IS KNOWLEDGE ACQUISITION AND TRANSFER ACHIEVABLE?

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Abstract

Knowledge is seen by many as a key source of competitive advantage and innovation in organisations. One strategy identified to better facilitate the acquisition and dissemination of knowledge is the learning organisation which can be characterised as something that continuously acquires, processes and disseminates knowledge throughout the whole organization.

To be a valid concept the learning organisation, must be able to show that it can identify knowledge; what it is, what it needs and how to acquire it. This paper, based on research in progress, contends that as this is not possible the concept of organisational knowledge is severely limited. This paper addresses three areas: whether the organisations can recognise knowledge at all, whether there is a confusion of terminology that may affect outcomes and how setting ‘learning targets’ impacts upon organisational learning.

Initially the idea of organisations as constructivist and self-referential systems will be explored, with the contention that if this is the way that organisations behave, the ability to recognise knew and/or useful knowledge will be severely limited. The contention is that this leads to much of what is heralded as 'knowledge' acquisition as being in fact 'information' gathering and that whether this information can be translated into useable knowledge is a very debatable issue.

The argument is made that, far from the learning organisation aiding the acquisition of knowledge which will enable organisational success, it may actually hinder it because the constructionist framework will inhibit the ability to see outside the current frame of reference.

Introduction

Knowledge is seen by many as a key source of competitive advantage and innovation in organisations. In 1964 Drucker stated 'What does make a business distinct and what is its peculiar resource is its ability to use knowledge to social, economic and managerial advantage' (Drucker, 1964, p.17). This has led to managers identifying processes to better facilitate the acquisition and dissemination of knowledge.

One such management strategy is the learning organisation. This can be characterised as something that continuously acquires, processes and disseminates knowledge throughout the whole organization. Garvin states ‘A learning organisation is an organisation skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights’ (1993, p80). What is outlined is the concept of a process being able to generate knowledge within organisations that managers can tap into in order to gain competitive advantage for their organisations. It is assumed that 'knowledge' exists, is inherently important, that it can be transferred and that companies can facilitate transfer.

The learning organisation is seen by some as providing an organisation with a way to achieve transformation. According to Redding “the degree that an organization learns determines its

1 See for example: Thubin, 1994; Goh, 1998; Senge, 1992.
2 See for example: Senge, 1992; Pedlar et. al., 1989; Nevis et. al., 1995
capability to transform itself to meet demand for fast, fundamental change’ (1997, 61), this clearly states the need for the learning to change behaviour in a positive way. An actual definition of what writers mean by transformational change is hard to find. However, it is implied that it will be a major change, possibly even a metamorphosis; the organisation wishes to become something new. Kofman & Senge stress that organisational learning is about ‘generativeness’ not just survival (1993, 6). It is this perceived ability to progress further than purely incremental change that appears to make organisational learning as transformation so attractive to its proponents. For many, transformation is seen to be the ultimate goal. The term is used to underpin the idea that the stress should be on organisational processes which permit self-development within the organisation rather than being forced to change by outside intervention or competition. These processes are considered to be of a continuing nature and quite possibly not linear or iterative\(^3\).

The inference is that if learning can be fostered and channelled then organisational learning will follow. But even if this is achieved it may not necessarily be positive. Is what the organisation learns going to lead to transformation or may it make illogical deductions leading to error? The generally accepted notion of organisational learning is that it will enable new learning or insights (Fiol & Lyles, 1985), however, the problem may be that behaviour may change as a result of perceived experience but not from learning itself. Gephart et al. accept that this is a potential problem and identify the learning organisation as the solution: ‘All organizations learn, but not always for the better. A learning organization is an organization that has an enhanced capacity to learn, adapt and change’ (1996, 36). The learning organisation is described as being a way that an organisation learns, it is a way of managing the learning process in a way that will maximise the transformation and minimise the potential for error.

