

## Disseminating knowledge to build a learning organization

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**Abstract** In recent years the learning organization has become popular in the management literature but the extent to which staff typically obtain access to the information they need for enhanced learning is not well understood. This paper examines the access to information experienced by staff within a New Zealand company in terms of the topics on which information is received and the sources from which information comes. The results show significant divisions within the company on status grounds for information that is currently received. Nevertheless, no such divisions were found for the information that is sought. Limitations appeared more obviously with regard to formal information sources (for which the company is responsible) than for the informal sources (which the individual finds it easier to access). Implications for companies aspiring to strengthen their capacity to learn are briefly discussed.

**Keywords** Learning organization, access to information, information sources, disseminating knowledge.

### Introduction

One of the most discussed topics in current popular management commentary is the learning organization. The issue of managerial and organizational learning is hardly new, with writers (e.g., Taylor [1965] as in the literature of problem solving) having examined aspects of the topic thirty years ago. A substantial literature on innovation also exists (e.g., Daft and Becker, 1978; Kimberley, 1981; Rogers, 1983; Abrahamson, 1991) that is not explored in detail here.

Yet it is especially now that the concept of the learning organization seems to have come into its own. Various writers echo a common theme: 'The ability to learn faster than your competitors may be the only sustainable competitive advantage' (De Geus, 1988: 71). 'the rate at which individuals and organizations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries' (Stata, 1989: 64); 'In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge' (Nonaka, 1991: 96).

De Geus defines institutional learning as 'the process whereby management teams change their shared mental models of their company, their markets, and their competitors' (1988: 70). The publication of Senge's *The Fifth Discipline* (1990) served as a catalyst for commentators to consider the implications for improvements in management practice that are inherent in the concept of learning organizations.

Typical elements cited as intrinsic to the learning organization include: management innovation; systems thinking; quality improvement; making judge-

ments based on facts; empowering the members of small teams to ensure they have the authority and the resources to enact change; and building a shared vision among all organizational members (De Geus, 1988; Stata, 1989; Senge, 1990; Nonaka, 1991). Related topics include the 'intelligent enterprise' (e.g., Quinn, 1992), which involves 'converting intellectual resources into a chain of service outputs and integrating these into a form most useful for certain customers' (Quinn, 1992: 48).

Much of the literature on learning organizations depends on accounts of the processes and outcomes that occurred within firms which are considered to have made or which are making the transition to learning organizations. Examples are Benson *et al.* (1987), who describe Nabisco; Hendry *et al.* (1991) on TMI; Nixon and Allen (1986) on Sun Alliance; and Pickard (1990) on Sheerness Steel.

Yet Vedder (1992) has expressed concerns about the practice of trying to analyse successful learning organizations with the aim of transposing lessons learned there to the situation of less developed companies. Vedder argues that studies of successful firms contain intrinsic limitations, and says that there is a 'disappointing track record of using success studies for prediction or as action guidelines' (1992: 58). What works well in one environment may be completely unsuited for another. He concludes with the observation that studies which span a full range of success and failure may be more useful as predictive tools.

### *Models of learning*

Much of the current attention to organizational learning (e.g., Gibb, 1995; Jones and Hendry, 1992) is becoming characterized by a rejection of older, operant conditioning models of learning (e.g., Whyte, 1972) in favour of principles of learning based more on social learning theory (Davis and Luthans, 1980). Operant conditioning and classical models of learning tended to focus on stimulus and response behaviours (a person works – is paid; works hard – is praised and gets a bonus) and gave little attention to the sources of the stimuli that were said to produce responses.

By way of contrast, social learning theory goes beyond earlier conceptions of how learning is performed and begins to address the individual-controlled processes of acquiring knowledge (Luthans, 1989). The significance of this for studies such as the present one is that learning is now increasingly understood to be an outcome of what staff themselves determine to be the appropriate response to their environment. This paper contends that one of these responses consists of on-going attempts by staff to secure access to work-related information. The growing acceptance within organizations now that staff should be encouraged to facilitate their own learning opens up consideration of the topics of information and the sources of information accessible to staff.

Another related issue in the field of the learning organization as defined by the social learning approach is adaptability (Senge, 1990). Senge argues that one of the characteristics of the learning organization is the capacity for staff to be adaptable. This suggests that staff need to have access to a variety of behavioural options, not least in discovering needed information from all available sources, in this way obtaining the benefit of a variety of different points of view. If staff access to information is constrained then presumably their capacity to be adaptable and see alternative ways of taking action are similarly impeded.

