A study attempted to determine whether the United States experience of continuing education and training provides an appropriate resource for changes intended to increase lifelong learning in the United Kingdom by considering institutional and cultural differences for the two countries. The study considered the trajectories for lifelong learning over several decades as the UK has moved closer to the U.S. model with increased participation rates in formal post-16 education and increased entry to higher education. At the same time, the UK has experienced a decline in youth employment opportunities and employer-offered apprenticeships. Data were gathered through a contextual analysis of data about education and training providers; a regional study of several generations of families in South Wales gathered through a door-to-door survey of 1,104 householders and their children followed by semi-structured interviews; and taped oral histories from the local Miners' Archive. Through this research, five education and training trajectories were devised: non-participant, delayed learner, transitional learner, immature learner, and lifetime learner. Socioeconomic class was often seen as a determinant of learning trajectories, and influences of time and place are large. The study concluded that the best way to create lifelong learners is to create the motivation for lifelong learning in the schools and colleges. (Contains 82 references.) (KC)
Why US Solutions Don’t Travel: Lifetime Learning and Post-Compulsory Education and Training in the UK*

by Stephen Gorard, John Furlong and Gareth Rees

a paper to be presented to the Annual Conference of the American Sociological Association, Toronto, August 1997

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* Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.
Introduction

The list of US examples which have inspired UK education and training (ET) policies includes magnet schools[1], private industry councils, education-business compacts, community colleges, loans for students in higher education and licensed teachers (Finegold et al 1992). There are, of course, examples (local management of schools, grant-maintained schools, the national curriculum) of US policy-makers learning from the UK experience and in several other cases it would be wrong to think of policy-makers in the UK as simply borrowing the policies generated on the other side of the Atlantic. Nevertheless, what UK policy-makers know about the US does much to set the scene for their own initiatives and nowhere is this more clearly the case than in policies designed to increase participation rates in post-compulsory education and training (POCET). The higher US participation rates and, in particular, the higher proportion of participants achieving degree qualifications, have long been considered real advantages of the US system (Finegold 1992; Raffe and Rumberger 1992).

While UK commentators have often expressed concern about the content of the ET received in the US system and about the standards achieved in mass higher education, there are now new reasons to question the wisdom of using the US model of participation in POCET as any kind of template. Since the mid-1980s there has been widespread agreement in the UK over the central role played by education and training in determining the country’s economic success (Cassells 1985). From this time, and even before, government sources were keen to make this point (Department of Employment 1981; Department of Employment/Department of Education and Science 1986), and there have so far been four government white papers on post-compulsory education and training in the 1990s. Employer-sponsored publications were rather later in the field though ultimately just as vocal in their support for the central point (see, for example, Confederation of British Industry 1989, 1993, 1995). In these later publications (of government and employers) it has been increasingly common to find that concern over ET has been re-focused on
the particular problem of ensuring that POCET continues throughout the lifetime of learners as well as on the overall level of ET that goes on in the UK. Thus, according to the *Lifetime Learning: Consultation Document* (Department for Education and Employment 1995) it is a matter of concern that only seven per cent of over 25 year olds are pursuing a qualification, that further learning is overwhelmingly a pastime for those who are already well-educated, and that somewhere between thirty and forty per cent of those of working age expect never to do any more training.

The US has traditionally had more returning drop-outs and more over-25s in higher education (Raffe and Rumberger 1992) but there may be other reasons why the US may not be a good model when trying to increase lifetime learning. For one thing, both countries have been identified as poor performers in international comparisons of lifetime skill-acquisition (Finegold 1992). Moreover, cultural and institutional differences may mean that the qualified advantages of the US system cannot easily be transferred to the UK, for example it is believed that the pattern of incentives differs in important ways between the UK and the US. In the US post-16 ET has not simply been more accessible, but has also carried more incentives (whereas in the UK higher education, for example, has been seen as a consumption good: Finegold 1992). Similarly, both employers and employees are believed to have more incentives to engage in later (rather than initial) training in the US than in the UK (Tan and Peterson 1992).

