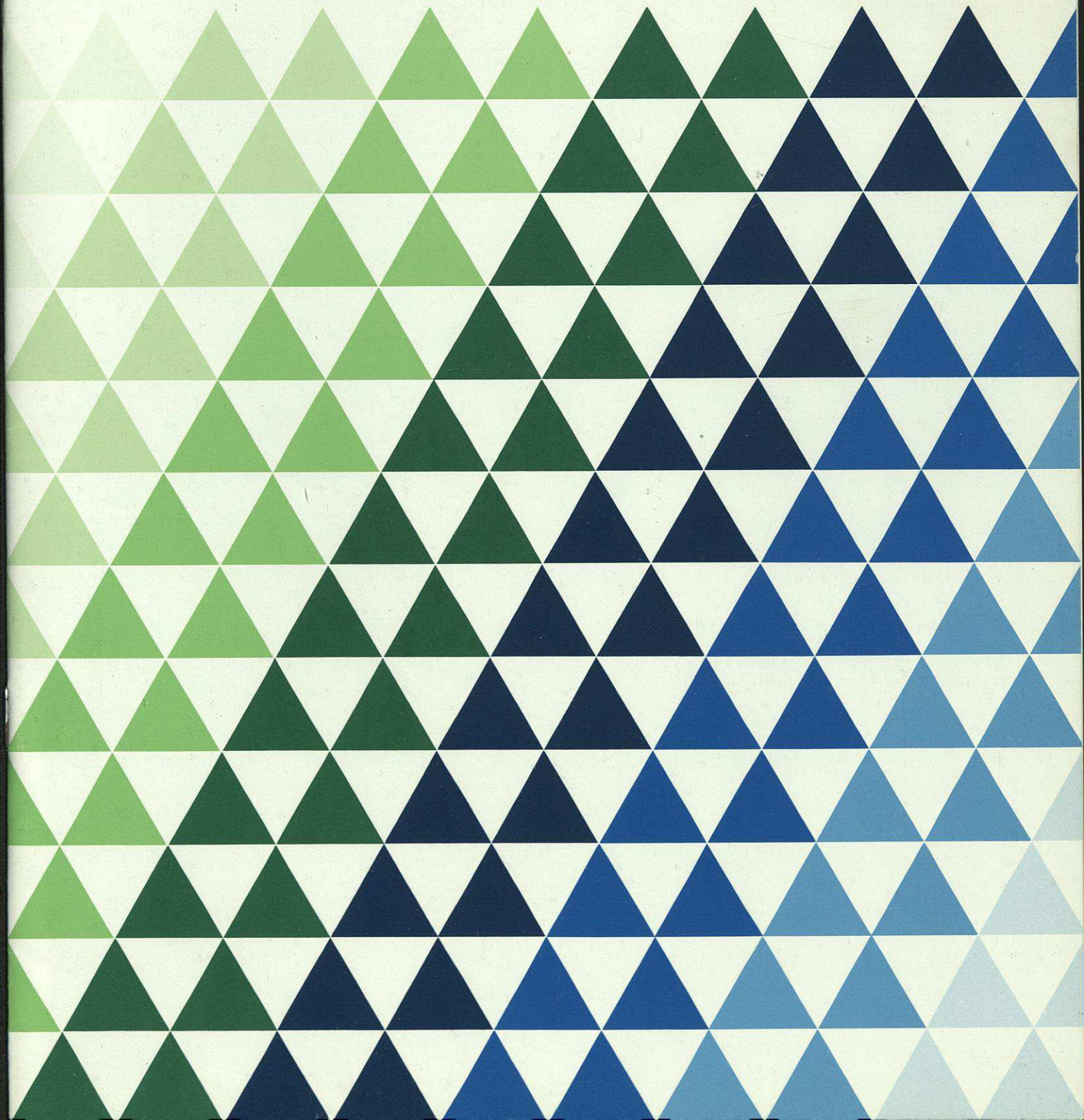


# Management Summary

BUTLER COX  
FOUNDATION

## Senior Management IT Education





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Management Summary  
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Educating senior managers in the realities of information technology (IT) is widely recognised as a crucial task. As information systems move to the centre of the competitive arena, it becomes ever more necessary for senior managers to grasp the contribution systems can make. But our research suggests that most of the training offered to senior managers is both wrongly targeted and ineffectively delivered. Based on new research and insights, Report 58 seeks to provide answers to five key questions:

- What are the important topics for IT education for senior managers?
- How is it carried out at present, and with what results?
- Why do systems departments find it difficult to educate senior managers about IT?
- Is the difficulty connected with the way senior managers learn?
- How can the task be better undertaken?

