



A Tale of Two Nations: An Examination of Technical and Vocational Education and Training (TVET) in England and Ireland in the Second Half of the 19th Century against the Background of the Low Standing of TVET in Contemporary Education Systems

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ABSTRACT

A number of recent studies have pointed to the historically low standing of vocational education against liberal/academic studies in schools and colleges, a status which shows little sign of improvement. Various perspectives on the causes of this state of affairs have been advanced over the years, and philosophical, historical, economic and political factors have been examined in depth. Adopting a predominantly historical/philosophical perspective, this article attempts to throw light on current debates by examining the development of technical and vocational education and training (TVET) in England in the second half of the 19th century, and comparing this with educational developments in this field in Ireland which was then a colony of the British Empire and, after 1801, part of the United Kingdom. It is intended that, through the analysis of contrasting cultures and politico-economic systems, the origins of the differential status of vocational and academic pursuits can be highlighted with a view to suggesting ways of enhancing the standing of

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vocationalism. There has never been a more urgent time for this form of historical and philosophical policy review since the subordinate status of vocational studies stands in the way of much-needed curriculum and pedagogical reform in educational systems around the world. In conclusion, a number of suggestions are made in relation to the need for a more holistic conception of TVET which pays due attention to the practical and psychomotor aspects of the field emphasised in current approaches to the revival of craft and manual skills and strategies. Future research in the field would do well to take into account emerging studies on craft and manual learning, in addition to attending to the 19th century origins of vocational courses and strategies.

Keywords: *Technical and vocational education and training (TVET); 19th century Anglo-Irish educational developments; craft; TVET national policy, history and philosophy of vocationalism.*

1. INTRODUCTION

The nature and status of technical and vocational education and training (TVET) has been studied by means of a wide range of methodologies, disciplines and perspectives, including policy review, empirical investigation, and philosophical analysis [1,2]. For the present study, a philosophical/historical approach has been chosen to seek an understanding of the current subordinate status of TVET as against general academic pursuits. The historical perspective involves a comparative study of the early development of TVET in England and Ireland during the second half of the 19th century when national systems of education were being established across Europe. Philosophical investigation relates to the origins of the vocational/academic divide and the nature of the TVET curriculum and learning strategies. The application of philosophical and historical methods in the review of TVET policy and research follows those exemplified in mainstream studies in the field [3,4], with the principal objective of suggesting ways of reforming and enhancing the status of vocational studies in contemporary educational systems.

White [5] has suggested that it is possible to conceptualise educational processes in broad terms as aspects of general 'upbringing' (pp.82-3) and, on this account, TVET and related activities are as old as – and given their centrality to human survival and reproduction – arguably older than any other form of education and training. As Coffey ([6], p.50) observes:

Formal education in England was originally specifically vocational and continued to respond to the demands for training for clerical, administrative, and legal operations generally. Developing grammar, trade and craft schools all served primarily vocational purposes (p.12).

However, when it came to national policies and the establishment of state-funded institutions in the 19th century, the familiar divisions between liberal/humanist studies (associated with a ruling elite) and more practical/vocational pursuits (for the masses) came to dominate and inform developments.

As Green [7] has argued, it is not so much any particular content that is characteristic of the classical humanist heritage but, rather, its historical association with power relationships in socially stratified and hierarchical societies. In fact, as Skilbeck [8] suggests, this tradition has demonstrated a 'remarkable capacity to change and adapt, from mathematics and philosophy, to theology, to classical languages, to literature, for example, according to changing cultural circumstances' (p.15). The main thrust of developments was a differentiation of forms of education – similar to those set out for people of gold, silver and bronze in Plato's *Republic* in which pure or disinterested activities were placed above practical pursuits – which served the purpose of maintaining social stratification in a hierarchical class society [9].

The connections between such stratification and the vocational/liberal divide can be seen clearly in Wilkinson's [10] graphic description of the evolution of the 'gentleman ideal' in 18th and 19th century England. As he describes these values:

The gentleman was taught to consider himself above specialisation, whether in the sense of regional style or that of technical know-how. Both of the latter were reserved for his social inferiors...With regard to technical specialization, therefore, such expertise was the mark of one who had to use knowledge to earn a living and not for the leisured pursuit of wisdom and beauty (p.133).

As mentioned earlier, such ideas had their roots in Ancient Greek ideas, particularly those of Plato and Aristotle who, in *The Politics* [11] insists that the 'citizen must take part in only those useful occupations which do not degrade the doer'. Aristotle continues:

We therefore call degrading those occupations which have a deleterious effect on the body's condition and all work that is paid for. For these make the mind preoccupied and unable to rise above menial things. It is proper for a free man to do something for himself or for his friends or on account of its value in itself, but he that does the same action on others' account may on occasion be regarded as doing something paid for or servile (p.301).