This paper will attempt to address the question of whether the US experience provides an appropriate resource for changes intended to increase lifelong learning in the UK by considering some of these institutional and, especially, cultural differences. It does so by looking at the auguries for lifelong learning over several decades as the UK has moved closer to the US model with increased participation rates in formal education post-16 and increased entry to higher education. All of this has happened at the same time that there has been a collapse of youth employment opportunities and of some types of employer-based training including the recent disappearance of initial training.
through apprenticeships. The collapse of the youth labour market and the loss of apprenticeships also removed two remaining sources of difference between the UK and the US (cf. Raffe and Rumberger 1992; Tan and Peterson 1992).

**A Survey of Patterns of Participation in Post-Compulsory Education and Training**

Our project is one of fourteen funded by the UK Economic and Social Research Council as part of the Learning Society Programme. It is a regional study in industrial South Wales of the determinants of participation and non-participation in post-compulsory education and training, with special reference to processes of change in the patterns of these determinants over time and to variations between geographical areas. The study combines contextual analysis of secondary data about education and training providers with a regional study of several generations of families in South Wales via survey, semi-structured interviews and taped oral histories. The background to the study is further described in Gorard *et al.* (1996). The survey data will be combined with learning biographies from a large number of semi-structured follow-up interviews, taped oral histories from the local Miners’ Archive, and an in-depth study of the learning opportunity structures in the three research sites during the 50 years of the study.

The survey data were obtained via a door-to-door survey in 1996/97 of 1,104 householders and their children, representing a systematic stratified sample of the population of industrial South Wales in the age range 15-65. The survey obtained the life, work and educational histories of each respondent and their family members, and these were used to define eleven characteristic lifelong learning trajectories (see Gorard *et al.* 1997b). In addition, 10% of the sample representing the range of trajectories were re-interviewed in-depth to obtain their accounts of the reasons for their participation or non-participation at each stage of their life. All differences and relationships described are significant at the 5% level, using chi-squared,
t-tests, one-way analysis of variance, or logistic regression as appropriate (see Gorard et al. 1997a for a more detailed description of the methods used in this study)

Each case history was converted to a sequence of changes of state from one event to another, after initial school (cf. Dolton et al. 1994), and although there was considerable variety in the life histories, there were far fewer than 1,104 different patterns of learning when described at this level. There were, for example, a large number of histories that included absolutely no report of any formal or leisure-based learning since compulsory schooling. There were a few respondents still younger than the school-leaving age, and a larger number still in full-time continuous further education. Several histories were partly composed of repeated sequences of changes of state, such as part-time job with initial training, pregnancy, part-time job with initial training, pregnancy etc., or temporary job with no training, unemployed, temporary job with no training, unemployed etc. If such repeated sequences are considered as identical regardless of their length, then the actual number of different learning histories becomes surprisingly small. In fact, eleven patterns can be used to describe most of the variations, and these can be grouped into five classes for most analyses (see Table 1). It should be noted that each respondent provided data for nearly 1,000 variables and only a few of these were used to define the trajectories, while the remainder are used to describe systematic differences between them. The classification technique has been adapted by an iterative model fitting and criticism process (cf. Dale and Davies 1994), and confirmed by later analyses (cf. Maxwell 1977), but it is the fruitfulness of this typology of eleven theoretical trajectories that is the true test of its validity.

The trajectories were devised over a period of time as successive waves of the survey results arrived, and polytomous logistic regression models were created and modified at each stage to try and predict the trajectory for each respondent (Menard 1995). The independent variables used were the
potential predictors described above and the dependent variable was the probability of following one of the trajectories (cf. Felstead 1996). This method was particularly appropriate to model the determinants of participation in adult learning since it was essential to eliminate from analysis those factors which are merely correlates of prior events (cf. Lehtonen and Pahkinen 1995), thus maximising the effectiveness of the predictions for the sample (Allison 1984) while minimising the number of predictors (Pedhazur 1982). All the possible predictor variables derived from previous studies, and their interactions with age and gender were included in the initial model and successive models were built iteratively both with and without each combination, and variables were then selected or omitted using the conditional statistic (Norusis 1994). One important restriction derived from the underlying causal model was that the variables were entered in batches in the approximate order that they occurred in the respondents life history, starting with the age of the parents at birth for example, and ending with the total number of times the respondent has moved house. Most variables are categorical in nature expressed using deviation coding which allows the simple use of interaction effects, any change in the dependent probability that they produce are measured in terms of an average respondent.

