

# 1 Two very different educational ideals

---

This is a book about everyday life in Britain and Switzerland – how young people go to school, what they learn, how they choose their careers, and how they train to produce goods and services that are in international demand and earn high incomes. Outstandingly marvellous as Britain's contribution was in leading the industrial revolution and in serving as a beacon of democracy, doubts have increased as to whether its education and training systems are now all that they should be in an increasingly technological and developing world. Questions are increasingly asked whether in other countries education and training taken as a whole are substantially better than here; and, if so, what are the precise and substantial aspects in which they differ; and whether Britain's problems – insofar as they lie in the fields of education and training – could be solved simply by 'more money'.

To help cast light on these issues, an unusually close inquiry into another country's educational and training arrangements was undertaken by the National Institute: it was 'unusual' in that it relied not, as often in social and economic research, simply on consideration of statistics and learned articles plus short site-visits by the investigators, but was substantially based on the expert judgement of teams of experienced practitioners – teachers, inspectors, vocational experts – who took part in a structured series of visits to educational institutions and employers' training establishments in Switzerland, together with return visits to Britain by Swiss experts.

But why, the reader will ask, choose Switzerland for such an investigation rather than, say, deepening our researches into the German system, or the United States, France or Japan? Indeed, why go abroad at all when much might be learnt within Britain itself by comparing good schools and good training-employers with those of only average performance or below?

Some brief answers to these questions may be attempted at the outset, though a full justification can appear only in the course of ensuing chapters as we compare details and analyse the issues at stake. Let us begin with the limitations of comparisons solely within Britain. First, there are the

Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## 2 From school to productive work: Britain and Switzerland compared

disadvantages of insularity – of comparing only variants that have become accepted in Britain, rather than the wider range of possibilities opened by a critical examination of arrangements in other countries. Secondly, in whatever way samples of (say) schools are chosen within Britain for comparative evaluation, those schools that are exemplary will include an undue proportion with children from homes that attach importance to study; as a result, such schools attract good teachers, have better organised lessons with less indiscipline, have good final examination results, attract more families of that sort to the area, and so cumulatively reinforce that process. The obverse for unsatisfactory schools need not be spelled out. Comparisons *within* Britain may well help in deepening our understanding of these mutually reinforcing cumulative processes, and our understanding of the difficulties in changing them: they cannot provide much guidance for the average teacher who is keen to raise the school-leaving attainments of an average mix of pupils to the standards attained by their counterparts abroad.

Looking for inspiration to the United States is no longer as attractive as it used to be; its ‘blackboard jungle’, the low attainments of its average secondary school pupils in international tests, heavy youth unemployment, later age of university graduation than in Britain – these are well-known limitations of its highly expensive system of education. Americans now look increasingly to Continental Europe for features of its apprenticeship system which might be grafted onto its own post-compulsory schooling framework, and so help raise the capabilities of its lower-attaining school-leavers. If we turn to Japan, it is undisputed that its industrial efficiency and the extraordinarily high attainments of its school-leavers provide great challenges to western thinking; yet a great cultural gap makes one hesitate in drawing immediately applicable policy conclusions. Japanese home life in general, and the mother in particular, place greater emphasis on supporting and furthering a child’s schooling attainments; and the balance of ultimate objectives in a Japanese child’s upbringing is very different from that desired in Britain – conformity is given much greater emphasis than individuality, and extending the child’s span of attention and concentration is valued more than the spontaneity and creativity which have become the shibboleths of English progressive educationists.

## Switzerland’s achievements

The greater cultural similarity between Britain and its Continental neighbours suggests that relevant policy lessons would be drawn more readily

Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## Two very different educational ideals

3

from nearer home; we need to look more closely at the Continent before going further afield. France and Germany have been the subject of a number of comparisons (by the National Institute as well as by many others) and provided much support for the view that higher attainments in Britain are both possible and necessary in schooling, training and productivity. Deeper investigations are however necessary to understand by what specific methods Continental schooling arrangements promote the higher attainments of their school-leavers, how vocational guidance at their schools contributes to encouraging so many more to take up skilled apprenticeships, and which features of their vocational qualification systems contribute to their attractiveness. In choosing Switzerland for the present deeper investigation, the following advantages can be listed:

- (a) For an economist, its extraordinarily high real income per head – as high as the United States, 15–20 per cent above Germany and France, and 31 per cent above the UK (as estimated in the most recent purchasing-power-parity comparisons for 1990) – is sufficient for an inquiry into the qualifications of its workforce that contribute to that remarkable achievement.<sup>1</sup>
- (b) The reputation of Swiss manufactures reinforces our interest in skill formation: Switzerland's precision engineering, industrial chemicals, pharmaceuticals, and food industries have acquired a worldwide renown for high quality. Despite Switzerland's small size – only a tenth of the UK's population – it is among the world's largest exporters of specialised high-quality manufactured goods; for example, Switzerland accounts for 45 per cent of world exports of weaving machines, 37 per cent of platen printing presses, 34 per cent of watches, 32 per cent of vegetable alkaloids and derivatives.<sup>2</sup> Its total exports of machine tools

<sup>1</sup> *Purchasing Power Parities and Real Expenditures, EKS Results*, vol. 1, OECD 1992, pp. 28–9. A recent inquiry at the National Institute by Valerie Jarvis and S.J. Prais suggested that the gaps in real incomes between Britain and Germany (and, by implication, Switzerland) are likely to be considerably greater than indicated by those estimates because of inadequate allowance in the underlying PPP comparisons for quality differences in the products produced in the various countries (The quality of manufactured products in Britain and Germany, *National Institute Discussion Paper* no. 88, December 1995).

<sup>2</sup> S. Borner, N.E. Porter, R. Weder and M. Enwright, *Internationale Wettbewerbsvorteile: Ein strategisches Konzept für die Schweiz* (Campus, Frankfurt, 1991), p. 103.

Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## 4 From school to productive work: Britain and Switzerland compared

are the third largest in the world, after Germany and Japan, and double those of the UK; expressed per head of each country's workforce in the whole economy, Switzerland's exports of machine tools in 1992 were double Germany's, seven times Japan's, and fifteen times the UK's.

- (c) Switzerland has been more successful in avoiding the problems of youth unemployment that have increasingly plagued Britain in the past decade; unemployment among Swiss young people aged under 25 in 1992 was only 5 per cent of the labour force in that age group, compared with 15 per cent in the UK, 21 per cent in France and 6 per cent in Germany.<sup>3</sup> The Swiss system of vocational training for school-leavers resembles Germany's in many respects (yet with significant differences, as explained in Chapter 4), and the detailed 'mechanics' of its vocational guidance and training systems are worth careful study in relation to recent and planned changes in Britain.
- (d) Switzerland's mountainous terrain provides extraordinary natural *disadvantages* to transport, travel and communications; there are no 'great central plains' on which crops can be grown efficiently; and no natural resources to speak of (in contrast to Germany's coal and iron).<sup>4</sup> True, its mountains were among the factors protecting it against the ravages of two World Wars; that factor undoubtedly contributed to its rapid economic development in earlier decades, but can hardly be a significant continuing element in today's increasingly global economy. The nature of its workforce skills, and the institutional arrangements for developing those skills, thus invited detailed investigation.
- (e) Since the times of the Swiss educationist Pestalozzi (1746–1827) – widely regarded (especially, of course, in Switzerland!) as one of the great founders of modern universal education – it has been a particular objective of Swiss schooling to develop an appropriate combination of *intellectual* and *practical* aspects of schooling; it is clearly worth exploring the con-

<sup>3</sup> *The OECD Jobs Study* (Paris, 1994), Part 1, p. 43. Movements of migrant workers have often contributed to cushioning unemployment in Switzerland. Whatever contribution that factor may have made in the past, the current situation is that the children of migrants form an unusually large proportion of school pupils (of the order of a fifth in Zürich in 1995), and the additional provisions made for their difficulties seem adequate to ensure that they find apprenticeship places and subsequent employment.

<sup>4</sup> Borner *et al.*, p. 212.

Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## Two very different educational ideals

5

trasts with Britain, where intellectual elements have often been regarded as more important.