Such elitist ideas drawn from the writings of Aristotle and Plato formed the basis of the classical education associated with the gentleman ideal mentioned earlier with its distaste of and aversion towards technical and manual pursuits. Once such hierarchical and normative distinctions had been made by thinkers it was almost inevitable that they should come to be connected - through formal systems of education - to social stratification and political power. As Schofield [12] explains:

The passing of time merely emphasised the distinctions which Plato made. Studies which were valuable in themselves, especially the Classics, became associated with the privileged class or elite in society. They were directly related to the concept of a courtier, a gentleman, a man of affairs, and later the public schools. Liberal education always carried with it a suggestion of privilege and privileged position, of not needing to work for one's living (pp.151-2).

Wilkinson [10] wonders whether the cultivation of this privileged gentleman elite in England – many of whom 'preferred government responsibility to private profit' – might have 'starved industry, science and other key occupations that nourish the state' (p.142). Although such classical ideals formed the basis of the public school aristocrats who came to form the Anglo-Irish Protestant Ascendancy which was to rule over Ireland as a colony and later as part of the United Kingdom, the Irish situation was characterised by unique and particular features which allowed for a differentiation of educational experience. As will be explained below, the fact that Ireland established a national system of schooling forty years before England, and was a predominantly agrarian nation with specifically colonial, land

management and social order concerns to occupy the Anglo-Irish rulers was to allow for rather different developments in relation to vocational and technical studies [13,14].

2. TECHNICAL AND VOCATIONAL EDUCATION IN 19th CENTURY ENGLAND*

Historians have pointed to the intriguing and ironic anomaly that – in spite of the fact that Britain had been the first country in the world to experience an industrial revolution and, indeed, was still regarded as the 'workshop of the world' at the time of the Great Exhibition held in London's Crystal Palace in 1851 – the industrial dominance of Britain in the 19th century was neither caused nor accompanied by the growth of educational activity [15,16]. As Ashby [17] has suggested:

The Industrial Revolution was accomplished by hard heads and clever fingers. Men like Bramah and Maudslay, Arkwright and Crompton, the Darbys of Coalbrookdale and Neilson of Glasgow, had no systematic education in science or technology. Britain's industrial strength lay in its amateurs and self-made men; the craftsman-inventor, the iron-master...formal education of any sort was a negligible factor in its success. The schools attended by the prosperous classes followed a curriculum which had scarcely changed since the school days of John Milton two centuries earlier (p.50).

In fact, as Coffey [6] argues, in spite of the huge and rapidly-moving industrial developments of the 19th century, there was little connection with occupational training at this time and the 'economy did not to any noticeable extent depend upon the educational system for a supply of schooled artisans' (p.27). The Great Exhibition of 1851 held in London at the Crystal Palace was 'planned to demonstrate to the world the glories and triumphs of British industry and commerce, and this it did, almost every prize being taken by British individuals and firms' [18]. As Musgrave (1970) comments, it displayed Britain as the 'foremost industrial nation' (p.144). However, by the time of a similar Paris Exhibition of 1867, a member of the Exhibition jury – Dr Lyon Playfair – was moved to write to the Taunton Commission (then considering the state of technical education in England) urging them to examine the role of 'scientific instruction' as part of their remit so as to help Britain keep pace with the foreign competition which was then starting to outstrip British achievements' (bid.).

The relative decline of British industry against its European counterparts was attributed in large part to 'the extent and efficiency of secondary and technical education' in countries such as France, Prussia (later to be a unified Germany) and the USA which 'contrasted very markedly with the parlous state of English secondary schools' [18]. Forster's Elementary Education Act of 1870 – effectively establishing state provision for the first time (though compulsory schooling applied only to children of 5-10 years of age in 1880 and only up to age 12 in 1889; Parliament.UK, 2010 [19]) – had 'primarily an economic purpose' [6]. On the introduction of the Elementary Education Bill in the House of Commons in February 1870, Forster argued that:

Upon the speedy provision of elementary education depends our industrial prosperity. It is of no use trying to give technical teaching to our artisans without elementary education; uneducated labourers and many of our labourers are utterly uneducated – are, for the most part, unskilled labourers, and if we leave our work-folk any longer unskilled...they will become overmatched in the competition of the world ([20] pp.99ff.).