**Five categories of ET trajectories**

**Table 1**

**Frequency of each trajectory**

<table>
<thead>
<tr>
<th>Category</th>
<th>Trajectory</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-participant</td>
<td>Non-learner</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Near non-learner</td>
<td>18%</td>
</tr>
<tr>
<td>Delayed learner</td>
<td>Delayed trainee</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Deferred student</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Twilight learners</td>
<td>1%</td>
</tr>
<tr>
<td>Transitional learner</td>
<td>False-start trainee</td>
<td>11%</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>False-start student</td>
<td></td>
<td>9%</td>
</tr>
<tr>
<td>Immature learner</td>
<td>Still at school</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Still in f/t education</td>
<td>3%</td>
</tr>
<tr>
<td>Lifetime learner</td>
<td>Work-based learner</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Early learner</td>
<td>19%</td>
</tr>
</tbody>
</table>

The first group in Table 1, the 13% of the respondents who reported no education or training after initial schooling, have no analogue in previous studies. They are the group most frequently ignored as they are unapproachable through lists of participants, and only available due to the door-to-door method of access used here. The second group, a further 18% who reported only the occasional training episode lasting less than one day in total, usually related to health and safety regulations doing only what is essential to retain their job (see pp. below), but the very small scale of their adult training is a surprise. In total these "non-learners" and near "non-learners" form a "non-participant" group representing one third of the total sample.

Delayed learners are so called since the first substantive learning episode they report is over five years after they leave initial schooling, and they have made the transition from school to work. They may be similar to the deferred beginners described by McNair (1993), and the discontinuous learners of (Hand et al. 1994). The group is 18% in total. A few of these are "twilight" learners for whom the first substantive post-compulsory learning episode is after becoming permanently economically inactive through retirement or long-term illness, who may be more activity-oriented than goal-oriented learners (Harrison 1993). Of the remainder 7% are delayed work-based trainees, perhaps receiving substantive training in their second or subsequent jobs, while 6% are mature students returning to some form of post-compulsory education after a break.
Some of respondents are still in full-time initial education and these are the "immature" trajectories. Transitional learners are those who continued to further education or substantive work-based training in the five years after initial schooling, but have undertaken no further education or training since. Of these, 11% only received substantive training in their first significant employment after leaving school at the minimum age, and a further 9% reported no formal learning since leaving full-time post-compulsory education. Together these may be thought of as "false start" trajectories, or as similar to the "by default" learners described by Hand et al. (1994). The remaining respondents have been optimistically classified as "lifetime" learners since they have reported both transitional and later learning episodes, 19% via further education, and 19% via what may be termed an "apprenticeship". These two are more like the categories of learners discussed by Tremlett et al. (1995), and the continual learners sketched out by Hand et al. (1994).

The proportion of respondents displaying each trajectory vary significantly by age. Some of these differences are structural/methodological and to be expected. For example, those still in full-time continuous education are much younger. If these, and the 15-24 age group that they mostly comprise, are ignored, there has been a clear trend towards participation in some form of adult education since 1945 when the oldest respondents left school. The proportion of each cohort reporting no formal learning has decreased, despite the greater number of years in which participation was possible for the older groups (Table 2). However this decrease is not chiefly to do with a greater return to education as an adult, because the proportion of delayed learners has held relatively constant, or even decreased (but here the difference could be age rather than period related). The proportion of lifetime learners has increased, but so has the proportion of those only using education/training as a transitional state.
Table 2
Trajectory by Age cohort

<table>
<thead>
<tr>
<th>Trajectory</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-particip</td>
<td>8</td>
<td>19</td>
<td>26</td>
<td>35</td>
<td>43</td>
</tr>
<tr>
<td>Delayed</td>
<td>3</td>
<td>7</td>
<td>14</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>Immature</td>
<td>38</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transitional</td>
<td>27</td>
<td>39</td>
<td>22</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Lifetime</td>
<td>34</td>
<td>33</td>
<td>38</td>
<td>35</td>
<td>26</td>
</tr>
</tbody>
</table>

When these changes are considered for men and women separately (Tables 3 and 4), the reduction in disaffection for males took place chiefly for those finishing initial education in the 1950-60s while for women it took place a decade later in the 1970-80s. One implication is that whereas the reduction in disaffection for men was replaced by an equivalent increase in lifetime learning until the 1980s, for women the increase in lifetime learners was matched by the front-loaded transitional learners. There are still a large number of female non-learners, and a relatively large number of male lifetime learners in South Wales.