It appears, therefore, that the learning organisation has emerged because of the view that, if learning is to be useful it will need to be managed in some way and that to do this implies structure and process - in other words some form of organisation. Iles identifies the need to develop a set of new managerial competences in “learning to learn”, in order that organisations can stay ahead of the changes in their environments and be successful (1994). Goh also indicates that employee skills and competencies are fundamental to the success of the learning organisation (1998). However, both Iles (1994) and Goh (1998) go on to say that skills are not enough, there will need to be a context within which they can be developed. The learning organisation is seen to be a way of supporting transformation with a recognisable structure which enables the acquisition and transfer of knowledge. If it is to be successful such acquisition and transfer must be possible.

This paper will consider three areas which will all directly affect whether the learning organisation can in fact achieve the goals stated above: whether the organisations can recognise knowledge at all, whether there is a confusion of terminology that may affect outcomes and whether setting ‘learning targets’ impacts upon organisational learning. The paper is based upon work in progress which is seeking to establish whether there is an epistemological foundation for the learning organisation which would enable knowledge to be identified and used in a meaningful way. A combination of questionnaires and semi-structured interviews has been undertaken which sought to gain an understanding of: what employees understood by certain key terms; how they saw the relationships between knowledge and data; how they saw new knowledge being created and how knowledge was identified and shared. A

\(^3\) See for example: Senge, 1992; Pedlar et al., 1989; West, 1994; Kofman & Senge, 1993
comparison has been made between companies actively seeking to become learning organisations and those who are not.

**Can organisations recognise knowledge?**

In order to benefit from knowledge held within it, an organisation must be able to recognise it and know what it is looking for. However, one of the most interesting aspects of reading about the learning organisation in the literature is seeing what is not said. It does not, for example, say what it understands to be knowledge, although it constantly states that the creation and implementation of knowledge is why learning organisations are created. Garvin for example states that an organisation that is a successful learning organisation is one that has, “become adept at translating new knowledge into new ways of behaving. These companies actively manage the learning process to ensure that it occurs by design rather than by chance” (1993, 81); Gephart et al. state ‘The lifeblood of a learning organization is a free open system for communication information and knowledge’ (1996,40) and this should be held as a central issue. Yet neither Garvin nor Gephart actually define what they mean by the word ‘knowledge’.

It is also interesting to note that when Dovey discusses the need for an apprenticeship of learning to gain understanding, he lists the purposes/uses of knowledge; how to use knowledge actively; the conditions under which particular knowledge is applicable and the relevance of knowledge to specific and general contexts; but not what is knowledge. This is accepted as given and already a part of a shared mental model (1997, 340). However, although he does go on to detail three forms of learning in terms of knowledge he does not really delve into the idea and the reader is left unclear as to what he really means by the term ‘knowledge’.

So, how do learning organisations identify knowledge and how do they know what knowledge is at all? According to Garavan, ‘Knowledge generation and its use is inadequately addressed within the relevant literature’ (1997, 21). Argyris & Schon talk of the ‘output of organizational inquiry’ and ask when it becomes knowledge, but they do not define what they mean by knowledge - it is assumed that they and the reader have the same understanding of the terms (1996, 14).

‘The most effective learning organizations, it is believed, not only acquire and use knowledge as required but also understand how to learn’ (Wishart et al., 1996, 12). Kock et al. disagree with this, they would say that it is knowledge acquisition which is important not how it is learnt. To focus on learning may be to lose the knowledge (1996). When this is equated to the Input - Process- Output model it can be seen that if too much stress is made upon what is being put in, the result may be that what is being produced is no longer what was required.

Can the nature of organizational knowledge actually be identified? Some literature highlights the experiential nature of organisational learning and stresses that it is built up in a continuous incremental process at odds with the goal of transformational knowledge\(^4\). Lyles & Schwenk stress two differences between the knowledge structure (by which term they mean the shared beliefs at organisational level) and the organisational culture. First, whereas culture refers to the ‘affective or emotional elements’, the knowledge structure is narrower, dealing with

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\(^4\) See for example : Lyles & Schwenk, 1992; Simonin, 1997; Kolb & Fry, 1973; Kofman & Senge, 1993
'goals, cause-and-effect beliefs, and other \textit{cognitive} elements’; and second it is ‘more clearly linked to an organization’s strategy for survival and more subject to change’ (1992, 157).