It was not until 1902 that England had anything like a national system of schooling [15]. By that time, as indicated below, Ireland had experienced 70 years of a national system of schooling which incorporated, by 1900, a good range of technical subjects. Coffey [6] describes the British education system (essentially restricted to England and Wales after 1944, since Scotland and Ireland had separate administrations) as one informed by a 'spiritually predestined class system' (p.62). This was due to the 19th century Victorian legacy described in graphic terms by Kenneth Richmond:

The Victorian attitude to education was much the same as it was to all other public services. It had its First-Class compartments, the Public Schools with the doors and windows locked against riff-raff; its Second-Class, the old grammar schools intended for the sons of the bourgeoisie, the professions; its Third-Class the Elementary Schools for the 'lower orders', the artisans (p.90).

Such divisions and hierarchical stratification effectively prevented the emergence of any form of 'common school' ([6] p.64) in England, and ensured that the 'perennial liberal versus utilitarian debate continued to be fought mainly on class lines' (ibid.,p.73). Moreover, the long-established British 'resistance to the provision of

technical education at the secondary stage' ([21] p.209) effectively prevented the rich and deep Victorian conception of craft and artisanship from informing the development of schooling.

The upshot of all this was that 'with the exception of pure science which developed largely independently of formal educational institutions', England was, by the mid-19th century, 'incomparably backward in most areas of scientific and technical education' ([7], p.292). There was a 'startling absence' of TVET from schooling (private grammar or public institutions) frozen in the classical mould, and apprenticeship training was locked in rigid medieval traditions which received no public funding until the early 20th century. Even the English universities 'contributed virtually nothing towards scientific and technical needs', and this compared unfavourably with the continental states where the early 19th century saw the establishment of 'a layer of technological institutions in the form of the Polytechnique, the French grande école and the German Technische Hochschule (technical high school)' (ibid.).

This neglect of technical education in England was due – partly to the deep-seated prejudices associated with the liberal/humanist tradition so entrenched in the culture at all levels – but also because, unlike the British experience, industrial development in continental Europe was organised, funded and guided by the states. As Green [7] explains:

In continental Europe industrialization occurred under the tutelage of the state and began its accelerated development later when techniques were already becoming more scientific; technical and scientific education had been vigorously promoted from the centre as an essential adjunct of economic growth...By contrast Britain's early industrialization had occurred without direct state intervention and developed successfully, at least in its early stages, within a laissez-faire framework (ibid.,p.293).

As indicated above, the Paris Exhibition of 1867 confirmed and reinforced the backwardness of British industry and stimulated the quest to improve TVET at all levels. As mentioned earlier, Dr Lyon Playfair had noted these defects and, on returning from Paris, wrote to Lord Taunton who was then leading the Commission looking into the state of scientific and technical instruction. In his open letter to the Commission he observed that, with few exceptions, 'a singular accordance of opinion prevailed that our country has shown

little inventiveness and made little progress in the peaceful arts of industry since 1862'. The main cause of such defects was the 'unanimity of conviction that France, Prussia, Austria, Belgium and Switzerland possess good systems of industrial education and that England possesses none' ([22], p.174),

Following the publication of the report of the Royal Commission in 1884 [23], the Technical Instruction Act was passed by parliament in 1889 which legislated for:

Instruction in the principles of science and art applicable to industries, and in the application of specific branches of science and art to specific industries or employments. It shall not include the teaching of any trade or industry or employment ([24], p.68).

The rather theoretical thrust of the Act reflected both the territorial power of the craft guilds to preserve the secrets of their specialist trades, and also the state of the debate about the differences between technical education (as theory and principles) and technical instruction (as trade or occupational practice). This ambiguity merely magnified the hierarchical class divisions between vocational and general education and also, damagingly, within TVET. As Musgrave goes on to observe:

Technical education for the upper levels of the labour force might still be seen in terms of general principles, but at the lower levels to teach practice was now becoming the custom (ibid.,p.69).

In subsequent work, Musgrave [25] observed that the demands for technical education in England met 'constant opposition' and noted that 'one of the main hindrances to the development of technical education has been the low regard in which industry was held' (p.153). Such prejudice and the dichotomy of theory/practice and divisive ambiguity was to bedevil TVET in England from the 19th century down to the present day. Such was the cultural prejudice that – in spite of the welter of legislation in relation to technical education in the late 19th century – the final position was bleak and unsatisfactory for the status and development of TVET. Green [7] sums up the picture in graphic terms:

Technical education had been cast in a mould that subsequent legislation would find hard to break. Growing up as an extension of the apprenticeship system and reliant on employer

initiatives, it developed in a fragmented and improvised manner; initially of low status, conservatively rooted in workshop practice, and hostile to theoretical knowledge, publicly funded technical education became normatively part-time and institutionally marooned between the workplace and mainstream education. A century later it would still be seen as the Cinderella of the education system (p.299).