Table 3
Trajectory by Age cohort (men)

<table>
<thead>
<tr>
<th>Trajectory</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-particip</td>
<td>5</td>
<td>22</td>
<td>19</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Delayed</td>
<td>4</td>
<td>8</td>
<td>16</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Transitional</td>
<td>26</td>
<td>33</td>
<td>22</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Lifetime</td>
<td>26</td>
<td>36</td>
<td>44</td>
<td>46</td>
<td>33</td>
</tr>
</tbody>
</table>
Table 4
Trajectory by Age cohort (women)

<table>
<thead>
<tr>
<th>Trajectory</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-particip</td>
<td>10</td>
<td>17</td>
<td>32</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>Delayed</td>
<td>2</td>
<td>6</td>
<td>13</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Transitional</td>
<td>28</td>
<td>44</td>
<td>23</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Lifetime</td>
<td>22</td>
<td>31</td>
<td>32</td>
<td>26</td>
<td>18</td>
</tr>
</tbody>
</table>

The Determinants of Participation Patterns

From the foregoing analysis it is clear that the expansion of school and college-based POCET (paralleled by the disappearance of certain categories of employer-based training) has not produced a concomitant expansion in lifetime learning. Indeed, it is becoming clear that lifetime learning is not determined in the same way that early patterns of participation in POCET are. If there were two relatively distinct sets of determinants of participation in post-compulsory education and training we would expect the determinants of lifetime learning to be similar in some respects to both transitional and delayed learners and dissimilar in most respects to those of the non-participants (perhaps the inverse of them). In the same way one would expect the determinants of transitional and delayed learners to be similar in some respects to both lifetime and non-participant learners, but dissimilar to each other. There are many indications above that these descriptions are valid, but a more formal method would be to attempt a classification of each case into one of two possible trajectory types using only information not also used in the definition of the trajectories, such as participation in education. If it is easier to split a transitional from a delayed than a transitional from a non-participant learner for example this would provide substantial support for the two component model.
The two analyses that are dealt with in detail here are a direct attempt to measure the two components of determination, one for transitional learning and one for later post-compulsory learning (with a third model used as a control). If the variables known about each respondent when they are born are added to the logistic regression functions, it is possible to predict the trajectories that involve immediate post-school education and training more accurately than the trajectories that involve later adult education and training. This result, not in itself very surprising, is some confirmation of the two component notion. Adult learning is, as suggested above, less determined by initial social background factors than transitional learning is. When the variables concerning initial schooling are added to these functions, it makes little difference to the accuracy of the "immediate" predictions (Table 5). Those who will stay on in school, or move from school to college or work-based training, are largely determined by their background. Although school performance is a good predictor of staying-on it is not the primary cause of it, and as seen above many of those who "fail" all qualifications at school stay on in full-time education after 16. However, performance at school does significantly increase the accuracy of the "later" predictions, as do variables concerned with adult life and what is known about each respondent now. The suggestion here is that later learning is less determined by background and more by school and career characteristics, while those who will continue with education or training at age 16 are already on such a trajectory a long time before any rational decision is made. While this may seem unsurprising to some, it does challenge the prevalent idea that "if at first you don't succeed, you don't succeed" (Tuckett 1997), or that adult learners in the 1960s did not include many men, unskilled workers or those who left school at 15 (Lowe 1970). Participation in POCET is not and, according to this survey never has been, a simple linear progression from one form of learning to another. Success or failure at school may have more impact on later than immediate participation since the former is more dependent upon an individual's conception of themselves as a "learner" or a "non-learner", whereas the family and its support structures may have more to do with whether one is
encouraged to prolong adolescence, or to learn a trade or simply to start bringing money home at an early age.

