

# **ESRC SEMINAR SERIES: HOW TO MOTIVATE DE-MOTIVATED 14-16 YEAR OLDS WITH SPECIAL REFERENCE TO WORK-RELATED EDUCATION AND TRAINING.**

## **Summary of Seminar 2 Held on February 14<sup>th</sup> on Comparative Perspectives**

**Paper 1: *'PISA, engagement and motivation, precursors for performance and destinations'*. Andreas Schleicher, OECD**

### **Introduction**

AS began his presentation by setting out the international education and employment context in which the PISA results need to be viewed. Key facets of this include:

- The growing mismatch between skills and supply in a changing world.
- By 2020, manufacturing will only occupy 10-20% of the workforce.
- In the UK and elsewhere, meanwhile, the high skills sector is growing .
- Participation in lifelong learning (LLL) is very variable; in the UK about half participate, but these tend to be the better educated or trained.
- Unemployment and participation in LLL are highest amongst those who achieve fewest qualifications at school – ‘what we do not get right in schools leads to lifelong disadvantage’.
- Minorities feel increasingly left out of rising wealth creation in industrialised countries (but is this always the case?).

The importance of PISA approach and results lies in the facts that:

- It has concentrated on measuring applied knowledge and skills in reading, mathematical and scientific literacy – capacities that will be important in adult and working life.
- The performance results from PISA have been related to students’ engagement with learning and their motivation and capacity to learn.
- Students’ performance has also been related to a range of background factors, including family background, socio-economic circumstances, gender, whether native born or not, extent of stratification in school systems, and extent of within- and between-school differences etc.
- Results characterise best performing countries on range of variables and demonstrate where education systems can be. They also provide strong clues of the route which other countries can take to achieve greater success. They show which levers can be used to change and transform educational systems, schools and improve student performance.

### **The Results**

With regard to PISA’s measurement of reading literacy:

- Across countries, there were strong relationships between student performance at age 15 and gender, home background, parental education, the socio-economic profile of schools’ student intake, level of school resourcing and school climate.

Girls and students from more advantaged homes, families with higher levels of parental education, schools with better socio-economic profiles and better resourced schools with more favourable climates performed better on the tests.

- The highest performing countries on a range of measures tended to be Korea, Iceland, Finland, Canada and Japan.
- The UK did well overall and was eighth out of 28 countries. It did particularly well at the top level of reading (Level 5) with a relatively high percentage of students achieving at this level. It had a longish tail of poor readers.
- Between school differences accounted for much of the observed variation between students overall; UK was one of the countries where within-school differences were relatively high.
- The UK was one of the countries where socio-economic factors were particularly related to performance, with quite a steep gradient between these factors and student achievement. In countries such as Finland and Japan, the gradient was much flatter.
- There is a relationship between the extent of stratification of educational systems and student performance, particularly amongst the lower socio-economic groups of students; the UK has a high degree of stratification, even though it is one of the higher performers overall.
- The UK did relatively well in terms of relationships between students and teachers and students' engagement in learning. There is a direct relationship between engagement and performance across the OECD countries.
- A 'social equity' factor was derived which related performance to equality of opportunity and extent of integration within school systems. Countries were plotted within four quadrants: the UK fell clearly into the high overall performance, low social equity quadrant, whereas Finland, Korea and Japan, Canada and Iceland were in the high performing, high social equity quadrant.

### **Discussion and Emerging Issues**

The extent of stratification of educational systems and extent of differentiation within schools can impact on student performance, and these factors can be used to effect improvement.

Changing the socio-economic profile of schools, and not concentrating students from poor backgrounds in the same schools can also be a lever for positive change.

There is continuing concern about the under-performance of boys and their often lower engagement with learning, and the strategies that can counter-act these factors.

There is a need to work on students' engagement with learning and the quality of their relationships with teachers – these can all lead to gains in performance.

**Paper 2: *Motivating (De-motivated) 14-16 Learners Through Vocational Education: Policy and Practice in the United States.* Cathy Stansz, Rand Corporation.**

**American Context**

The USA has a decentralised education system, so that VET has no set curriculum or standards. Federal monies account for only a small proportion of the overall funding for VET, which is largely provided through the states.

