Management is concerned with the concept and choice of goals. A manager must first determine his own goals within the framework of overriding organizational objectives and limitations. Second, a manager must determine what methods he will use to achieve his goals—on the basis of cost-benefit comparisons. Third, the manager must design his specific management plan, which must include a monitoring system that permits him to observe and respond to any deviations from the original plan. Educational preparation is a critical factor in the development of effective managers. First, managers must develop analytical ability and learn to treat knowledge and perceptions in a problem-oriented fashion. Second, managers must learn to interpret ideas creatively. Third, managers must have the ability to lead and motivate people. Fourth, managers must be able to understand and organize information flow. Fifth, managers must understand how to delegate. Educational management is often hindered by political considerations and other noneducational factors. Also, in the operational area of education, it is extremely difficult to measure cost effectiveness. However, the lessons of business administration and factory management are still largely applicable to educational management. (Author/JG)
The Fundamentals of Educational Planning:
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No. 53  TRAINING FOR MANAGEMENT
(an outline of requirements)

by Ralph Glasser

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First of all, it is important to be quite clear as to what management is. There is a prevailing belief in business, not only in the developed countries but in the developing countries, that management is solely concerned with the organization of people. This is a fallacy; it places too much emphasis on the human relationships aspect, important though this is. Management is essentially concerned with the effective use of resources. Implied in the word 'effective' is the idea of formulating the right goals in the attainment of which the resources are organized and applied.

Management, in fact, is basically concerned with applied economics. Let me remind you that economics is concerned with the use of resources in order to achieve certain ends or targets. A very interesting definition of economics serves to bring out this point. Wicksteed defined economics as 'the study of the logic of choice in the application of scarce means to alternative ends.' This formulation is critical to all I want to say here. There are three aspects of that definition that merit attention in this context. The first is choice, the second is scarcity, and the third is alternative ends.

If you think of any human situation, whether it is in business or in private life, you will see that these three elements are at the heart of the matter. You are concerned with scarcity because everything is scarce by definition, since if this were not so there would never be any management problems! There must always be alternative goals or ends because, given persistent scarcity as a factor in life, you must always be involved in choices between alternatives. Consequently, choice is our continual task in organizing our affairs.

What I have just done is to describe the substance of management. In fact, management is concerned with the conception and choice of goals, and with the most effective movement of resources to achieve them. You will see that choice is the challenge at every turn. Management is the skill of making the right choices, both in goals and in the organizing of the means to attain them. How do you know which are the right choices? This is really the kernel of the matter. In answering this question, as I now propose to do, we shall also have defined the requirements of management training.

We have now established that management is concerned with the movement of resources to achieve goals, and therefore in the making of the most beneficial choices in resource use. How, then do you measure the effectiveness of management? There is only one way, by measuring the performance in goal selection and resource use, having regard to all the possible alternative uses of the resources you propose to commit. This is known in economics as the concept of opportunity cost; that is you measure the value expected from the resource use selected against the possible value of those resources if used in some other way. This comparison
reveals the true cost of the selection you are making; it also assists you in judging the alternative costs of different methods (resource use) of achieving the same goal.

Given, therefore, an over-riding set of terms of reference from some superior body or person, the measurement of management effectiveness begins with a judgment of the choice of goals on the above criterion. Choice of goals is itself an incomplete statement, for goal-setting, the prime management task, involves the creative act of conceiving targets, not merely selecting from existing ones. I shall return to this point later.

You will not always succeed in achieving the goal set; you may fall short in some degree. It is by the extent to which you fall short that management effectiveness is also measured. This is one way, not the only way. Another way is to measure your results in historical terms, by comparing them with performance in similar situations elsewhere.

It may be objected at this point that if you are fairly junior in an organization, you will not have the opportunity of making choices in the fixing of goals or in the allocation of resources. You are given orders which you must perform. I suggest that this is not an accurate appreciation. At any level in an organization there are choices to be made within the terms of reference given, all of these concerned with the relative cost of the resources in question: time, personnel, vehicles, materials, machines, or a combination of them of various kinds. There are always alternatives, and choices to be made between them.

I will now discuss a list, in time sequence, of the tasks of management, in the context of the above formulation.