## The key topics

Although there are many IT-related topics about which senior managers might usefully be informed, our research (as illustrated below) found that three topics are widely agreed to be the most important:

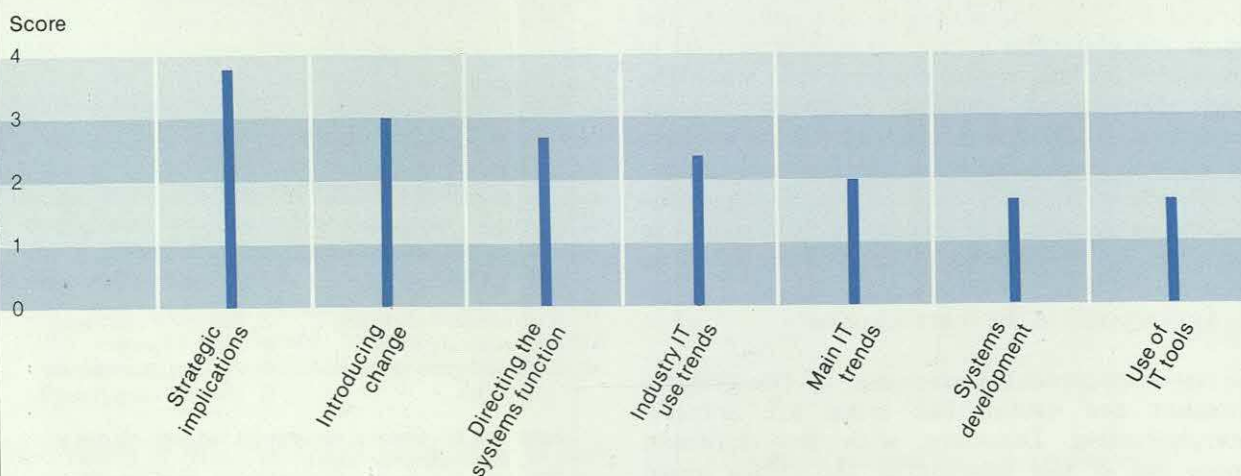
### IT can reshape markets and industries

Systems now have the ability to bond suppliers and customers together; to reshape the way firms share the total added-value in a business line; to sharpen competitive edge; and to create and sustain market dominance.

### IT can provide greater organisational choice

Recent Foundation research suggests that information systems progressively change the organisational options open to management. They provide ways to cut lengthy chains of communication; and they provide ways to run complex businesses more responsively.

Figure 1 Important areas of senior management IT education



Respondents ranked each of the areas of education on a scale 0 (unimportant) to 4 (very important). The score shown is the average score for each area.



## Senior management must direct the systems department

The third topic for top managers' education is their role in controlling and directing the systems department. Our research shows that systems managers themselves believe they need direction towards the business goals of the enterprise, and that only the board of directors (or its equivalent) can provide such direction. To do this effectively, the board requires a good understanding of the capabilities, and the limitations, of the systems function and the services it can provide.

Teaching senior managers other things – such as how systems are developed and how to use IT tools like spreadsheets and word processing – may be interesting or even useful. But it is no substitute for education in the key areas defined above. Under certain circumstances, we find that teaching senior managers about inessentials may even be counter-productive, because it weakens their real understanding of why systems are important. Some training courses for the board actually make it harder for the systems director to do his or her job.

