowledge in several "skill areas": computer science, IBM products, IBM policy, economics and business administration, communication and presentation, sales training through case work. In working periods between courses the trainees must read literature and work at gradually more difficult tasks under supervision.

4.11 Grants for part-time studies

All the six high-technology firms we interviewed had a policy of giving grants to employees studying at university or college. The studies required examinations and must be relevant for the firm, but not necessarily for the present job. Some large public services have had a policy of giving paid educational leave for full-time studies, for instance telecommunications engineers studying to become graduate engineers.(4) Of the six high-technology firms, only one oil company sometimes gave full-time paid educational leave. In the other firms the employees had to study part-time by correspondence courses or evening courses besides working. As this is demanding, the initiative had to come from the employee and not from the firm. The grants covered expenses for books and student fees, usually for studies from half a year to two years' duration. For studies in private colleges this might amount to 20 000 NKR or more, however the employer pays as much for some short courses from private training agencies. Public colleges and universities were also used, but so far private colleges have offered more part-time evening studies. Of the six high-technology firms, only the two computer firms required the employees to pay back the grant if he/she left the firm during the education or within one year later. The grants were used by employees in all kinds of occupations. The engineers and graduate engineers got some grants for specialised studies (geochemistry, computer science). But most of the grants were used for complementary education in business economics, administration and foreign languages. This is useful in technical positions and to qualify for managerial positions.

Notes

(1) Ellen Brandt: "Vi satser på kompetanse". NAVFs utredningsinstitutt, Oslo 1989.

(2) Peter B. Doeringer and Michael J. Piore: Internal Labor Markets and Manpower Analysis. Lexington Mass. 1971.

(3) Sølve Sandaker: Personalopplæring i offentlig og privat virksomhet. Voksenopplæringsrådet, Oslo 1990.

(4) Ellen Brandt: Interne arbeidsmarkeder og profesjoner i offentlige etater. NAVFs utredningsinstitutt, Oslo 1985.

(5) Arthur L. Stinchcombe: Bureaucratic and craft administration of production, a comparative study. Administrative Science Quarterly Sept. 1959.

(6) Carol Heimer: Organizational and Individual Control of Career Development in Engineering Project Work. Acta Sociologica 4 1984, pp 283 - 310.

5 Private training agencies: tailor-made management programmes and non-technical courses

This is a very heterogenous sector of course providers consisting of:

- "pure" training agencies with courses as their only product
- training agencies connected to or as part of consulting firms, using consultants as course lecturers
- equipment suppliers also selling courses to customers
- private schools for a trade, often financed by a trade organisation
- private schools organised as limited companies
- private schools organised as non-profit foundations.

We have not included private colleges as training agencies, they are seen as higher education institutions. (chapter 9) In the 1980's many private schools were established within computer science and marketing in Norway. They have become colleges, or they are in the long process of being recognized as private colleges by the Ministry of Education and Research. The stages in the process are:

- curriculum and teachers approved
- students may apply for state loans and grants
- diploma evaluated as a basis for further university studies
- students and graduates registered by the Central Bureau of Statistics in higher education statistics
- college receives state subsidies (25 to 90 per cent)

As terms I have used "private training agencies" for firms offering short courses, mostly continuing education, and "private schools" for firms offering both short and longer courses, as part-time or full-time studies, also basic education.

None of the private training agencies or schools in Norway offer initial professional education for our relevant groups, managers and engineers, so this is not the reason why these employees use them for continuing education. (The schools offer initial education in advertising, tourism and computer science.)

In my view the most typical private training agency in Norway is *connected to a consulting firm* and gives non-technical courses in *management, sales and service.* These private training agencies do not try to establish partnerships with other

Norwegian course providers. However, they develop close partnerships with their customers: firms and trades.

5.1 International cooperation and fusions

In the late 1980's there is a trend for private training agencies to cooperate with agencies abroad - particularly for programmes in the Internationalisation of Management. One example is the Norwegian Institute for Management and Administration (NILA), which has established joint courses and workshops with the American Center for Creative Leadership. But some training agencies have cooperated internationally for a long time. One of the largest consultant and training agencies in Norway, Hartmark-IRAS, has cooperated with Tack Training International in UK since 1959 as an associate, among now more than twenty countries. These courses are within management, business economics, sales and communication. Managers from international firms may participate in management courses held in England.

For management training, however, some Norwegian practitioners and professors have been critical of importing courses from other countries, especially US. They stress the cultural and political differences, Norwegian managers have more positive relations to unions and the state.

There is a trend towards mergers and fusions, with Swedish and American firms in particular, for private training agencies and consultants (as within advertising and accounting). One example is the Norwegian Institute for Management and Administration (NILA), which has merged with the Swedish Institute of Management (IFL). On the other hand, experienced consultants leave large training agencies, taking their clients with them and creating new agencies. The whole field is very fluid.

5.2 Growth and crisis in the training market

Courses giving interpersonal skills within management, personal development, sales and service seem to be the major part of what consultants and private training agencies offer to the market, in addition to computer courses. In the 1980's there was indeed a "mushroom growth" in the commercial course market in Norway, until 1988-89. Then low oil prices, increased bank interests and less private spending because of a compulsory wage freeze lead to economic trouble for many firms. The firms cut down on employees taking expensive courses. Two of the largest private training agencies reported 30 per cent less participants in the autumn 1988, but 10 per cent more participants in "tailor-made" courses for firms. Probably some small agencies or single consultants have gone out of business. (But there are *no official*

overviews or statistics of private training agencies in Norway, neither courses, participants or teachers.)

Management training is subject to "fashions" in the approach and theories used. Social-psychological skills (leadership) or economic-administrative skills (management) have alternately been in focus. The most popular approach in Norway the last years, both in-house courses and in private training agencies, has been "situational management". All the firms we interviewed used this approach.

The *quality* of the commercial management courses has been hotly debated in Norwegian media, particularly during the "boom" 1985-88. There are many opinions, but little research or evaluation. The OECD question "Are there rules governing quality and costs that help to regulate the market?" for private training agencies in Norway, must be answered "No". *The market is not regulated*, neither by the customers' representatives (employers' and trade federations) nor the adult education officials (local boards and the Ministry of Education and Research). The Ministry evaluates courses only when course providers seeks state grants according to the Adult Education Act.The non-profit associations seek grants to keep fees low, but not the private training agencies.

5.3 Tailor-made management programmes

Both the high-technology firms and the service firms in our study had proceeded in the same way to get a "tailor-made" management programme.(1) For a period the firm deliberately sent managers to different management courses offered in the market by consultants and private training agencies to test these courses. Both the participants and the training department evaluated the courses, and the firm contacted the most promising consultant. The consultant should preferably know the trade, through giving courses or earlier experience as a manager before becoming a consultant. In cooperation with the training department and the top management, the consultant then transformed and adapted his/her course(s) to the firm. This management programme was usually led jointly by the consultant and an internal training officer. The advantage in using an external consultant is that he/she has experience from many firms and is more free to criticize, particularly with earlier experience as a manager.

Higher education institutions and other providers may also cooperate with the firms to give "tailor-made" management courses. (We will discuss this in the following chapters.) Our firms, however, had only cooperated with private training agencies for this purpose. It seems the main reason is that they had earlier used management courses from these agencies, and not for instance schools of business administration.

5.4 Non-technical courses

Private training agencies dominate the market for *sales courses and service courses*. One does not expect traditional universities oriented towards the public sector to give such training. The professional schools (formally at university level) for business administration and graduate engineers might give such training, but only some in these professions enter sales jobs. Is it possible to learn to sell to and relate to customers in a school situation with no real customers? Perhaps this must be left to continuing education for professionals having customers.

Private training agencies are often part of or connected to private consulting service firms. As course lecturers the consultants use their experience from different firms and trades. One example of a sales training programme relevant for engineers and graduate engineers is the four-day course "Professional Sales to Manufacturing Firms" from Hartmark-IRAS, with lectures, exercises and group work within the themes: Customers' Needs and Motives, Product Presentation, Preparing and Closing the Sales Talk, Sales or Negotiation, and Personal Time Planning. After a job period of four to eight months comes a three day follow-up course with video recording and discussions of sales situations and plans for further development. For sales managers there is a three- day course, combining general management themes with Field Training of New Salesmen and Evaluating the Salesman.

Computer courses are another field where private training agencies do a lot, in addition to computer suppliers. Managers and engineers may take basic courses in the use of standard computer programmes, including word processing. Engineers may take courses in programming and systems development offered by specialised training agencies. One example is three-day to five-day courses by the AU Seminars. The lecturers are graduate engineers and other systems developers, some of them from private industry and computer firms, but most from one Norwegian and one Swedish consulting firm within systems development and organisational development.

Private training agencies in Norway do not offer technical courses in other fields than computers. This market is left to professional associations (chapter 6) and higher education institutions (chapter 9). The one exception known to us is the training agency AITEC. It offers courses in "Computer Aided Design (CAD) in Instrumentation", "Fibre Optics", "Microprocessors and Digital Systems", "Adaptive Regulation" and "Reliability of Automated Systems". The lecturers come from firms within oil and manufacturing and from higher education institutions like the Norwegian Institute of Technology (NTH) located in the same town, engineering colleges and maritime colleges. This training agency also sells computer-based and video-based training programmes from the Instrument Society of America (ISA).

Notes

(1) Ellen Brandt: "Vi satser på kompetanse". NAVFs utredningsinstitutt, Oslo 1989. (English summary)

6 Professional associations: certified modular programmes, courses and seminars

Professional associations play a very important role in continuing education as *intermediaries* between course providers (higher education and others) and individual professionals. Associations are the main channel for communicating the professionals' needs for continuing education to universities and colleges. Recently associations are setting up certificates combining courses from different course providers, both higher education institutions and others.

Professional associations also inform their members of relevant courses from providers other than universities and colleges. This is particularly done for language courses and courses in business economics and administration.

The associations themselves only have staff to offer short courses and seminars, mostly using professionals as lecturers. They try to get higher education institutions to set up longer courses, where universities and colleges have the main responsibility, qualified staff and offer examinations giving certification. *Certification* of courses is becoming more important for professional associations. Their members need documented competence if they change employers. Employers are now more concerned that a course shall be worth the price they pay, and a certified course is already professionally evaluated.

"Among the objectives assigned to continuing professional education, the ones on which these associations place most emphasis are, first, a better understanding of society and its trends and, second, the acquisition of complementary skills." (OECD proposal page 13) In Norway professional associations offer courses mostly in *specialised* areas, in technical or financial subjects. They offer some courses in complementary skills like management, but this is mostly left to other providers, as are language courses. In my view training in "the use and application of new technologies" (computers etc) is not a complementary skill for engineers, but part of their technical basic knowledge of new tools to solve technical problems or an area of technical work in development and service.

Several professional associations may have managers as members. But is it a profession's responsibility to give continuing education to managers who to some degree have "left the profession"? The Norwegian associations of law graduates and economics graduates do not think so, they have no management courses. On the other hand, the associations of graduate engineers and business administration graduates have been active in giving continuing education in *management* to those members having managerial responsibilities.

For years graduate engineers have taken courses in business economics and administration to get complementary knowledge to qualify for managerial positions and to be better managers. What is new is their professional association working as an intermediate, putting together courses from different providers and working to get the certificate accepted.

6.1 PDC - Professional Development Certificates for graduate engineers

These modular programmes for continuing education have recently been established by the professional association of graduate engineers (NIF), starting in 1989. The requirements for a PDC certificate within a field are five module courses of at least forty hours each, with examinations required, plus a project work task.