Given the overall terms of reference set, whether you are a planner of a school building project, in charge of educational materials, or of teacher training for example, you will have to begin by determining what your own goals are to be - as distinct from the over-riding goals stated in your terms of reference - and then how you are going to deploy the resources at your disposal. To begin this, you will have to decide the limits of your freedom of action. Only when you know this, when you are sure what are your safe limits, can you proceed to conceive goals within those limits. For instance, to take a ridiculous example, it will be quite useless for you to decide that you are going to build 500 schools of a certain type if a) your terms of reference specify a school of a totally different type, and b) you have only been allocated enough money to build ten! Again your timing - which will determine a great many of your subordinate goals - will obviously depend on the resources available, and perhaps the differing rates at which they may become available.
The second type of task confronting the manager, in time sequence as I have said, is to determine the methods he will use - that is, the ways in which he will allocate resources - on the basis of cost-benefit comparisons. The expression 'cost-benefit' means, roughly speaking, that you are only able to make a rational choice by comparing the possible results, and costs, of alternative uses of a given set of resources. For example, if you have to make a journey and you have the alternative of using a ten-ton truck or a small car, and assuming that you will make the journey in approximately the same time using either, you will almost certainly choose the small car because fuel costs will be much lower. To put it differently, the cost-benefit result from the use of the ten-ton truck for this particular purpose, would be far less than if you used the small car. You can apply this sort of measurement to most types of situation. Accordingly, your second task on this sequence will be to make a selection of methods on the basis of the best cost-benefit results from a comparison of different ways of deploying your available resources.

Having done that, you will then make a plan, that is, you will decide on the deployment of your resources and budget accordingly both in financial cost, allocation of personnel and materials, etc., and in time. Incidentally, we must not forget that time is the scarcest economic resource of all. Remember that time is something you simply cannot replace; once gone, it is gone for ever. Management time, in particular, is a high-cost item.

Having arrived at a management plan, action is the next step. But before giving the signal 'start' you must have a means of knowing whether the action you have decided upon will happen as you intended. In other words, you will have to devise a method of monitoring the action so as to co-ordinate it accurately with your plan, or make some alteration - either in the action or in the plan - if events or performance turn out differently from what you expected. Clearly, if you do not provide yourself with a method of monitoring action, you will not be in full control of implementation; you will be left in ignorance of deviations, from any number of causes, until long after you could have intervened to correct the situation and prevent a wasteful use of resources. Or, indeed, you may discover by this means that the plan itself was wrong. The sooner you discover this the better! Either way, remedial action must be decided on quickly. It will be a matter for judgment on your part, how close a monitoring method is needed. The essential principle here is: concentrate on a method that will signal deviations beyond a safe tolerance. A captain of a ship, once he has charted his course, is then interested only in deviations from it, or matters which lie ahead that may cause a deviation. So, also, the manager should devise his monitoring on the 'negative' signalling principle; the absence of a negative means that the plan is 'on course'.

We are now, in this imagined evolution of the management situation, in a period of action. Typically, what could now happen? Suppose, for instance, you have made a plan to convert some old buildings into suitable accommodation for a school. You have estimated the cost in terms of every factor including, of course, time, and you start the execution. Obviously the success of your plan will be completely ruined if something happens to force you to alter the time schedule. All the cost estimates will now be wildly wrong. If unexpected weather conditions cause delays, in the building work, your cost is going to go up, and the longer the delay the higher this increase will be. None of this is specifically foreseeable. Of course, it is often the practice to include in a management plan a factor for delays. It is obvious, however, that such an estimate of a delay factor can only be correct by chance, since the future is always unknown. If there is any likelihood that delay is developing, you must have contingency plans to correct the situation. Consequently, this is an area of implementation where management monitoring of action is vital, particularly since mid-course correction of a plan is nearly always more expensive, since time presses and you have little room for manoeuvre.

You will be under pressure of time and must estimate clearly and quickly what the delay, plus various remedial or planning alternatives, will cost.

Of course, it may be objected that too much emphasis is here being placed on cost. You may say: 'What has cost to do with this situation? I have to convert this place into a school, and I have been given the materials, the time, the labour and so on. All I have to do is to get on with it!' However, we are nevertheless concerned here with assessing management effectiveness and we have seen that this must be in terms of resource use. The only way of knowing how effective we are being is to measure our performance in terms of cost. Any system of management, indeed any course of action, is only fully controllable in terms of comparative costs. Consequently any management system must include a method of quickly knowing the cost of action, and of easily comparing alternatives in cost terms.