Opportunities and pressures to assess the relative advantages of neighbouring countries' education and training systems in practical detail are particularly open in Switzerland because of its extensive borders and linguistic plurality; in addition, Switzerland has the distinction of being governed in a highly participative and decentralised way. There are consequent differences within Switzerland in respect of schooling and training which express themselves in variations at Cantonal levels in legislation on curricula, examinations and related organisational and financial responsibilities. The present study has taken for its focus the German-speaking part of Switzerland, within which variations are smaller; it is the largest sector, with 74 per cent of all Swiss nationals and 65 per cent of all its inhabitants having German as their mother tongue. To have ventured more widely into French and Italian parts of the country would have led to undue dissipation of our research resources – and to wearying detail in the present report.<sup>5</sup>

## Qualifications of the workforce

The distinction of Switzerland's training and education systems is at once evident on comparing the qualifications attained by its workforce with the UK. Household sample interview surveys, which include questions on vocational and educational qualifications of all living at each sampled address, are now carried out routinely in both countries (in Switzerland, only since 1991) on more or less common principles and provide an adequate basis for such comparisons; summary results for the two countries are shown in table 1.1, together with those for Germany – a touchstone in these matters. Five broad levels of qualification – from university level to those

<sup>5</sup> French and Italian parts of Switzerland rely to a greater extent on full-time college-based vocational education (as in their neighbouring countries) rather than on apprenticeship combined with part-time college education as in the German-speaking parts. At the same time, it is a matter of concern that youth unemployment is higher in the French and Italian parts than in the German-speaking parts. For statistics on languages, see *Statistisches Jahrbuch der Schweiz*, 1992, p. 323.

6 From school to productive work: Britain and Switzerland compared

Table 1.1 *Highest vocational qualifications attained by the labour force<sup>a</sup> in Britain (1990), Switzerland (1991) and Germany (1991)*

	Britain	Switzerland	Germany <sup>b</sup>
Degree level <sup>c</sup>	11	10	10
Higher intermediate (technician) <sup>d</sup>	7	12	8
Lower intermediate (craft) <sup>e</sup>	9	55	54
Basic vocational qualifications <sup>f</sup>	8	2	
No vocational qualifications, but general educational quali- fications which are:			
high or medium <sup>g</sup>	30	2	n.a.
low or none <sup>h</sup>	<u>35</u>	<u>19</u>	<u>n.a.</u>
	<u>65</u>	<u>21</u>	<u>28</u>
	100	100	100

Sources:

*Britain:* Based on Labour Force Survey 1990, *Employment Gazette*, March 1992, and estimated mapping of NVQ levels in *Employment Gazette*, July 1992, p. 346; and special tabulations. *Switzerland:* Based on *Die Schweizerische Arbeitskräfteerhebung (SAKE)*, Bundesamt für Statistik, Bern, 1992; and special tabulations. *Germany:* *Fachserie 1 Reihe 4.1.2: Beruf, Ausbildung und Arbeitsbedingungen der Erwerbstätigen 1991*, Statistisches Bundesamt, Wiesbaden.

Notes:

<sup>a</sup>Per cent of persons in employment. For Britain, persons of working age (men aged 16–64, women aged 16–59) in employment.

<sup>b</sup>German figures are presented here for approximate comparison only; respondents not providing information on vocational qualifications were classified in the original sources together with those without a vocational qualification.

<sup>c</sup>For Britain: first and higher degrees and equivalent (for example, graduate membership of professional institutes). For Switzerland: university degrees, *Höhere Fachschule* qualifications, extra-university qualifications of an equivalent level including those teaching qualifications regarded by the Swiss as being of an equivalent level.

<sup>d</sup>For Britain: BTEC HNC/D, nursing qualifications, non-graduate teachers. For Switzerland: *Technikerschule* and *Meister* qualifications, some non-graduate teachers (estimated from those classified under *Matura* in the Swiss LFS; the latter group includes primary school teachers as well as persons with only general educational qualifications).

<sup>e</sup>For Britain: City and Guilds parts II and III (estimated at 20 per cent of all City and Guilds qualifications in the LFS, on the basis of *Employment Gazette*, July 1992),

Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## Two very different educational ideals

7

*Notes to table continued*

BTEC National qualifications (estimated at 70 per cent of the published combined figure for BTEC General/First and National qualifications, on the basis of *Employment Gazette*); half of trade apprenticeships (on the basis of *Employment Gazette*). For Switzerland: apprenticeships, full-time vocational colleges; the figure includes an estimated three quarters of those classified under *Diplommittelschule* and an estimated 35 per cent of those classified under *Matura* (see text fn. 6).