Changes in the shared beliefs, and as a result the mental models, will occur as result of (i) the impact of the interpretation of environmental events; (ii) results of past organisational actions (experiential learning); (iii) the influence of key decision makers (Garatt, 1990); (iv) the dominant coalitions within the firms (Dovey, 1997); (v) political processes within the firm; (vi) a social process (Wenger, 1998) (vii) combinations of these (Lyles & Schwenk, 1992; Easterby-Smith et al., 1998). But if knowledge is defined as shared beliefs does this not imply a subjective view of knowledge at odds with the way knowledge is used to make ‘rational’, ‘objective’ decisions within the organisation?

Watkins and Marsick want to measure the knowledge ratio (how many knowledge workers there are as a percentage of total staff) as a way of ensuring that new knowledge is being created (1993), but how do they know what these workers know and how can they be sure that new knowledge is moving into and around the system? Having a ratio that shows that there are a lot of knowledge workers and that the number is increasing may not mean there is a greater use of required knowledge. The identified categories may not measure the required results only a presupposed way of achieving them. Sculpting (their metaphor) can be taken two ways according to sculptors. One can take material and sculpt what is planned or one looks at the material and frees what is already there - most great sculptors would say they do the latter. This means that the latent knowledge must be released: this concurs with the view of Nonaka & Takeuchi who state that the key to acquiring new knowledge is to make tacit knowledge into explicit knowledge and that most knowledge is created by middle managers (1995). Nonaka & Takeuchi ask, ‘what in fact is knowledge?’ as they feel that what is interesting is the difference they highlight between eastern and western approaches to the definition of knowledge (1995). They state that western philosophy has generally agreed that it is ‘justified, true belief’, and this would then become the shared understanding and history that pervades the ‘community of practice’ that we are socialized within, thus over time it has become accepted that we know what knowledge is and that we can recognise it. Not only this but we will recognise the knowledge we see and therefore see no need to test it. This ability to identify truth is supported by the western acceptance that there can be objectivity permitted by a split between the knowing subject and the known object (Nonaka and Takeuchi, 1995). Eastern philosophy does not have this split but sees everything as a continuation of everything else and accepts that by its very nature a system will be subjective and self-referential; what is seen may not be ‘truth’ only the individuals understanding of the ‘truth’.

This could mean that if information is considered to be true it will therefore be accepted as knowledge with no challenge. Further, it could mean that if information is seen which is believed to be knowledge, it will be accepted as truth without further verification. If this is so, then it follows that all learning entering an organisation is being accepted into the system as a form of knowledge and therefore as truth to be acted upon unchallenged - knowledge is implied to be a ‘belief’ system. When asked to give examples of how the organisation gained ‘knowledge’ the majority of examples were of ‘information’ entering the system, with little evidence of any process being applied in order to manage what is amassed, thereby supporting the hypothesis that most ‘knowledge’ is no more than a belief system and may not be true or reliable.
The responses from the research in progress all confirm this idea that the knowledge being recognised is not being tested and is being constructed within the organisations themselves. The majority of respondents imply that knowledge is constructed via a form of process - learning, acquisition, understanding and gathering were commonly used terms (see Figure 1) - and that these processes were applied to information received from outside the organisation.

