

A practical tool to recognise individual and organizational learning obstacles

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Abstract

The paper addresses the methodological problem of observing individual and organizational learning obstacles in a particular organization. These obstacles impinge on effective distributed leadership and management. First, we use Kim's revisited model for organisational learning presented by Espejo et al [1996] to classify major individual and organisational learning obstacles. Then we present a method to observe these obstacles in a particular organisation. Some final remarks are discussed from the use of the method in specific organizations.

Key words: Organisational learning; individual learning; learning obstacles.

1 The problem

The topic of organizational learning is still of practical importance for today's effective management [Beitler, 2005]. Indeed, given the accelerated rate of technological change and the importance to respond quickly to specific needs of particular clients, organizations are moving toward more fluid structures [Drucker, 1980]. That is, structures where distributed leadership is a desirable characteristic [Clift and Thurston, 1996, Nanus, 1992] and empowerment is a key feature for effective management [Robinson, 1997]. Movements like Total Quality Management points to a distributed leadership where autonomous groups are responsible for finding and solving relevant problem-issues. Techniques from reengineering show how to redesign organizational processes to accommodate this new management practices. But in overall there is a practical concern with individual and organizational learning. This is so because individual and organizational learning obstacles will impinge on effective leadership, empowerment and management.

Observing this kind of obstacles, however, it is not a trivial problem; particularly if our concern is on structural obstacles rather than obstacles associated with personal characteristics of particular individuals. So far, interviewing people is the most common technique used to approach the problem. Therefore, it is expected that through the analysis of interviews and by direct observation of how people carry out their activities, learning obstacles could be made apparent. However, in order to do so, what do we have to ask in each interview? How should we accommodate the interviews with the particular roles of interviewers? How do we process the

answers? How could we relate these answers to specific learning obstacles? How avoid falling in a technical conversation? This paper addresses the problem of observing individual and organizational obstacles in a particular organization. All questions mentioned above are answered by employing a technique based on the use of cartoons.

The first section of the paper develops a conceptual framework for distributed leadership and empowerment based on management cybernetics [Beer, 1979, 1981]. Second section presents a conceptual model to explain individual and organizational learning. Then we describe a method for observing learning obstacles and, in the last section, we comment on its use in different organizational contexts.

2 From individual to organisational learning

Any role in an organization can be represented in terms of how it manages the task relevant to it. This management, in turn, could be focused in the way the task complexity is balanced throughout the design and use of attenuators and amplifiers of complexity [Espejo et al, 1996]. Figure 1 illustrates this complexity management where the role should be able to attenuate the complexity s/he observes in the task while simultaneously amplify his/her capacity of action.

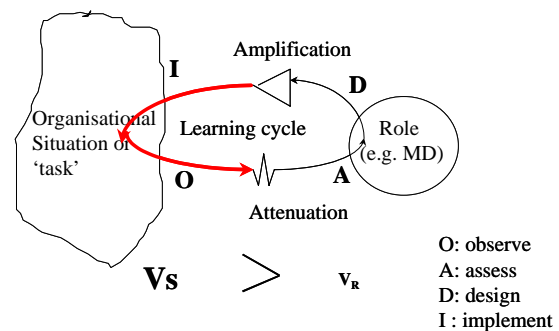


Figure 1. Management of a task [Espejo et al, 1996]

There are four stages in this management process: *observe*, *assess*, *design* and *implement*¹. Let us explain this process with some detail. The (individual performing the) role observes the situation in order to gather relevant information that is required to grasp 'what is going on'.

With this information, it is possible to make an assessment of the situation by using a given criterion to compare it with some expected outcomes. A mismatch between the current observations and the expected outcomes will trigger a process to design a set of actions in order to change the situation. The implementation of these actions, in turn, closes the loop by (hopefully) affecting the situation. Then, further observations may start the process all over again. This circular process is usually associated with a *learning cycle*. Building on this idea, we define *individual learning* as the process of

¹ This is the basis of the OADI model of individual learning developed by Kim [1993].

increasing the capacity of effective action in a particular domain [Kim, 1993]. Notice that this definition of learning puts the emphasis in embodying action rather than in acquiring knowledge [Reyes and Zarama, 1998]

It is possible to design this management process by setting up specific mechanisms to simultaneously reduce the complexity of the task (i.e., by means of attenuators) and increase the role's response capacity (i.e., by means of amplifiers). For instance, if the role is that of a professor responsible for delivering a course in a university, Figure 2 illustrates some attenuators and amplifiers of complexity that she may use to manage her task (i.e., the teaching related to this course).

By organising the students in small groups in such a way that they are able to discuss by themselves some of the issues that the professor wants to address during the class, she is effectively reducing the variety of questions that she may have (otherwise) to face if the interaction with the class were on a one-to-one basis. At the same time, by delegating some responsibility to a supporting team (i.e., a teacher assistant) the professor may be able to increase her capacity to deal with some of the issues that the students, by themselves, are not able to address. This kind of design is known as 'variety engineering' in the managerial literature [see, for instance, Espejo and Harnden, 1989]. Please note that attenuators and amplifiers of complexity in this venue are *structural mechanisms*, in other words, they are related to the *role* and how it relates to the task and not to particular individuals. This observation is crucial for the argument we are putting forward.

