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Assessing NHS Managers' IM&T Competence

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Abstract. This paper describes how Checkpoint, a self-assessment questionnaire, is helping managers in the UK's NHS identify their strengths and weaknesses with respect to their use and management of IM&T, and hence implement development plans to become fitter in the IM&T arena. This paper presents the trends and benefits which are resulting from Checkpoints use and their implication for the future education and development of managers in the NHS.

1. Introduction

Increasingly, the organisations and individuals that succeed will be those who not only know 'how' and 'what' but also 'beyond' [1]. This means the ability to use and manage information and information technology will be one of the core competencies [2] which any successful organisation and the individuals therein must possess. Managers and their organisations will therefore need to be 'well informed'.

Nonetheless, as Farbey *et al* [3] and others have found, there is often very little relationship between the investment in information management and technology (IM&T) systems and business performance. All too often systems are implemented in isolation to the business objectives, and there is a lack of attention paid to the human factor, namely the users. Optimising the return on the investment in any form of (IM&T) system requires the IT, human resource, business strategy and organisational culture to be synchronised, as shown in Figure 1 (after Venkatraman [4]).

Invariably, failure to optimise the IM&T investment is due not to any technological problem, but rather to organisational and human resource issues. However, too often scant attention is paid to either the organisational culture or the human resource factor. Typically, 80% of an organisation's effort is focused on the technology and only 20% on these other factors when, it could be argued, the ratios should be reversed.

NHS organisations are operating in an increasingly complex environment. The challenges appear as the consequences of more complicated requirements and the demand for faster business and clinical response times. IM&T can not only help to meet these new challenges through enhanced communication and information for control, but also precipitates change as new capabilities cause work to be carried out in different ways.

This year will be a milestone for IM&T in the NHS. A new format NHS Number is being implemented. It will be a key enabler for the exchange of clinical and administrative

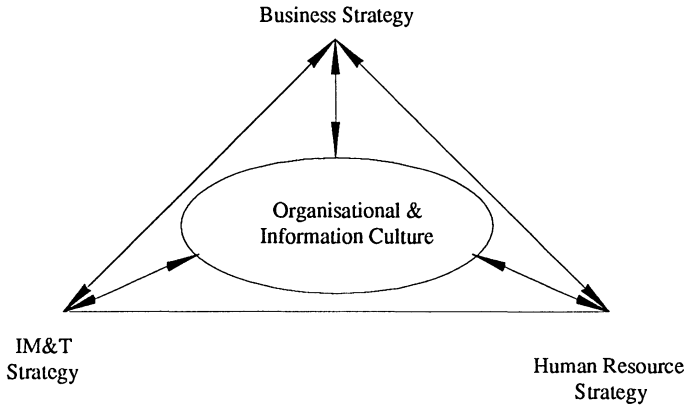

Figure 1 Synchronising the IM&T Strategy

information. The NHS Nationwide Network will become operational. This will enable all parts of the NHS to communicate with each other electronically. With these initiatives it is possible to develop more efficient contracting - the use of Healthcare Resource Groups and Contract Minimum Data Sets encourages the exchange of information via the new NHS-wide Clearing Service whilst providing management information for the NHS Executive as a by-product. The electronic management of the NHS is increasingly becoming a reality.

It used to be thought that management's main role in ensuring the successful use of IM&T systems was to be involved only in the implementation [5], and that their actual use of such systems had little bearing on the issue [6, 7]. However, as Kanter [8] points out, what the chief executive and his managers do sends a strong message to the rest of the organisation about how they, too, should behave.

Managers' competence to use and manage their IM&T resources is becoming increasingly critical to the success of an organisation and its ability to achieve a real business return on investment in such systems. As a result, increasing emphasis has been placed on educating managers about the strategic use and management of the IM&T resource. Most managers now have a computer terminal on their desk [9], but how many use them productively is questionable [10]. Despite all we know about management education and development, motivating managers to become end-users rather than being 'chauffeur driven' [11] remains a vexed subject.

2. Managers' Personal use of Computers

Sundridge Park has undertaken an extensive research programme looking at how senior executives are interfacing personally with computers, what factors motivate and inhibit their use of the technology, and how they have developed their competence with computers. The study is based on interviews with over 100 senior executives. Amongst the users, one of the major motivators is an unquenchable thirst for knowledge about their business, and a desire to know beyond.

Whilst some managers rapidly develop their competence to become 'expert users', others never graduate from being 'chauffeured-users'. There is clearly no right and wrong as to the level of competence managers achieve: the key for trainers and administrators is to identify what is achievable and how they can achieve it. In many cases we have observed managers start out as keen users and then see their use drop off. This paper will outline some of the key findings about the factors which influence some managers to make more extensive use of the computer than others.