<table>
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<tr>
<th>Figure 1: Typical process phrases</th>
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<tr>
<td>“ability to understand”</td>
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<tr>
<td>“gaining”</td>
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<td>“acquiring”</td>
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<tr>
<td>“aligning information to achieve knowledge”</td>
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<tr>
<td>“building”</td>
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<tr>
<td>“recalling”</td>
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<td>“transferring”</td>
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“Knowledge implies the ability to actually use information, whereas information is nothing really, just numbers or figures or words or anything else but it doesn’t necessarily imply any sort of a grasp of the concept behind it. … knowing how to use the information because knowledge implies you know the significance of it, you know., how to apply it, you can actually add value to the information. I think that’s the difference”

“Surely its an external/internal thing? In that knowledge is something that's in here, part of an endeavour - and also in terms of perfection, true knowledge means that knowledge is something that you see as being correct whereas information is something that you may treat with a certain amount of scepticism”

There are several interesting aspects to these quotes: the idea of process, the idea of information underpinning knowledge, the concept of truth as knowledge and the constructivist aspect of how knowledge is being created. There is also a clear link with subjectivity as “you know the significance of it”. A further experiment is being undertaken outside the companies where professional students are asked to define knowledge and a picture is constructed with the class. More examples are to be done, but so far it has become clear that the students who are all working, are all using a constructivist notion of knowledge. This is not a great surprise, however, this has to imply that the decision making is subjective and that the knowledge is based upon a belief system. Knowledge will only be recognised as untruth when something goes wrong - the construct of knowledge being applied is by its very nature reactive.

According to Nonaka and Takeuchi ‘the most important characteristic of Japanese thinking can be termed a “oneness of humanity and nature”’ (1995, 28) This can be seen to affect their approach in everything, as knowledge ‘means wisdom that is acquired from the perspective of the entire personality’ (1995, 29). The difference is the way they deal with the relationship between the ‘self’ and ‘the other’ - the split the western world accepts between the knowing self and the known other is not apparent, rather there is an acceptance that the two are totally interrelated and one in part creates the other. Kofman & Senge move towards this perspective when they stress that the systems approach needs to consider the ‘Primacy of the Whole’ and move away from linear thought. The interaction of the whole system is what matters and not
the individual parts within it - unless the whole is understood no transformation can occur, subjectivity is acceptable and in fact needs to be accepted as inevitable (1993,13). They do, however, concede that the problem may be that the individuals may be unable to conceive of the whole.

It would appear that there are several problems that may occur from these approaches as they imply that the system (a) is based upon a belief system; (b) may not be a fully open system sending and receiving information in an objective way and (c) is not separate from the environment, but rather is a closed system within the environmental system itself. If any of these implications are valid it would seem that the organisational system must be self-referential in behaviour.

Interview respondents, when asked how new knowledge was acquired clearly demonstrated that it was often a very haphazard process, repetitive in its outputs and frequently self-referential. As the targets are set internally, any acquisition of knowledge is self-determined from within the organisation's own environment and the process must, therefore be a constructivist one. The idea of a knowing subject and the known object become blurred as the perceived environment is constructed by the organisation itself. Only if the organisation has the ability to separate itself from its environment in some way will it be able to develop new knowledge separately from its current mind set. The research being undertaken implies that, even at a very senior level, this is not apparently possible.

Applying self-referentiality to cognitive systems, Maturana illustrated their self-referential nature by demonstrating that the brain is not able to distinguish between hallucinations and perception; to be able to identify whether what is seen is real or not needs some outside reference point and is only possible if the perceiver is not alone (in Morgan, 1986). The confusion is explained if the perception is being determined only by the internal self-referential processes of the system and not by a reference to the external environment. The cognitive processes are therefore circular referring only to information already in place. If the analogy can be applied to organisations (as they are claimed to be learning and therefore cognitive systems of a sort), it would give further support to why knowledge is being self-constructed within organisation - the link with the external environment is not being made.

What can be seen here, therefore, is that it is likely that organisations are working on an assumed epistemological framework which assumes an object/subject split but, as can be seen from the concept of self-referentiality outlined above this is too simple a view. The differentiation is there but not a separation. The subject becomes a part of the object. Neither the environment nor the organisation can be seen as a single object, they are themselves part of a greater whole and therefore the greater truth they seek is unobtainable. Change will be generated from random variations within the system providing the seeds of new systems and identities in an evolutionary way. As the environment cannot be seen in an objective way the reactions and ideas will depend upon how the environment impacts upon the organisation and how it in turn reacts to it (if at all). Self-referentiality is thus partly the result of being a closed system (in von Krogh & Vicari, 1993).