Empowerment is a theme often touched on by writers in the field, while in the view of Moller (1991) employees as much as managers have the responsibility to take action that will empower themselves. The issue of empowerment opens up the question of access to knowledge, as Francis Bacon said nearly 400 years ago, 'for knowledge itself is power'. A company that genuinely aspires to empower its staff needs to recognize that older habits of restricting information for reasons of protecting managerial authority need to be replaced by fostering improved access to information. This observation may be in contrast to views expressed by some writers (e.g., Jones and Hendry, 1992) who equate empowerment with staff development (1992: 56). In the opinion of this writer, empowerment goes beyond staff development and includes acceptance of increased employee decision-making rights based on their enhanced understanding of the company's situation.

Overall, then, under a social learning approach, staff learning is seen to grow from the needs of the individual and as user-driven, rather than as provider-oriented with the primary focus on the requirements of the organization. This transition from an understanding of learning as passive (where the organization reinforces the staff behaviour and learning it wants) to active (where individuals define their own knowledge acquisition needs) opens up the question of the nature and quality of the sources from which staff obtain their information.

#### *Access to information*

A theme of importance to this study is access to information. Nonaka (1991) points out the critical nature of ensuring that staff have free access to information: 'When information differentials exist, members of an organization can no longer interact on equal terms, which hinders the search for different interpretations of new knowledge' (1991: 102). He cites the instance of Kao Corporation, a prominent Japanese consumer goods manufacturer, which 'does not allow any discrimination in access to information among employees. All company information (with the exception of personnel data) is stored in a single integrated database, open to any employee regardless of position' (1991: 102). Nonaka says, 'successful companies are those that consistently create new knowledge, disseminate it widely throughout the organization, and quickly embody it in new technologies and products' (1991: 96). This paper examines some processes of *dissemination of knowledge* that commentators touch on lightly, but which have not yet been fully assessed in the literature of organizational learning.

An initial problem is that much of the commentary on organizational learning appears more hyperbolic than pragmatic. For example, Senge's statement that learning organizations are places 'where collective aspiration is set free, and where people are continually learning how to learn together' (1990: 3) may well be the stuff of inspiration but its exact meaning is difficult to elucidate. As Harris says of Senge's book, it is 'strong on philosophy but short on offering specific guides to behavior' (1990: 348). This makes it less than easy to establish the operational implications that may flow from the concept of learning organizations. Nevertheless, we may assume that any learning, whether individual or organizational, is dependent on sufficient access to information.

A second point to bear in mind is that any organization is comprised of people, and the extent to which an organization 'learns' is presumably a function of

how well the individuals within it learn. Therefore, it seems safe to assume that one measure of a learning organization is the nature and extent of the information acquired by individuals within it. We should nonetheless note, as Ramsey (1991) points out, that, whereas individuals within a company may proceed happily enough to build their own learning, their organization as a whole may well signally fail to learn. It is important to stress that individual learning is only *one measure* of a learning organization, because the latter concept is not yet well defined. So we may say that information flow of an as yet unspecified type or nature within an organization is a necessary but probably not sufficient condition for enhanced learning to occur.

The present study also needs to acknowledge classic research into the sources of information in use in organizations. Over thirty years ago Cyert and March (1963) found that when people obtain work-related information their search behaviour was, in their words, 'simple-minded, biased and sequential'. By this they meant that staff did not appear to select their source of information to meet the demands of the problem facing them at the time. Rather, almost regardless of the issue they tended to choose whatever source or sources of information they were familiar with, and the order in which they consulted such sources tended to vary little, regardless of the problem they were wanting to solve.

Some research exists which suggests that under conditions of urgency, when personnel know it is imperative to solve some critical problem, then they are more likely to explore a range of sources for the information they need (e.g., Aguilar, 1967; Daft and Weick, 1984; Mintzberg, Raisinghani and Theoret, 1976). However it appears to be the case that in most everyday situations people tend to use those sources with which they are familiar and that are close at hand. An organization wanting its staff to take into account a wide variety of perspectives needs to ensure that broad sources of information are located in close proximity to staff and that staff are encouraged to use them.