The goals for the PDC certificates are to obtain unified and connected continuing education (not fragmented courses) for graduate engineers, and to bring in ecological and economic assessment of the consequences of technical solutions.

The first PDC certificates were in Steel Construction, Practical Project Work, Administration and Management. Coming up are three environmental certificates in Energy and Energy Saving, Indoor Environment, External Environment and Pollution. The professional association is in the process of setting up certificates in Internationalisation, Establishing and Developing High-Technology Firms, Safety and Risk.

In establishing all these PDC certificates, the professional association has cooperated with universities, colleges and other providers of continuing education.

The professional association gets informed of the needs for PDC certificates in different fields from extensive contact with its members, individually and through fourteen sub-speciality societies within the association. The association also cooperates with some of the larger firms, like Statoil and Norsk Hydro. The inspiration to start with the PDC certificates came from study trips to Finland and the United States. Furthermore, several committees in the association have been discussing continuing education.

Organisation

For each PDC certificate the professional association (NIF) has appointed a responsible professional council with four to five members, always including one from the Norwegian Institute of Technology (NTH) and sometimes one from another university or college. The other members are graduate engineers practising within the field in firms and public services. The board of the professional association coordinates the work of the PDC certificate councils.

The professional association sees its tasks to be:

- register existing officially approved courses
- build up alternative modules to a PDC certificate
- stimulate their members to plan their continuing education
- make PDC-certificates known to the firms, so that the employers will pay for the modular courses taken by graduate engineers.

Existing courses at universities and colleges are approved as part of a PDC certificate. This may be evening courses lasting half a year and day-time courses lasting two weeks or more. The professional association sees its role as a coordinator. Only if there are no suitable courses in a field, the association establishes a course of its own. Preferably it tries to get a higher education institution to establish a course, as universities and colleges have the organisation, the teachers and the economy to develop and arrange such extensive continuing education.

Teachers

The choice of teachers is left to the different providers of the modules within a PDC certificate. Universities and colleges usually have their regular professors as lecturers. Professionals are used in the technical EEU courses at the Norwegian Institute of Technology (see chapter 9) and in business administration courses. The professional association (NIF) uses only professionals for their own study courses, as most are held in Oslo, three hundred miles away from the professors at the Norwegian Institute of Technology (NTH).

Certification

The professional association (NIF) has compiled a list of approved courses given by different providers, which may be modules within PDC certificates:

- Technical EEU courses at the Norwegian Institute of Technology (NTH)
- Technical courses at engineering colleges
- Administration and management EEU courses
- Business administration and economics courses at the Norwegian School of Economics and Business Administration (NHH), The Norwegian School of Management (BI), engineering colleges, colleges connected to non-profit associations (NKS, NKI)
- Project work courses and environmental courses at the Electronic University, part of a foundation connected to the regional college and regional research institute in Stavanger.

The examinations are arranged by the universities, colleges and other providers as usual. If participants do not pass an examination, they may try once more as other students also may. The project work is evaluated by the professional council for that PDC certificate.

The PDC certificate is meant to be flexible. The first and second modules are usually compulsory. The individual participant may choose the remaining three modules from the list of approved courses, or request that other courses be approved. According to individual needs, courses from different PDC certificates may also be combined.

Normal study pace is one course each half year, which means two and a half years to complete a PDC certificate. The maximum period is set at five years. Technical courses must be taken within the last five years to be valid. The certificate shall signify updating, and not be a collection of some old courses. Similarly project work must be done after the five course modules are completed and be "tailor-made" to the courses.

The board of the professional association has required that graduate engineers must have minimum five years of professional experience before taking a PDC certificate, of these three years in a field for which the certificate is relevant. Fresh graduate engineers cannot relate the courses to work and cannot contribute to discussions with experienced professional lecturers in the technical courses. Some were allowed to participate, but they became passive and frustrated. Instead, the professional association has arranged free courses in Practical Project Work for unemployed new graduate engineers. (Last year their unemployment rate rose steeply, from a few per cent to ten per cent.) With this extra competence most of the participants got a job afterwards.

Funding

In Norway, course fees for professional updating necessary for the job are tax-deductible for employers, self-employed and employees if they have to pay themselves. Few or no graduate engineers would pay for expensive technical courses themselves. If their employer is not willing to pay, they will not attempt to take a PDC certificate.

The professional association (NIF) charges 7 500 NKR in 1990 for one of its own courses, four hours one evening a week for ten weeks. Members of NIF get a ten per cent discount. These courses have only ten to twenty-five participants, far less than the short technical courses. Since the courses are held in Oslo, Trondheim and Stavanger for local participants, there are no additional hotel and travel expenses for the employer to pay.

Universities and colleges charge as much or more for their courses. For five modules plus project work the total cost amounts to between 40 000 and 60 000

NKR for a PDC certificate. This may seem much for the employer to pay, but it is not more than the cost of some short management courses by private training agencies.

6.2 Management programmes and certificates for graduate engineers

In contrast to business administration graduates, graduate engineers have not many administrative and management subjects in their basic education, particularly if they were educated some time ago. The professional association of graduate engineers (NIF) has as "one of its stated goals that the association shall be leading in quality, and be the natural environment for its members in management training and management development."

Since 1979, the association has had a programme "Group Studies in Management and Administration" (GILA) for its members. During ten years 1 100 graduate engineers have completed this programme, that is five per cent of the association's 20 000 members (1988). The former participants have a GILA Forum, meeting at least once a year for a seminar. The GILA programme was developed by the Council for Management and Administration in the professional association. Several hundred graduate engineers were active in the development, led by a business administration professional and the Training and development manager in the association. The GILA programme is not only for those graduate engineers already in managerial positions, but those are probably most likely to get their employer to pay for it. In its marketing information, the association says "GILA meets the need for knowledge and skills in your present function. To participate in GILA is not a promise of promotion, but a good foundation for further development, and our way of taking care of tomorrow's managers."

The GILA programme is process-oriented and has five meetings of two to three days each, in total twelve days. The themes are Analytical and creative problem solving, Management psychology (communication, attitudes, conflict solving, competition and cooperation, negotiations), Oral presentation (own presentation with video recording), Responsibility for and administration of personnel (recruiting, training and developing employees) and Project organisation. The last part of the programme is a decision game in business economics. The participants are divided into groups that represent firms, in competition they have to take a series of decisions within finance, investment, product range, production, buying and sale. The decision game was developed at the Norwegian School of Economics and Business Administration (NHH). The method has, according to the association, "turned out to be particularly well suited for engineers", showing "the connections between economical, technical and social sides of management problems".

A Professional Development Certificate (PDC) within "Administration and Management" was established by the professional association of graduate engineers (NIF) in 1989.

The association has not started new management courses for this certificate, they use what is already offered by themselves and other providers. The association has so far approved of different management courses as modules:

- Their own GILA programme is equivalent to two modules or eighty hours. The programme is process-oriented, with group work and no examinations. To obtain a PDC certificate, instead of examinations the participants must do project work in Development planning. This is evaluated by consultants in the association.
- The Seminar in Industrial Administration (SIA) at the Norwegian Institute of Technology (NTH) is also process-oriented and with project work, with four meetings lasting six weeks in total, considerably longer than the GILA programme (see chapter 9).
- In-house management programmes in firms (see chapter 4).

Courses in business economics and business administration are also required for graduate engineers taking the PDC certificate in "Administration and Management". Here the professional association approves of long courses by different higher education institutions: the Norwegian School of Economics and Business Administration, Course Centre (NHHK), the Norwegian School of Management (BI), the regional colleges and the engineering colleges. All these offer decentralised courses, held in the evenings for half a year. Graduate engineers all over the country may participate, also those working in small firms outside the larger towns. This opportunity is even greater with correspondence courses, with additional gatherings, from the two largest non-profit associations (NKS, NKI), also approved by the professional association as parts of a PDC certificate. (Members may apply to the professional association to get approval of courses from other providers, but those already approved of are the main providers.) The institutions themselves arrange examinations as usual after the courses, they evaluate the graduate engineers along with other part-time students.

The professional association of engineers (NITO) have no special management programme. They have, however, three days courses in "Problem Analysis and Decision Analysis" and "Negotiations, How to Satisfy both Seller and Buyer". Both these courses are new and are to be held twice in 1990.

6.3 Short management courses for business administration graduates

The Norwegian Association of Masters of Science in Business (NSF) has as members business administration graduates with four years' education from Norway or abroad (Siviløkonom) or a Master's in Business Administration (MBA). During the 1980's, the association has annually held a two days seminar in Oslo called "The Responsibility of Middle-level Managers". This is not a process-oriented course with group activities, but consists of lectures for a large audience. The lecturers are predominantly consultants and firm advisors (possibly former managers) and personnel managers.

Local branches of the association have sometimes given management courses, for instance in 1986 the Troms and Finnmark branch (the furthest north) held a management programme with three meetings and a hundred participants.

In the 1980's the association annually had three to five thousand participants in their professional courses. Most courses were within specialities in business economics, organised by themes like Economics, Accounts, Finance, Taxation, Marketing. (This is operative standard competence.) Only two to three hundred participants were in management courses, about five per cent of the total participants. Why are the management courses such a small part, when a far greater part of the profession and of the members work as managers? Our informant in the professional association gave several reasons.

First, the business administration graduates have learnt more organisation and management in their basic education than other professionals. Secondly, there are many other providers of management courses: higher education institutions, private training agencies and firms. Thirdly, one day's courses for individual managers are replaced by longer in-house programmes for a team of managers, and the association is not suited for this. But the main reason is that the association in the 1980's channelled management courses to the training agency the Norwegian Institute for Management and Administration (NILA). This institute was jointly established in 1979 by the professional associations of business administration graduates and graduate engineers, employers' federation and several trade organisations. The professional associations were represented in the Council and in Contact committees. The institute had programmes within general management, international management and technological management. But since this Norwegian institute merged with the Swedish Institute for Management (IFL) in 1989, the professional association no longer has any direct bonds with the institute.

In 1989 the professional association of business administration graduates put forward an ambitious programme for professional development with 61 courses offered to be held in Oslo. Half of the courses were suited for managers (6 courses

in Management, 7 in Strategy, 8 in Organisation, 5 in Personnel Management, 2 in Personal Planning and PC Use, plus courses in Negotiation, Project Management, Innovation). The courses were short, one or two days only. The lecturers were consultants with previous experience as managers, and a few professors. Only half the lecturers were business administration graduates, the rest were mainly graduate engineers (with MBA or other supplementary business education) and economists, a few psychologists and political scientists. Unfortunately this was the year when the course market changed from growth to decline, as firms tried to cut expenses. Due to this, many of the courses offered had to be cancelled.

The board and the professional council in the association of business administration graduates have recently, in autumn 1990, decided to give priority to continuing education with the possibility for certification through examinations. One model may be the EEU courses at the Norwegian Institute of Technology (chapter 9). This calls for further developing cooperation with higher education institutions. At present, the professional association of business administration graduates (NSF) is represented on the board of the Course Centre, the Norwegian School of Economics and Business Administration (NHHK) and in the Continuing Education Committee, the Norwegian School of Management (BI). Our informant in the association thinks, however, that the bonds between the association and their higher education institutions are not so close as between the association of graduate engineers (NIF) and the Norwegian Institute of Technology (NTH).

6.4 Language courses

In Norway the professional associations of graduate engineers and engineers have been active only to some degree in "providing multicultural and language training in preparation for functions involving export or service abroad", as the OECD project draft suggests. The associations have mainly left this responsibility to employers in the private and public sector. Employers have used a variety of providers. Universities has offered third world languages like Japanese and Arabic. European languages have been offered mainly by private training agencies and non-profit associations.