Maturana discusses the concept within the framework of autopoiesis which has also been applied to organisations\(^5\). Another element of autopoietic theory which may be of importance

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\(^5\) See for example: Geyer, 1992; Kickert, 1993; Mingers 1997
here is that an autopoietic system is simultaneously open and closed. To be ‘Simultaneously Open and Closed’ seems contradictory but is nonetheless core to autopoietic analysis. According to the theory as it is applied to Organisational Behaviour, the cognitive system is closed and autonomous, and thus constructs a representation of its own reality (von Krogh and Vicari, 1993). Reality construction is a process that involves the making of distinctions in observations. The brain receives signals (and is therefore open) but it must then assign meaning to these signals. This it can only do by relating the signals to information previously received and pre-existent norms. Applied to organisations this means that information is received as signals from the environment but is then translated within its own autopoietic system into something it can understand. It is open to the stimuli but is closed in the way it interprets them.

The pattern of knowledge creation will encourage the shared mind-map and vision which many writers consider to be key to the achievement of a learning organisation. However, as can be seen this shared mind-map may not be conducive to gaining new knowledge as the signals are not entering the system clearly, partially because of the self-referential nature of the process and partially because of a possible confusion between information, data and knowledge which will further confuse the signals.

Confusion of terminology and how it may affect outcomes
Kock et al. identify the fact that knowledge, information and data are closely related. They also state that, ‘Although distinct, these three abstract concepts are often confused (1997, 71; 1996, 31). As an example they show Drucker as using the words information and knowledge interchangeably. Argyris and Schon also confuse the terms when they say that ‘Generically an organization may be said to learn when it acquired information (knowledge, understanding, know-how, techniques or practices of any kind) by whatever means’ (1996, 3). They then go on to give their definitions of the three concepts, each of which is defined in terms of the other two. Their understanding the difference between information and knowledge is that ‘While information is descriptive - that is, it relates to the past and the present - knowledge is eminently predictive, that is, it provides the basis for the prediction of the future with a degree of certainty based upon information’ (1997, 71).

There are two interesting issues here. The first is the phrase ‘degree of certainty’. This implies that knowledge has been deduced from the information and is truth that can be used. This implies a constructivist approach to knowledge as outlined above. The second point of note is about the confusion of terms. When analysing what was flowing around organisations they found that, although people thought it was knowledge it was predominantly information that was found (1997). They found that information can be exchanged without knowledge but that all knowledge exchanges included information. They concluded that if organisations can improve the knowledge transfer rather than information transfer, learning is more likely to take place. This would presuppose that those within the organisation were aware of the difference and could identify what needed transferring.

This possible confusion of terms is one of the areas the research has been interested in. Respondents were asked to define certain key terms including: Information, Data, Learning

6 See for example: Wishart et al., 1996; Senge, 1990; Kofman & Senge, 1993; Gephart, 1996; Pedlar et al. 1989; Teare, 1997; Dovey, 1997; Goh, 1998; Watkins & Marsick, 1993; Mabey & Salaman, 1995; Simonin, 1997; Nevis et. al., 1995
and Knowledge. They were asked to explain what they understood by the word and to indicate how they would use it. The range of answers (see Figure 2) indicated little common understanding of the terms, which is significant as most communications on the subject do not include working definitions but assume a common understanding. The most significant confusion was between 'information' and 'knowledge' and this was found consistently, with no noticeable differences between organisations claiming to be learning organisations and those that were not. The definition of ‘knowledge’ is commonly held to be ‘information’, whilst ‘information’ is frequently defined as being ‘data’. The logical inference from this is that ‘knowledge’ equates to ‘data’ but as this is clearly not the case it emphasises the confusion regarding terminology.