Let us continue with our list. On the basis of the monitoring system which you have inserted into your management plan, you will be able to observe, or to have brought to your notice, any deviations that are beginning to happen - or better still, appear likely - whether due to natural causes such as weather, or perhaps because some of your personnel are not sufficiently skilled and so are needing more time to perform certain operations than planned, or because the cost estimates themselves were wrong and need adjustment. The manager's job, at that stage, is absolutely crucial. He must make up his mind quickly as to what amendments are required to his plan to ensure its progress towards the goal with the least cost increase. To put it more gloomily, what amendments are needed to avoid failure, defining failure as such a high cost increase as to call the value of the whole project into question.

It becomes clear that management is a fairly creative function. I emphasize this because of the still prevalent belief that to manage simply to follow a
set of rules. If you follow the rules, you are all right; if you do not, you are not a good manager! Clearly you cannot fix intelligent goals, within your own terms of reference in the manner described above simply by following rules. There are no rules, except rules of thought, of analysis, of cause and effect. When you are sent to do a job, for example to execute a project, or are given some task to perform, there can be no rules except overriding ones as to how your particular terms of reference fit into an overall plan. But within your particular task, the only person who can make the rules is you yourself. It is here that the creative need in management arises—and is critical. There are two reasons for this. First, it is you who must set the targets within your terms of reference; and secondly you have to be creative in devising the best pattern of method to achieve the goals.

To go more deeply into the area of implementation, let us look at another common fallacy, namely that a manager is simply a man who stands outside the action and gives orders. In a limited sense, of course, it is true; but it is certainly not the whole truth; how can you give orders if you cannot conceive what the action should be in a fluid situation, and particularly if you do not know accurately what is going on? Clearly you have to arrange a method whereby you will obtain sufficient information about the situation to enable you to make decisions. In technical terms, this is called 'feed-back'. Feed-back is a term borrowed from mechanical engineering; by means of certain signals a mechanism can indicate what is happening within it, and do so in such a way that required action is either indicated or made to happen. A type of feed-back is in the signalling provided by the speedometer of a car; as you press your foot down on the accelerator, the needle will move further over because the wheels are going round at a faster rate. Similarly feed-back in human relations, and in management, is a mechanism for performing the same signalling function, to enable you to:

(a) satisfy yourself that action is in accordance with your instructions, and to plan the next stage;

(b) ascertain precisely any deficiency in action and so amend your plan of implementation to bring you back on course.

There is so much room for operational creativity here that one can only give indications of principle. Whether you obtain feed-back by inspection or whether you provide for some kind of reporting, you must remember that you can only absorb a limited amount of total information. A frequent mistake is to make the feed-back system too cumbersome. There must never be more information flowing back to the manager than is strictly necessary.

I now come to the final stage in the cycle of management tasks; and here I must again emphasize that the process I am setting out here is a continuing one, as the word cycle implies. It overlaps on itself, so to speak, as you go through time. I use the word 'final' here because we are at the completion of a phase. The manager's task, after having accomplished the foregoing, is to see to it that the organization he has created is continually in a state to carry out all the tasks he has planned for it. Incidentally, by using the word 'organization', I do not mean that all I have
said applies only to a situation where there are a lot of people employed. I use the word organization in a technical sense to mean a management system however small. It even applies to a situation where you are managing yourself—take the extreme example—and thus managing the deployment of your own time, skills, etc., and accordingly attempting to secure the most effective use of your own resources.

It is in this context of maintenance of the organization that human relations may come to the forefront of importance, but this task relates to more than people. It is concerned with the total organization, and looks continuously to the future, immediate and distant, so as to ensure that forward planning can depend on the organization functioning as expected, and that it is consequently a secure basis for any planning. Forward planning, in fact, should include the maintenance of the organization itself as a prime object.

We have now reached a point in the exposition where we have seen a complete cycle of the management process, and a short recapitulation may be useful. It becomes clear that management is something more than simply telling people what to do. It is a creative task, and one that can only be performed if the person doing it has disciplined himself to be analytical, in understanding what is going on around him. In using the term 'creative' in this respect, I would like to use another image, borrowed this time from chemistry—the word 'catalyst'. A catalyst, of course, is something that by its presence causes other events or processes to happen. In the same way, the fully effective manager, if he behaves in the creative way I have described, will exercise a catalytic influence on his environment. In fact, this is at the heart of the matter; this is his true function.