## Method

This research reflects Vedder's (1992) argument, already mentioned, to the effect that studies of successful companies contain intrinsic limitations if the aim is to provide prediction of learning organization pathways or action guidelines. The present study, rather than analysing a company that has successfully achieved learning organization status, instead focuses on an organization that does not yet appear to have arrived at such a point. This approach is then prospectively a valid way of shedding light on the discrepancy between where an organization is now, in a 'pre-learning organization' sense, as compared to the stage it may attain, and what some of the required steps might be to reduce the discrepancy.

If we may assume that a precondition for a learning organization is that its staff need to be well informed, the next stage is to determine the dimensions of such information flow to staff. In the context of the present study, these dimensions were considered to be in two parts. They were an organization's *capability to provide* information, and the staff's *motivation to find it out*. That is, to what extent do staff *currently have* good access to work-related information? And to what extent do staff *wish to have* good access to work-related information?

Both of these focus on access to work-related information. Two aspects were explored: first, the *topics* on which staff receive information; and second, the

*sources* from which staff receive their information. It was considered important in respect of both topics and sources of information to assess staff access to information received now and staff access to information that they wanted.

### *The organization*

The organization selected for this study is a large New Zealand processing plant employing about 1,500 persons. Its culture is strongly engineering-oriented, particularly among managerial and technical personnel. At the time of writing management were making attempts to adapt the organizational culture to incorporate a greater awareness of marketing issues facing the company. Senior management recognized, however, that this kind of cultural change would take time and would probably not be straightforward to implement.

Through observation, interviews and discussion with staff the writer came to the view that the organization was still operating in a fairly traditional manner in respect of organizational management processes. In general, authority relationships, allocation of work and supervision practices were characterized more by a mechanistic than an organic approach. As Jones and Hendry point out:

Traditional measurement and control systems tend to discourage experimentation and adaptability, and hence learning, thus producing a steady-state mentality which resists change. When there is an emphasis on individual and group learning, which is linked to the job itself, there is greater focus, a more constructive and adaptive attitude, and an empowering of people in the organization.

(Jones and Hendry, 1992: v)

As yet this company appeared to show few characteristics of the learning organization, which arguably makes it an appropriate research site for the assessment of what an organization of this nature might do to facilitate improved access to knowledge for its staff.

Four levels within the company were identified: top managers, middle managers, first-line supervisors and non-supervising staff. However, since only four persons identified themselves as top management, the focus in this discussion is mainly on the three subordinate levels.

Non-supervising staff (NSS)	= 272
Supervisors (S)	= 126
Middle managers (MM)	= 65
Top managers (TM)	= 4
N	= 467

The aim was to obtain a coverage of about one-third of the company, comprising viewpoints from throughout the organization. With this in mind a representative sample was taken from all sections, departments, hierarchical levels and occupational groupings within the company. While it might have been desirable to take a random sampling of staff, this was not feasible on account of extensive use of shifts and because no centralized personnel information system was available to show which staff were present in the company. We distributed 540 questionnaires and 467 were returned, providing a response rate of 86 per cent.

*Topics of information*

For the purposes of this study Katz and Kahn's (1978) widely accepted model of downward organizational communication was employed. In *The Social Psychology of Organizations*, Katz and Kahn argued that staff need five kinds of information:

- 1 Specific task directives
- 2 The job rationale
- 3 The company itself and its policies
- 4 Feedback about work performance
- 5 Information on the organization's goals.

These five categories were incorporated within a survey containing nine topic areas:

*How much information on the following topics do you receive now, and how much information on them do you think you should receive?*

- 1 My work responsibilities
- 2 How well I am carrying out my work
- 3 The difficulties and challenges my organization is experiencing
- 4 How senior management in this organization make their decisions
- 5 My prospects for promotion and career development
- 6 Major new developments or changes in the organization
- 7 How my job fits into the organization as a whole
- 8 How my work performance is assessed
- 9 How well my organization is achieving its goals and objectives.

That is, participants responded twice to each of these nine questions, once on a scale of one to five for *How much information do you receive now?* and again on a scale of one to five for *How much information do you think you should receive?*

<i>Katz and Kahn's category</i>	<i>Topics of information</i>
1 Specific task directives	1
2 Job rationale	4, 7
3 The company itself	3, 6
4 Feedback about work	2, 5, 8
5 The organization's goals	9

The current study is comparable to earlier investigations (e.g., Goldhaber and Rogers, 1979; DeWine and James, 1989). Its intended outcome is knowledge of which topics and from which sources of information staff think they receive either too much or too little data.