## The systems department generally teaches not what is needed but what it understands best

A great deal of top management IT education is now being provided (despite doubts about its effectiveness) and more is planned for the future. Sources of such education include the systems department itself, consultants and gurus, newspapers and television, suppliers of hardware, and business schools. The survey conducted as part of the research for this report suggests that when the systems department provides education for top management, it tends to concentrate on the subjects it knows well – more technical in flavour – rather than the important topics listed above. It leaves the important subjects – intentionally or otherwise – to others. The failure of the systems department to concentrate on the most important topics is illustrated graphically in the chart opposite.

Some top-management courses run by the systems department are useful, but some are actually counterproductive. Disasters, with the chairman storming out of the meeting or the entire board decamping at lunch time are pretty rare. In general, most boardroom seminars are cordial,

well-prepared, and attentively received. Yet at the end of the day, the atmosphere is often inconclusive. "It's all been very interesting, but where do we go from here?" is a typical reaction. Although most such events are by no means a failure, they simply are not the success that systems directors feel they could and should be.

Why is this so? The most common answer is that the purpose of the education has not been correctly or fully analysed. The systems department believes it should teach something, so tends to concentrate on the technical areas where the systems staff are most comfortable.

## Systems staff are not credible educators on the most important topics

When the systems department does turn its attention to the most important matters, it is not regarded as the most effective source of education. The chart opposite shows how systems staff are more effective at teaching the least important topics and vice versa.

Figure 2 The systems department concentrates on the least important topics

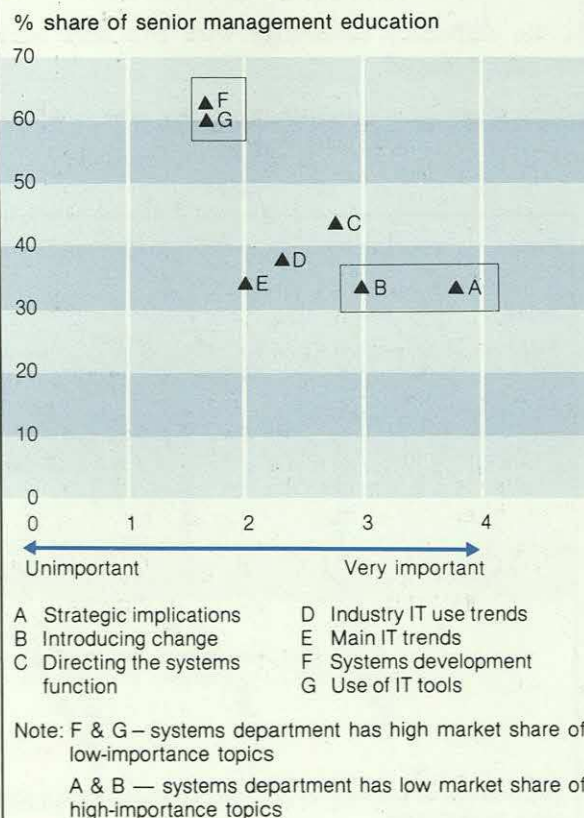
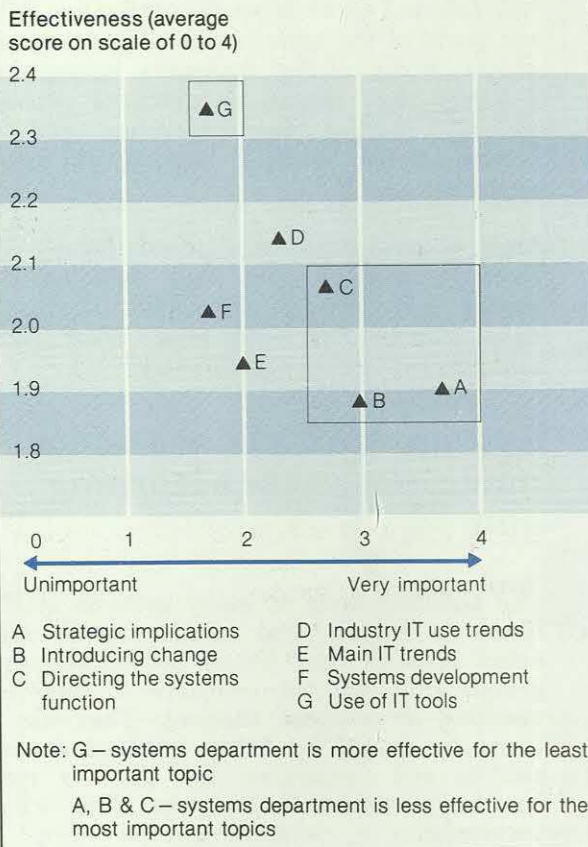