<sup>f</sup>For Britain: City and Guilds part I (estimated at 40 per cent of all responding to the LFS as having City and Guilds qualifications); 15 per cent of BTEC General/First and National qualifications; half of trade apprenticeships (see note c). YTS trainees are not included unless they have also attained a vocational qualification. For Switzerland: half of all responding to the LFS as having obtained *Anlehre* qualifications (the *Berufsbildungsgesetz* of 1980 require training and course attendance, but does not specify examined standards for the award of this qualification; half have therefore here been treated as not attaining a basic vocational qualification).

<sup>g</sup>For Britain: GCE A-levels and O-levels or equivalent, and 20 per cent of all City and Guilds qualifications to represent those who have obtained qualifications below NVQ level 2. For Switzerland: three quarters of *Matura* and *Diplommittelschule* qualifications. The figures for Switzerland incorporate estimates (see text fn. 6).

<sup>h</sup>For Britain: CSEs below grade 1, 20 per cent of City and Guilds qualifications, 15 per cent of BTEC General/First and National qualifications, and those recorded as having no qualifications. For Switzerland: no qualifications (2 per cent), those completing *obligatorische Grundschule*, and half of those classified under *Anlehre* (see note d). The figures also include young people who are in vocational training and have not yet completed it.



Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## 8 From school to productive work: Britain and Switzerland compared

who are virtually unqualified – are distinguished here, as follows (details of constituent qualifications, and definitional adjustments for international comparability, are in footnotes to the table and below)<sup>6</sup>:

(a) *Degree-level qualifications* First and higher university degrees or equivalent qualifications, for example, graduate membership of professional institutes in Britain, Federal Polytechnics (*Eidgenössische Technische Hochschule*) in Switzerland.

(b) *Higher-intermediate (technician-level) qualifications* Qualifications below degree level but above craft level; for example, BTEC Higher Cer-

<sup>6</sup> Some elements of approximation and estimation have been necessary for the sake of international comparability, but they are unlikely to affect our central conclusions in any substantial way; the general problems in comparing the two countries' Labour Force Surveys are noted here, while detailed points are recorded in footnotes to the table. For both countries these surveys give the *highest* qualification obtained by each person questioned, based on a conventionally defined ranking; but the ranking conventions unfortunately differ between the two countries, and we have therefore been obliged to introduce indirect and rough estimates to establish definitional comparability. The highest qualification can be either a *vocational* qualification or a *general educational* qualification: if someone has both types, and his general educational qualification is ranked above his vocational qualification, then the vocational qualification is not recorded in the LFS. Because of our concern here with economic performance, where a person has both vocational and educational qualifications, he has been reclassified by his vocational qualification, sometimes using informal estimates. For example, on the basis of discussions in Switzerland, we allocated three quarters of those recorded there as having as their highest qualification a high or intermediate general educational qualification as also having acquired a vocational qualification. A further problem attaches to the Swiss LFS category *Matura*, which comprises both general educational qualifications equivalent to English A-levels and certain primary school teaching qualifications; we assumed that three quarters of those classified under *Matura* have also obtained a vocational qualification, though that may be an underestimate. In the latest (but varying in earlier) British LFS, all general educational qualifications below higher education level are ranked below vocational qualifications; the difficulties just described do not therefore arise when considering the latest British LFS. Important problems in interpreting the British LFS arose where very different levels of qualification were recorded as belonging to the same category; for example, no distinction was made between parts I, II or III of City and Guilds qualifications, or between BTEC First/General and National qualifications. In such cases we applied the mapping of LFS data to NVQ levels given in the *Employment Gazette*, July 1992, p. 346.



Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## Two very different educational ideals

9

tificates and Diplomas in Britain, *Höhere Fachschulen* and *Ingenieurschulen* qualifications in Switzerland.

(c) *Lower-intermediate (craft-level) qualifications* For example, in Britain, City and Guilds parts II and III, BTEC National qualifications; in Switzerland, qualifications certifying examined completion of apprenticeship-type training courses lasting 2–4 years.

(d) *Basic vocational qualifications* Vocational qualifications below craft level; for example, in Britain, City and Guilds part I; in Switzerland, basic traineeships (*Anlehre*) generally of only one year's duration.