The professional associations of graduate engineers (NIF) and engineers (NITO) both cooperate with a private language training agency (Norsk Språkinstitutt, NSI), which for years has specialised in language courses for business, manufacturing, banking and research. The language courses are mentioned in the associations' course catalogues, but the members must contact the training agency themselves. The languages are English, French and German. Audiocassettes and videocassettes are available for self-study, combined with telephone contact with teachers, or courses with teachers, or combinations of these. Intensive courses, some of them at colleges, of a few weeks abroad are also offered, stressing oral language, with

one teacher for only one to four participants. Our informants in the associations thought that their members are not good enough in foreign languages, for instance in negotiations. But this deficiency must first be experienced, as most Norwegians think themselves rather good in English. In German and French, however, most realise their weak competence.

6.5 Business administration courses through Electronic University

Within distance teaching, the professional associations for graduate engineers (NIF) and engineers (NITO) cooperate with Ullandhaug Electronic University, a foundation connected to the local research institute and regional college in Stavanger. The Ullandhaug foundation has bought the Electronic University Network rights for Norway from the United States. One's own personal computer is connected by telephone (modem) to computerised university courses and teachers in the US. No technical courses are offered. In Business Administration it is possible to obtain degrees at Associate, Bachelor's and Master's (MBA) level. The professional associations have only been intermediaries, informing their members through their magazines. Some members have written for the fifty pages catalogue in Norwegian describing the Electronic University, but so far the associations do not know of anyone having started. First, it is expensive. A course giving two points in the university system, costs 10 000 NKR, more than an equivalent evening course at business schools in Norway. Secondly, it requires discipline to study on one's own. An alternative is evening classes, set up by business schools in many small towns, where the participants "drive each other onwards". Our informant in the engineer association thought that "the thrill of the personal computer" is a thing of the past. As engineers use computers during their working day, they are not tempted to use it for lonely studies in the evenings too. Distance teaching may, however, be useful for in-house training in small firms. But the problem here is the high development cost and who is to pay for it.

6.6 Administrative and sales courses for engineers

The work of engineers is both technical-scientific, social and economic (in relation to suppliers, customers and colleagues). The social and economic aspects are even more important in managerial positions, and some continuing education is especially for them. But ordinary engineers also need some competence in administration, business economics and interpersonal skills.

During the first part of the 1980's, the two professional associations (NIF and NITO) annually had 7 000 to 8 000 participants in their technical courses, according to the adult education statistics. In administrative and economics courses the number

of participants varied more, from under 1 000 to nearly 3 000 annually, and there were no clear trend of increase or decrease. (Figures are not available for the later years.)

Among existing and future PDC certificates from the association of graduate engineers (NIF), several are technical-administrative: Practical Project Work, Establishing and Developing High-Technology Firms, Internationalisation. In addition the association also has short courses in technical-administrative areas like "Project Management", "Municipal Planning", etc.

The professional association of engineers (NITO) has several technical-administrative courses lasting three days and new this year: "Marketoriented Product Development" (to be held four times), "Quality Management for Product Development", "Internal Control of Working Environment" and "Logistics" (Materials Administration). New is also a three days "Economics Seminar", to be held three times and said to be a seminar "that teaches you to think profitability" - which is evident to business economists, but not to all engineers.

Many engineers and graduate engineers sell technical equipment to firms and professional customers, they need some training in sales and marketing. Of younger graduate engineers in 1985 nearly 50 per cent had work tasks in sales, marketing, contact with customers.(1) The professional association of graduate engineers (NIF) has no special course for sales work. However, it does include Marketing Management in its administrative and management courses and consider it necessary to include more marketing.

The professional association of engineers (NITO) has for several years offered a three days course "The Sales Engineer's Challenges within Manufacturing and Services". This course will be held five times in 1990. The lecturer is a professional sales engineer, educated as an engineer with additional business economics, as is usual for engineers going into sales work.

6.7 Technical courses for engineers

The professional association of graduate engineers (NIF) annually arranges 150 to 250 technical courses or seminars, lasting only one day to three days (as with courses from private training agencies). It is difficult for engineers to get away from their work for a longer time, especially in firms. Most courses give updated specialized technical competence like "Supercomputers" or "New Concepts and Materials for Bridges". The lecturers are not professors from the Norwegian Institute of Technology (NTH), but usually five to ten practising graduate engineers working in manufacturing, consulting firms and public services. The courses are quite intensive, with lectures and discussions also in the evenings, for the 25 to 150 participants. The courses are held in hotels, in different towns and in the mountains, only a few are held in the capital city Oslo. The market for such courses has

become tougher, employers are more critical now than earlier. Our informant in the professional association says they know the market and "play it safe", few courses are cancelled for lack of participants.

The professional association of engineers (NITO) annually arranges 70 to 90 courses or seminars, lasting one to five days, mostly two or three days. In 1990 NITO will provide 54 different courses, some of them held several times, of these 35 in purely technical subjects. Within internal environment (building), offshore technology and aquaculture, most courses are new this year. Within electrotechnical engineering, all courses were held earlier too, some of these courses give competence for compulsory certificates according to governmental regulations. For such structured training courses, only one lecturer is used for ten to thirty participants. On the other hand, NITO arranges conferences for the exchange of professional experience with several lecturers and up to two hundred participants. As lecturers NITO uses both engineers (its members) and graduate engineers (members of NIF). This is similar to the engineering colleges, where all the professors have been graduate engineers. That the market for external courses has become tougher in later years, is also said by our informant in this professional association (NITO). Courses must "hit" and be of immediate use, not only interesting. As advisors the association uses practitioners with a "feeling" for what is going on. Most courses turn out to be appropriate for the market, only ten to fifteen per cent of the courses are cancelled.

6.8 Cooperation between the professional engineering associations

The Norwegian Association of Graduated Engineers (NIF) has 20 000 members in work. Of these, 73 per cent are employed in the private sector, 24 per cent are employed in the public sector (16 per cent state and 8 per cent municipalities), while only 3 per cent are self-employed. Of the members, 7 per cent are women.

The Norwegian Association of Engineers (NITO) provides continuing education for its 30 000 members in work. Of these, 56 per cent are employed in the private sector, 35 per cent are employed in the public sector (15 per cent state and 20 per cent municipalities), only 1 per cent are self-employed and 7 per cent have unknown employment. Of the members 8 per cent are women.

In contrast to the boundaries between the health care professions, there is no sharp boundary between graduate engineers and engineers, neither in work nor in continuing education. Each professional association has its own members as the primary target group for its courses. The members are asked for training needs and ideas for courses. But the courses held by the engineering associations NIF and NITO are open to everyone who needs them and can profit from them. Of the

participants in the NIF courses, roughly only 25 to 30 per cent are graduate engineers members of NIF. Another 30 per cent are engineers members of NITO. Non-organised graduate engineers and engineers are another 30 per cent. The last 10 per cent have other kinds of higher education: architects, agriculture graduates, economists, political scientists etc. Some graduate engineers attend specialised NITO courses, like "Electrical Installations in Buildings".

In the late 1970's and early 1980's, the Norwegian professional associations of graduate engineers (NIF) and engineers (NITO) had a joint Educational Association. They still held their courses separately, the Educational Association was an "umbrella organisation" for better use of state support to course providers according to the Adult Education Act of 1976. As this support was gradually cut down during the 1980's, the joint Educational Association was split up in 1986. But the two professional associations now cooperate more. NIF, NITO and the Norwegian Federation of Contractors together arrange an annual Innovation Conference for 150 participants. NITO is the secretariat for this, while NIF is the secretariat for the annual Productivity Conference. The 60 participants here are mainly presidents and top executives of firms, possibly because they are members of the somewhat elitist Polytechnical Forum, which is a co-arranger together with the professional associations.

In preparation for the new economic situation in Europe after 1992, top executives in Norwegian firms have participated in conferences and courses for some time. Technical middle managers have not had such opportunities. The professional associations of graduate engineers (NIF) and engineers (NITO) therefore tried to hold utilitarian 1992 courses for this group, combining technical and trade aspects. But the response has been weak, it seems that technical middle managers only attend courses useful for today's work and do not look a few years ahead. This is in contrast to the present overwhelming use of the term "strategic" in management courses.

6.9 Cooperation with other course providers

The professional associations almost never cooperates with private training agencies. An exception is when the association of engineers (NITO) for their new three days course in "Project Management" uses an engineer from the private training agency AITEC in Trondheim as lecturer. To our knowledge, this is the only private training agency in Norway to specialise in technical courses outside the computer field.

For decades, the professional association of graduate engineers (NIF) has communicated through formal channels its members' needs for continuing education to the "paternal house", the Norwegian Institute of Technology (chapter 9).

The professional association of engineers (NITO) has one member from its Board represented in the Engineering Education Council, which coordinates the

fourteen engineering colleges throughout the country. But the association has not cooperated directly with the engineering colleges. Our informant in the association thought this was partly due to engineers not having the same identification with, and later professional contact with, their educational institution as graduate engineers have. It is difficult for the association to have close contacts with so many colleges. Also, engineering colleges in the 1980's have been busy with extending their basic courses from two years to three years, they have had little time for establishing continuing education.

In addition to the public engineering colleges, a private foundation has given engineering education by correspondence courses for decades and in later years also through local offices (NKI). It is perhaps more market-oriented, and the professional association (NITO) has cooperated with it for some courses, for instance in telecommunications.

Many engineers and graduate engineers study business economics and administration in universities and colleges, part-time in evening classes (chapter 9). After a decision by their board, the association of engineers (NITO) has cooperated with the Norwegian School of Management (BI) in Oslo to make these courses more suited for their members. The lecturers will be supplemented with some engineers, and the examples will be from technological firms - the courses become tailor-made for engineers. Instead of one evening course a week during half a year, the course is concentrated in two meetings of three days (Friday and weekend). This means the employer must approve of two working days off, in addition to probably paying for the course. It should be possible for engineers from firms outside Oslo to participate, as they cannot in evening classes. This setup is offered for the first time in 1990, starting with four courses: "Materials Administration", "Internal Accounting", "Organisation and Supervision of Work" and "Marketing Management". The educational institution has responsibility, holds examinations and gives credits as usual. The professional association announces these courses in their magazines and directly to local NITO groups in large firms and public services in the Oslo area. Many members of the association have shown interest and asked for more information, but so far the participants have been few. The association finds this somewhat disappointing.

7 Employers' federations and trade organisations: management courses

Employers' federations and trade organisations are important as *intermediaries* between course providers and firms, particularly small firms. The same applies in relation to public services and municipalities for the public employers' federations. The position as intermediaries is somewhat similar to professional associations for individual employees. These federations and associations are "nodes" in networks of continuing professional education, especially when they cooperate with higher education institutions and other course providers.

7.1 Private sector

The Norwegian Employers' Confederation (NAF) was a pioneer in providing management courses from the mid 1960's and in the 1970's. In the mid 1980's it had a programme for middle-level managers (four meetings of five days each and project work), a similar programme for lower-level managers and supervisors, a five day basic course in "Organisation and Management" with a further course and a seminar for former participants. In addition came several, two to five days, courses in subjects like "Labour Legislation" and "Wage Politics and Wage Systems". Late in the 1980's the Employers' Confederation merged with the Federation of Norwegian Industries. The resulting Confederation of Norwegian Business and Industry (NHO) offers no management courses, it is left to the member trade organisations as they may give more tailor-made courses for their trade. Besides, there are now so many other providers of management courses, and the Confederation has contacts with these instead of offering its own courses. The Confederation has also taken initiatives for debates on competence and education, from primary schools to higher education and continuing education.

