

Apprenticeship as a model for the future of TVET

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Content

- Apprenticeship – a „seductive notion“?
- Apprenticeship – concept
- Models of VET
- Elements of a successful VET system
- Conclusion



Views on apprenticeships

- **Politics:** „successful model“, integrating youth in the workplace, also integrating low school performers in education and work
- **Public opinion:** “Apps” (apprenticeships) help to reduce youth unemployment rates
- **Critics:** “seductive notion” because of equity issues (social and gender aspect)



Apprenticeship

- **Terms:** „German Model“, apprenticeship model, apprentissage
- **Variation:** “Dual System“, “Trial System
- **Conceptual background:** Sites of learning, interaction between school and workplace, communication between stakeholders



Apprenticeship modes

- **Learning:** apprenticeship as a mode of learning:
 - imitation of skills and attitudes
 - informal kind of acquiring knowledge
 - practical way of adapting to a workplace
- **Apprenticeship as a specific way of education:** Integration in the workplace and society through occupational (and vocational) training and schooling



Apprenticeship as part of education

- **Tradition:** apprenticeships in most crafts all over the world, in all historical periods, in order to recruit youngsters for continuing the trade
- **20th Century:** Start of a formalized (but mostly separated from the Education System) Vocational Education and Training (VET)
- **21st Century:** Apprenticeships and VET system get close to the education system



Modernization: perspectives

Germany „Beruflichkeit“	France „culture technique“	England „Qualification Framework“	Criterion
Corporation	School, Administration	„Quangos“	Centre of gravity
Beruf	„savoir (faire)“	Competences	Units
Skill-based regulations	science-based curriculum	Learner based modules	Assemblage
Input	Input	Output	Stiring, Orientation
Holistic approach	Access, junction	Flexibility	Character



TVET & apprenticeships („apps“)

- **View I:** TVET as apps should be based on occupations

integral concept, qualification-based standards

- **View II:** TVET should be released of occupations (and apps)

organization-based concept, employability orientation



apps & skills

- **View I:** high skill equilibrium
integral concept, qualification-based standards
- **View II:** skill shortage due to occupational bias, which does not offer enough opportunities to continue in education: gap between vocational and higher education



Prospects of VET, including apprenticeships

- **View I:** VET & apps (apprenticeship) are losing its importance due to the “knowledge” economy
- **View II:** VET & apps are dying due to the idea of university
- **View III:** VET & apps as concept disseminate and hybridize the whole education system



The Rise of modern VET

- 20th Century: Establishment of modern VET
- Relevant school-based learning gets important
Countries: England, France, Germany, Austria-Hungary, Russia
Switzerland and USA make industrial progress
Rise: between 1870 till First World War
- Regulation and public schooling for apprentices in order to be competitive and to integrate working class youth
- VET systems as a part of the „organized modernity“ in order to meet the needs of a mass education



Switzerland
(1884-1895)

Implementing VET

First amendments in order to subsidize schools with an industry and commerce focus and museums for technical, commercial and household education

„Bundesbeschlüsse zur Förderung gewerblicher und industrieller und landwirtschaftlicher Bildungsinstitutionen“ (1884)

„Kaufmännische Berufsbildung“ (1891)

„Hauswirtschaftliche Berufsbildung“ (1895)



Vocational education in trades

Expenditures and Subsidies for trade schools and institutions

Canton	Population (1880)	Expenditures SFr.	Subsidies Fr.
Zürich	317 600	174 558	92 740
Bern	532 200	60 486	29 640
Genf	101 600	165 863	82 432
Neuenburg	103 700	71 750	21050
Switzerland	2 846100	616603	256 651



VET contracts & examinations

- Examinations 1880: 36 apprentices
1900: 1402 (subsiz. 10 000 SFr)
1914: 7600 45 000

- Contracts 1900:
37 961 male and 14 906 female apprentices

Rank:

- (1) Textiles
- (2) Construction
- (3) Metal &
machines industry



Effects of legislation

Cantons with and without legislation for apprentices (1905)

Canton	Number of apprentices	Trade & Industry	Commerce
Cantons with legislation	26 152	20569	4477
Incl. Zürich	6636	5051	1407
Incl. Neuchâtel	1982	1675	269
Incl. Genève	1648	357	82
Cantons without	9142	7225	1661



Primary school and work

Modern vocational oriented schooling: France as rolemodel

Reform of Drawing

Introduction of Manual Work in Schools:

- *Since 1880* Manual work in **France** mandatory
- „Travaux manuels“ in order to enhance the dexterity of children
- Prework-education in order to improve the industrial performance of a country



France as role model for VET

**Armand Freiherr von Dumreicher (1881):
„National Welfare as a Result of Education“**

- Educational Policy in an Industrial State has to establish vocational institutions, especially specialized vocational schools
- Traditional apprenticeships are „not sufficient anymore“



Écoles des Arts et Métiers

- „Enseignement professionnel“ is systematically organized
- „Orientation nouvelle“ is the result of specific industrial needs
- The origin is the École polytechnique
- Technical „Bildung“ as suitable way for the industrial age



Pattern of technical „Bildung“

First year: „Rotation“ of youngsters between Iron, Wood, Steam und Mechanics (4 hours a day)

- Instruction in subjects: Mathematics, Drawing, Physics, Chemistry and Repetition of the elementary subjects of Primary School

Second year: Choice of the occupation

Third year: Flexible qualification in order to move from one workplace to the other

Aimed for elite workers



Switzerland and „ateliers publiques“

Karl Bücher: „Such VET schools are the future“ (1879)

- Strong support for work-based schools like in France (1884 ff.)
- Trade
- Teachers
- Foundation of such public „work-schools“: Berne, Winterthur, Zürich
- Further development of specialized schools for watchmakers: Neuchâtel, Jura



Role model II: Kingdom of Württemberg

- Liberal markets instead of protection (Ferdinand von STEINBEIS)
- Central office for economic policies (Stuttgart)
- Broad Establishment of „continuation schools“ with a vocational focus for agriculture, trade, industry, commerce and household



Meeting different vocational needs

Building a set of diverse vocational institutions and measures

- „Verein für Socialpolitik“: „Combined learning“ (1875)

Switzerland:

- „Preisschrift Hug/Boos“ (1881)
- „Gutachten Bendel“ (1884)
- Swiss association of trades 1895: Apprenticeship in the workplace combined with schooling (Survey)



Normalisation of VET & apprenticeships

20th century:

- Daily based mandatory schooling for all apprentices (8 to 9 hours, 3 or 4 year apprenticeships)
- International observers spoke of a fascinating model which is able to produce „capable workmen“ and „good citizens“ („Model Kerschensteiner“- see below)



Legitimization and further development of a dual model

„Gesetz über die berufliche Ausbildung“ 1930 (1933)

- First overall legislation in Switzerland
- Mandatory Schooling
- Written apprenticeship contract
- Examinations for basic and further vocational education
- Balance of power between cantons, state and associations
- Till 1960: 162 Reglementation for 238 occupations.
- Further more sophisticated legislation acts: *1963, 1978, 2002*



First examination for Masters in agriculture, 1945



(Quelle: <http://ateliersjaune.ch>)