*Sources of information*

To obtain a comprehensive overview of the sources from which staff obtain information, an approximately equal balance of interpersonal and print-based sources of information was included. Although in the management literature more attention has been paid to interpersonal communication (e.g., Dansereau and Markham, 1987; Seibold, Cantrill and Meyers, 1985) it was felt that print sources could be at least of equal significance.

The place of print sources in organizational communication is starting to find a higher profile: as Yates and Orlikowski have pointed out, 'the introduction of various sophisticated electronic communication technologies and the demand for faster and better forms of interaction are visibly influencing the nature of much organizational communication' (1992: 299). The sources of information included in this study are in the two categories of interpersonal and print.

#### *Interpersonal*

- |                               |  |
|-------------------------------|--|
| 1 Subordinates                | 2 Coworkers                              |
| 3 People from other sections  | 4 My supervisor                          |
| 5 Department or unit meetings | 6 Senior management                      |
| 7 The grapevine               | 8 Personal contacts outside organization |
| 9 Seminars or workshops       |  |

#### *Print*

- |                                    |  |
|------------------------------------|--|
| 1 Memos, etc., from within company | 2 Reports, etc., from outside company  |
| 3 In-house newsletters             | 4 Organizational records               |
| 5 Books, etc., not in library      | 6 Magazines, etc., not in library      |
| 7 Organized library                | 8 Government documents                 |
| 9 Computer-based info system       | 10 News media (TV, radio, newsletters) |

In view of the relative newness of this field it was considered desirable to work within a framework of objectives rather than hypotheses. The objectives were:

- to investigate whether staff say they receive information differentially according to their organizational ranking;
- to investigate whether staff report their preferences for receiving information differentially by their organizational ranking;
- to investigate the sources from which staff currently report receiving and wanting to receive information; and
- to assess implications arising from these findings for processes of learning within organizations.

It was decided to employ one-way analysis of variance implementing the Scheffe procedure, using SPSSX on a DEC 5000/125 machine. The advantage of the Scheffe procedure for this kind of study is that it supplies robust information about between-groups variations. Such an approach has the potential to reveal the nature of information flow limitations in respect of varying groups within the company.

## **Results**

### *Topics of information*

We first examine the topics of information received by staff. This provides an indication of the issues on which discrepancies of access to information appear. Table 1 displays mean scores and significant between-groups differences in respect of the topics of information received by staff.

From Table 1 there appear the following trends:

A total of nine significant between-groups differences was found for four out of the nine *information now received* questions. All four levels of staff appear in the between-groups differences, and all appear with a similar frequency:

**Table 1** Between-groups differences for topics of information received now

	Mean scores	Between-groups differences
1 My work responsibilities	NSS 1 3.22	2+4*
	S 2 3.17	
	MM 3 3.41	
	TM 4 4.5	
4 How senior management make their decisions	NSS 1 1.96	1+3* 1+4* 2+3* 2+4*
	S 2 1.95	
	MM 3 2.42	
	TM 4 3.5	
7 How my job fits into the organization	NSS 1 2.76	1+4* 2+3* 2+4**
	S 2 2.62	
	MM 3 3.17	
	TM 4 4.5	
8 How my work performance is assessed	NSS 1 2.32	1+3**
	S 2 2.51	
	MM 3 2.85	
	TM 4 3.75	

*Notes*

Scale is: 1 = very little 2 = little 3 = some 4 = much 5 = very much

\*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$

Groups are: 1 = NSS (Nonsupervising staff) 2 = S (Supervisors)

3 = MM (Middle management) 4 = TM (Top management)

N = 467

1 = NSS (Nonsupervising staff) 4 times  
 2 = S (Supervisors) 5 times  
 3 = MM (Middle management) 4 times  
 4 = TM (Top management) 5 times.

It is noteworthy that no differences were found between groups 1 and 2 (non-supervising staff and supervisors), or 3 and 4 (middle and top management). In other words, in terms of receipt of information, the sample appears to be dividing into two groups, one being top and middle management and the other supervisors plus non-supervising staff.