It is appropriate at this point to say a word with special reference to the developing countries. The conditions of scarcity which I mentioned as dominant in all human situations, in one form or another, is particularly serious in these countries. There, the pressing problem is to accomplish tasks with a chronic shortage of resources. It will be clear from this fact alone that the catalytic influence of the skilled manager is in a sense far more important there than anywhere else. However, it can be said, in the same sense, that the urgency of all the tasks and needs in a developing country is far more serious than anywhere else. Unfortunately, it is in the developing countries, the countries of greatest scarcity, that management skills of a high order are scarcest also. For the same reasons, the institutions and the organization capable of training and enlarging a force of skilled managers are either non-existent or not sufficiently developed. This observation brings me to a more general view of the subject.

A useful way of looking at human skill is to regard it as part of a country's social capital. The more skilled a country's people are, the more social capital it possesses. It is in the organization and application of its social capital that a country's development depends. Management skills are in a special category here, because its creative contribution resides in its ability to bring about further growth.
I have laid some emphasis on attitudes. It is here that the basis of management skills are to be laid. Before I deal with this, let me point out that so far I have deliberately made no reference to the apparatus or tools of management, mechanical means, systems, machinery, methods. The reason for this should be clear. Sophisticated office machinery, systems, computer-technology are immensely valuable aids, but these things cannot do the creative thinking for you. Indeed it is unfortunately too often true that these methods are used to mitigate the ineffectiveness of management. They cannot, for example, analyse situations for you except in ways you determine; and they cannot make intelligent decisions for you, again except in ways you pre-determine. Machines and systems, however ingenious, can do only what they are told. The expression 'management systems' is therefore highly misleading. They do not 'manage'. They can be extremely useful if you have the creative ability to use them well. It is the presence of the catalytic manager that can alone ensure this. Far more fundamental, therefore, is the education of people in the appropriate ways of thinking, and their further training in the disciplines required. Educational preparation is therefore a critical factor.

What are these requirements in education and training. In the first place, managers must have analytical ability, and must be accustomed to treat knowledge and perceptions in a problem-orientated fashion. In other words, they must be accustomed to relate knowledge immediately to practical situations and applications. Let me quote an instance where a young man's education clearly not prepared him in this way. It is a true instance. In a certain country, a senior adviser to a Ministry requested an assistant to get him a list of the companies whose shares were quoted on the Stock Exchange of that country. The assistant was a recent Economics graduate of a university in that country. When the information did not reach him after a whole day, the adviser sent for the young man and asked why he had not produced the list. The assistant said it was a difficult task. In surprise, the adviser said 'Difficult! you are an economics graduate just come from university! You should have no difficulty in this!' The assistant replied: 'Yes, but they never taught me how to solve problems!' To him, this task was a problem. The reason was that the system of education relied on the memorisation of pages of textbooks, without the slightest attempt to impart the discipline of relating knowledge to the real world. Such a system of education, where knowledge is completely divorced from practice, virtually deadens a person's natural creative ability, in the same way, as a normally active person, who has been confined to bed for a long period by illness, may find it difficult to walk properly; his leg muscles have been 'taught' not to work. So also with one's mental muscles. Such methods are unfortunately quite common. The system is often called 'learning by rote', that is, memorising the words in a textbook or in the lessons given. Thousands and thousands of young people are being sent out each year from such institutions with stores of memorised facts in their minds; but since they have not been exposed to problem-orientated training, they are handicapped in using their minds properly. They have little or no experience in analysing the ingredients of a situation, no discipline in rearranging its parts in a form that will point towards constructive action. And this is the important point, since as we have seen it, it is constructive action that must be the fruit of management thinking. In
the system of education that relies on learning by rote, the worlds of theory and of action are completely divorced. And in a developing country particularly, such education - if one can call it that - is wasteful. The development of analytical and conceptual skills is the necessary basis for producing good managers, especially the awareness that all mental effort must be action-orientated to be of any value. Growth and development vitally depend on people who have no difficulty in proceeding smoothly and swiftly from analysis to action. These faculties can be taught and developed. When we are born, we have to learn to see! Our eyes do not know how to focus properly by instinct. To continue this analogy, having learnt to see, we have also to learn what to do with the vision once we have acquired it. This is what I mean when I speak of developing analytical skills, and problem-orientated training. Of course, it is true that many people seem to be naturally gifted in this, or perhaps one should say that they retain and develop the gifts in spite of, their education! For the majority, however, the correct early education and subsequent training is vital in building up a country's management cadre to the high levels required by developmental needs.