Table 5
Impact of determinants in temporal sequence

<table>
<thead>
<tr>
<th></th>
<th>Birth</th>
<th>School</th>
<th>Adult</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>69.55%</td>
<td>73.25%</td>
<td>79.84%</td>
<td>80.25%</td>
</tr>
<tr>
<td>Later</td>
<td>65.02%</td>
<td>77.37%</td>
<td>86.42%</td>
<td>87.24%</td>
</tr>
</tbody>
</table>

[the percentages are the proportion of cases correctly predicted using only the data from each step].

Immediate post-compulsory education and training

Table 6
Coefficients of determination

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.02</td>
<td>.20</td>
</tr>
<tr>
<td>Place of birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research site</td>
<td>-0.47</td>
<td>.23</td>
</tr>
<tr>
<td>South Wales</td>
<td>+0.13</td>
<td>.76</td>
</tr>
<tr>
<td>UK</td>
<td>-0.42</td>
<td>.43</td>
</tr>
<tr>
<td>Abroad</td>
<td>+0.76</td>
<td>-</td>
</tr>
<tr>
<td>Male</td>
<td>+0.50</td>
<td>.00</td>
</tr>
<tr>
<td>Female</td>
<td>-0.50</td>
<td>-</td>
</tr>
<tr>
<td>Attended school</td>
<td>+0.64</td>
<td>.01</td>
</tr>
<tr>
<td>Not attended school</td>
<td>-0.64</td>
<td>-</td>
</tr>
<tr>
<td>Took 16+ exams</td>
<td>+0.28</td>
<td>.05</td>
</tr>
<tr>
<td>Not took 16+ exams</td>
<td>-0.28</td>
<td>-</td>
</tr>
</tbody>
</table>

Social class
<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>+0.53</td>
<td>.24</td>
</tr>
<tr>
<td>Intermediate</td>
<td>-0.32</td>
<td>.41</td>
</tr>
<tr>
<td>Working</td>
<td>-1.17</td>
<td>.02</td>
</tr>
<tr>
<td>Unwaged</td>
<td>+0.96</td>
<td>-</td>
</tr>
<tr>
<td>Number of children</td>
<td>-0.31</td>
<td>.03</td>
</tr>
<tr>
<td>Constant</td>
<td>+1.93</td>
<td>.03</td>
</tr>
</tbody>
</table>

Of the variables concerning adult and present life, only social class and the number of children make any real difference to the correctness of trajectory classification. Again this is probably because other indicators such as the age of first having a child or the background of siblings and life partners are already encompassed by existing variables. Those who have more children tend to have the first one younger, and those who have children at a young age tend not to stay in education or training at age 16, for example. The fact that current area of residence and length of residence in South Wales are not good predictors of participation in this model is presumably because they are already present to some extent in the place of birth variable which is given priority as it occurs first, and is itself the major determinant of the other two. Table 6 shows the coefficients for those variables retained in the model.

In theory, it is possible to calculate the odds of anyone in South Wales continuing after school in education or training from these coefficients. For example, a 50 year old woman born in Neath-Port Talbot, who attended school regularly but left school at 15 without taking any qualifications, has since worked as a domestic cleaner and raised two children, would have the following odds of education or training in the two years after initial schooling:

\[
\frac{1}{1 + e^{-\left(-0.02\times50 - 0.47 - 0.50 + 0.64 - 0.28 - 1.17 - 0.31^2 + 1.93\right)}}
\]

or around 19%.
A 30 year old man born in Cardiff who attended school regularly and took 7 'O' levels at age 16, has since worked as a salesman, and has one child, would have the following odds of education or training in the two years after initial schooling:

\[
\frac{1}{1 + e^{-(-0.02\times30 +0.13 +0.50 +0.64 +0.28 -0.32 -0.31\times1 +1.93)}}
\]

or around 90%.