2.1 Coda: TVET Themes in English Education

By the end of the 19th century – notwithstanding the fact that England was the first country in the world to experience an industrial revolution – technical education had serious deficiencies which caused it to lag far behind most of its competitors in the developed world. The major causes can be summarised as follows:

- a) The classic liberal/humanist tradition of the public school gentleman unduly dominated 19th century educational debates and informed the late development of schooling and a bias against technical pursuits.
- b) The laissez-faire policy of successive British political parties militated against central government intervention in the planning and funding of TVET, and this left vocational education in the hands of medieval craft traditions and untheoretical workshop practice.
- c) The vocational/academic divide resulting from the above became deeply rooted in the culture and practice of mainstream education, and this caused the subordinate and second class standing of TVET which blights English education to the present day.

3. TECHNICAL AND VOCATIONAL EDUCATION In 19th CENTURY IRELAND

The Act of Union of 1801 brought Ireland under the direct control of the British government with the purpose, as Coolahan [26] explains, of binding 'Ireland more closely to Britain through a policy of cultural assimilation' (p.3). Given this subordinate colony status of Ireland, the 'unusual fact' (Akenson, p.3) that Irish national system of education appeared in 1831 – 40 years before the establishment of a national compulsory system in Britain – calls for special explanation. As Akenson goes on to observe:

In the years before the system's founding Ireland underwent no industrial revolution, no significant urbanization, no breakdown in the agrarian order and family structure, and did not experience any of the other forms of social revolution that usually presage the creation of state systems of formal education (ibid.,p.3).

How is this historical state of affairs to be explained? In his survey of the origins of state education systems, Green [7] sought to examine and explain the factors which led to the establishment of national education systems in France, Prussia, Britain and America during the 19th century. Although, social, economic, cultural, and political developments all, of course, play a part in the evolution of national systems, the dominant factor for Green was state formation itself. As he puts it:

The major impetus for the creation of national education systems lay in the need to provide the state with trained administrators, engineers and military personnel; to spread dominant national cultures and inculcate popular ideologies of nationhood; and so to forge the political and cultural unity of burgeoning nation states and cement the ideological hegemony of their dominant classes (p.309).

In this way, Green seeks to understand why England – the first industrial nation – was the last country to establish a national system of education in 1870 (with compulsory schooling from 1880), lagging behind France and Prussia by decades. As mentioned in earlier sections, the industrial revolution and urban expansion was proceeding apace without a national education system and – as the hub of a large empire – English state formation was not a priority in the early 1800s [27]. Later in the century as Britain lost ground to other industrial nations and social problems increased in the new factory towns, the need for educational reform became pressing [18,28].

Can the state formation argument be employed to account for the early establishment of the Irish national system in 1831? The economic and social drivers of educational reform seem to be largely absent but, on the other hand, the historically ambivalent and uneasy political relationship between Ireland and England might justify a national Irish system which served the purpose of 'cultural assimilation' ([26], p.3) which could bind together the two nations especially in the areas of language and religion. Initially the 1831 settlement allowed for basic education in

the three Rs with non/un-denominational religious and moral instruction aimed at uniting children of different creeds in one system. Although this official mission was maintained throughout the 19th century the de facto position was that the Roman Catholic Church in Ireland came to dominate the whole system with only around 4% of schools allowing for genuinely mixed religious education [29].

There were a number of special factors at work in the connections between Ireland and England during this period, of particular significance was the legislative and governance relationship between Westminster and Dublin in the 19th century which was rather more flexible than might be expected given the de facto colonial links. Akenson [13] argues that the 'relationship of Ireland to England was one which allowed the English rulers of Ireland to approach Irish social problems in a relatively freewheeling manner' (p.388). As Akenson elaborates on this relationship:

Because Irish parliaments had been legislating in educational matters since the sixteenth century, this meant that it was easy for radical educational legislation to be proposed and passed. Unlike the English situation, a consensus of official opinion on the topic of Irish education developed early in the nineteenth century (ibid.p.388).

Through the Board of Commissioners of National Education, the Irish school system funded by Britain developed apace and by 1860 had had 800,000 pupils enrolled in national schools throughout Ireland ([14], pp.15-16). Akenson [13] argues that this national system of education had 'important effects upon the Irish nation' the chief of which was that the 'country was transformed from one in which illiteracy predominated to one in which most persons, even the poorest, could read and write' (p.376). This early foundation of elementary schooling was to prove important in the later developments of technical education later in the century.

Although the values underpinning educational trends in Ireland at this time could not but reflect, at least in some degree, the dominant liberal/humanistic features of the English elite [14], there were differences between the two nations which were important for later vocational developments. Unlike English attitudes, there was a generally favourable approval of education in the nation of 'saints and scholars' and this was reflected in the informal 'hedge schools' which were established throughout Ireland in the 18th

and 19th centuries. Akenson [13] cites Edward Wakefield who wrote in 1812 that he did not know 'any part of Ireland so wild that its inhabitants are not anxious, nay eagerly anxious for the education of their children' (p.49). This popular enthusiasm for learning and the fact that the early schools often stressed the 'practical applications' (ibid.,p.52) of the basic subjects, meant that the later development of technical education in Ireland was to be shaped by different aims and values from its English counterpart.