Secondly, people must be taught to interpret ideas creatively; not simply to rearrange the ingredients according to certain rules, but to contribute an element of imagination that will change the situation into something more valuable than a mere sum of the parts. There is an old story that shows this difference between merely observing a situation and contributing something fresh to it. A certain landowner was asked by one of his peasants one day: 'Why is it that you do not give me a horse to ride as I go about my work, as you do the foreman? Why do I have to walk about the fields on my own two feet?' The landowner thought for a minute and then said: 'I will show you. You see on the horizon there is a caravan passing. Go and find out something about it'. Off went the peasant and presently returned and said: 'Sir, the caravan is owned by a certain Mr. So-and-so'. 'But where is the caravan going?' asked the landowner. Off went the peasant again and returned and said: 'Sir, the caravan is going to so-and-so'. 'But what kind of merchandise is it carrying?' demanded the landowner. Away went the peasant again, back and forth, each time answering the one question put to him the time before; and so a number of questions were answered in a laborious way. After some time, the landowner said to the peasant: 'Wait and I will show you something'. He called to his foreman, who rode up on his horse, and said to him: 'Foreman, go to that caravan over there and find out something about it'. Off trotted the foreman on his horse, and shortly came back saying: 'The caravan is owned by Mr. So-and-so. It is carrying this and this merchandise. It is going to such and such a place. The price of the merchandise is so much...' and thus brought out a comprehensive story of the situation, finishing by adding: 'And I think that the price he asks is far too high, and I think we should offer him so much.' In other words, the foreman had assessed the situation, produced a full report of which judgment could be made if necessary, and furthermore had made a decision as to what action to recommend. The landowner turned to the peasant and said: 'You see? That is why you have to walk on your own two feet - and the foreman can ride on a horse!'

The point here, of course, was that the landowner was underlying the fact that the peasant had not paused to analyse why the landowner wanted information about the caravan, and did not frame his enquiries accordingly.
namely to provide a basis for a decision, whereas the foreman had used his analytical ability to do so.

Education for management must therefore aim to build this kind of mental discipline, the quick perception of a situation coupled with the ability to transform this perception into creative planning and action. Each of these stages, perception, appreciation, planning and action, should follow one another quickly and naturally.

I return to a point I passed over briefly at the beginning, namely the extent to which management is concerned with people. Of course, in the last resort, action takes place through people. Management is certainly concerned with organizing and co-ordinating the behaviour of people, and a manager must be able to translate his ideas into terms easily understandable by people who have to co-operate in pursuing the planned goals, and to whom he can transfer his ideas for action with confidence that the planned action will follow. Part of the manager's compendium of attributes must be an ability to lead people and to motivate them. By motivation, I mean to transfer to them his own energy to pursue the planned goals, and to maintain this energy to the full. Of course, motivation includes a great many aspects which we cannot pursue here; including selection, environment, reward, identification, with the task, etc. However, in total they constitute one of the features of the situation which it is the manager's task to understand, organize and control as part of his function of goal-setting and deployment of resources.

Another important attribute of the manager is to be able to understand and organize information flow. This is often dismissed as obvious. Yet one of the most unfortunate aspects of many management systems is that there is too much information. Again, a common management problem is that the information that does come through the system is so badly organized as to be equivalent to a state of no information. One need only go into any large organization and see the immense amount of labour employed in shifting pieces of information from one point to another, and in absorbing and processing it; so much so as to create the fallacy that management consists in the moving of pieces of paper! Consciously, of course, no manager would admit this for one moment in regard to his own organization. One of the skills of management is to organize the provision and movement of information so that only essential facts and signals are moved from place to place. This demands careful and precise selection. Thus, reporting from one management level to another is a form of information flow; and here one must remember that the absorption of information by any one person is strictly limited, making it all the more necessary for limitation of information flow to be a feature of any management system.