It might be argued that having children and having an occupation (on which to base social class) happen after the transition from school and therefore cannot be considered as determinants. On the other hand, models using only strictly prior events have been created and found to be very similar, with the coefficient for age changing from 0.50 to 0.56 but that for gender staying the same for example. In fact the only coefficient to alter significantly is that for taking examinations, which becomes almost twice as important. The stability of the solution suggests that it is a good one, but that examinations at age 16, the age and number of children, parent's, partner's, sibling's and the respondents social class are all linked. Secondly, it is not clear that the transition from school must come before having children, or planning to have children, or leaving to get married (which in the age cohorts before oral contraception may have implied having children). Nor is it clear that leaving school must come before the formation of class attitudes to education, nor that it is 'apprentice-type' training that leads to certain occupations rather than certain occupations having such training. What is often neglected in models having a strict temporal sequence of causation is that pull can be as effective as push. Thirdly this version of the model has been selected for publication because it allows direct comparison between the determinants of early and later learning, and the influence of children, for example, on later learning is indisputable. Fourthly, allowing all variables to be used as predictors has not altered the order of events very much. The coefficients for age, gender, place of birth, and attendance at school are the key ones, and
as has been shown, later measures such as current area of residence do not add to the accuracy of the function (although they can be used as rough proxies in their own right).

**Later post-compulsory education and training**

The coefficients for the larger number of determinants of later learning are shown in Table 7. Although some of the variables are the same as for transitional learning, their relevance is not. For example, those with no qualifications are much more likely to return to study than those with qualifications below the GCSE benchmark. In addition, the majority of the determinants of later learning are unique (e.g. social class of partner).

**Table 7**

Coefficients of determination

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.05</td>
<td>.21</td>
</tr>
<tr>
<td>Place of birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current area</td>
<td>+0.29</td>
<td>.65</td>
</tr>
<tr>
<td>South Wales</td>
<td>-0.94</td>
<td>.18</td>
</tr>
<tr>
<td>UK</td>
<td>+1.61</td>
<td>.05</td>
</tr>
<tr>
<td>Abroad</td>
<td>-0.96</td>
<td>-</td>
</tr>
<tr>
<td>Male</td>
<td>+0.54</td>
<td>.01</td>
</tr>
<tr>
<td>Female</td>
<td>-0.54</td>
<td>-</td>
</tr>
<tr>
<td>School type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehensive</td>
<td>-0.41</td>
<td>.29</td>
</tr>
<tr>
<td>Grammar</td>
<td>+1.19</td>
<td>.02</td>
</tr>
<tr>
<td>Secondary Modern</td>
<td>+0.16</td>
<td>.64</td>
</tr>
<tr>
<td>Other</td>
<td>-0.94</td>
<td>-</td>
</tr>
<tr>
<td>Qualifications at 16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>+0.65</td>
<td>.45</td>
</tr>
<tr>
<td>Elementary</td>
<td>-1.40</td>
<td>.00</td>
</tr>
</tbody>
</table>
Since the overall effect of each variable across all values is zero, individuals can still be fitted to the model even if they have values missing (and doing so has shown how accurate these predictions are), and the variables can also
be considered in isolation (so that men are more than 1.7 times as likely as average to take part in further learning). The function requires more information about each respondent than that above. Using the example of the 50 year old woman born in Neath-Port Talbot above, who attended school regularly but left school at 15 without taking any qualifications, has since worked as a domestic cleaner and raised two children, her school attendance and taking of examinations are now insignificant in determining her participation in education or training. However, the example must be extended to include the type of school she attended (a measure of both age and ability as determined by the 11+), her qualifications at 16, whether she reported a hobby requiring study/practice, the social class of her partner and most-qualified sibling, the age at which she had her first child, length of residence in South Wales and where her mother was born. If this woman went to secondary modern school, does yoga and swimming with her friends, has a husband who was an electrician, a brother who is a teacher, and a mother born in Port Talbot, and this woman has lived in Neath Port Talbot all of her life having her first child at age 23, then she would have the following odds of education or training in later life:

\[
\frac{1}{1 + e^{-(-0.05 \times 50 + 0.29 - 0.54 + 0.16 + 0.65 - 0.33 + 0.54 - 0.93 + 0.44 - 1.15 - 0.35 \times 2 - 0.07 \times 23 + 0.06 \times 50 + 4.28)}}
\]

or around 80%.