An example of a trade organisation cooperating with higher education institutions, is the Norwegian Hotel and Restaurant Association. In the mid 1980's it had a programme "Organisation, Management and Marketing", with two three-day meetings and project work during two months. The lecturers were from Oppland Regional College, Tourism Study (a specialised two year course in business economics). The Association also cooperated with the University of Bergen, Faculty of Psychology ("Management and Mastery of Stress") and the private College of Marketing in Oslo (courses at the college or in-house for Association members). Videos for hire and correspondence courses were also offered to managers. Now in 1990 the Hotel Association cooperates with their trade institution, the Norwegian College of Hotel Management in Stavanger. A course "Service Management" is

certified with eleven points or half a year of study. It qualifies for later study at the college and exempts students from taking some subjects. Otherwise there is a problem of no evaluation system for courses, just market recognition. The Norwegian Hotel and Restaurant Association and other associations in service trades cooperate with the Administrative Research Fund (AFF) of the Norwegian School of Economics and Business Administration (NHH) in a tailor-made programme for top managers in service trades. The programme has four meetings of four days each during one year, shorter than the ordinary AFF programme of eight weeks. (chapter 9.3.1) There has been no crisis for management courses in the hotel trade, the number of applications has increased in later years. The Association has had long waiting lists for the programme "To Manage in Change" for middle-level managers. More than one hundred participate now in the programme, having two meetings of two to three days and project work during half a year. Lecturers are consultants from private training agencies. The Association also has set up a network of thirty-five female top managers, with lectures on different professional themes.

7.2 Local government sector

The Norwegian Association of Local Government (KS) has a Local Government Training Service (KO), offering courses for employees in municipalities and counties, held in local hotels or in-house. The most extensive programme for managers is "Municipal Management Development", with three meetings of three to four days. Participants should be not individuals, but a group from each municipality of chief officer, top officers of municipal services, politicians and union representatives. The programme may also be held in a municipal service or a county administration. The programme is adapted and tailor-made to local needs. The themes are boundary conditions for the public sector, managerial behaviour and roles, service management, cooperation between administrators and politicians, management by objectives and measuring results, situation-oriented management, communication, conflict solving, negotiations, project groups, new technology, employee codetermination.

The Local Government Training Service also has a five day course "Administration and Management" with training exercises, and a motivation course "Women and Management", also open for non-managers, with two meetings of three days and project work. These courses are held all over the country, some lecturers come from regional colleges. So far the Training Service has seldom used lecturers from universities and business schools. One exception is the cooperation between the Centre for Management Education (ULA-NTH) and the nearest municipalities and counties. (chapter 9.8) Now in 1990, however, the Local Government Training Service has entered an agreement with the private Norwegian School of Manage-

ment (BI) and its regional offices to develop and set up management courses next year.

The Local Government Training Service also cooperates with the private Norwegian Correspondence School (NKS): "Management in Municipalities and Counties" consists of three meetings and six papers with theory and exercises, while "Supervision" consists of five to six meetings and nine papers. These courses are held locally, while two-day seminars in "Service Management" and "Managerial and Organisational Development" are only held in some cities.

7.3 State government sector

The Ministry of Labour and Government Administration, the Directorate of Personnel, offers courses to state employees. These courses are particularly used by ministries and small public services, as large public services organise their own basic and continuing education. (chapter 4) The Directorate of Personnel offers several courses for managers in how to take care of their *personnel responsibility* within the government administration framework: "Negotiations in the Public Sector", "Agreements on Wages and Working Conditions", "Rehabilitation, National Insurance and Pensions", "Personnel Policy and Employment", "Employee Talks". The lecturers are from the Directorate of Personnel. The Directorate cooperates with a lecturer from the Norwegian School of Economics and Business Administration (NHH) for the course "Strategic Personnel Management" and with private consultants for the courses "Selection and Interviewing of Applicants" and "Employee Development". All these courses are short, lasting from two to five days.

International contacts and cooperation are becoming more important in the public sector as for firms. The Directorate of Personnel offers foreign language courses for officers and managers, two levels in English and three levels in French, with forty hours at each level. It is also possible to take two week courses abroad, combining advanced language teaching and lectures on public administration. A special programme " Norway in International Cooperation" has during seven months six meetings of one week each: English Conference Language, Cross-cultural Communication, Bilateral Negotiations, Multilateral Negotiations, Norwegian Foreign Policy, Study Tour to International Organisations. The Ecole Nationale d'Administration (ENA) in France annually invites thirty foreign public sector managers, including one from Norway, as students who shall also work in French local and governmental administration. The problem is the advanced level of French language required.

Project Administration and *Project Management* is needed in the public sector as well as in firms. The Directorate of Personnel offers seven different courses in

this field, most held by private consultants and lasting three to five days. An exception is a certified ten week programme in cooperation with Oslo Engineering College and a consulting firm. (chapter 9.7)

Annual conferences for exchange of experiences between managers in the public sector is also arranged by the Directorate of Personnel, for top executives and for personnel managers. To improve management development and organisational development (OD), in-house consultants meet for lectures and network building.

Development courses for managers in public administration are offered by the Directorate of Personnel, in cooperation with the Directorate of Organisation and Management: "Communication and Cooperation in Management", "From Plan to Action" and "Management by Objectives in the Public Sector". These courses last two or three days, they are not part of programmes with several meetings.

In 1976 the Directorate of Personnel established the *Government School of Administration and Management* for Senior Civil Servants (GSAM). It is a full-time course for fifteen weeks in the autumn each year, with a follow-up conference the next spring. Competition to attend is great, a ministry or service does not get more than one of thirty places. The goal for the school is to "develop managers who are able to run a more modern and efficient public administration", with better realisation of political decisions, more comprehensive and less sectorial solutions, more flexibility and better service to the public. The course consists of five main themes: Strategies for Change, Development of Leadership, Power and Management, Information and Service to Users, Employer Functions.

At the start it was discussed whether this school should be within Faculty of Social Sciences at the University of Oslo, but the school was set up as a separate institution. One third of the lecturers at the school in 1990 are however from higher education and research: four from universities, two from the private Norwegian School of Management (BI) and five from public research institutes. The other lecturers came as much from public administration including the Directorate of Personnel and from private consulting firms and other firms. Of the lecturers 28 per cent are women in 1990, while in recent courses 45 per cent and 36 per cent of the participants were women. This is far more than usual in management courses with participants from the private sector.

8 Non-profit associations: management courses for small firms and public services, language courses

Non-profit associations have traditionally been involved in "second chance" education for adults, in Norway they have not gone into "catch-up" education to youngsters who are low achievers at school. During the 1980's non-profit associations in Norway have *expanded vocational courses* in all areas, with general courses and hobby courses becoming less important. The main reason is a greater demand in the market for "useful" occupationally relevant courses, not least from women who are employees and no longer housewives. The non-profit associations have become more dependent on fees from participants and what people are willing to pay for, as government has reduced the subsidies to adult education during the 1980's. The tendency towards "vocationalism" is strongest in the largest non-profit associations like the Folkuniversity and the Workers Educational Association.

The non-profit associations comprise a heterogenous sector. Around forty organisations belong to the Norwegian Association of Adult Education Organisations. Most of these voluntary organisations (humanitarian, cultural, rural, religious, ideological, political, etc) offer courses primarily for their members. Their courses are not relevant for managers and engineers. A few professional associations, like those for engineers and graduate engineers, are members of the national Association. (see chapter 6)

Among the other non-profit associations, the *correspondence schools* are most active in giving courses relevant for managers, engineers and other employees. The correspondence courses have to be approved by the Ministry of Education and Research, and the schools are supervised by the State Council for Correspondence Schools. Even if some of the correspondence schools are privately owned as foundations or limited companies, they are state regulated. (This is the reason why they are described in this chapter and not as private training agencies in chapter 5.) The larger correspondence schools no longer only use written materials to individuals or study circles in their *"distance teaching"*. They supplement these with audio and video cassettes, radio and television programmes. Local classroom teaching is often combined with correspondence courses, especially for certified courses with examinations.

8.1 Open management courses

The Norwegian Technological Institute (TI), with fourteen regional offices, gives courses to its target group small firms (with less than one hundred employees) in manufacturing, crafts and technical services. It has established a Secretariat of Management Training. It offers a combination of course and consulting services to managers in small firms, with three course meetings of two days held at local hotels and thirty hours of consulting in the firm. The consulting services make this programme tailor-made, needed by managers in small firms with less in-house resources for solving technical, administrative, financial and marketing problems.

One of the large non-profit associations, the Folkuniversity has in Oslo cooperated with local craft federations for courses in "Management of Small Firms", for craftsmen wanting to obtain a trading licence.

8.2 Tailor-made in-house management courses

The privately owned Norwegian Correspondence Institute (NKI) has established a Department for Employee Training, using its own consultants and lecturers from the NKI colleges in engineering and computer science. It wants to be a "training department" for small firms: discussing training needs, setting up and carrying through training programmes, and evaluating the results if desired by the firm. The customers have been firms in oil, technical services, commerce and public services. They offer both technical and administrative subjects. One example is a programme "Practical Management" in three parts, each consisting of modules which may be adjusted to participant needs and may be held in-house.

Other large non-profit associations also offer in-house courses in management and administration: the Folkuniversity, the National Technological Institute (TI), the private foundation Norwegian Correspondence School (NKS). The latter has held the course "Modern Management" tailor-made for the building trade, chemical manufacturing, the printing trade and newspapers, pharmacies, auto dealers, the hotel trade, banks and state government.

8.3 Distance teaching in business administration

Since 1968 the Norwegian Correspondence School (NKS) has offered a correspondence course programme "Managerial School", in three parts, taking at least one and a half years. Every half year examinations are held in cooperation with the National Technological Institute (TI). From the 1980's the correspondence courses may be combined with local classroom teaching one evening a week, to explain and discuss difficult themes. This is arranged by local non-profit course providers and schools in more than one hundred places throughout Norway for three thousand participants annually. Employers pay the course fees before or after the course prog-

ramme for approximately half the participants, says the NKS School. The "Managerial School" courses are Accounting, Financial Control, Marketing, Management, Strategic Management, Labour Legislation, Accounting Analysis, Investment Analysis, Practical Financing. In 1979 the Norwegian Correspondence School (NKS) signed an agreement with the Norwegian Association of Engineers (NITO) for using the "Managerial School" as continuing education. Since then more than three thousand engineers have taken the course programme. Even with examinations, the "Managerial School" is not certified for higher education institutions generally. It qualifies for the second year continuing course "Management for Small Firms" at Oppland Regional College, in competition with others. The course is certified with ten points or half a year for studies at Agder Regional College. Naturally it qualifies for the two year study in business administration at the parent organisation's NKS College. A shorter, one year course programme "Supervisor School" is offered by the Folkuniversity, the Norwegian Correspondence Institute (NKI) and the Workers' Educational Association (AOF).