There has been a longstanding separation of vocational and academic education in the USA (see page 3 of CS's overheads for diagram of the system). VE is mainly offered in the 14-18 High School sector, with students choosing their vocational pathways between 14-16.

A majority of high school graduates leave school with either 3 or more vocational course credits or concentrated their courses in a single occupational area. About a quarter of high school graduates enter jobs directly after school although better jobs generally required post-school study.

There have been recent attempts to boost vocational education, particularly for the less academic and motivated learners. There has been increased emphasis on integrating vocational and academic learning and offering more and new within and outside school learning opportunities. With reference to this, three new types of organised learning have been tried:

- Career Academies – a ‘school within a school’ approach which is targeted at maybe 40 students, with small-group approaches.
- High schools with clustered choices or pathways available at age 14/15 (5/6 pathways often available).
- High school with themes – a whole-school approach (similar to specialist schools in England?).

**Research Evidence**

From recent evaluations of these alternative approaches, six practices that can enhance motivation and engagement have been identified:

- Close student-teacher relationships are engendered (smaller learning communities, smaller class sizes, weekly seminars).
- Students have greater autonomy and better engagement with learning with increased ability to choose and through more student-centred learning (e.g. project-based).
- Students have multiple paths to gaining competence through achieving vocational, not just academic goals and through development of core and key skills.
- Well structured educational environments are provided.
- High expectations and strong emphasis on achievement exist.
- Development of both educational and career pathways with emphasis on guidance for progression and development of vocational identities.

Despite the above, research and evaluation on alternative programmes is often sketchy, without a strong empirical base. Some exceptions have been a longitudinal study with control group of students in Career Academies in California, plus another randomised experimental study of these in New York, and a quasi-experimental study in New York of Magnet Schools.

The two studies of Career Academies have indicated that, relative to the comparators, there were higher levels of both student and staff satisfaction with the career academy approach, better staff-student relationships, improved attendance, reduced drop-out and higher levels of college entry. Those who were assigned through lot to Magnet Schools were found to have developed a stronger occupational identity earlier and were better career planners.

Thus the evidence suggests that the alternative approaches have a range of gains in terms of motivation, re-engagement and outcome, but not necessarily increased student achievement on traditional measures of this. Also, there have been problems of students mixing and matching options in vocationally incoherent ways and clear links not being made between high school modules and vocational goals.

With regard to the development of occupational learning, the future is uncertain. There is still an emphasis on the academic route and VE lacks parity of esteem with this. Federal legislation and resourcing under the current administration may not be continued.

### **Discussion and Emerging Issues**

Many of the characteristics for success in American programmes have also been identified within the UK. The best alternative programme characteristics often model apprenticeship type learning, with clear and increased targets, reinforcement of student learning, close and continuing teacher-student relationships and clear links between academic and vocational learning.

There is a continuing weakness in the school-level careers guidance provided to support academic and vocational choices and student progression. In the States there is a tradition of the school counsellor, who does not have a vocational focus to their work.

There is an incentive system in the States for those choosing vocational routes, but this is not universally available and depends upon location.

There was no definitive answer yet to the key question of why the alternative vocational programmes did not lead to increased student academic performance. Could this be because there was not a strong focus on academic achievement, or because of the varied inputs and time away from traditional learning?

### **Paper 3: *Motivating 14-16 Year olds: How do the Swiss do it?* Julia Whitburn**

#### **Introduction**

There is particular interest in the Swiss system because:

- An unusually high proportion – two thirds - of Swiss youth gain vocational qualifications
- Unemployment for young people is very low
- There is a high GDP per head in Switzerland and the well-qualified workforce is felt to be a key factor in achieving this
- There is, arguably, evidence that the Swiss are better than many at motivating less academic learners.

#### **Identified Success Factors**

The apparent success of the Swiss system was felt to be associated with four overarching factors:

- The system maximises success rather than failure
- There are safety nets in the system at different stages
- No choices need to be made by students before they are able to make them
- Training and qualification routes are clear and widely understood.

Children begin school relatively late, with the kindergarten stage being focused on play and developing pre-requisites for effective learning.