If the 30 year old man born in Cardiff who attended school regularly and took 7 'O' levels at age 16, has since worked as a salesman, and has one child, is also known to have attended a comprehensive school, passing 4 of the 7 'O' levels, with no reported hobby, a partner who is a housewife, no siblings, a child born when he was 23, a mother born in South Wales, and he has lived in South Wales all of his life, then he would have the following odds of education or training in later life:
\[
\frac{1}{1 + e^{-(-0.05 \times 30 - 0.94 + 0.54 - 0.41 - 0.48 - 0.14 - 0.54 + 1.75 + 0 - 0.01 - 0.35 - 0.07 \times 23 + 0.06 \times 30)}}
\]

or around 75%.

This is quite a remarkable turnaround, and these examples are not simply made up. They are based on two of the early follow-up interviews. The working-class woman who left school early with no qualifications has a higher probability of participating in later education or training than the intermediate class man who stayed on in education or training after 16. There are several possible reasons for this. One, of course, is their age with the older respondent having had more years in which to take part in something, but this ignores both the predictability of trajectories once they are embarked on, and the influence of motivation. The woman has shown herself interested in taking part in therapeutic social activities with friends and enjoyment of these is precisely the kind of experience that could lead an apparently non-participant learner to participate in more formal learning. Another possible distinction is the influence of the teacher brother who may be both an informal tutor and a role model. The 30 year old salesman only scores as highly as he does because he has an unwaged partner.

The influence of this unwaged category is interesting given that it is predominantly composed of women (and older men) but its effect is in addition to that caused by gender alone. Comparing the coefficients for unwaged across the two models it can be proposed that women are more likely to participate in immediate education than their gender coefficient suggests but less likely to take part in later learning. However, where unwaged women have a partner he (since they are in fact all male) is much more likely to be a learner. This could be partly due to the removal of barriers such as time and child-care that others experience, while both characteristics could also be a symptom of relatively privileged economic position.
It is noteworthy that whereas being on a trajectory through initial education leading to sitting for examinations increases the chances of transitional study or training, the role of qualifications themselves are more ambiguous than much contemporary literature (for example, Finegold et al. 1992) would suggest. Those who are highly qualified at 16 do tend to participate more in later learning, but then so do those who have none. It is those who have some qualifications but who missed the "cut" of 5 'O' levels who are less likely to return to study/training. All of these factors are clear indications that the determinants of immediate and later post-compulsory learning are different.

Discussion
The theoretical background for this study is based upon an assumption that patterns of participation in adult learning are sensitive to the influences of both time and place (Rees et al. 1997). All other potential determinants of the patterns reported in the life histories are themselves bound into this process, so that the relevance of gender, for example, depends to a large extent on social and policy changes over time and on the local employment opportunities available (Banks et al. 1992). Opportunities for initial, further and higher education have increased since the first cohort (now aged 65) left school from 1945 onwards. Opportunities for employment, the nature of employment and the training that accompanies it have also altered. Overlaying this changing but objective national opportunity structure, are the widespread regional variations within it (e.g. Penn et al. 1990) and each person's subjective opportunity structure (cf. Gambetta 1987), which is based on differential awareness of the opportunities available (cf. Willms and Echols 1992), their ability to make rational judgements of future actions (e.g. Hodkinson et al. 1996) and their motivation, perhaps springing from their family background (e.g. Banks et al. 1992), other peer groups (Taylor and Spencer 1994), or their learner identity formed at least in part by their earlier learning experiences (Roberts and Parsell 1988). All of these combine and interact to determine what is seen as available and more importantly appropriate to each individual. Only then do the more visible barriers to
participation become relevant (NIACE 1994), since the cost of a course, for example, cannot be considered by someone unaware of the course or its cost. Similarly, the absence or presence of incentives to participation to which the existing literature makes reference (see p. above) may not be immediately and obviously relevant.