Figure 3 Effectiveness of education provided by the systems department is lower for the most important topics



## External educators have value, but cannot fulfill the whole task

Even though systems directors know that their own education programmes for senior management lack credibility, they do not have a high regard for the ability of others – consultants, gurus, business schools, or suppliers of hardware – to teach the important subjects (see opposite). Although the systems director has the internal knowledge of the enterprise required to teach the important subjects, he lacks the skills, and hence the confidence in his own resources, to tackle them. External speakers on training courses may have the lofty vision, relevant skills, and unbounded confidence; but much of what they say strikes board members as general and theoretical, unrelated to the daily pursuit of profit.

The end result is that the board learns how to use Lotus or WordStar – but not how to use IT to reposition itself within its industry and secure a competitive advantage.

## Senior managers rarely get the education they want or need

What senior managers believe they want from IT education may be different from what they actually need. And both may be different from what they get in practice.

What they need is education that concentrates on the three key topics already mentioned – the ability of IT to reshape industries, the role of IT in bringing about organisational change, and the role of top management in directing and exploiting the systems department. Our research suggests that they rarely get what they need.

Figure 4 Relative effectiveness of different sources of training

Source of training	TOPIC		
	Strategic implications	Introducing change	Direction of the systems function
Average rating for the systems department's effectiveness (on scale of 0 to 4)	1.9	1.9	2.1
IT suppliers	– 5%	*	– 15%
Business schools	+ 10%	+ 5%	– 10%
Professional associations	+ 10%	*	– 10%
Consultants	+ 15%	0	– 15%

Key:  
 \* insufficient examples to provide a reliable rating  
 + % better than the systems department  
 – % worse than the systems department



## Senior managers want relevant and practical education

What senior managers want is usually fairly easy to determine, because they are articulate spokesmen; one of the managers we interviewed described his need as "very relevant and simplified education". In other words, the education must have relevance to the industry senior managers know and the problems they face. It must be related to the daily task of making their company profitable. Much of the formal, theoretical teaching about strategic planning that emerges from American universities and business schools therefore runs the risk of being too abstract for many senior managers. Teaching that concentrates attention on amazing technical developments is also likely to be wide of the mark for senior managers.

Thus, senior managers rarely get the IT education they need, and rarely get the education they want. It is amazing that with such poor provision of education, information systems have made the progress they have in most organisations. With better educated senior managers, the potential for systems must be enormous. How can better education be provided? The first step is to understand how senior managers learn.

## Understanding how senior managers learn

In Foundation Report 49 we reported on strategic systems planning. We concluded that the planning process must contain elements that are social and political, as well as the purely technical and analytical. Similarly, in researching the difficulties of educating senior managers, we believe that one of the problems is that the would-be educators do not take sufficient account of the human element in the learning process. It is not sufficient to be thoroughly familiar with the topic and to give technically competent presentations. Different people learn in different ways and the methods used must be appropriate for the audience. As for Report 49, we again found the work of the American researcher David Kolb to be relevant to our problem.

### People learn in different ways

David Kolb has identified a learning cycle that consists of four stages: concrete experi-

ence, reflection and observation, abstraction and conceptualisation, and active experimentation. Everyone uses each of these stages to some extent when learning about a subject, but different types of people emphasise different parts of the cycle. As the figure opposite shows, many senior managers belong to a category that learns by practical problem-solving, looking for difficulties and resolving them, without seeking theoretical explanations.

Most systems staff, in contrast, belong to a learning category that likes inductive reasoning and is more interested in theories than learning by experience. Most senior managers do not learn in this way.

## Systems staff educate senior managers across a learning gulf

The teaching style of many systems staff is likely to irritate and confuse senior managers because they belong to learning-style groups that are not receptive to classroom teaching or abstract theories. They like to learn by doing, by being involved in case studies and discussion. This is why many boardroom seminars are less than wholly successful.