The six years of Primary schooling are about establishing the foundations in core subjects. There are close and continuing relationships between pupils and teachers, with pupils generally having only two teachers for their six years of primary education. There is an emphasis on whole-class learning and a low differentiation of tasks. Teachers build strong links with parents.

There is a good deal of flexibility in the system which enables individuals, albeit a small minority, to change schools, age groups or repeat a year.

There is less importance attached to academic study, with relatively few students at Year 7 (12%) going onto the gymnasia. The vast majority spends the three years of Secondary Level 1 in the tripartite system of Sekundarschule (A), Realschule (B) and Oberschule (C) streams. A recent development has been a form of comprehensive school, attended by about 10% of the age group.

Successful pupils from the A stream can transfer to the gymnasia and there are similar opportunities for B and C pupils to move upward; sometimes by repeating a year in the higher stream. This system is felt to have a particularly motivating effect on learners, particularly those who are slower to achieve.

Apart from the gymnasia, which do have specialist teachers, the Swiss secondary system uses mostly generalist teachers who can build on-going relationships with students, teach across subject areas and provide a more stable learning environment.

The Swiss system provides excellent careers guidance, delivered by teachers and the careers service. This begins in Year 8 and helps prepare students for important decisions at the end of Year 9 relating to Secondary Level 2 and apprenticeships. Work experience is provided, but is much more tied into students' vocational choices, and may involve several different periods, depending on individuals' needs.

After Level 1, approximately, 22% go to the gymnasias, 9% go to technical high schools or colleges and 68% to vocational schools or colleges. No students leave school without definite arrangements for apprenticeships or further study.

The post-school VET system is a national system, it is voluntary and an apprenticeship is a pre-requisite for a training place at college. Apprenticeships usually involve three to four years of study and practical work and 350 apprenticeship areas are recognised, although this number is being reduced to create broader training domains and reduce over-specialisation. The cost of training is largely borne by the parents since training wages are low. There is a high success rate. The VET system helps shape the secondary school curriculum, unlike the British system.

Key aspects that could be transferred in, JW's view, to England are:

- The Swiss system's emphasis on success
- Notions of teacher continuity and use of generalist teachers

It is also noteworthy that the Swiss system operates with large numbers of immigrants.

### **Discussion and Emerging Issues**

The UK now has a Modern Apprenticeship framework for almost all sectors, but there is still the problem of employers not always wanting to be involved and the system is not so universal or accepted as in Switzerland.

There is clearly the continuing need to get the incentive system right for both young people and employers and we can learn from the Swiss approach.

The UK has adopted the very different philosophy from Switzerland of keeping young people in education for longer and this may not be the best approach.

The interesting question of why the PISA results for Switzerland are not better, given the Swiss emphasis on success, was raised, with no clear conclusion. Some queries have been raised as to whether the sample is reliable and what skills and knowledge PISA is actually testing, but the results were still felt to be surprising.

We can learn from the success of Switzerland in achieving parity of esteem between the vocational and academic routes, but here craft skills and industries have long been held in high esteem, rather than academic knowledge.

It is also true that over a lifetime, people who have followed the VET route earn nearly as much as those following academic pathways.

## **Overall Themes Emerging From Seminar 2**

There appears to be confusion between the role and efficacy of generalist and more specialised schools. However, where the vocational route works, it works in a generalist context.

The degree of differentiation and individualisation within and between schools is an important concern, and can be linked to student performance and outcomes.

The question of when and how students make their educational and vocational choices can be instrumental, with benefits of delayed choice having been identified. We may need to consider a 'new choice paradigm', but we do not want to replicate the problem, seen in the States, of lots of choice, but no clear purpose. We need more restricted choice, but with strong purpose and clear and well understood routes. The UK system suffers from multiple and not well understood pathways.

Continuity of teaching and building stable and on-going relationships between students and teachers and other instrumental adults can be a key to success for the lower achieving. Related factors are the size of teaching units and grouping arrangements and the quality of teacher-student relationships. One practical approach would be, as in FE, to give more emphasis to the creation of stable course teams. This may be important in the delivery of specialised teaching (e.g. in science) that requires highly qualified teachers.