<table>
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<th>Figure 2: Typical quotes from the short answer question responses</th>
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<td><strong>Definitions of ‘knowledge’</strong></td>
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<td>“information about something”; “information gained from many inputs and used to deliver outputs”; “knowledge is the individual’s understanding and information gathered about something”; “retention of information”; “Information”; “To have learned, remembered and be familiar with various pieces of information”; “information that you know”</td>
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<tr>
<td><strong>Definitions of ‘information’</strong></td>
</tr>
<tr>
<td>“knowledge, data”; “knowledge communicated, gained or given”; “facts in the context of giving knowledge”; “data”; “facts, news, data, provided by verbal, written and electronic mediums”; “data of interest”; “data or facts used to increase your knowledge”; “relevant data or knowledge”.</td>
</tr>
<tr>
<td><strong>Definitions of ‘data’</strong></td>
</tr>
<tr>
<td>“information”; “information, facts, figures”; “Information necessary to carry out your work”; “information that can be analysed”; “visible or audible information”; “information stored or required to do something, information on any person or item specifications”</td>
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These are from a range of the companies and confirm the similarity of responses indicated above. What can be seen here is the interchangeability of the terms and that what are held to be commonly understood terms are clearly not so which implies that communicating ideas regarding learning/ knowledge etc. are likely to be less successful than expected. Much more analysis is yet to be done on this but it implies that although a shared mind map may be in place, it is not one that gives a clear definition of knowledge. In all cases employees indicated that the drive towards greater ‘knowledge’ was leading to an increase of ‘data’ and ‘information’ within the system, but it was not obvious whether, if their own definitions of knowledge were to be applied, new knowledge could be seen to be achieved or identified.
From the definitions of information it appears that to have more information may become a desired learning outcome in itself although this may not, in fact, lead to new and/or useful knowledge (see Figure 3).

<table>
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<th>Figure 3 : Examples where the definition of Information were less than clear</th>
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<tr>
<td>Information is “knowledge acquired through experience or study”</td>
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<tr>
<td>Information is “A collection of data put into a format that can be understood and used for knowledge”</td>
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<tr>
<td>“Information is a source of knowledge regarding a subject”</td>
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<tr>
<td>“Information covers data and individual facts and half facts and represents the sum inputs which create knowledge”</td>
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<tr>
<td>Knowledge “may be described as accumulated wisdom, experience or simply the possession of factual information”</td>
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<tr>
<td>“Information I understand to mean data or knowledge”</td>
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Kim says, ‘True knowledge is more than information; it includes the meaning or interpretation of the information, and a lot of intangibles such as the tacit knowledge of experienced people that is not well articulated but often determines the collective organizational competence’ (1995, 75). The concept of understanding was brought out by respondents as one of the processes indicated as leading to knowledge (an example is seen in Figure 3). However, this was outlined as an understanding and internalisation of information brought in and therefore is, by its very nature self-reflective and constructed as outlined earlier; this links with the concept of organisation being gained via process identified earlier in the paper.

What is seen here is that if the terms are not clear and knowledge is not well defined, organisations will be satisfied if they recognise there is more information entering the system. It will be assumed that either this is knowledge or that it will become knowledge. This assumption may lead them to set themselves ‘learning targets’ where all members of the organisation are seen to be learning in some pre-determined way. If the targets are information, not knowledge, the advent of the learning organisation may not occur.

**How do targets impact upon knowledge acquisition**

Many organisations when trying to become learning organisations set about targeting new ideas and setting up development systems that will enable a more group feel and culture to emerge (Arkin, 1993; Nevis et al., 1995): for example ‘Desired outcomes from the workshop were articulated as interlinked themes’ (Attwood & Beer, 1988, 205). There is also considerable focus on management by objectives in many schemes (Arkin, 1993). The need for measurement drives the organisation constantly towards process but conversely, in doing so it may prevent the theory from ever becoming practice. The setting of ‘learning targets’ is a strategy frequently advised to those who wish to measure the acquisition of new knowledge. The targets will be achieved but, as outlined earlier, because of the self-referential way they are set they merely support current thinking already within the organisation.