(e) *No vocational qualifications* Those with no *vocational* qualifications, of whom some may have general educational qualifications. We have here sub-divided general educational qualifications into (i) a higher and medium category, corresponding to A-levels or 'higher grades' GCSE (A–C) in England, and *Matura* in Switzerland; and (ii) a lower category – those with lower GCSE grades (below C) or no general educational qualifications, and completion of *Volkschule* in Switzerland.

It will not be forgotten, of course, that these categories represent simplifications of an underlying more continuous and more complex reality, and also that many individuals may have acquired skills without having acquired formal qualifications. Nevertheless, three important contrasts between Britain and Switzerland can be drawn from this table with reasonable confidence. First, there is virtually no difference between the two countries in the proportions having attained university-level qualifications: 11 per cent of the working population in Britain, 10 per cent in Switzerland. Secondly, there appear to be extraordinarily large differences between the proportions with intermediate vocational qualifications: 67 per cent hold intermediate qualifications in Switzerland – taking technician and craft qualifications together – as against 16 per cent in Britain. There is less difference at the technician, higher-intermediate, level (at 12 compared with 7 per cent of the workforce); the bulk of the difference is at the craft, or lower-intermediate, level, where 55 per cent hold such qualifications in Switzerland as against only 9 per cent in Britain. Whatever might be thought about the proportion of the British workforce which had acquired skills without accompanying paper qualifications, it seems unrealistic to suppose that this bridges more than a small fraction of the gap. Thirdly, comparison of the proportions with only basic vocational qualifications, or no qualifications, yields naturally the converse: only about 20 per cent of the

Cambridge University Press

978-0-521-59919-1 - From School to Productive Work: Britain and Switzerland Compared

Helvia Bierhoff and S. J. Prais

Excerpt

[More information](#)

## 10 From school to productive work: Britain and Switzerland compared

labour force in Switzerland are at this level, compared with roughly 65 per cent in Britain. A summary way of putting these comparisons is to note that about *three quarters of the Swiss workforce is vocationally qualified to levels reached only by the top quarter of the British workforce*.<sup>7</sup>

Comparison with Germany (final column of table 1.1) indicates that Switzerland has a workforce qualification structure fairly similar to Germany's. But there is also a suggestion that Switzerland is at a slight advantage in some respects: while closely similar proportions have qualified to university level, a greater proportion has qualified to higher-

<sup>7</sup> Official sources in the UK from time to time fall prey to the temptation to convey a more flattering picture of its workforce qualifications, which is radically misleading when set in international context. For example, the Department of Employment's *Labour Market Quarterly Report* (February 1993) said: 'Almost three out of every four people of working age in Great Britain have a qualification. ... Over half are qualified to A level or above.' A hurried reader could easily understand this to mean that over half of all persons of working age in Britain are qualified to A-level or above. But the text was 'badly written' (as an official at the Department of Employment explained in response to our request for elucidation); the second sentence should read: 'Over half [of the three quarters of persons of working age who have a qualification] are qualified to A level or above', *that is*, the proportion of such people out of *all* people of working age is under, rather than over, a half. But even that is subject to reservations. First, time-served apprenticeships were treated as of A-level standard; however, the assumption that all who have served such an apprenticeship are educated to the same level as those who have passed A-level examinations is grossly over-optimistic, since time-serving does not require part-time college attendance nor a final examination. Secondly, City and Guilds certificates, and BTEC/BEC/TEC qualifications below Higher level, were all classified as equivalent to A-level standard. This, again, is a gross oversimplification since no distinction was made between the three levels of City and Guilds passes (the lowest of which is only of about secondary school leaving standard), and between the two levels of BTEC/BEC/TEC qualifications below Higher level. Other estimates by the Employment Department, BTEC, and City and Guilds (see fn. 6 above) indicate that 80 per cent of City and Guilds passes, and 30 per cent of BTEC qualifications below Higher level, are below NVQ level 3 (that is, below craft level). Putting all these qualifications on a par with qualifications entitling the holder to university entrance suggests, shall we say, some lack of touch with reality. Discounting these groups radically reduces the proportion of people that can be considered as educated to A-level or above. An official interpretation of the available British surveys, broadly consistent with the text above, has now been provided in *Education Statistics for the United Kingdom: 1995 Edition* (HMSO, 1996), table 36 (b).