Although the ruling elite in Ireland broadly shared the values which informed the subordinate status of vocational pursuits in 19th century England, the Anglo-Irish ruling elite was concerned with rather different matters than the standard preoccupations of the English public school gentleman which had helped to shape the subordinate role of technical education in the mother country ([30,31]. Moreover, there were important differences between the landed gentry in England – where agriculture represented only 25% of activity in a rapidly developing industrial economy – and Ireland in which the land accounted for two-thirds of all economic activity [32,29] As Duffy [30] writes, the estates in Ireland 'became progressively contested spaces in the later 18th and 19th centuries, with increasingly unpopular attempts by the dominant elite to reform their properties through regulation' (loc.12, Kindle edn.). The uneasy and ambivalent relationship between Ireland and Britain is captured fully in the Great Exhibition held in Dublin in 1853. As Duffy explains, the exhibition was designed to 'reconfigure Ireland symbolically as a modern progressive nation comfortably located in the United Kingdom' but, in the end, the event 'served to emphasize its subordinate colonial status'. Duffy goes on to report that:

The organizers of the exhibition found themselves instructing people whom they consider as their national lower orders in the behaviours appropriate to civilized life by mobilizing colonial images of Ireland traditionally used to denigrate the island as a backward region of the United Kingdom (ibid; loc.12-13).

In fact, the notion that the indigenous Irish people were generally primitive, unruly and in need of civilising influences was fully realised in the harsh and unforgiving manner in which the Anglo-Irish ascendancy landlords treated their tenants throughout this period. Monacelli [33]

has explored a range of 19th century writings describing the Irish as backward, intemperate and lazy, and there was a fervent English hope that 'the implementation of the Poor Law in 1838 would turn the Irish into an industrious class' (p.10). Following the failed 1798 Wolf Tone rebellion, the 19th century witnessed continuous conflicts, outbursts and unrest between the landed elite and their tenants, often played out within the fractious relationship between the Irish Catholic church and the Anglican ruling class. Against this background, the management of colonial rule was a predominant concern, and the various legislative measures enacted during the period – including those relating to education – were meant to support this process. However, educational development is multi-dimensional and open-ended, and the new national system was to prove extremely useful for those Irish nationalists seeking justice, independence, and a revival of Celtic culture in the face of imperial rule throughout the 19th and 20th centuries [34].

Given the peculiar nature of colonial rule and Anglo-Irish relationships, the Irish experience in relation to the late 19th century impetus to establish a vocational system to compete with European trends was rather different from the English approach. It could be characterized as both independent of spirit and forward-looking in its nature and scope. Mechanics institutes were established in Limerick, Cork and Dublin in the first half of the 19th century, and there was an Artisans' Exhibition held in Dublin in 1885 ([14], p.69). Following this, the City of Dublin Technical Schools were founded in 1887, notably two years before the 1889 Technical Instruction Act was passed by the British parliament (indeed, the members of the British Royal Commission on Technical Instruction, 1881-84, consulted a report produced by Professor Sullivan on technical education in Ireland; Argles, 1959, p.102 [23]). As Gleeson [35] explains, these technical schools:

were the first of their kind in Great Britain or Ireland. Supported and endowed by private citizens and later by a contribution from the Corporation, the schools had already achieved reputation and success at the inception of the Department of Agriculture and Technical Instruction in 1899 (p.3).

In addition to this useful early foundation of technical support for education and training, the national school curriculum – under the influence of enlightened Commissioners of the Board of

Education – gradually extended the range of subjects taught in the schools to include a good range of technical and pre-vocational topics. This came about, partly as a result of the lack of interest in general school matters beyond the religious on the part of the dominant Catholic hierarchy, and partly in reaction to the lack of economic and occupational diversity in a predominantly agrarian society suffering serious decline following the famine and subsequent depopulation of Ireland after the 1840s [36,26]. A Technical Education Association of Ireland was established in 1893, and the Commission on Manual and Practical Instruction in Primary Schools set up in 1898 led to radical changes in the curriculum. The new curriculum incorporated commercial subjects (such as typewriting and shorthand), science and art (including building and machine construction, drawing and woodcarving, science and maths), and industrial subjects (such as carpentry, joinery, plumbing, milling and typography ([14], p.73). Moreover, this vocational emphasis was to be continued through to secondary and tertiary sectors and the technical sector developed apace into the 20th and 21st centuries [37].