In advance of the completion of all the in-depth interviews with a sub-sample of survey respondents, the following argument should be treated with caution. Nevertheless, all the government documents referred to in the introduction to this paper have confirmed that the expansion of post-16 places in schools and colleges has done little to alter the underlying resistance to POCET in the UK, especially as measured by people's reluctance to pay for it themselves. We hypothesise that the root of this problem lies in the prevalence of a particular sort of rationality. In this rationality, people carry on with the idea that what cannot be picked up on the job is not worth knowing. Here, knowledge and skill is only valued for its immediate pay-off and never seen as intrinsically valuable (for a discussion of evidence from existing research see Fevre, 1996). If it is your view that when something is required for the job which you do not possess it is up to the employer to make sure you acquire it, then you are quite likely to end up with non-transferable skills if you acquire any at all. This is because such non-transferable skills do not make you attractive to other employers out to poach your employers' workers and so your employer's investment in training will be protected. (In fact it is highly likely that you and your employer share the same attitudes to education and training anyway). The expansion of post-16 opportunities seems to have overlaid the view that it is pointless to learn things that are not directly relevant to the job in hand with a superficial veneer of credentialism for some. By far the biggest group in our survey were those with no post-compulsory education and training at all but that the next biggest group, one that will on present trends gradually replace those with no education and training, was made up of people who had stayed on at school past the
school-leaving age but still did not engage in any significant subsequent education or training (and still less in lifetime learning) after they left school.

There has been a long and well-respected history of criticism of the credentialism involved in the US way of getting people into jobs (Berg, 1971; Collins, 1979; cf. Dore, 1976) and most of this criticism makes the point that the things people are being give credentials for have little relationship to what is actually required for economic development. We are now suggesting that we also question whether such credentialism is in any way conducive to encouraging lifetime learning. We would hypothesise that the spread of credentialism in the UK has also affected those who, in increasing numbers (but usually with the same sort of background as those who went to college in the past), go on to higher education. Even at this level, credentialism leads people to consider the content of their education and training content to be relatively unimportant and they are probably not thinking that they should be acquiring knowledge or skills which will make them better at their jobs (again see Fevre, 1996 on secondary evidence). This is not their aim, not their concern, and such matters are left up to employers (who have limited priorities). People who adopt the credentialist view have never actually abandoned the more common resistance to anything but directly useful (on the job) knowledge. They continue to believe that what cannot be picked up on the job is not worth knowing but in their case the basic orientation is overlaid with something else. Credentialists have discovered another pay-off for knowledge and skills, the labour-market pay-off (and for some, especially those going into higher education, this pay-off might even consist in being able to delay entry to the labour market). We hypothesise that in the UK more people now have more credentials but a significant majority of them have not been made more skilled in the process because credentialism has not affected the basic and underlying rationality which leads people to resist further, and especially post-compulsory, education and training. It is, rather, the case that this basic rationality has been over-laid with the notion that some pieces of paper will be required to get into a job to which one might aspire and this involves no change in orientations to lifelong learning.
Conclusion

The loss of employer-based training opportunities in the UK has made young peoples' orientations to POCET much more important than they might once have been. The trajectories which are established for these young people very early in life are now even more determinant than before: put simply, it mattered less that one rejected ET which was not relevant to a job when that job entailed an apprenticeship. The increased access to classroom-based POCET (on the US model) which has accompanied the loss of employer-based training makes orientations (whether towards general resistance to ET or the limited acceptance of ET with credentialism) more important in determining outcomes than before.

Our survey shows that the trajectories established so early in life (with their clear relevance to socio-economic divisions) do not lead to lifelong learning. Lifelong learning is not simply a track that one can be born onto but rather becomes a possibility along the way, possibly during schooling but sometimes later still. Yet the system we have put in place after 16 does nothing to alter the basic orientations which prevent lifelong learning becoming a possibility for the great majority of people. This new system is concerned more with transmission than transformation and here there may well be some much more valuable lessons to learn from particular US experiences (see for example, LaMagdeleine D. and Rigoni D. 1996) which suggest that earlier post-16 education ought to be helping to produce the motivation, the willingness to be transformed throughout life, that is necessary to lifelong learning. Creating the motivations for lifelong learning in the schools and colleges is not the only way to bring it about (cf. Fevre et al. 1996) but it is probably the best way to do it when so much reliance is placed on classroom-based POCET.

* This paper reports on research funded by the UK Economic and Social Research Council (Grant No. L123251041)
[1] The intended British counterparts (City Technology Colleges) were judged to be much less successful.


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Corporate Source: SCHOOL OF SOCIAL SCIENCES, CARDIFF UNIVERSITY

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