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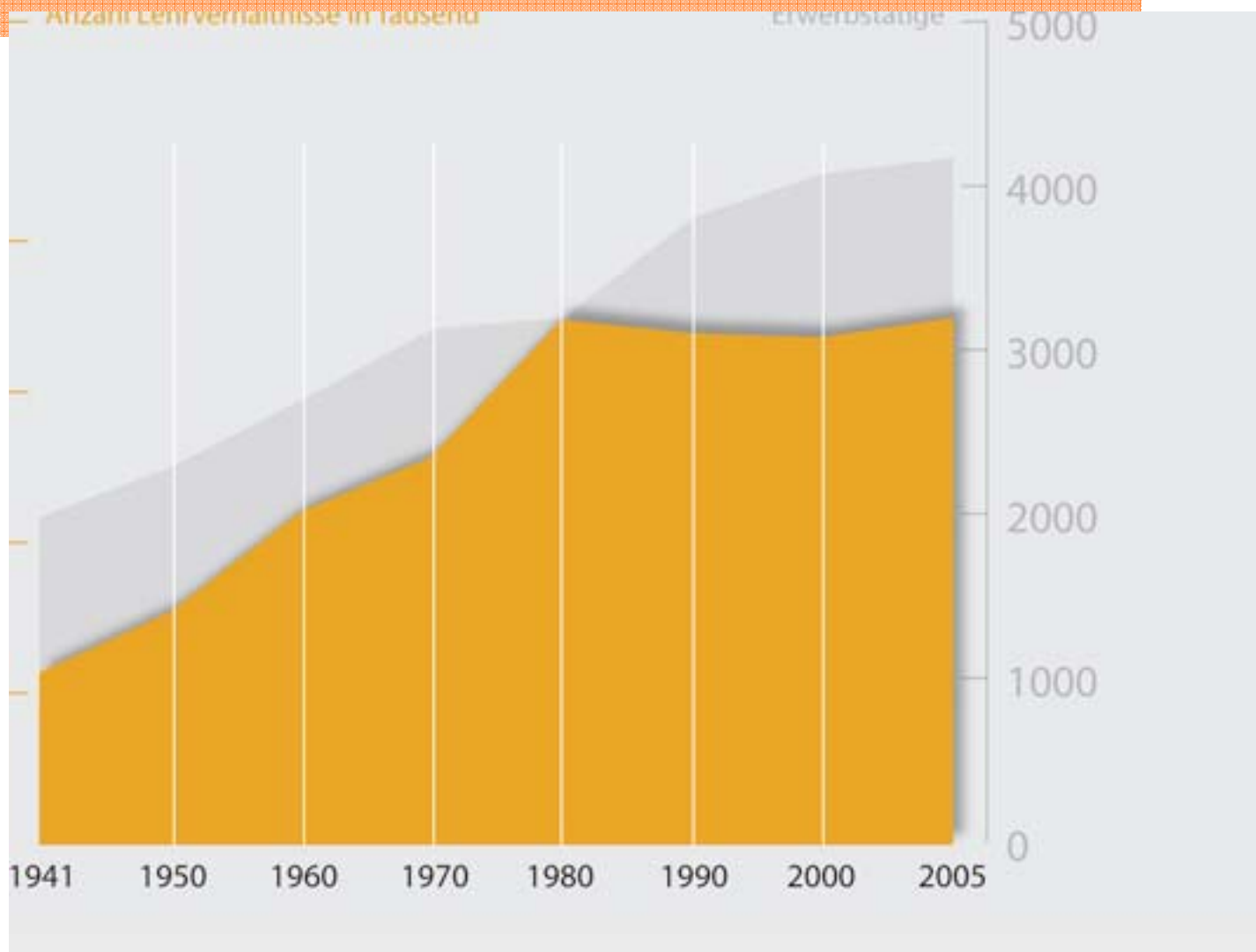
Apprenticeship contracts 1938-1961

Total of Contracts for apprentices

Year	Males	Females	Total
1938	44 510	13 905	58 415
1948	59 124	17 096	76 220
1955	61 069	20 606	81 675
1961	88 376	31 074	119 450



Development of apprenticeship contracts (from 50 000 to 160 000)



New
developments

Stagnation on a high level

2005: 70 000 new entrances in VET

2008 77 000

2009 73 000



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The Rise of a modern VET system

- All over Europe and in the USA a new kind of VET is rising in the 20th Century
- Specific national conditions helped to establish specific models
- Challenges today:
to make the system run the employers play a central role,
still strong trade bias, choices of parents and youngsters,
permeability and parity of esteem



W. D. Greinert: VET systems

- **State** plays only a *marginal role for VET Qualifications* - liberal model (England)
- **State** *plans, organizes and controls VET* - state-driven model (France)
- **State** delivers the framework and support for *VET* - mixed model (Germany)

Th. Deissinger: VET systems

- **Occupation** plays only a *marginal role for VET Qualifications* - liberal model (England and France, most Anglo-Saxon countries, Japan) - Modular approach
- **Occupation** is the organizing principle for *VET* - It delivers a curriculum, (Germany, german-speaking regions), the didactics and methods of learning and the institutional setting: actors negotiating and organising VET - Holistic approach