This was quite different from the British experience in which the technical schools established after the 1944 Education Act turned out to be short-lived, partly because of the ‘hostility of both parents and employers of labour’ ([38], p.36), and partly because the ‘vocational and practical subjects in general had not attained the importance of the more prestigious “academic” or “pure” subjects’ ([6], p.153). As McCulloch ([39]) comments about the English experience, the ‘technical and vocational end of education somehow got lost’ in the relentless ‘drives towards comprehensive schools’ in the 1960s, a loss described as ‘one of the tragedies of British education after the second world war’ (p.214).

3.1 Coda: TVET Themes in Irish Education

By the end of the 19th century, the Irish system of education was arguably more conducive to technical/vocational developments than its counterpart in Britain. A number of significant factors can be discerned in accounting for the differences:

- a) The early establishment of a national schooling system in 1831 was important, establishing a relatively high level of

literacy decades before elementary education was developed in England.

- b) The liberal/humanist ‘gentleman ideal’ distaste of the vocational and practical was less dominant in Ireland – given the Anglo-Irish predominant concerns with land management and the establishment of social order – and this allowed enlightened Commissioners of Education to devise a schooling system which incorporated a broad range of practical, vocational and pre-vocational subjects.
- c) A combination of the above factors served to establish – not just a more favourable attitude to vocational education than existed in Britain – but also an embryonic system of technical schooling as a foundation for the future evolution of vocational education and training in Ireland.

4. CONCLUSION: ENHANCING VOCATIONALISM IN CONTEMPORARY TIMES

Notwithstanding the cultural and educational differences between England and Ireland in the 19th and 20th centuries, both nations – along with their European neighbours – could not but react in broadly similar ways to the neo-liberal globalising influences which have shaped economic and educational systems in recent decades [40,41]. A characteristic feature of this reaction was a widespread trend towards a minimalist conception of TVET in the form of competence-based education and training (CBET), a development which signally failed to enhance the standing of vocationalism in spite of its strategic popularity [42,43].

In spite of what Keep [44] has described as a ‘permanent revolution’ (p.47) in TVET policy initiatives in recent times, the central problems are still with us and – according to recent research reports [45] – the ‘recurrent theme’ of low status and investment in vocational programmes is a global problem which defies interpretation against the background of current skills shortages and high youth unemployment around the world. Coughlan expresses the position in graphic terms:

Everyone says it's a good thing and it's vital for the economy. But - and there is always a but, it's still the academic pathway that has the higher status. As the saying goes, vocational education is a great thing... for other people's children.

Another side of this conundrum is that there is more need for vocational education than ever before. Youth unemployment, particularly among those without training or qualifications, is a scourge in many countries. But at the same time employers are warning about skills shortages and not being able to find the right staff (ibid.p.1).

More recently Billett [46] has summarised the current position as follows:

The societal standing of vocational education is often perceived to be low, compared with other education sectors...this issues of standing is global and prevalent in countries with both developed and developing economies (UNESCO, 2018). The consequences of this low standing can be profound. They include how governments, enterprises and communities view and sponsor vocational education...These perceptions also shape how both young and older people elect to engage with it...and participate in vocational education provisions (p.161).

Billett goes on to suggest remedies for this state of affairs – drawn from the educational systems of Switzerland, Denmark, Finland, Spain and Norway – and these include factors such as boosting the theoretical content of TVET programmes, aligning vocational goals with the demands of occupational work, improving the quality of vocational teachers and ‘promoting higher forms of vocational education’ in addition to ‘engaging with industry and professional groups to promote the standing of programmes and outcomes’ (ibid.,p.168). The problem is – as a wide range of educators have observed about vocational reforms [47-50,1] – all these strategies have been attempted in the past with little noticeable success.

Perhaps the most prominent reform movement of the last few decades has been the implementation of CBET strategies in vocational systems throughout the world ([51]; Mulder, 2017). This movement incorporated many of the features suggested in Billett’s analysis – outcomes relevant to employment, close co-operation between employers and TVET providers, and full government policy approval and funding support – yet CBET has comprehensively failed to achieve its chief objectives [43,52,41] and the quest for vocational upgrading and parity of esteem with general/academic pursuits remains a live issue. Research connected with the investigation of white working-class educational

underachievement by the House of Commons Education Committee [53] reported that it was the most disadvantaged pupils – those in receipt of free school meals – who ‘were most likely to study vocational programmes’ (p.58). The report concluded with the observation that:

We consider that vocational education is an important subject that deserves future scrutiny. In particular, a careful balance needs to be struck between ensuring that young people are given access to an academic education while avoiding portraying vocational routes as a second-class option (ibid.,p.59).