This was seen to be a strong possibility within the organisation that considered itself to be the furthest forward as regards promoting learning (and thereby, in their view, knowledge
development) within the research. It was setting 'learning targets' but the targets stressed the commonality of knowledge rather than individuality. It became clear that the actual output was that much of the same 'information' was being redistributed thus inhibiting, not encouraging, innovation and growth.

Kock et al. feel that the focus on organisational learning produces the myth that all organisations should be learning systems and therefore organisations seek to learn even when they do not need to (1996). One of the mistaken targets may therefore be to have more learning, not to use more knowledge. ‘How you categorize and measure something depends on how you look at it and what you are differentiating it from. Since there are so many different ontologies of organizational learning, the more one sets out to measure precisely its nature and extent, the more one is likely to fall into what Ryle (1949) calls a ‘category mistake’. …there is much danger of methods based on one set of assumptions being applied to a model of organizational learning based on a wholly different set of assumptions’ (Easterby-Smith et al., 1998, 267.) For example, when Iles suggests the use of competences in order to learn how to learn (1994) there would appear to be two potential problems. Firstly, who defines the competences and do they know what they are looking for. The second, and possible more serious issues is as they are defined in the same language as other processes such as recruitment, how can they be seen to be radical and different, as others imply processes must be if they are to transform the organisation? The competences may merely reflect what is already happening and encourage more of it.

The question therefore emerges as to whether, in a self-referential, target setting framework there can be any new knowledge or divergent thinking. As indicated in the introduction the learning organisation is seen to be one that ‘transforms’ itself, and this implies it is not merely adding incrementally to what it already knows. One step towards this is to promote inquiry and dialogue in order to promote innovation and openness. The need to promote divergence in order to create innovation is widely claimed and can be an important reason for promoting new knowledge acquisition within organisations. However, at the same time there is a desire to develop collective vision and effective, empowered teams. To achieve these there is great emphasis placed upon shared vision and collective culture achieved through training and development. This is one of the problems.

Development and appraisal is set up by identifying the training needs of individuals and then setting up plans to achieve these. However, if the training needs identification is set against the background of a falsely constructed environment and a self-referential set of goals, the needs chosen will only act to perpetuate the self-constructed reality as perceived by the environment. The desire to attain a coherent culture often exacerbates this further as employees, whilst encouraged to innovate on the one hand, are encouraged towards a common, self-constructed understanding on the other. This will affect not only the targeted needs and potential areas for knowledge development but also design, as this will reflect perceived needs and a desire to maintain the stable relationships outlined earlier. Honey recognised this and stated that many organisations are unwittingly designed to encourage the acquisition of procedures and behaviours they wish they had less of (in Garavan, 1997, p. 26). This may be because although they want something else they are unable to design structures outside their boundaries of understanding. When there is an organisational goal of a unified culture this may also deepen the chances of inappropriate learning.

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7 See for example: Kanter, 1983; Paper & Johnson, 1997
Organisational success is often defined in terms of the relationships between performance outcomes and targets. As targets change so does the definition of success. However, what does not change is who sets the targets. Levitt and March observed that organizations have problems in overcoming the competences they have developed with earlier processes when they wish to define new ones. Once a set of ideas is in place they will be very hard to replace even when an attempt is being made to do so (Levitt & March, 1988). Organisational memory can be very long and often success is assumed to result from managerial actions which will then be repeated, even if in fact it is a coincidence. Once an outcome has been attributed to a reason (accurately or not) it will become fact and the definition is now set within the process. Thus random actions have now become a successful/unsuccesful procedure.