## There may be a case for not using a classroom setting for senior managers

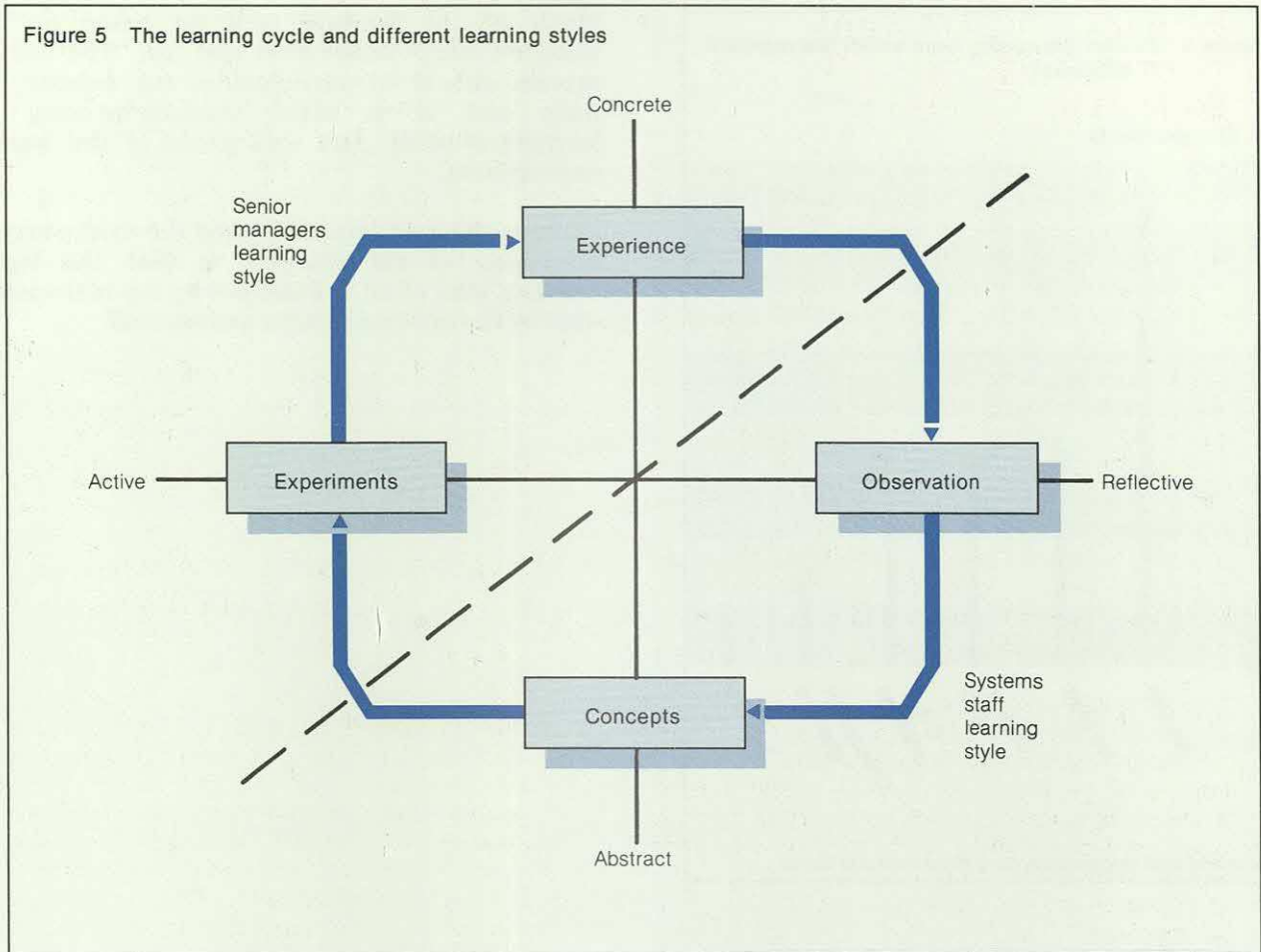
Some astute systems directors believe that formal education for senior managers can never be successful. They prefer to educate through the medium of work. Whilst such an approach is undoubtedly an important element of successful senior management education, Butler Cox believes that formal education can be successful, if it is properly handled.