In a similar vein, the recent report on the transition from school to work by the House of Lords Select Committee on Social Mobility [54] decried the ‘unspoken snobbery in favour of academic qualifications rather than vocational qualifications’ (p.49), and made a raft of recommendations for the improvement of this state of affairs. Such recommendations are worthy but are unlikely to have much impact on vocational curricula, training and qualifications until the subordinate status of TVET is addressed by radical reforms which tackle curricula, pedagogy and underpinning educational values.

As the 19th century educational history of England and Ireland indicate, the establishment of a good foundation of general education which incorporates technical and manual elements is crucial in shaping systems in which vocational study is valued as highly as other aspects of education. Recent Irish experience in regard to TVET developments seems to have broadly confirmed these early lessons. Reviewing case studies of the professionalization of TVET practitioners in Finland, Australia and Ireland, Croke [55] found similarities between the three nations in terms of their tendencies to be guided by their ‘history and context of policy reform’ (p.360). She was able to identify in each country ‘national education and training systems that own, broker or rent a moral purpose for capacity building: be they driven by an agreed ideology, an aspiration or a goal concerning economic growth and productivity’ (p.367). This ‘moral purpose’ was clearly linked to the professional development and motivation of TVET practitioners a finding which, as other studies have noted [47,48,41,56] is important in terms of encouraging rich holistic learning which can enhance the esteem of vocational studies.

Similarly, in the review of Irish TVET policy developments by Heraty, Morley & McCarthy

[57], the researchers note that the trend towards continual vocational reform has been partly driven by the influx of foreign multi-nationals which 'espouse the training and development of employees as a fundamental priority investment' (pp.192-3). Further developments in relation to the growth of a nationally-co-ordinated TVET system has been informed by Ireland's membership of the European Union. The 2010 OECD [58] Review of Irish vocational education and training noted the 'good range of provision at post-secondary level', the close 'collaboration with social partners' in the national system, a 'well-structured apprenticeship system with a systematic blend of on and off-the-job elements', and a wide range of 'innovative ways of engaging employers' in TVET developments (pp.1-2). The CEDEFOP report on TVET in Ireland in 2019 noted the importance of a national skills strategy which incorporates improvements in craft apprenticeship training, in extended educational programmes for TVET tutors, and in connections between the work of practitioners at all levels from school to university [59].

Such developments in Ireland broadly parallel those in countries such as Switzerland which has a system described by many observers as one of 'high quality, high status vocational education' [60]. The principal reasons for this status (broadly similar to those which characterise TVET in Austria, Finland and Germany) include a comprehensive and high quality system of apprenticeship attracting around two-thirds of school-leavers, a 'permeable' system in which movement between vocational and academic tracks is possible at all levels, close collaboration between employers, educators and state bodies, and a system in which 'vocational education is regarded as highly as general education' (ibid.) which may be encouraged and supported through skills competitions between young people of different countries (on such competitions, see Chankseliani, Relly & Laczik, [61]). Shafique (ibid.) is scathing about the failure of the UK education and training system to satisfy any of these crucial criteria.

An unavoidable conclusion drawn from over a century of TVET reforms in Britain and elsewhere is that tinkering with curriculum and qualifications (such as the current plan to introduce 'T levels' in England as vocational equivalents to academic A-levels; UK Government, [62]) will not be sufficient to solve the problems until a radical cultural shift in values takes place in relation to vocational and general educational experiences.

The philosopher A.N. Whitehead [63] was absolutely correct to assert that there 'can be no adequate technical education that is not liberal, and no liberal education which is not technical; that is, no education which does not impart both technique and intellectual vision' (p.74). In a similar vein, Dewey [64] spent a lifetime trying to break down the damaging divisions between theory/practice and body/mind in order to promote an 'education which acknowledges the full intellectual and social meaning of a vocation' (p.318).

In order to achieve this holistic Deweyan vision on TVET in relation to the current problems, it is possible to suggest a number of promising strategies.

4.1 The Resurgence of Craft and Manual Work

Germany has recently re-introduced the meister qualification for the 'master craftsman' as a preliminary to obtaining a licence to practise in various occupational fields (Oltermann, 2019), and – in addition to an enormous revival of interest in handcrafts in contemporary culture via popular television and social media platforms (Hyland, [56]) – a number of recent research writings have foregrounded the crucial significance and value of craft and manual work in human life. Sennett [65] for example, suggests that 'all craftsmanship is founded on a high degree of skill' typically involving 'about ten thousand hours of experience', and that craftspeople 'are dedicated to good work for its own sake' (p.20). Such work is inextricably linked to codes of ethics. As Sennett explains:

Craftsmen take pride in skills that mature. This is why simple imitation is not a sustaining satisfaction: the skill has to evolve. The slowness of craft time serves as a source of satisfaction; practice beds in, making the skill one's own. Slow craft time enables the work of reflection and imagination – which the push for quick results cannot. Mature means long; one takes lasting ownership of the skill (ibid., p.295).