Ph. Gonon: Modes of vocational schooling

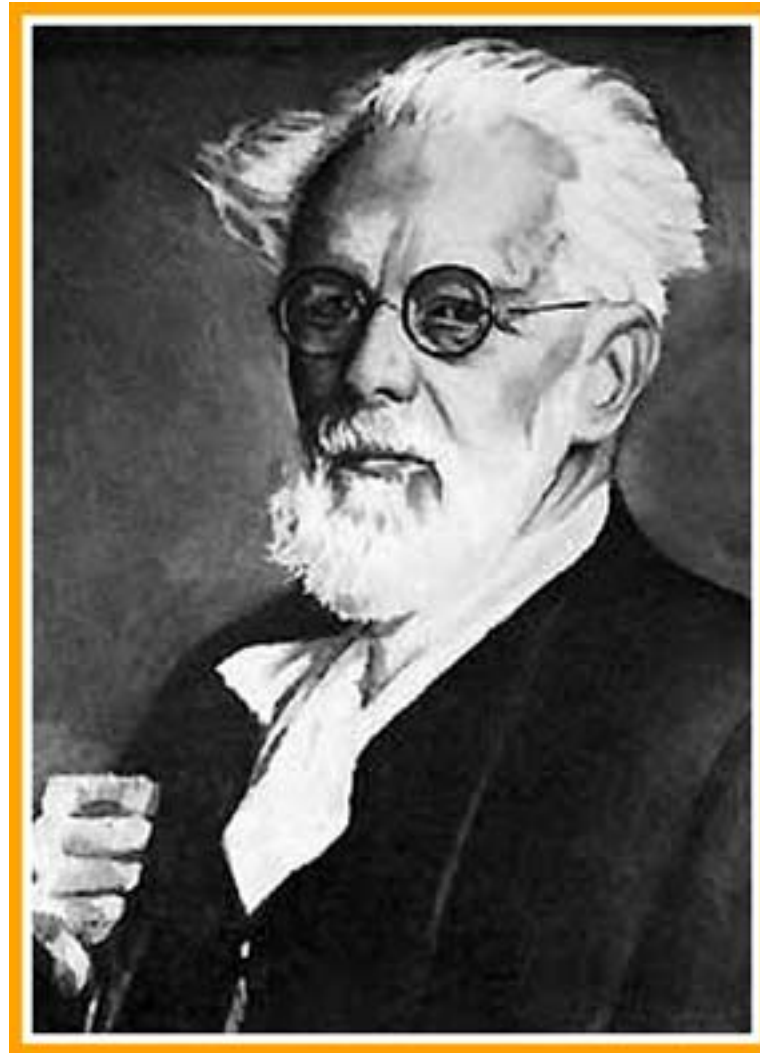
- **Model Diderot** (France)
„L'apprentissage à l'école“
- **Model Kerschensteiner** (Germany)
Vocational schools as support or completion of training
- **Model Dewey** (USA)
High school as a preparation for work and life



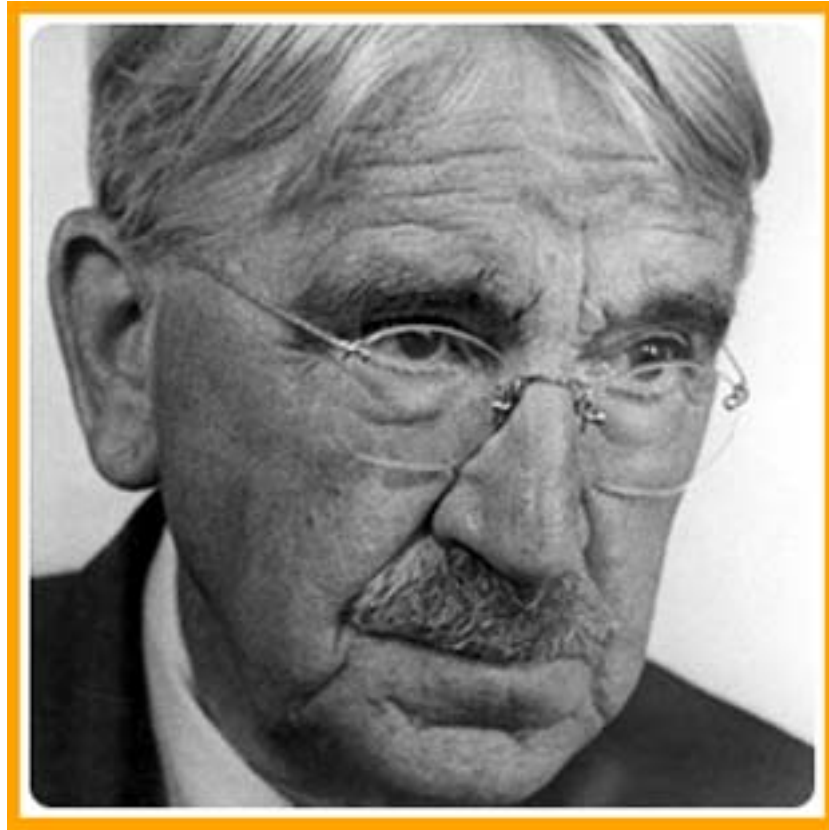
Diderot 1767



Kerschensteiner 1914



Dewey 1935



H. Steedman and C. Trampusch & M. Busemeyer: models of VET

- **Germany (dual VET)**

Dual VET is demand-oriented, broadly accepted and gives access to professional careers

