

an industrialist looks at the schools*

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I could describe my position as one in which I have to use the product of your efforts to try to run the businesses of which I am for the present responsible to shareholders and others. Over a period of time, machinery is being set up for discerning the future requirements of staff at all levels, and for selecting this staff in such a way as to reduce the chances of error to reasonable proportions. Perhaps then, though I have nothing to tell you whatever about education, it might interest you to hear a little about the intellectual and educational qualities of those people for whom my staff are looking, according to those criteria, which experience teaches are the most indicative of success.

I was given a paperback recently which was first published in 1967. In the preface, the author says, "Most people do not bother any more about their thinking than they do about their walking or their breathing. There is however much more individuality in thinking styles and sufficient difference between individuals to suggest that thinking may be a skill about which something can be done. The long years of education are mostly concerned with knowledge. Fact is piled upon fact, and little, if any, time is spent with the basic techniques of thinking. Skill in thinking is treated as a by-product that ought to follow detailed attention to specific subjects. But does it. And if it does, is not this a round about and wasteful process — like burning down a pagoda to produce roast pork".

Another authority has said: "Nor do I hold with those who regard it as presumption if a man of low and humble conditions dare to discuss and settle the concerns of princes: Because just as though those who draw landscapes place themselves below the plain to contemplate the nature of the mountains and lofty places, and in order to contemplate the plains place themselves upon the high mountains, even so to understand the nature of the people it needs to be a prince, and to

understand that of princes, it needs to be of the people". This was written by Machiavelli in his dedication to *The Prince*.

Let us analyse the qualities that I am looking for in the people that our organisations are recruiting to run our businesses, both now and in the future. In analysing this, I might add that broadly there are two kinds of organisation, because they look at personnel planning in two different ways: The first says, "let's grow by merger and take-over and any other device available to us, and we can find staff on the open market or if we can't, our own staff can work a little harder", and the second which says, "satisfactory growth and expansion are planned activities, and can only be achieved if the personnel resources

are meticulously thought out well ahead". I work on the principle that if a particular group of companies is planned, say, to achieve a significant increase in profits, the personnel planning must be done three years in advance, i.e. one must start thinking now for the people who are going to produce the increased profit three years from now.

Of the two kinds of organisation I have outlined, it is interesting that the first, though occasionally successful, is built on a kind of "fire brigade" mentality. They therefore attract firemen as executives. The latter are built on a philosophy of planning staff requirements, and building or developing the capabilities needed, by designing a more or less planned approach through the organisation, with acquisition of responsibilities to provide the pattern of executive capability that you eventually need. Critics of this kind of planning point out that it never wholly works in practice. However, whilst I will be the first to agree with this, I am quite definite that the presence of the plan, with its continual updating in the light of circumstances, immeasurably improves the chances of success. The products may be called many things but they are not firemen.

What I am trying to say therefore is that worldwide, and only slightly less so in South

* Text of an address to teaching graduates at JCE.

Africa, a pattern of professional management is tending to take over from the entrepreneurial attitudes of the past. Less and less is one hearing that the essence of good management is the ability to take a snap decision. More and more one is hearing that success depends on the meticulous analysis of all the possibilities and the trained decision making flowing from it.

Experience shows that it is wise to have certain threshold qualities in choosing potential executive manpower. Let me state quickly that by potential executive manpower, I mean anyone from the foreman level up. And let me also say that the foreman level is open to anyone from the tradesman or assembly-worker category who shows the necessary supervisory qualities. It is axiomatic that the supply of these qualities is lower than the demand.

Reverting to threshold requirements, I prefer to see those in senior managerial categories to be in possession of a professional qualification — University degree or equivalent membership of one of the institutions. By this I don't mean that nobody else can make a good senior executive. All I mean is that the chances of acquiring the necessary intellectual capability are enhanced if the candidate is of this type.

Secondly, for any executive position, a candidate must possess at least matriculation standard and demonstrate some effort on his own part to widen his educational and professional background by extra-mural study of one kind or another, if he has not been fortunate enough to go to a university.

In these posts, one seeks not so much the technical knowledge which the candidate possesses, but his ability to think analytically and logically, and to draw the correct conclusions. I would even go so far as to say that the reason why I would infinitely prefer to have a Chartered Accountant as my Financial Manager, is not because I know that he possesses certain technical knowledge which he had to get before he acquired the qualification, but because I know that he is able to think straight. On the design and research side, it's different of course, because the content of specific technical knowledge is prerequisite. And, furthermore,

I am not speaking in this case about professional firms of lawyers, auditors or architects, who sell their technical knowledge.