Crawford [66] also makes much of the idea of craftworking as 'being good at something specific...dwelling on a task for a long time and going deeply into it, because you want to get it right' (p.20). The fond and careful description of his own journey from PhD and think tank to motorcycle repair shop was partly an attempt to escape the uniformity of a de-skilled post-Fordist

society which had led to the 'degradation of blue-collar work' (p.38). His response to this – described as an attempt to show how 'manual work is more engaging intellectually' than 'knowledge work' (p.5) – takes the form of a critique of the divisions between intellectual and manual work against the background of the way Taylorist scientific management and automation has degraded the nature of so much productive work. A strand of this thesis takes the form of the attempt to challenge the assumptions that 'all blue-collar work is as mindless as assembly line work and...that white-collar work is still recognisably mental in character' (p.31). Crawford questions relentlessly the standard educational distinctions between propositional/theoretical and practical/operational knowledge and – by examples drawn from the activity of chess players, firefighters and electricians – demonstrates the importance of tacit, personal and intuitive knowledge in all human activity so that 'thinking and doing' are inseparable not distinct processes (ibid.,pp.161ff).

Sennett [65] offers similar observations in his description of 'operational intelligence' (pp.280ff), and Marchand, in a recent dialogue with Nigel Warburton for the *Big Ideas in Social Science* collection of readings [67], defines his role as a craft worker, researcher and writer in terms of addressing the misguided and harmful distinction (attributed here to Da Vinci) 'between manual labour and intellectual work reflected in the division made between "craftwork" and "fine art"'. Criticising an education system in which 'working with the hands is perceived as a fallback position – a second choice', he defines his mission in terms of 'challenging the mind-body dichotomy' and explains that his:

Research aims to explore and expose the complexity of knowledge that is actually involved in handwork, and thereby raise its status in the eyes of educationalists, the government, and the general public (Marchand in Edmonds & Warburton, [67], p.124).

This holistic view of knowledge – which is very similar to Dewey's [63] instrumentalist conception employed in his attempts to break down the 'antithesis of vocational and cultural education' based on the false oppositions of 'labour and leisure, theory and practice, body and mind' (p.306) – is well illustrated in the collection of accounts of craftworkers edited by Marchand [68] in which practitioners operating in diverse fields describe their activities. As Oppenheimer [69]

has written recently, the 'future is handmade' and describes the work of 'artisans and thought leaders who are redefining craft, skill and, ultimately, the real meaning of a knowledge economy' (p.1).

4.2 Embodied Learning in TVET

Recent work within philosophy of education – drawing on the writings of Merleau-Ponty [70] – has attempted to bring the 'embodied subject' back into educational discourse as a way of remedying the undermining of the physical in the learning/teaching encounter. O'Loughlin [71], for example, asserts that:

It seems to me that bringing bodies back into the picture has been crucial for education. As teachers, educational theorists and the like, we need to direct our attention to the realities of bodies in discursively constituted settings. Western philosophy can be seen as the history of successive periods of Western humanity's cultivation of its own "mind." (p.8).

In attempts to embody the cultivation of mind, similar arguments have been proposed in terms of the role of bodies in relation to learning in general [9], and all this serves to underscore the arguments of Crawford and Sennett noted above that it is largely through our physical acting on the world that we may develop knowledge, understanding and skill. Such a conception may be used to justify Crawford's [66] idea of manual work which involves the 'learning of aesthetic, mathematical and physical principles through the manipulation of material things' (p.31), and has echoes in Marchand's [68] interpretation of craftworking as one which:

Counters the classical emphasis on internal "mind" operations and challenges the separation drawn between the mental arithmetic and the physical doing, by making the sensing, feeling, acting, and socialised body the locus of its enquiry (p.12).

In addition to the lessons to be drawn from the 19th century history of TVET – and, of course, the example which successful European systems can teach us – there is much of value in this recent work on craft and embodied manual activity in terms of helping us to enrich and enhance the social values and cultural standing of vocational studies at all levels [42,2]. Future research and development in TVET would do well to remember the lessons of the early history of the establishment of vocational curricula, in

addition to paying special attention to the important work in the craft and manual learning spheres currently being pursued in a range of different educational disciplines.

NOTE

*'England' tends to be used symbolically in this early period to represent 'Britain' or the 'United Kingdom' though, in modern times, England and Wales have separate educational administrations from Scotland and Northern Ireland (partitioned from the Irish Free State which was established in 1922 and later became the Republic of Ireland in 1949)

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Author has declared that no competing interests exist.

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