Essentially there were two main topics on which several differences emerged: *how senior management make their decisions* and *how my job fits into the organization as a whole*. Both these issues had to do with overview considerations, how well the staff understand their organization in a holistic sense, and given that the sample appears to be dividing itself into two groups by organizational level, it is at the levels of nonsupervising staff and supervisors that problems of understanding appeared.

It was noteworthy that otherwise differences did not appear, with the exception of two issues on which there is some evidence of between-groups differences, namely *my work responsibilities* and *how my work performance is assessed*.

So far we have been considering information received now. This is next to be balanced against the information that staff say they want. The Scheffe analysis revealed *no significant differences* among varying levels of staff for the work-related information they wanted and the division between staff levels referred to



above in the discussion of information received now did not appear. This suggests that there is a commonality of interest among levels of staff in respect of information sought. Another way of putting this is to say that people's organizational status may condition the information they are receiving now, but it seems to be unrelated to the information they want.

### Sources of information

We next examine the sources of information used by staff to obtain an indication of where disparities in access to sources may occur. Table 2 displays mean scores and significant between-groups differences in respect of the sources from which staff obtain their information.

In the analysis of sources of information the category of subordinates showed significant results. However, this source was excluded from the results in view of the confusion arising from the fact that the between-groups differences involved responses from nonsupervising staff, who by definition have no subordinates. Yet it should be understood that the responsibilities of some 'nonsupervising' staff did include some occasional or part-time supervision. Since the finding for subordinates offers little insight into the topic, it is appropriate to pass over it.

**Table 2** Between-groups differences for sources of information received now

	Mean scores				Between-groups differences	
	NSS	S	MM	TM		
<i>Interpersonal sources</i>						
5 Department or unit meetings	3.11	3.14	3.47	3.5	1+3*	
8 Talking with personal contacts outside organization	2.36	2.51	2.92	2.25	1+3***	
9 Seminars, courses or workshops	2.51	2.75	3.11	2.75	1+3***	
<i>Written or print sources</i>						
10 Memos or reports from inside orgn	3.56	3.81	3.92	4.5	1+3*	2+3*
11 Letters or reports from outside orgn	2.4	2.59	3.17	3.5	1+3***	2+3***
12 In-house newsletters or circulars	3.71	3.9	4.0	3.75	1+3*	
13 Organizational records	2.51	2.62	3.13	2.67	1+3***	2+3**
14 Books, etc., not held in organized library	2.2	2.14	2.68	2.75	1+3**	2+3**
15 Magazines, etc., not held in organized library	2.41	2.26	2.76	3.0		2+3*
16 Organized library facilities	2.33	2.09	2.85	2.5	1+3*	2+3**
17 Government documents	1.76	1.56	2.2	2.25	1+3**	2+3***
18 Computer-based information retrieval	2.08	2.21	2.6	2.5	1+3*	
19 News media (TV, radio, newspapers)	2.74	2.46	2.94	3.5	2+3*	

#### Notes

Scale is: 1 = never 2 = rarely 3 = sometimes 4 = often 5 = very often

\*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$

Groups are: 1 = NSS (Nonsupervising staff) 2 = S (Supervisors)  
3 = MM (Middle management) 4 = TM (Top management)

N = 467

Otherwise, significant differences appear in thirteen of the nineteen sources from which information is received now. Of these thirteen sources, three are interpersonal, and ten are print. In other words, of the nine interpersonal sources, significant between-groups differences were found in only three (excluding subordinates). Of the ten print sources, significant between-groups differences were found in all ten.

Considering next the three out of nine interpersonal sources where differences were found, it is noteworthy that at least two and perhaps all three are in the category of more formal rather than informal sources of information. That is, the organization itself directly mediates the information flow from the sources *department meetings* and *seminars, courses or workshops*, and to some extent mediates information flow from the third source, *contacts outside*. In this way the between-groups differences found point to deficiencies in access to information formally supplied by the company.

By way of contrast, the other interpersonal sources where differences were not found are relatively more within the scope of the individual to control. In the course of our everyday work most of us have the opportunity to seek information, if we choose, from sources such as *co-workers, people from other departments, one's supervisor, the grapevine* and, perhaps to a lesser extent, *top management*.

Such a contrast between formal versus informal interpersonal sources of information may help to shed light on the appearance of all ten print sources in Table 2. Most staff are not in a position to obtain on-demand access to official print sources such as *organized library, in-house newsletters* and the like, but are dependent on the company making such sources available to them. Virtually all ten are more *formal* in nature (with the company having responsibility to provide access) than *informal* (where the individual staff member has the ability to access the source at will).