3. Checkpoint

As a result of the Sundridge Park research programme and as part of a joint project with the NHS IHCD, a diagnostic instrument called 'Checkpoint' has been developed which allows managers to explore their competence to use and manage their IM&T resources, as shown in Figure 2. From Checkpoint, they can identify the gaps in their own personal competence and mismatches within the organisation's information culture. Development and, as appropriate, change programmes can be determined for the organisation and for individuals. The Checkpoint process has been described in detail elsewhere [12]. In summary, managers complete a 250 to 300 item questionnaire which is then computer marked. The computer-produced report which each manager receives indicates how they compare with other managers who have completed Checkpoint. It also indicates where either they could obtain more benefits from the skills and expertise they already have, or perhaps should consider developing their level of competence further. The report, which includes an action plan, is a working document which managers are encouraged to return to over time especially as they acquire new skills and knowledge.

Checkpoint is designed for middle to senior managers across the entire spectrum of management within the NHS, from those with purely administrative roles to those with medical responsibilities. It was officially launched in the NHS in June 1995.

4. Preliminary Findings

Both managers and those responsible for providing IM&T training say they have found Checkpoint very useful, and some interesting results and benefits are beginning to emerge, for example:

- managers are finding they are more skilled than they thought they were;
- many non-user managers are, in fact, very motivated to learn to use the computer but do not know where to start;
- younger managers may be more skilled at the local use of IM&T but are less well equipped to deal with the management issues such as implementing a cost benefit realisation plan; and
- Checkpoint enables a more effective dialogue to take place between managers and the IM&T professionals.

These findings and their implication for the managers development are interpreted and explained in the light of Bandura's [13] theory of self-efficacy, and the theory of reasoned action [14].

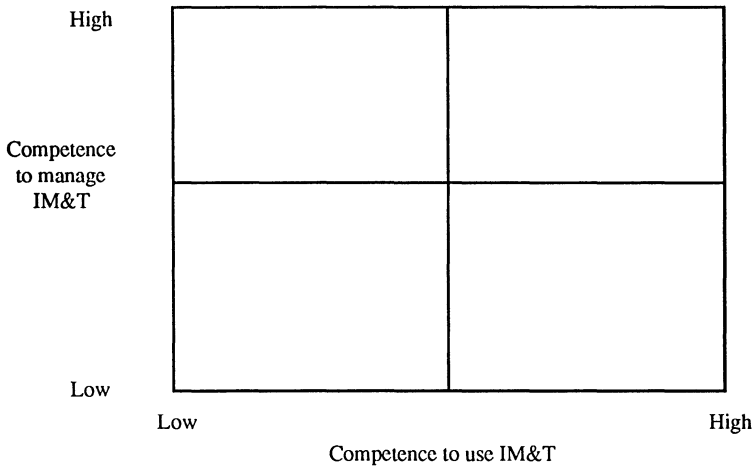

Figure 2 Managers' Competence with IM&T

Venkatraman [15] suggests that to exploit IM&T to its fullest one must move beyond a level of local use whereby all one's use is confined to one's own specific needs. Many young managers, whilst very skilled at using the pc for their and their business unit's needs (eg radiology), are far less capable of thinking about and planning how their IM&T resource could be used to work more effectively with others outside their own local environment. This finding has implication for the development of future generations of senior executives.

One of the issues often cited as a barrier to the use of IM&T is the lack of meaningful communication between the IM&T professional and the end-user manager. Checkpoint is helping overcome this issue, and the resulting benefits are starting to be seen. Some of the trends and relationships which are starting to emerge show that the managers' level and continuity of use of IM&T are related to:

- their attitudes towards the computer;
- the content of their job; and
- the sources of IM&T support available to them.

These findings have implications for the future education and development of managers in public health sectors and particularly the UK's NHS. For example, having motivated and trained managers to use the available IM&T resources, it is important to ensure they remain committed users and do not let their competence with the technology decrease. A decline in use, for whatever reason, does not represent an effective use of the initial investment in developing the managers. More effective benefits would clearly be obtained if managers were encouraged either to continue developing their IM&T competence or maintain their current levels of use as befits their needs.

A second set of trends relates to the types of applications which are being used. Despite a wide range of relatively user-friendly software, managers still have a tendency to use a

very limited range of applications regardless of their appropriateness for the task in hand, as others have found in the past (see for example [16]). Often the most frequently used application is the one the manager first learned to use.

5. Conclusion

Checkpoint is helping managers in the UK's NHS to become fitter users of the IM&T resources currently available to them, and hence well informed managers. The composite data from the Checkpoint database is providing those responsible for the IM&T for Managers Training Programme with feedback on the benefits from their previous initiatives and guidelines on where to focus their future efforts.

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