Having accepted these threshold qualities, our system is based on the principle that anyone may have the field marshal's baton in his knapsack. It just depends on how he's led or taught whether he keeps it hidden or produces it at some later stage. I find that in accepting this principle as opposed to what one might call a "crowned prince" attitude, I am in good company.

A Russian educationist called Makarenko enunciated an axiom which said, "If the pupil fails to learn, the fault is in the teaching".

What one appreciates more than anything else in the complicated policy discussions which surround the planning of a business is an intellect which can wrap itself with ease round a complicated concept which you don't have to spell out. Let me try and explain. Conceptual thinking is always difficult, particularly when it deals with the future. In planning a long term marketing contract, for instance, one has to try to analyse the situation which is most likely to prevail through the whole length of the contract which may be ten years or more. To project one's mind forward, to assess markets and trends under these new conditions of which the present is merely an imperfect indicator, is to walk in the area of mathematical probabilities, and interlocking histograms of several dimensions. When over and above it all, you have to recognise that the money that flows from such a series of arrangements cannot be looked at at face value in ten or fifteen years time, but must be discounted into terms of its corresponding value today, you have some idea of the problem. This incidentally, from a business point of view, illustrates the principles of discounted cash flow and linear programming.

If the potential executive possesses some of these qualities, and if at the same time, he is capable of being imaginative, of handling his human relations with tact and humanity, of being willing to delegate authority, whilst having the ability to bear full responsibility and possess above all, a broad, strong minded realism, and a strong internal drive, or

basic motivation, he is the kind of man we are looking for.

I search therefore for the system of education which will train a man in the habits of self-directed enquiry and logical inference, and through this, the discovery for himself of the abstract principles. It is no mere coincidence that in this last sentence, I happen to be quoting from a book by W. Kenneth Richmond, Senior Lecturer in Education at Glasgow University and the author of a number of books in this field. He goes on to say "gone one hopes forever is the abject notion that the art of teaching is nothing better than the process of imparting information . . . gone too, or going fast is the age-old disposition to underrate the capacities of the average child, and with it the readiness to write him off permanently as non academic" — an echo here of the Makarenko quotation I made earlier.

And continuing from Kenneth Richmond, "The fuse which will assuredly spark off a genuine teaching revolution in our time, is to be found in changes in the concept of educability which have been only brought to a head since mid-century — changes which have already produced a volte-face in official pronouncements as witnessed in the Crowther Robins and Newsome reports, and which demand fundamental re-thinking on the part of administrators, teachers, and parents alike because they open up entirely new possibilities".

What happens then when one starts looking at the educational process with the type of enquiring attitude I have postulated, to see whether it is intended to produce the kind of qualities one needs for leadership in the modern world? One looks, one observes, and one reads, and one learns from all this of the presence of a vast and unco-ordinated seething mass of innovation — new thinking, new method, new technique — none of which has as yet been reduced to a concrete philosophy, or even, if I may be so bold, to the status of a profession. I am not saying that teaching is not a profession. I am saying that the analysis and establishment of teaching techniques is not yet a profession. I am not original in making this statement, but I am quoting from W. Kenneth Richmond

in his book, **Teachers and Machines** in which he says, "In any profession, practice must find its eventual justification in some body of established organised and coherent body of theory. In this respect, teachers suffer from a certain disadvantage in that the theories at their disposal are neither well organised, nor coherent. At the highest level of discourse they tend to lose themselves in philosophical abstruseness; at the lowest they degenerate into small talk about the tricks of the trade". This was written in 1965. But this is not disheartening — just the reverse — it is intensely stimulating to witness the birth of a profession, and even perhaps to contribute something.

To conclude my thesis which began by hinting that a school cannot be expected to figure as an agent of social change except in a very limited way, ends with the assumption that it must provide the boldest lead. I quote from David A. Goslin, in the **School and Contemporary Society** in which he says, "assuming that our society and others throughout the world will continue to change at their current rates during the coming decades, we would argue that our present educational system must do more than provide students with a mastery of organised systematic and disciplined subject matter if they are to be able to react in appropriate ways to the unique situations they will face as policy makers and citizens of a world community in the 21st century. In fact, it appears likely that unless we take some major steps towards improving our educational system to produce large numbers of highly sophisticated and flexible problem solvers in the immediate future, we may not reach the 21st century, either as individuals or as a society".

I think it was Dr. Norbart Weiner of the Massachusetts Institute of Technology, that pioneer of Cybernetics in the late 40's, who pointed out that knowledge tended to develop like the spokes of a wheel, getting further and further away from each other and from the central hub which supported them, but until they were joined by a rim of interdisciplinary communication, the value of the whole thing as a wheel was really quite limited.