- **England (modern apprenticeships)**

VET & apprenticeship is often seen as second best solution

- **LME & CME (liberal & coordinated market economies)**

VET depends on Welfare-State, liberal market economies do not support as much VET

LME as anglo-saxon framework for the development of skills versus CME based on social partnership & corporatist way of VET provision



VET: perspectives

Author	Perspective	Examples	Contrast	Mix
Deissinger	Connectivity with occupations	Germany	England	(France)
Gonon	Degree of <i>vocational</i> schooling	France	USA	Germany
Greinert	Grade of state-intervention	France	England	Germany
Steedman	Demand-Supply	Germany	England	(Austria)
Trampusch	Welfare regime: liberal or coordinated	England	Germany	Switzerland



Rauner & apprenticeships

- **Transitions:** Advantage of apps: transitions are smoother
- **Theory & Practice:** all education needs a phase of appliance and socialisation
- **Governance:** Apps are most adaptive, if there is a central stiring and incentives are given for enterprises



„dual model“

- Term was coined in recommendations by a German advisory board in the year 1964. The regulation of trade and the establishment of continuation schools was determined as „dual system for the education and training of apprentices“ (Deutscher Ausschuss für das Erziehungs- und Bildungswesen 1964, p. 68).
- Today most occupational learning, besides workplace learning and attendance in schools includes a third place which is part of this arrangement: some kind of initial skill training outside production and schools: answer to flexibility needs

Advantages and problems

Pro	Contra
Serious Learning in a real work situation	Work is not always as insightful for personal intellectual growth
Immediate Confrontation with technological aspects	Too specific kind of learning, lack of general knowledge
Youth meet very early the world of work	Classroom learning with peers is not very important
Low youth unemployment	Demographic curves and economic up and downs shorten attractive offers for apprenticeships
Shared costs, industry is much involved in	Low investment in innovative and cost-intensive apprenticeships
State is only active where necessary	Lack of coherent education policy
Experience-driven kind of learning	Partly ineffective and unnecessary elements of learning



„Sonderweg“ of dual VET countries

- Low rates of academic education - still an important part of youth remains in VET and continues in vocationally based further education
- Smooth transition into work, even for higher education (universities of applied sciences, dual academic pathways)
- Still high, but diminishing inclusion rates for strong and also for weak learners

this raises the question of *adaptability*, *flexibility* and *permeability* of apprenticeships



Pathwaybound characteristics of dual VET systems

- Start: arts and crafts, trade tradition
- Modern dual VET:
 - Answer to the so called „social question“
 - Economic policy for trade
 - Links to the education system through teachers and other stakeholders (associations)
 - Public examinations
 - Take off with industry (boost after Second World War)
 - Stagnation due to the rise of the service or knowledge economy



- „Scholarisation“ and formalisation of VET
- (Loosley) Coupling systems of education and economy:

Basis are defined standards, traditionally defined through occupational tasks:

- Occupational tasks are *constructivist*, i.e. open for change; modification in order to meet new challenges are possible
- Occupational tasks are defined as *education and training opportunities*, i.e. require teaching and learning practice



- VET meets several and divergent interests from the business community, from education, from society
- VET is public (public private partnership)
- VET is part of the education system
- VET combines specific and general knowledge
- Occupation as a central focus for VET
- Close link to the enterprises, economy and economic policy
- VET opens career pathes

Future of apprenticeships

- **Why does it work in Switzerland?**
- Incentives for employers
- Political structures
- Corporations who revise permanently
- Shared competences
- Permeability within the system
- **Challenges**
- EQF
- Loss of occupational culture
- Prestige of higher education



Essentials for modern apprenticeships

- **Functionality:** it must make sense
- **Permeability:** an open system which gives access to higher education
- **Flexibility:** Apps are most adaptive to changing contexts in education & work
- **Governance:** balance of diverse views
- **Legitimacy:** Expert view, parental choices, recruiting practices





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Wagner



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