For example, Napoleon maintained a strict discipline in this respect among his staff. No more than eight people were to report to him directly. He did this, as other commanders have done, for very good reasons; he knew his own limitations in the absorption of information and he knew, as all good leaders and managers do, that his creative contribution to a situation...
could only come after essential information had been absorbed and not before.
He had therefore to allow himself time for creative thinking and for the
making of decisions. This limitation on reporting is part of a concept
known as the 'management span of control'. A good manager must understand
this in order to ensure in his planning that he is not prevented by excess
reporting and information flow generally from organizing his own time
effectively. What is more, he must see to it that everyone else in his
organization is similarly freed from the same handicap.

The bigger the organization, the more opportunities there are for
experiencing the problems of avoiding too great a strain on the management
span of control. It is here that the art of effective delegation becomes
vital. If you have only eight people-reporting directly to you and, say,
several hundred people in the system, it is obvious that you cannot personally
be in direct operational contact with them all. Good management must include
understanding how to delegate. Delegation is possibly the worst performed
management task of all! In the same way as no man will ever admit to being
a bad manager, no one will ever admit that he does not delegate properly.
Inwardly, of course, people are aware of their own limitations, but they
resent any suggestion that they do not understand how to organize their
own time and their energies. When a manager is compelled by pressures of
time and circumstance to delegate, this is a severe test of self-confidence,
and, in fact, of managerial ability. He is asking someone else to perform
a management task for which he himself is answerable, and to take decisions
for him. This is very painful. The temptation is often to delegate in-
completely, so that full, or at least adequate authority is not handed over
to the subordinate. In such a situation, the superior may think he is
delegating. In fact he retains decision-making authority within his own
hands. The result is that he wastes both the delegate's time and his own.
True delegation is quite different. The work 'delegation' has a very precise
meaning. It means that the person delegated to is given certain terms of
reference within which he is given complete authority. By complete authority,
of course, is meant that he must take his own decisions and not come back
to his superior about them. If he is compelled by instruction to refer back,
th en his superior has not really delegated. He has been made into a mouth-
piece or instrument of the superior and not a true delegate. If so, the
superior has destroyed his initiative, and his power to contribute to the
work of the system; in addition, the superior has handicapped himself,
since he must do the delegate's decision-making job as well as his own.
Both are the losers.

Of course, there are risks in delegating. You take the obvious risk
that the person you have delegated may take the wrong decisions. This is true,
and there is no certain way out of this. There are, however, ways of limiting
this risk. Apart from care in initial selection, the commonest method is a
financial limit on authority, and there are many variations of this.
Budgetary control in its numerous forms, is the prime example, sometimes
called 'management by exception'. This term means that the budget sets
 certain financial limits to decision-making authority; above these limits -
the 'exceptions' in fact - the delegate must refer back for confirmation
of his decisions before implementing them. Below the limits, his decision-making authority is complete. The financial limit will vary, of course, according to the level in the system, and various other factors. If the delegate is, say, director of education for a certain area, he may have a very high financial limit, perhaps hundreds of thousands of dollars. If he is in charge of stores in a village, he may have financial limits of as low as a few dollars, beyond which he must refer to a higher level for permission to purchase some small replacement items.

In terms of management the purpose of such a method is quite logical and clear. It is to split up the total load of decision-making and to distribute it in suitably graded parts within the organization. Delegation thus emerges as a management method of central importance. There remains, however, the risk implicit in delegation as such, namely that one cannot classify every possible eventuality in advance by budgetary limits alone. This will not give you security that every decision taken below the limit will either be the correct one or, if wrong, will not be unbearably harmful. Correctness or otherwise of decisions taken below the limit can only be known in detail after the event, either because their consequences become known through the difficulties they may create or by periodic budgetary checks. There is thus only historical control, not actual control. As one has yet discovered a satisfactory way out of this difficulty. All one can do is to minimize it as far as one can. It is one of the penalties of size.

One of the many variations of the above is worth noting. It is called 'management by objectives'. A very interesting book, in fact entitled MANAGEMENT BY OBJECTIVES by Odiorne, is worth reading in this connection. While the method is more commonly used for business, it is adaptable for other activities. You set each section of your management system a target which can be, if it is a business, the achievement of a certain figure of sales, if it is a non-business activity, it could be the completion of a certain project within a given time and within certain financial limits, or the achievement of certain standards of performance. The main point is that, after having set the objective and the limitations of, say, time and cost, you then leave the manager in full control of the situation. There is a proviso, of course, that if he thinks he is going to fail to meet one of the objectives he must reconstruct the plan and get approval for this from the next level of authority above him. The fault may be that the plan was wrongly conceived, that certain unknown factors might have intervened such as higher materials costs, or that the labour force was below the required standard. However, there is no doubt that this system has many advantages over purely financial control systems in that it permits the manager greater freedom of manoeuvre in which to employ his creative ability. The crucial factor is in the correct framing of the objectives.