## Preparation is the first priority

The systems department should prepare very carefully, starting by trying to understand the motivation and learning style of each key person who may need education. They should also study the business performance of the company, its main



Figure 5 The learning cycle and different learning styles



divisions, and its key competitors. This preparation is required for two main reasons.

First, our research showed that, although systems departments feel that more education is required, they believe that senior managers apparently do not share their view. The major barriers to further education are that senior managers either have no time or do not see the need (see the chart overleaf). We believe that there is a real need, and that systems directors must therefore find out how their organisation's senior managers may be motivated to learn more about IT.

The second reason is that, to be seen as credible educators, the systems department needs to understand what is important to senior managers, and must be able to explain the relevance of IT in terms that senior managers will understand.

Thus, the systems department must prepare as carefully for its senior management IT education initiatives as if the company were an external customer considering making a purchase; in a sense it is. All of this is very time-consuming. But it is time well spent.

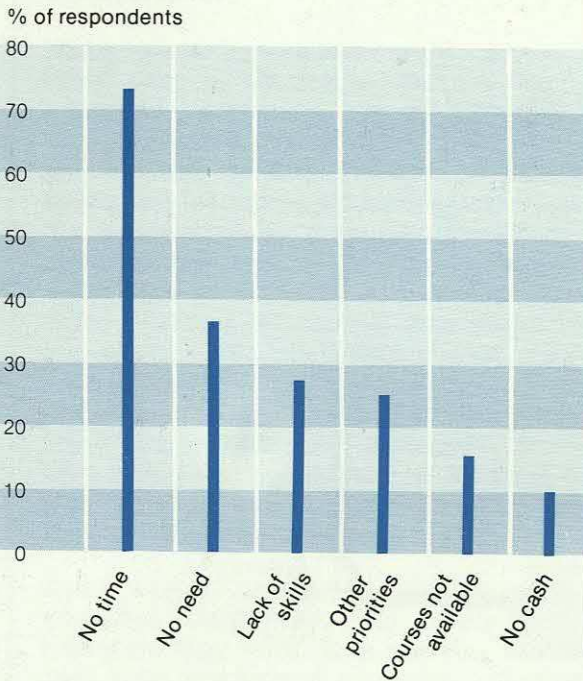
## Install a four-stage learning programme

The process of senior management IT education is a continuing one, and it may take a year or two before real benefits are obtained. The education programme should be based on the four-stage learning cycle:

- Provide each senior manager with an acceptable starting point for the learning process, according to his or her learning style. Concentrate initially on the two or three senior managers who have been motivated. Get them to describe their own experiences of information systems and provide them with a variety of new IT experiences through hands-on sessions. Avoid a teacher/student situation; instead, encourage an atmosphere of joint exploration, so that a fund of 'war stories' can be collected.
- Begin to draw out the lessons learned from their IT experiences. Examine a successful and not so successful project, preferably real-life ones. What were the differences? What was done



Figure 6 Factors preventing more senior management IT education



Note: Several respondents gave more than one factor

right? What were the benefits? Avoid emphasising negative conclusions; the aim is to develop and sustain confidence. Encourage them to relate their experiences to real-life situations in the context of the organisation, its business sector, and its competitors.

- Encourage senior managers to look for general rules that will explain the problems and secure the benefits identified in the previous stage. By doing this, senior managers will understand better the structure of the problems they are discussing. Select a current situation (formulating the systems department's budget, for example) to which the rules can be applied.
- Apply the rules formulated above to the selected situation. Observe the results. Refine and extend the rules in successive passes round the learning cycle.

Much of the learning will be based on case histories, many taken from real life. The learning process should be participative, not didactic. The main aim is to make learning-by-doing and learning-by-study part and parcel of the working environment.

Perhaps the most important, and the most worrying, conclusion of our research is that the biggest learning task of all is faced not by top management – but by the systems director and his staff.

Senior Management  
IT Education





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