

It is natural that this paper should express a consensus view and be concerned with administrative and structural matters, but in practical terms the science and mathematics parts of education are not catching the attention and excitement of able young people in schools. Without stimulus and the excitement that able teachers can produce in young people, the sensible ones will soon see that scientific specialist salaries are lower than in selling, finance, law or PR, in government or business and take an easier path for point-accumulation for university entrance and a comfortable existence.

Rather than discussing 'aspirations' or 'themes' therefore I prefer to see a practical if difficult, approach to the obvious failures in science and maths, English, classics and ,moral philosophical education. Higher differentials for such able, stimulating teachers would mean an argument with the Teachers' Unions, but without starting at the beginning –as you have begun with a return to effective, largely phonic, methods for reading - there is no sure base. Streaming in all schools is necessary. Horses for courses in fact.

I cannot say that I was taught by people who were always up-to-date, but we were given space to 'go and find out'. There was little equipment with which to play- if necessary we fixed a lash-up. Clerk Maxwell as a boy, observed beetles, and when the Clarendon Laboratory had the first students, they were set to mend a broken clock. The basic scientific practical principles were firmly established - observation, measurement, recording, deduction and explanation. If our explanation was not clear we were sent back until it was. We were also expected to be able to talk politely, understandably and to foreigners is some semblance of their tongue, as well as our own. If scientists are not clear, if there is ignorance and misunderstanding by other disciplines, the blame must lie with the scientists as well as on the other side of a conversation. Our universities were small enough for everyone to rub corners from those other disciplines as well as our own.

My children did not go beyond the Highers level in science. It was dull, dull and unfulfilling, unfulfilling and unprofitable.. The object was not to 'find out' but 'fill in the Worksheet correctly'. Experiments with boxes of machinery had only one answer and if that was wrong, the result was 'fixed'. Present levels of literacy and arithmetical achievement, regard for truth and achievement, show clearly that the recent systems have been inefficient and should be changed.

Theory must always be challenged by practicality, and it was here that our small country benefited from interchange of ideas between academia and business which had ability to spend local money on ideas - people were known and trusted by each other. Interference by Regulation, Targets, Administration, Taxation and avoidance thereof have not had beneficial effects and should have been avoided – as in Ireland.

The opportunity is still open and the potential is still there – for a time. Able young people are welcomed in America and Australia. Scotland is not helped by the lower standards of work in some agencies which apparently prefer to work towards departmental expansion rather than sticking to boring reality. However too much money misdirected will remove science to unproductive, safe, old concepts as we have already seen in some 'European' directions. We should be allowed to let good minds and hands run free – not put on tram-lines.