Before making special reference, now, to the sphere of education, it must be appreciated that management does not change in principle when adapted from one application to another. It is only the adaptation itself that may reveal superficial differences. For instance, it may, in some cases, be more difficult to devise the cost-effectiveness tests of planning referred
to above, or to frame standards that are comparable and can be expressed in budgetary terms. One particular disadvantage in applying management principles to education is that the setting of targets, the overall policy of educational planning, is almost always confused with factors that are not strictly speaking educational. There may be factors that may be broadly called political, environmental considerations, sociological influences, which interfere with the complete freedom of action of the educational manager. These factors are endemic in the educational field of activity, and we have to accept this. Even so, within these limitations, it remains true that the manager, at whatever level, is able to - and indeed must - construct his own targets and deploy his resources economically, that is judged on cost-effectiveness criteria. One of the great problems confronting managers in education is the apparent reluctance to frame plans with sufficient clarity. People in authority are too often inclined to safeguard themselves against future criticism by including ambiguities in their policy directives. The result is that every subsequent action to implement the policy must suffer from the same lack of clarity. It is important, therefore, for the manager to ensure that the initial planning for projects is as free as possible from such ambiguity. There must be insistence on the closest initial analysis of tasks and a clear appreciation, by all concerned - including the higher policy makers - of the resources available both in terms of opportunities and constraints.

Another major defect of most systems also stems from the broadly political implications referred to. Most, if not all, educational planners are in the public service system; consequently, there is perhaps a greater tendency than among business managers for them to exercise caution in planning objectives in order to ensure success in implementation, that is to over-insure themselves against possible failure to meet their own goals.

There is not much one can say about constraints such as these, except to recognize them and to evaluate them accurately in the given situation. Because these difficulties are endemic, greater weight tends to be placed upon operational performance by individuals than on efficient planning in the first place. Consequently, if anything goes wrong, it can never be the fault of the planner! It can only be the fault of the people executing the plan! However, awareness of these problems is of importance in itself. Beyond this, one is forced back on three main management safeguards: constant emphasis on clarity and precision in planning and goal-setting; extension of cost-effectiveness analyses and the training of all levels in this approach; and the greatest possible precision in the selection and training of management personnel.

Of course, in the operational area of education - teaching and related activities - one acknowledges that it is extremely difficult to measure cost-effectiveness except by largely intuitive methods. For example, in many developing countries, and in developed ones too, most people recognize that classes are too large, equipment often unsatisfactory, supplies of textbooks a problem both in substance and number, to mention only a few of the problems in the way of measuring cost-effectiveness in a system. Quantification in
many areas of activity must remain a matter of judgment. Hence the importance of selection of people for mature administration, and their continued training to ensure and develop this maturity. However, while acknowledging the difficulty of transferring the models of business management to education, the lessons of the business world and of factory management are still largely applicable, particularly in such areas as the provision of fixed equipment, supplies, and the selection, training and organization of the administrative sector.

One important but frequently minimized difficulty is common to both education and business. There is a tendency for educational administrators to be selected from the ranks of teachers, not always for their proven management ability. In the business world, for instance, it is common for managers of sales departments to be recruited from the ranks of the salesmen. One would have thought it self-evident that the qualities required of a manager of a department are largely different from those of a good salesman who is selling soap, cosmetics, etc. Similarly, the qualities of a good administrator are not the same as those needed to be a good teacher or lecturer. Yet, though apparently obvious, this fact appears commonly to be ignored. This is largely due to traditional influences, for example, because in many educational systems career advancement for a teacher involves at some stage moving into administration. One way of dealing with this problem would be to provide management training for teachers as well as for others who plan to confine themselves to the field of administration. For the able teacher, however, who has no aptitude or inclination for the management role, there should be career opportunities that would enable him to disregard the administrative line of advancement for career or status reasons alone.