These factors imply that although there is a stated desire for divergent and new knowledge, in fact it is very unlikely to happen. Take the analogy of a washing-machine. If the clothes are to be really clean (attainment of new knowledge) and not reflect previous dirt (experiences) then all the water must be drained out of the system before new water is put in. Even if only a little dirty water remains it will taint the entire rinse. If the system is closed (as autopoiesis implies) it will never be possible to get really clean water and so real new knowledge will be unattainable. Some incremental development may occur but transformation seems very unlikely.

Thus companies, instead of learning what is really happening, only create information as they see the need for it and reconfirm what they know. Self-referentiality shows us that organisations may fail to detect errors and decision-making must be flawed. ‘Rather they adapt to an environment they themselves have participated in constructing and to which they have conditioned other.’ (von Krogh & Vicari, 1993,401). Measurement is against efficiency which is internally defined, it is being encouraged by management and therefore targets are being set that will confirm what is already known and the common ethos will ensure that all staff are learning the same ideas. This is an important issue for the Learning Organisation, as a common theoretical assumption is that individual and group learning will enable new behaviours to emerge and change to occur in a proactive way because new knowledge is being gained via the learning process.

An example is a company which considers itself to be a seeking to be a learning organisation, has one of its key steps to be the training of all staff to NVQ level 2. This will undoubtedly ensure everyone knows more but, as it will be the same knowledge generated within the organisation and taught by the same people, it is extremely unlikely to change the overall sum of organisational learning in any way. It is an example of where self-referential target setting may lead to self-referential knowledge being all that is being passed around an organisation.

The research so far has supported this argument as it is clear that all methods to seek new knowledge are directly related to current ideas and systems (see Figure 4). There are two issues raised from the initial reading of these findings: (a) that new knowledge comes from within the current mind set and (b) they imply that the responsibility to move forward is seen very much as a part of management’s job. This is across both learning and non-learning organisations, despite the idea that there needs to be a change in the power and responsibility relationships when a learning organisation is desired8.

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8 See for example: Wishart et al., 1996; Senge, 1990; Kofman & Senge, 1993; Garrett, 1990; Editorial (b), 1995; Dovey, 1997; Watkins & Marsick, 1993; Goh, 1998; Mabey & Salaman, 1995; Nevis et. al, 1995
Figure 4: Quotes describing how new knowledge is attained

“Seek out information in order to make decisions”;
“New knowledge is gained via debrief”;
“Everyone is always very short of time so there is a need to focus on short meetings and stay ahead. We are staying one step ahead via the new innovation centres. Have to be clear on benefit versus cost. Competencies lead to fuller discussion”;
In response to who should be bringing new knowledge: “Yeah, it should be everyone, but then, there has to be some indication from the top that that is what is being looked for though, because otherwise you know, if you think that your job is to just keep doing the help desk, not looking to solve problems as they come up then you've no incentive to say 'right I could do this a new way’”

Returning to the issue of self-referentiality, if there is a clear dominant coalition of power from the top of the organisation this will inevitably frame what others within the organisation learn - the power relationships will act as a form of filter which will set informal targets designed to please the senior team..

Conclusion
This paper sought to look at whether the concept of knowledge acquisition and transfer (as personified by learning organisations) is realistically possible. Research in progress has highlighted three areas which indicate that the projected outcome and advantages may be less successful than sometimes implied.

The actual process of gaining knowledge is seen to be a self-referential, constructive one. This is by its very nature reactive. However, the learning organisation is trying to gain transformation through being pro-active. The two cannot both be possible and this undermines the potential for competitive advantage.

The confusion of terms is seen to be wide-ranging throughout the companies and potentially leading to the encouragement of adding information to the organisation but considering it as knowledge. This would mean the learning organisation may appear to be working when in fact the desired transformation will not emerge.

In order to measure whether the learning is occurring, some organisations set targets which, linking to the previous point, may encourage more of the same information moving around the system but little creation or sharing of new knowledge.

There is still a lot of analysis to be undertaken from the data but it is becoming increasingly clear that the pragmatic constructivist epistemology underpinning current organisations (including learning organisations) makes the realistic acquisition and transfer of knowledge unlikely.
References