8.4 Language courses

Non-profit associations are widely used for language courses by Norwegian employers, as these associations charge moderate fees and are available with local teachers throughout the country. Managers and engineers in Norway have a good knowledge of English, but they often lack training in oral and written professional language. Their knowledge of German and French is weak or non-existing, except for those who studied in these countries. (chapter 2.7)

The high-technology firms we interviewed had foreign language courses - necessary for negotiations, for contact with suppliers and customers abroad, for taking professional courses abroad, for possibly working in the firm or corporation in other countries. (chapter 4.5) They used teachers from non-profit associations together with their own training staff. The Folkuniversity in Oslo gave in-house courses in English, French and German for employees in Norsk Data. The level and contents of the courses were to be defined from the needs of the participants, typical for the decentralised and individualised style of the firm. In contrast Elf Aquitaine had extensive structured language programmes, separately for managers and professionals, for office employees and for technical offshore staff. They used teachers from the local Folkuniversity, the Centre Culturel Francais and the local English School (for children of foreign employees in oil companies). The programmes had five levels in English with courses of three to five days, in total 50 to 60 days, and six levels in French, in total 150 to 180 hours. After basic courses and refresher courses came courses specialising in report writing, business letters, meetings, telephone use and for managers also intensive English courses in presentation, meetings and discussions, negotiations.

8.5 Technical courses

The National Technological Institute (TI) is the largest provider of technical courses in Norway, but most of these are for craftsmen, workers and operators. Some courses are relevant for engineers, in electronics, automation, computer programming and project planning. The courses last three to five days, some ten days, and are held in several towns. Correspondence courses from the Engineering College of the Norwegian Correspondence Institute (NKI) may also be used as continuing education. Otherwise the non-profit associations do not have technical courses on an engineer level.

Notes

(1) Rolv P. Amdam og Ove Bjarnar: En bedrift i norsk skole. NKS og fjernundervisningen i Norge 1914 - 1989. NKS-Forlaget, Oslo 1989. Pp 165, 218 - 225.

9 Higher education institutions: certified courses in cooperation with professional associations, seminars, tailor-made in-house courses

9.1 Basic education used as continuing education

Norway has a *flexible* system of higher education. University degrees may be obtained by combining subjects from different types of institutions, both universities and colleges.(1) College graduates attend universities to get higher level qualifications. Applicants with one or more university examinations have been given extra points for admission to colleges, even if their university examinations do not count within the college degree. The use of basic education at universities and colleges as continuing education has probably increased during the 1980's, but there are no reliable Norwegian statistics on this.

Part-time students have increased, but these include young new students working to avoid large study debts. *Older students* (defined as over thirty years of age) have also increased, but their previous education is not registered by the institutions. The Central Bureau of Statistics, however, may combine educational data from several years for individuals, but this is complicated and expensive. Only some of these older students have completed a professional education earlier, thus using the new education as continuing education. (The others may have some examinations but no degree earlier, some have just had slow progression due to part-time work or children, some have taken a break in their studies, and some older students have never studied before.)

Our Institute for Studies in Research and Higher Education annually does a labour market *survey of graduates* from universities and/or colleges half a year after graduating. The graduates are also asked if they have started another course of studies or education. Of regional college graduates 20 to 25 per cent (up to 35 per cent for graduates in business economics) started another education during the late 1970's and the early 1980's. This increased to 29 per cent in 1987 and 41 per cent in 1989. A growing number of the students are not satisfied with a short two to three year vocational education. One reason may be that the labour market is tougher, 13 per cent of regional college graduates were unemployed in 1989 while only 2 to 5 per cent were so earlier in the 1980's. To study further is a way of putting off unemployment, hoping that the labour market will be better in a year or two. (Norway has not had heavy unemployment for graduates for longer periods.)

Of engineering college graduates as many as 30 to 40 per cent annually started another education during the 1980's. However, a large part took an extra year at an engineering college when the basic education was only two years in the early 1980's. (When the basic education was extended to three years, the extra year was incorporated.) If we do not include this extra year, 20 per cent of the engineering college graduates started other courses in 1984 and 1985, while this increased to 33 per cent in 1989.(2) The majority continues in the technical field, 15 per cent started full-time study to become graduate engineers and 6 per cent started university studies, mostly in natural sciences. The others mainly went for full-time or part-time complementary education in business economics and administration, 2 per cent at regional colleges and 8 per cent at other professional schools. As newcomers to the labour market, these engineers probably have to pay for their further studies themselves. The engineers may now start further studies not only to improve their qualifications, but also to avoid or put off unemployment (8 per cent among engineer graduates in 1989).

9.2 Continuing education courses

In the rest of this chapter I will look into courses organised specially as continuing education at universities and colleges. The usual set-up is full-time concentrated courses lasting from one day to some weeks, possibly with several such meetings while the participants work in between. Another set-up is part-time evening courses once a week, this is offered by universities and colleges in business administration and by engineering colleges.

The OECD proposal (page 15-16) has several questions concerning how universities and colleges give continuing professional education. Some Norwegian institutions (two professional schools and one regional college) have organised this activity as non-profit *foundations*. This gives them more flexibility than they would have within the state framework for higher education. (Private professional schools are also organised as foundations.) However, all institutions may charge fees from participants in continuing education to cover expenses for a course (outside lecturers, administration, etc).

Responsibility for the *quality* of a continuing education course lies with one professor, who usually also lectures, sometimes together with several colleagues and outside professionals. Most continuing education courses, at least the long ones, are transformed from a course in basic education. (Management courses are exceptions.) While the students get a few hours each week during half a year to a year, the professionals in work need more concentrated courses. Examinations are important as part of the certification of courses, and here universities and colleges have advantages over course providers in the non-formal sector. An examination may be

part of a degree, if evaluated by the National Coordinating Committee (NKU) as described in chapter 3.7.

A total picture of continuing professional education for managers and engineers at universities and colleges in Norway is not available, but the most important institutions are covered here. As all kinds of graduates may become managers, all higher education institutions could give continuing education in management. This OECD study excludes the professions in the sectors of health, research and education. Accordingly I will not go into management training specifically made for these sectors.

The different professional schools, universities and colleges are presented in the following and what types of continuing professional education they give to managers and to engineers. The end of the chapter describes in-house courses, often tailor-made, held in firms and public administration by different higher education institutions.

9.3 Norwegian Institute of Technology (NTH): EEU courses

For graduate engineers in work, the Norwegian Institute of Technology (NTH) provides certified continuing education courses called EEU courses. From the start in 1975 the number of courses has grown to 87 in 1990, of these 23 are new. Most courses are in technical subjects like "Computer Integrated Manufacturing (CIM)" and "Soil Modelling". Some courses are technical-administrative like "Maintenance Management" and a programme of eight courses in "Project Administration". A few courses are managerial.

An EEU course shall have at least fifty hours of lectures and exercises, equivalent to the study of this subject during half a year to one year in basic education. The exercises consist of current and realistic technical problems to enable the participants to use the course in their work afterwards.

Organisation

The EEU courses are planned by the Norwegian Institute of Technology in cooperation with industrial firms, public administration, research institutes and others. The representatives and the subject committees from the professional association of graduate engineers (NIF) give advice on the needs for continuing education among their members. The director of studies in the professional association is a member in the Course Committee for the EEU courses, together with three professors and one student from the Norwegian Institute of Technology. The Course Committee also receives proposals for new courses from professors through the nine engineering departments. The practical work with the EEU courses was done by a small Department for Continuing Education, part of the central

Studies Administration. In 1989/90 this department was made into a foundation, the Centre for Continuing Education (SEVU), to be able to operate more flexibly.

Teachers

In EEU courses the lecturers are mainly professors from the Norwegian Institute of Technology, who also teach this subject in the basic education. Most EEU courses are founded on basic courses, but adapted to graduate engineers with working experience. The EEU courses have from one to five professors as lecturers. In addition, some courses use up to five researchers from SINTEF, a foundation with many technical research institutes affiliated to the Norwegian Institute of Technology. Even more important, guest lecturers from firms are widely used, up to twelve of them in some EEU courses.

Certification

The EEU courses are intensive, most last ten days in two periods of one week each. It is difficult for engineers to be away from work for longer periods, since they generally work in teams. There are fifteen to thirty participants in an EEU course. Each participant gets a certificate of attendance, including examination results (grades) from the voluntary examination after the course. Course statistics for the 1980's show that between 45 and 60 per cent of the participants annually took the examinations.

Of the participants in the EEU courses 45 per cent work in the manufacturing industries, 30 per cent work in other parts of the private sector and 10 per cent work in the public sector. Their educational background is 55 per cent graduate engineers, 25 per cent engineers, 10 per cent other university education including architects and 10 per cent other types of education.

The EEU courses have been located at the Norwegian Institute of Technology (NTH) in Trondheim in mid-Norway. To make the courses easily accessible for more firms, some are now also held in the capital Oslo, where the professional association (NIF) has a new continuing education centre. On request an EEU course may be held in-house for technical employees in a firm. At present the Norwegian Institute of Technology is also trying out video-based continuing education, this is promising for the many small and geographically scattered firms in Norway.

Funding

Participation in the EEU courses are paid by the employers, not by the participants. The fees for the EEU courses are from 7 000 to 12 000 NKR in 1990, a few petroleum courses cost 16 000 NKR. For ten days this is somewhat less per day than private training agencies charge. Hotel, food and travel expenses are extra.

Students, professors and other employees at the Norwegian Institute of Technology and researchers at SINTEF may apply for participation without fees.

In 1985 course fees paid only half of the expenses for EEU courses. Now the goal is that 3/4 of the expenses should be covered by course fees, and only 1/4 should come from the budget of the Norwegian Institute of Technology. There is no direct state funding for EEU courses. (According to the Adult Education Act of 1976, the state supports for instance correspondence courses, but the available money has been cut back during the 1980's. EEU courses, as continuing education for highly paid well-educated employees, have not been considered for state support.)

External funding has been vital in starting several EEU programmes in the 1980's:

- From 1980 to 1983 the Norwegian Council for Scientific and Industrial Research (NTNF) supported five to ten courses each year in Data Technology (NIT).
- From 1981 to so far 1990 the multinational oil firm Mobil has supported ten to fifteen courses each year in Petroleum Technology.
- From 1983 to so far 1990 the Norwegian firms Statoil and Norsk Hydro have supported six to ten courses each year in Project Administration. These were at first mainly for engineers in the oil industry, but they are now adapted to the growing needs of other industries.
- In the middle of the 1980's Norwegian Water Resources and Energy Administration (NVE) supported a programme in Electrical Power Technology.

Economically EEU courses are seen as a whole. Courses run with a profit cover the expenses for cancelled courses, which were approximately one third of the courses in the late 1980's. This is part of the risk for universities in the market for continuing education. The Norwegian Institute of Technology charges 20 per cent "overhead" on the lecturers' fees and all operation expenses. Of the possible net profit, 50 to 70 per cent is transferred to the institutes in the different departments of the Technical University. The rest is used to develop new courses.

9.4 Centre for Management Education, Norwegian Institute of Technology (ULA-NTH)

The Norwegian Institute of Technology (NTH) has nine engineering departments, one of them is the Department for Economics and Industrial Management. The students here become graduate engineers with a curriculum in technical, administrative and economic subjects. This department consists of the Division of

Organisation and Work Science, the Division of Economics and the Centre for Management Education (ULA-NTH). Through this Centre the academic staff in the divisions give lectures at management courses. The Centre got its present name in 1980, it was established in 1961 as Administrative Continuing Education. The Centre of Management Education has a small academic staff, but it draws upon the departments for lecturers in different courses and programmes. All programmes of ULA-NTH offer optional examinations for the participants.

9.4.1 EEU courses in management

The EEU courses are certified continuing education, with optional examinations, developed and held by the academic staff in the departments of the Norwegian Institute of Technology. Most of the EEU courses are technical or technical-administrative, in 1990 three courses are relevant for managers. The EEU courses usually have two meetings of one week each for fifteen to thirty participants.

The EEU course "Business Development" has been held for more than five years to help experienced graduate engineers working as managers in firms with changing environments. The themes are: Strategic management and planning, Organisational development and participation, Innovation planning and development of creativity. Four lecturers come from the Institute, ten lecturers are managers from different trades with experience of "change management" in large and small firms. In addition to group work and exercises, the participants do project work based on their own firm in the one month period between the course meetings.