As in Table 1, no differences were found between nonsupervising staff and supervisors, or between middle managers and top managers. This reinforces the impression gained earlier that the organization has polarized itself into two divisions on status grounds.

Table 2 adds a further dimension when it reveals that of the total of eighteen between-groups differences, eleven are between nonsupervising staff and middle management, but seven are between supervisors and middle management. When we looked at the sources of information that people *want to use*, we found that only minor differences exist for the information that people would like to receive.

## Discussion

### *Topics of information*

It is noteworthy that across the entire analysis *no* differences were found between groups 1 and 2, or between 3 and 4. This finding appears to split the organization effectively into two, at least in regard to information received now. That is, the company seems to be divided into nonsupervising staff and supervisors, on the one hand, and middle management and top management, on the other.

As noted above, between-groups differences were found for four of the nine topics of information received now. In Katz and Kahn's terminology, two of

these were in the category of *feedback about work*, one was in the category of *specific task directives* and one was in the category of *the company itself*. One implication to be taken from this is that differential information supply particularly exists with regard to staff access to information about their work progress. Any company desirous of moving itself in the direction of a learning organization might take note of the necessity to keep staff well-advised about how well they are performing.

#### *Sources of information*

Between-groups differences were found for all ten print sources but only for three of the nine interpersonal sources (subordinates excepted). An implication to be taken from this is that an organization may wish to consider how well it is supplying its staff with the print-based information that they seek.

From Table 2 above we drew the implication that limitations in information supply occur especially with formal sources, where staff have little personal opportunity to create the sources they want. This is in contrast to those interpersonal sources that can readily be accessed through the individual's own initiative. Brown (1991) offered the view that staff need to be supported in developing new mental models of the future as a means of re-thinking traditional assumptions. The argument in this paper is that so long as lower-level personnel in a company, as in this case, appear to have poor access to officially provided sources of information, new or improved mental models of the future will be harder to create.

#### **Conclusion**

This study is located within the new social learning framework and argues that a fuller concept of organizational learning is dependent on ensuring that staff are well acquainted with an holistic overview of their enterprise and that staff access to a wide variety of information sources is unimpeded. The literature on the learning organization emphasizes staff empowerment and adaptability, but this contrasts with the likely situation within organizations of a mechanistic nature such as the one described here where lower-level staff are ill-informed on issues of an holistic nature and where their access to formal sources of information shows limitations. If knowledge is indeed power, then staff empowerment requires fuller access to knowledge.

Many management textbooks contain the story of the pharaoh (or bishop) touring the construction site of his pyramid (or cathedral) who asks the workers, 'What are you doing?' to which most people respond, 'Making bricks'. However one well-informed individual says, 'Building you a pyramid (or cathedral)'. The present study suggests that the majority of supervisors and non-supervising staff in the sample lack such an overview and appear some distance from achieving it.

Learning, whether organizational or individual, is complex and often serendipitous, and researchers may agree that no hard and fast rules exist that will transform a company into a learning organization. Yet, if the purpose of this paper was to give feedback to the company in question about the extent to which an improved information flow might enhance its progress, then a number of points could be made.

We may surmise that, as long as staff are not well informed about what guides

management in their decision making, they will find it difficult to think holistically about their contribution to the strategic direction of the company. Similarly, with regard to *how my job fits into the organization as a whole* we may infer that action is required which would assist staff to understand their particular value within the wider context and provide them with insights into how their personal contribution enhances the wider organization.

There is evidence of a division within the company in how access to information is perceived: nonsupervising staff and supervisors are on one side and middle and top management are on the other. Such divisions need to be addressed by practices of information supply that equalize information flow. If there are still management personnel who believe that staff of lower status levels have a lesser wish for information, then a useful finding for them arising from this study might be the commonality of preference for information across organizational levels.

Earlier in this paper it was noted that the literature of learning organizations stresses the theme of greater empowerment for staff. This theme is evoked again by the finding here that there seem to be few differences among staff in regard to the interpersonal sources they can access themselves, but differences do appear for the sources that the organization has to supply. If staff were empowered to set up for themselves the kind of formal information sources they wanted, then the potential emerges of an enhanced dissemination of knowledge to all personnel.

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