Another EEU course "TEKNO - Management in Technological Environments" is for "younger graduate engineers, or those going from primarily technical tasks to more administrative tasks". The Centre for Management Education is responsible. This is an introductory course, with numerous themes: Production management, Material administration and logistics, Project administration, Quality management, Safety, Creativity and innovation, Organising of work and organisation development, Personnel management and development, Working in groups, Communication, Conflict solving, Agreements and labour legislation. For graduate engineers it is positive that the course combines technical-administrative themes and interpersonal skills. The Norwegian Institute of Technology (NTH) has competence in technical-administrative subjects and access to a network of graduate engineers which private training agencies do not have.

9.4.2 Joint venture programmes

In the EEU course "International Marketing of Products, Services and Systems", the Norwegian Institute of Technology cooperates with the Norwegian Institute of Export, a foundation of the Export Council of Norway. The course is for "graduated engineers, sales engineers and others working in international marketing". The

lecturers come from many export-oriented firms and institutions. The participants have to present their own firm's international marketing. In 1991 the course will be re-named "Management Programme for International Business Development". This is a four week course and one week is used to visit a leading management school and selected industrial sites in another European country.

Another joint venture is the "Nordic Management of Technology Programme", a three week programme for engineers in high-level positions in business, research, etc. The partners are ULA and the technological research foundation SINTEF in Norway and corresponding institutes or centres in Denmark, Sweden and Finland.

9.4.3 Seminars in administration and management

The Centre for Management Education (ULA) is responsible for these seminars which are long programmes. There are no examinations in these programmes, unlike the EEU courses. But like the EEU courses in management, they are process oriented and do not consist of just lectures.

The "Seminar in Industrial Administration" (SIA) meets four times for two to three weeks during the autumn, in total six weeks. The seminar has long traditions, in 1990 it was held for the 32nd time. The objective is to increase managers' competence in running a technological enterprise, and to develop their competence in leading the future development of such organisations. The themes covered are broad: Management, Decision Processes, Strategic Management, Organisation Theories, Personnel Management, Technology Management, Project Organisation, Financial Control and Financing, Production Management, Marketing, Industrial Law, Society and Politics. An important part is an individual project related to the participant's work organisation.

The "Seminar for Public Administration" (SAOF) is shorter than the industrial one, meeting twice for one week in the spring. In 1990 it was held for the 15th time. This is not continuing education primarily for graduate engineers. The participants come from state-, county- and municipal administration all over the country, including politicians. Alternatives are management programmes by the public employers' federations (chapter 7). The themes covered are: The Administrative Unit as an Organisation, Cooperation between Administration and Politicians in the Decision Process, The Administrative Unit and External Environment, Economic Planning, Organisational Development, Management, Working Environment, Codetermination, Creativity and Change. Between the course meetings there is project work to be done.

9.5 Norwegian School of Economics and Business Administration (NHH), foundations for continuing education

The Norwegian School of Economics and Business Administration (NHH), in Bergen on the west coast, has since its start in the 1930's to the middle 1980's been the only institution in Norway for educating business administration graduates. Together with the other professional schools (or "scientific colleges" as they were called, within engineering, agriculture and veterinary medicine) it formally became a part of the university system in the 1970's. But it is not integrated into the University of Bergen.

As early as 1952, the Norwegian School of Economics and Business Administration established a foundation named Administrative Research Fund (AFF), to do research, consulting and systematic continuing education within management.

In 1959, the School established another foundation, the Course Centre (NHHK), to fulfil its national responsibility for giving continuing education to its graduates, and to give part-time basic education in business economics and administration. The Course Centre now has staff in Bergen, Oslo and Stavanger.

9.5.1 Management development programme

The foundation Administrative Research Fund (AFF) has since 1953 given a continuing education programme for managers in private and public sectors. During almost forty years this has been the most prestigious management programme in Norway. In the end of the 1960's the name was changed from "Course in Administration" to "Programme for Management Development" (PLU), as more social science theories and sensitivity training methods were introduced. The last has been somewhat modified, but the programme is still process-oriented and open, both in participants' influence on themes discussed and in pedagogical methods. The programme is long, in total eight weeks during a year, with three meetings of three to two weeks and project work in between. The around fifty participants work in permanent groups of eight to nine persons, for exchange of management experience and analysis of the ongoing group processes. Plenary sessions have lectures from the AFF staff and others, training tasks and discussions. Of the participants through the years 20 per cent worked in public sector. In the 1980's between 4 and 15 per cent have been women of the participants.

9.5.2 Open seminars in management and administration

The foundation Course Centre (NHHK) offers short, one to five day seminars to "meet the needs for professional updating, elaboration and to some degree extension". The seminars are primarily for business administration graduates, but they are open to all with a sufficient professional background. Most business

administration graduates work in the Oslo area, therefore 70 per cent of the seminars are held there, even if the School is located in Bergen. During the 1980's, the seminars held annually by NHHK more than doubled from twenty to nearly fifty, and the number of participants also doubled to 1 200. Most of these seminars, however, are in business economics specialities. Of the 47 seminars held in 1989, we consider eight seminars with 315 participants (one fourth of the total) to be continuing education for managers: "Negotiation Techniques", "Creative Problem Solving", "Project Management", "Management", "Management in the Public Sector" (held since 1982), "Management by Objectives in the Public Sector" (new), "Recruiting and Selecting Managers", "Management of Information Technology", "Market Adaptation through Organisational Design".

Lecturers in the management seminars have been professors from the Norwegian School of Economics and Business Administration (NHH) and professors from the corresponding schools in Denmark and Sweden. These later may use their native language, and they share with the participants a Scandinavian management culture, where cooperation with unions and the state is important. In general Norwegians are sceptical to importing American management culture. (But for the NHHK seminars in business economics, professors from the US and South European countries are used, as are Norwegian accountants and other professionals.)

The NHHK seminars are advertised semiannually in newspapers and the magazine of the professional association of business administration graduates. But the main information channel is by direct mail to business administration graduates, former seminar participants, selected firms and public administration. This address register has been built up during more than a decade. Coupled to the course information is a survey of seminar needs to be returned to the Course Centre. Our informants in the Course Centre (NHHK) in Bergen say they know the market rather well. Only three courses out of 29 had to be cancelled for lack of participants in spring 1990, that is ten per cent. Earlier in the 1980's ten to fifteen per cent of the planned courses were also cancelled.

In cooperation with the professional association, the Course Centre is responsible for the annual two days Autumn Conference at the Norwegian School of Economics and Business Administration with nearly three hundred participants and thirty lecturers, both professors and professionals. The Course Centre is also responsible for the programme "Project Management" at the School, consisting of three modules of one week each, in total 120 hours of lectures and exercises and a project of 40 hours.

9.5.3 Evening courses

The Course Centre (NHHK) offers "Special Courses" for professionals in work both in Oslo and Bergen. The courses are organised as lectures one evening a week for

half a year, with compulsory examinations, counting as 2 points in the higher education system (where 20 points are equivalent to one year study). Of the available 13 courses in Oslo autumn 1990, several may be relevant for managers according to our informant in the Course Centre. "Export Marketing and International Strategies" is geared towards middle-level managers. "Economics" should be relevant for top-level managers, focusing on national and international economic politics, with professors from the Institute of Economics at the University of Oslo and professors from the "parent institution" the Norwegian School of Economics and Business Administration (NHH). The courses in "English Business Language" and "French Business Language" are useful for managers, but even with all the talk of internationalisation the latter course had to be cancelled because of few participants. Most of the other Special Courses may be taken as part of the first or second year in Business Administration studies. These courses are somewhat elementary for business administration graduates, but they may give supplementary competence to managers with other educational backgrounds. For instance the Special Course in "Marketing" is useful for (graduate) engineers who have become managers and lack knowledge in this field.

9.5.4 Certified programme for international development (PRIDE)

This is a programme in internationalisation for top-level and middle-level managers, with seven three days meetings in weekends during one year, in total six weeks of course activity, held by the Course Centre (NHHK) in Oslo. The programme consists of lectures, cases of Norwegian and foreign firms, group discussions, project work in groups and one week study trip to Brussels and Paris. In addition comes reading more than 2 000 pages of books and articles. Taking a voluntary examination and including the written project work, the programme is certified at the Norwegian School of Economics and Business Administration as 10 points, equivalent to half a year of study, for a Master in Business Administration. The themes for the gatherings are: International Challenges; Choice of International Strategy; Cultural Understanding and Negotiations; International Market Development towards Firms, Distributors and Customers; Economy Control and International Financing; Focus on Europe 1992, Brussels and Paris; International Organisational Development and Management. For systematic exchange of experience the lecturers in 1989/90 were 11 professors from the Norwegian School of Economics and Business Administration (NHH) and 4 professors from other universities, 8 consultants and bankers, 19 managers from Norwegian firms abroad, 6 managers from foreign firms (French, Swiss) and 10 Norwegian representatives abroad (Export Council, Ministry of Foreign Affairs, OECD, EC). Besides the EC countries, experience from Eastern Europe, Soviet, Saudi Arabia and Sri Lanka were presented. Project work shall connect the PRIDE programme close to the firms

of the participants. At the start, participants must bring along an internationalisation problem from their firm, to be discussed in groups in relation to the lectures, before conclusions are presented and discussed at the last plenary meeting. This extensive programme costs 56 000 NKR plus hotel and travel expenses. The programme has been held since 1979, in Oslo. To maintain the personal networks, former participants are annually invited to a seminar with group meetings. They are also sent new and relevant articles, to be professionally updated. The PRIDE staff may assist the former participants' firms with in-house development programmes, seminars, etc.

9.6 Norwegian School of Management (BI), Centre for Executive Education

The Norwegian School of Management (BI) is a private institution, organised as a self-owned foundation. The school's main premises are at Sandvika just outside Oslo. From the 1940's to the 1980's it gradually developed from a commercial school to a college, by increasing the length of studies to four years and recruiting academic staff. In 1985 its graduates were officially recognised as business administration graduates. But the institution is still not formally a part of the university system. In the 1980's the school established regional business colleges in several towns, first for basic one year courses of study in business administration, later extending these to two and three year courses of study.

The Norwegian School of Management (BI) established its Centre for Executive Education in 1981, then within its Centre for Continuing Education. It has profited from being in the Oslo area, where the head offices of corporations and public services are located. The Centre has a small staff and uses the professors of the School as lecturers.

9.6.1 Open management programmes

The Centre for Executive Education is now starting Theme Programmes for Top Executives, the first one in "Strategic Management and Planning". The programme will be intensive, lasting for five days. Through case studies and new theories the goal is to give a "state of the art" report to managers.

The regional business college (BI) in Oslo offers "Special Courses" for professionals in work, organised as lectures one evening a week for half a year with compulsory examinations. Of the available 21 courses in autumn 1990, six courses are within Organisation and Management. New this year are "Management and Readjustments in the Public Sector" and "Service Management". The latter is organised as three intensive meetings on Fridays and Saturdays, as is the course "International Marketing and Management". Professors from the Norwegian School

of Management at Sandvika just outside Oslo are lecturers as well as professionally responsible for the courses. Some of the professors have been professionals, in private firms, in public administration and in politics. As lecturers are also used professionals, both business administration and social science graduates.

Managers may also take the longer "One-year Degree Courses" as continuing education. In Oslo relevant courses for managers are "Public Economics, Administration and Management", "International Management" and "Project Administration". (Regional business colleges outside Oslo offer other courses in economics and personnel administration.) Earlier the courses used to be evening courses, but now they are organised as four to eight modules during a year, each module lasting three to four days. The one-year degree courses are the voluntary part of the third year in basic education, for the Bachelor's Degree Programme. The School of Management now gives first priority to students. It also turned out to be difficult to lecture to a mixed audience of students and professionals. The Centre for Executive Education has started separate BI Management Programmes for professionals, using more "experience based learning". These programmes will also have examinations. The first programme for professionals in "Marketing Management" started in November 1990. It is held at hotels during the end of the week and weekends to minimise time away from work. In February 1991 the Centre starts a "European Community" programme.

9.7 Universities: language courses and socio-cultural seminars for internationalisation

The University in Oslo, the oldest and largest in Norway, has established a Secretariat for Externally Financed Activities. One part is the Language Section, with twenty employees giving nearly one hundreds language courses annually. Earlier only four per cent of the courses were bought by firms, the rest by the Directorate for Foreign Aid (NORAS) under the Ministry of Foreign Affairs (UD). The goal for 1989 was to sell 20 to 25 per cent of the language courses to firms.(3)

For several years the Language Section has held "Regional Courses for Business", lasting two to three days. They are meant as an introduction to different countries or regions and their cultures (language, literature and art, politics, economy, behaviour) for employees sent by their firm to live abroad for a period. Some courses also include spouses. The countries and regions covered have been Germany, France, UK, US, Canada, the Arab World, India, China and Japan. In later years most courses have covered East Asia. The lecturers hired are often from export-oriented firms or officials with experience abroad. Hired from the university has been among others staff of the East-Asian Institute. We emphasise that for such broad and multidisciplinary seminars, the university can use its variety of

institutes and subjects. The Regional Courses for Business have been attended well. Nearly one hundred Norwegian firms and several ministries have had employees as participants. Each course has from ten to sixty participants. The whole activity is financed by course fees.

9.8 Regional colleges: for managers in local firms and public administration

The eleven regional colleges (RC) were established as "short cycle higher education" during the 1970's in Norway. They are spread throughout the country, mostly in towns, but not in university cities. They are considered rather successful in fulfilling their different goals: give two to three year vocationally-oriented higher education, give courses which may be credited and transferred as part of a university degree, provide adult or recurrent education, and contribute to the development of the region in which they are located. At the start, the Ministry of Education stressed that special courses should be developed for part-time students, and indicated that up to 25 per cent of the educational capacity could be used for this purpose. Adult education should be regarded as an ordinary task for the staff and would not involve extra pay.(4) But are courses for employees and managers in local firms and public administration to be considered "adult education", with its associations of helping the disadvantaged? In the 1980's, some regional colleges paid their teachers for evening and weekend courses.(5)

In 1987 Agder Regional College, on the south coast of Norway, was the first regional college to establish a foundation for externally financed courses (SEVI). It wanted to be more flexible and more restricted admission to the college had limited the number of part-time students. Some staff members were critical of this, as they wanted to spend more time and effort on expanding regular studies from two to four years, and improve quality.(5) Even with the crisis in the course market during recent years, the foundation has survived.

What competence do the regional colleges have for giving continuing education to managers? All the regional colleges offer a two or three year course in business economics and administration, some with regional trade specialisation (agriculture, fishery, publishing, tourism). They have teachers within this field, but not necessarily business administration graduates. Their markets are local firms, most of them small, and local public administration, where fewer managers have higher education than in the cities.

9.8.1 Full-time courses

The one year full-time courses in "Project Administration" and "Internationalisation" at Agder Regional College may be relevant for managers. Oppland Regional

College has a one year full-time course, "Management of Small Firms", held for more than ten years. Considering the problem of getting away from business for so long, especially for owner-managers, we wonder if the participants have been managers or young graduates, with or without employment experience. Can managers use full-time courses as continuing education?

9.8.2 Tailor-made courses

Managers in municipalities and counties get paid educational leave for a total of two months during one year for the tailor-made course "Municipal Management". The course is held at two regional colleges (Agder far south and Nordland in the north), and at the Norwegian State College of Public Administration and Social Work (NKSH) in Oslo.

Finnmark Regional College has cooperated with Management Training for Fishery Industries (LIF), giving courses in business economics, product development and marketing. The courses are decentralised, as most of the industry is located in small towns and fishing villages, in this huge county on the border of the Arctic Sea. Otherwise this regional college does not hold short courses, since neither employers nor employees are accustomed to, or able to, pay for education.(5)

A typical example of governmental measures for Northern Norway, is the programme "Competence Development in Finnmark". As part of it Finnmark Regional College gives decentralised courses in economics and public administration to municipal and county employees, some managers, but mostly office employees. Low general educational qualifications caused problems, however, even with special preparation courses. The studies consist of ten course meetings each year for two and a half years, equivalent to the first year of full-time study, with the possibility to take the second year at the college. The municipalities pay wages during the course meetings, travel and accommodation expenses. The courses are paid by the Ministry of Local Government (KOM) and the Norwegian Association of Local Government (the municipal employer federation, KS).

9.9 Engineering colleges

The fourteen engineering colleges throughout Norway have extended their courses from two years to three years during the 1980's. This has demanded time and effort from the staff with no budgetary increase. It has not been possible at the same time to do a lot within continuing education. Earlier the colleges offered one extra year as continuing education. This was included in the extended three year basic education. This extension was in line with international trends, three years of education is required to become an "Euro-engineer" within the European Community. Upgrading the engineers now in work, where most have only two years of

education, is a huge task. Representatives of the engineering colleges consider the funding a public responsibility, but the Ministry of Education has not yet decided on this matter.

Continuing education has lately been the theme of conferences for engineering colleges; most colleges want to start something. Lack of premises outside the college for daytime and evening courses is a problem. At present, five of the fourteen engineering colleges have some continuing education in management and business economics. The courses are geared to the needs of local firms: automation and entrepreneurship for high-technology firms in Horten near Oslo; international marketing (two year course) and business economics (one year) for high-technology firms including a large semi-public engineering and arms firm in Kongsberg in an inland valley; business economics and management for small firms without business administration graduates in Narvik in Northern Norway and in Grimstad on the south coast. Narvik Engineering College, as the only one, also offers a basic education combining engineering and business economics, as engineers working in small firms have difficulties to get away for continuing education in business economics.

Oslo Engineering College has established a Continuing Education Centre just outside Oslo, as a department of the college. The Centre is supposed to be self-financing, not be run with profit or loss. For open courses the participant or employer pays. Firms and public services may buy courses for internal training. Courses for engineering college staff and teachers in industrial secondary schools are paid by the state. The many courses for unemployed engineers and graduate engineers are paid by the Directorate of Labour. For all courses, the Centre is free to choose lecturers from the engineering college or consultants and other professionals.

The Continuing Education Centre of Oslo Engineering College plans a programme in "Business Economics and Administration", as daytime courses with examinations, in total twenty weeks, giving ten points equivalent to half a year study. Some of the courses come from the third year in the new basic education. Applied computer science (programming) is part of the programme. The Centre also plans an additional half year programme in "Internationalisation", with courses in Law, Contracts, Business Language (English, French, German), Materials Administration, Quality Securing, Project Administration. The staff are not sure employers will pay for these long programmes, if, for instance, engineers want to work abroad in other firms. The course fees are moderate, but they need public support for the programmes.

The Continuing Education Centre also has several evening courses, lasting 20 - 30 hours, in Applied Computer Science. Some of these are elementary and what may now be considered basic competence: Word Processing, Use of Calculating

Sheets. Other courses give more specialised operative standard competence for engineers: Basic course in Computer Aided Design (CAD), Operative system UNIX, Programming language C, Programming tool DATAFLEX.

The Centre has cooperated with the Directorate of Personnel and consultants to develop programmes for state employees. "Project Management" lasts ten weeks during two and a half years, "Systems Development" lasts five weeks during half a year. The programmes include examinations at Oslo Engineering College.

9.10 Tailor-made in-house management programmes

During the 1980's the Course Centre, the Norwegian School of Economics and Business Administration (NHHK) has held some management courses within firms and public services every year, some in Bergen, but most in the Oslo area. For instance in 1984 the courses were "Problem Solving" for the Norwegian Broadcasting Corporation and for a large detergent manufacturer, and "Economical Planning" for a large paint manufacturer. In 1990-91 the Course Centre in Oslo will increase this activity. At present it is engaged in the high-technology firm Alcatel STK with a programme for engineers and other middle managers, with several meetings during two years, and a programme for top managers, with a two days meeting every six months. These programmes are adapted from the open courses and seminars, while a more tailor-made programme lasting two years has been arranged for the Norwegian Telecommunications Agency.

The Centre for Executive Education at the Norwegian School of Management (BI) has for years held in-house programmes for managers, both in the public sector and in private firms. Since this is very resource demanding, it does not have many programmes simultaneously. It is working to get the managerial development programmes closer to the research done at the Norwegian School of Management (BI). At present it has programmes for managers in the Ministry of Justice, the Norwegian Meteorological Institute, hospitals, local secondary schools and one private firm. Earlier it has had programmes for managers in the Norwegian Telecommunications Agency ("Marketing"), the Postal Services ("Economics and Statistics"), the Directorate for Foreign Aid ("Project Administration", "Economics") and Statoil ("Project Administration", "Materials Administration"). The Centre for Executive Education has cooperated with the Norwegian Council for Scientific and Industrial Research (NTNF) in establishing a programme in "Internationalisation for Building Contractors".

Among the regional colleges, the ones in Agder and Nordland have been very active in getting requests for courses in economics and administration. (Other colleges have been more active within technical subjects and computer science.) Agder Regional College appointed a professional council, to get good contacts with local firms and public administration. (The board has local politicians, but not

professionals.) On request, the regional college holds tailor-made in-house courses, for instance "Basic Organisational and Administrative Knowledge" for the local police.

Staff in the Centre for Management Education at the Norwegian Institute of Technology (ULA-NTH) have acquired competence and contacts from holding management seminars for more than ten years. Because of this, they are asked to hold in-house management programmes. We see the same trend toward "internalisation" of management training as our research of firms revealed. Our firms used private training agencies as partners, but here we see a higher technical education institution involved which is perhaps surprising.

The Centre only holds an in-house management programme if the programme is related to research done by staff members, if the programme is important for staff learning, and if it is possible to relate the programme to the student education at the Norwegian Institute of Technology. They are "not in it to earn money", they do not consider themselves to be competing with private consulting firms. Their ideal is to make "tailor-made" programmes, to do something new every time, but there is necessarily some continuity. The in-house programmes are just a small part of the Centre's work, and in later years the Centre has concentrated on the open seminars.- The in-house management programmes have been held locally in the Trondheim area, for manufacturing firms, research institutes, secondary schools, several institutions in local administration and services like the County Roads Office. Besides giving courses, staff of the Centre work as process consultants in firms, often for a long time, but not always in a formalised programme.

The most extensive in-house management programme by the Centre for Management Education at the Norwegian Institute of Technology (ULA-NTH) was held from 1980 to 1982 for more than one hundred managers in different sections of the Municipal Administration in Trondheim. The participants evaluated the programme, both during it and afterwards, in surveys and interviews. (6) The municipal managers saw their scope of action as very limited by bureaucratic rules and by politicians. The most important benefit from the management programme was the insight and experience that change and development is possible, both in persons and in organisations. The good features in the programme were:

- initial interviews with the municipal administration
- combine short course meetings and work in project groups
- combine theoretical themes, managers' own problems and interpersonal relations ("process")
- focus on development project, which may be supplemented by courses in administrative methods

Other desirable features were not realised:

- not only managers participated
- not compulsory for all managers, as only one fifth participated due to economic limitations
- a "contract" between staff and participants was not made, on how much guidance to expect during the programme
- there was no agreement at the start where to place the responsibility for further action and measures.

These additional challenges must be met, when staff in higher education institutions change from holding open management courses to doing in-house management programmes and possibly turning into organisational development consultants.

Notes

(1) Per O. Aamodt: A New Deal for Norwegian Higher Education? European Journal of Education, No 2 1990. Pages 171-185.

(2) Part 5 in Terje Næss and Per O. Aamodt: Higher Education and Employment: the Changing Relationship. Country Report from Norway to OECD. Institute for Studies in Research and Higher Education (NAVFs utredningsinstitutt), Oslo 1990.

(3) Markedsundersøkelse. Universitetet i Oslo 1989.

(4) Svein Kyvik: The Norwegian Regional Colleges. NAVFs utredningsinstitutt, Oslo 1981. Page 40, 109.

(5) Interview by S. Aga in 1987 for "The Hidden University" project, not published.

(6) Børre Nylehn and Anne Aaker: "..den friske iling i vort træge vanegjængeri"? Trondheim 1982.

10 Conclusions

10.1 Certification becomes more important

The "golden days" of the open course market are over, this is said by Norwegian course providers and firms. Both employers and employees have become more critical towards the *quality* and the *costs* of continuing education courses than they were early in the 1980's. The reasons are a tougher economic situation, a change from lack of manpower to rising unemployment and discontent with courses, especially management courses.

Employers pay for the courses and wages employees get during the courses. In 1988-89 low oil prices, increased bank interests and less private spending because of a compulsory wage freeze led to economic difficulties for many Norwegian firms. Employers tried to cut expenses, also course expenses. At the same time there has been more discussion on how important it is to have competent employees. To get more value for the money spent employers will be more selective in courses and try to find better, less expensive courses. We would expect this to continue in the 1990's.

Employees are concerned with the quality of courses for other reasons. They use time and effort to learn, and they need to have their increased competence certified to improve their career within the firm or in other firms. Generally employers try to keep employees they have paid extensive and expensive education for by creating internal labour markets with career opportunities. Certification of continuing education increases the chances of the employee leaving and is thus not in the employer's interests. But in a difficult economic situation, employers may have to lay off even some of the employees who received extensive continuing education. Certification of the continuing education may better the chances for getting a job in another firm for redundant professionals and other employees. It seems employers are becoming more aware of this, that they have to educate for the trade and not only for themselves. (A few firms have had this policy for decades.)

Even in the period when employers wanted to keep their employees within the internal labour markets, some employers
saw the benefit of certified continuing education. In eleven of the twelve firms we studied in 1986/87 employers gave *grants* to employees who on their own initiative studied part-time at universities or colleges. The study course had to be certified by examination and be relevant for the firm. (chapter 4.11) Engineers and graduate engineers got some grants for specialised technical courses, but mostly for complementary courses in business economics, administration and foreign languages - useful in technical positions and to qualify for managerial positions.

The increased concern for the certification of courses favours higher education institutions in competition with other course providers. *Universities and colleges can guarantee the quality*, professional and academic, of their continuing education courses. Responsibility for course quality lies with the professor setting up the course, often from a basic education course, who usually also lectures. The increased competence of the participants is tested by graded examinations. An examination may be part of a degree if evaluated by the National Coordinating Committee (chapter 3.7). The institutions in business administration have so far been most active in offering modular continuing education courses which may be supplemented to a full degree.(chapter 9.5 - 9.6)

Certification and examinations are suited for courses giving *operative standard competence* for a profession, competence that may be used in different firms. Continuing education updates the competence from basic education or gives specialised competence which the professional did not get (or choose) in basic education. Some operative standard competence is common to the whole profession, some is shared only by professionals working in sub-specialties. An example of certified, specialised courses is the two-week EEU courses at the Norwegian Institute of Technology for graduate engineers.(chapter 9.3)

Professional associations typically offer short courses or seminars where professionals exchange experiences. Recently the association of graduate engineers has set up *Professional Development Certificates*, consisting of modules, both certified courses from universities and colleges, courses from the association and from other course providers.(chapter 6.1 - 6.2) The certificates were not set up to be recognised by the ministry or any governmental agency, the association is working to get the certificates acknowledged by their members and employers.

10.2 More courses are tailor-made

The market for tailor-made courses increased and flourished in the late 1980's, we expect this trend to continue in the 1990's. This may seem contradictory to the trend of increased certification, but the two trends supplement each other as they apply to different types of continuing education. Certification is important for courses which give operative standard competence. Tailor-made courses are necessary for courses which give *local competence*, specific for a firm, a public service or possibly a trade, often combined with operative standard competence.(chapter 3.3) Firms have experienced that tailor-made courses give the best results when *basic competence in interpersonal skills* (communication, conflict solving, etc) shall be transferred from a course to daily work. Such a course is best held in-house for all relevant employees and is usually compulsory. This applies to

management courses, but also to sales courses and service courses for engineers and other professionals. (chapter 4.10)

Universities and colleges cannot be expected to be the main providers of tailor-made in-house courses to firms and public services. They have a responsibility to give continuing education to their graduates as individuals, but not specific responsibilities to certain firms. (Regional colleges may be an exception, they were established to increase the competence in local business and government through basic and continuing education.) To set up and give tailor-made courses is time-consuming, a few firms get a lot while the rest get nothing. It is, however, important that higher education institutions do not close themselves to the possibilities of offering tailor-made courses.

As it is, several Norwegian higher education institutions have given tailor-made management courses through their Centres of Continuing Education.(chapter 9.10) University institutions in business administration and in engineering have been active, so have regional colleges. They have not done this from economic need, but to test out their theories and methods in the field. They do not market the possibility of tailor-made courses, but they are contacted by ex-participants from the open management courses. A Centre does not have the capacity to give such courses in more than a few firms and public services each year.

Private training agencies and large non-profit associations are better suited to give tailor-made in-house courses in management and particularly in sales and service. The main reason is that these courses are often *connected to consultant* practice in organisational development. The firms see the need for this, if you want to change people's behaviour you usually have to change the organisation of work too. Most large training agencies are also consultant agencies.(chapter 5) It is possible for higher education staff to be consultants, but this requires contractual measures and long-term commitment.(chapter 10.1) Professors, even in business administration institutions, seldom have professional experience in sales work as a background for courses and consultant work. This is probably better left to private training agencies.

10.3 Professional associations and trade organisations as intermediaries

A higher education institution cannot be expected to have many joint programmes and partnerships with businesses, that is single firms. Some local firms may receive ordinary courses or tailor-made courses. But this one-to-one cooperation demands much time from the staff in contacts and planning. In my opinion the cooperation between higher education institutions and firms is best done using professional associations and/or trade organisations as intermediaries on a *national* basis. This

will probably function better than to give a ministry or government agency the task to coordinate the training market, if this is not already done. A professional association informs its members of relevant courses from different institutions, the association also informs the institutions of its members' needs for continuing education. A trade organisation does the same for its member firms. The great advantage of using such intermediaries is that employees and employers *in small firms* may also be reached. Otherwise the direct contacts are between large firms and higher education institutions.

10.4 The distinction university sector/non-university sector is problematic

On the present and potential development of continuing professional education the OECD proposal asks: "Should a division of responsibilities between the different types of higher education institutions (university and non-university sectors) be encouraged?" (page 15) A problem here is that the university sector in Norway consists of two very different types of institutions: four traditional universities and eight specialised institutions with university status, comparable to the German Hochschule and the French Grandes Ecoles. This report is concerned with two such specialised university institutions, the Norwegian Institute of Technology (NTH) and the Norwegian School of Economics and Business Administration (NHH).

The specialised university institutions are like universities in their research activity, their studies last four to five years while university degrees take four to seven years and college degrees take two to three years in Norway. The specialised university institutions give clearly vocational or *professional* basic education, like colleges and like some faculties in universities (law, theology, medicine, odontology, pharmacy). In contrast the typical university studies in languages and arts, social sciences and natural sciences are *disciplinary*. Students combine several subjects to a lower level degree or a higher level degree including a thesis. These degrees prepare for work as secondary school teachers (with added teacher training courses) or researchers (possibly with a doctorate added), but it is not usual to call these degrees "vocational" or "professional". It is for these disciplinary research-oriented studies, and not for the professional studies, that one may be concerned if "the preservation of intellectual freedom" is threatened by partnerships with business. So far the disciplinary university studies in Norway have little contact with business, the main exception is natural science staff doing contract research and holding some courses for firms (but this is outside the OECD project).

In this report the traditional universities are hardly visible.(chapter 9.7) The obvious reason is that engineers, graduate engineers and business administration graduates (a typical managerial education) do not get their basic education at

universities in Norway, and as a consequence neither their continuing education. The same applies to architects and accountants. Of the professions mentioned by the OECD only lawyers are university educated. The universities are active, however, in giving continuing professional education to their health professions and to secondary school teachers graduated from universities.

Both specialised university institutions and colleges have restricted admission in Norway, in contrast to the traditional universities except the health profession studies. They are in a better position to offer continuing education as they are not swamped with new students the way the Norwegian universities are now.

10.5 Continuing professional education is always "vocational", but gives different types of competence

Continuing professional education is necessarily in some way connected to the professional's present or future work, it is vocational. It may, however, contain elements or subjects that would be called "general" or "liberal" if taken separately in another setting. A lecture on a country's literature may be part of the Regional Courses for Business held by the University of Oslo for employees going to work abroad for firms and government.(chapter 9.7) In the course literature is connected to the country's economy, politics, social customs, etc. The objectives are clearly professional. A quite different situation is when a professional takes an evening course in literature out of personal interest, we may call this continuing education or adult education serving cultural objectives.

"Is the development of continuing professional education within higher education institutions a means of countering and possibly preventing initial education from becoming unduly vocationally oriented?" (OECD proposal page 16) My answer is "no". Basic education for a profession is and must be vocational, it must prepare for the common core of work tasks. The first years in professional studies give basic science and basic professional skills. In the last years students must *choose between many specialised subjects*, relevant for different areas of professional work. The existence of continuing education has not led to fewer optional subjects in basic professional education, as far as I know. Basic courses are usually the foundation for continuing education courses. But the "wrong" choice of specialised subjects in basic study is less fatal when it is possible to take needed subjects as continuing education later in work.

It is mistaken to think that only specialised subjects, giving operative standard competence, are "vocational" basic education or continuing education. From the interviews in the firms and from course providers it was surprising to discover how much of the continuing education was meant to give basic competence, in native language and foreign languages and not least in *interpersonal skills*. Does this imply

that higher education institutions do not do their basic education job properly? In my view it is not sufficient to make students do more project work in teams, or set up lectures in social psychology with compulsory examinations. Theories of interpersonal relations must be connected to practical training in teamwork and discussions of the process, as is done in good courses. This is costly in terms of staff, and it is necessary to bridge the separation between theoretical subjects and practical training often found in professional education.

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Continuing Education for Managers and Engineers

This report was written as a contribution to the OECD project "Recent Developments in Continuing Professional Education". It is also a publication from the project "The Hidden University" at the Institute for Studies in Research and Higher Education.

The report reviews continuing education courses for managers and engineers in Norway. The main themes are the division of labour and the cooperation between different providers of continuing education: firms and public services, private training agencies, professional associations, employers' federations, trade organisations, non-profit associations and higher education institutions. Special focus is given to the actual and potential role of universities and colleges.

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