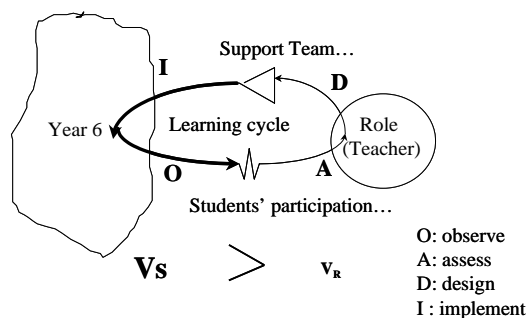


Figure 2. Examples of attenuators and amplifiers of complexity

In many occasions, however, these amplifiers and attenuators of complexity occur de facto, without any previous design. In those cases, the likelihood is that the learning loop may not be appropriately closed resulting in a poor performance of the task. Poor attenuation and amplification of complexity is responsible for what we are calling *obstacles for individual learning*. It follows, therefore, that any obstacle for individual learning will impinge in the effectiveness of individual leadership and management by affecting the performance of the task associated to that leadership role. We will go back to this point in the next section, but before let us expand the notion of individual learning to the organisational realm.

Following the same ideas expressed before, we say that *organisational learning* is the process of increasing

the organisation's capacity for effective action in a particular domain. Now, it is evident that organisations learn through their individuals, however, individual learning does not imply (necessarily) organisational learning. The latter depends very much on the mechanisms for communication and coordination of roles that are in-built in the organisation; in other words, it depends on the structure of the organisation.²

An expansion of the OADI model for individual learning may be used to describe four learning loops characteristic of organizational learning; this is called the OADI-SMM model [Espejo et al, 1996]. Figure 3 shows these learning cycles: individual single loop learning, individual double loop learning, organizational single loop learning, and organizational double loop learning. Single loop learning occurs when errors are detected and corrected within the framework of present norms, values and aims, whereas double loop learning happens when, in addition to detection and correction of errors, there is a questioning and modification of existing norms, values and aims [Argyris and Schön, 1996].

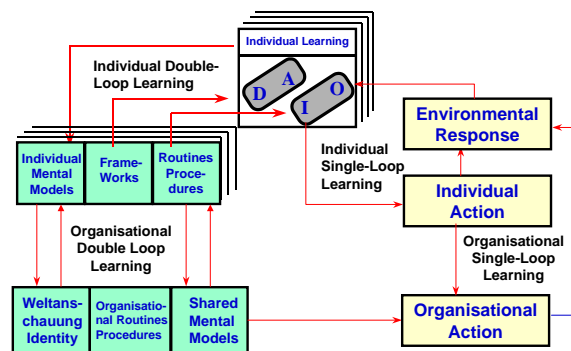


Figure 3. The OADI-SMM model for Organisational Learning [Espejo et al, 1996]

3 Individual and organisational learning obstacles

Our interest in this paper is to examine some of the consequences of individual and organisational learning obstacles. As per individual learning, structural obstacles for organisational learning can be observed when any of the four learning cycles of the OADI-SMM model are not adequately closed.

This analysis converges in the identification of seven types of learning obstacles that can be distributed among the four learning loops. Figure 4 illustrates these learning obstacles. Regarding individual single loop learning, we may identify three learning obstacles: role constrained learning, model restricted learning and information restricted learning. Concerning organisational single loop learning, we recognise four learning obstacles: role

² Again notice that organizational learning is related to *roles* and relationships among roles and not to specific individuals although, at each moment, every role is embodied by a particular individual. In this sense we say that organizational learning transcends individual members of the organization.

constrained learning, audience restricted learning, model restricted learning and information restricted learning. With reference to individual double loop learning we distinguish superficial learning whereas fragmented learning and organisation-constrained learning may emerge as obstacles related to organisation double loop learning.

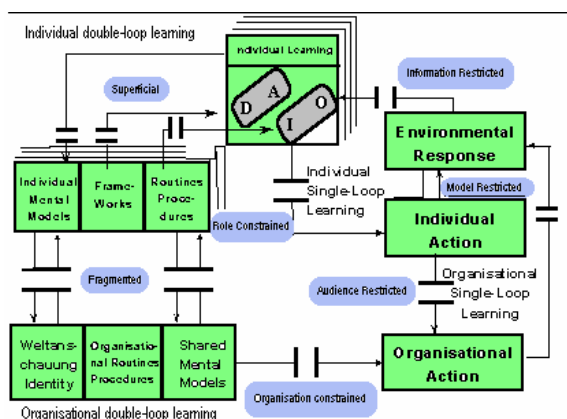


Figure 4. Individual and Organisational Learning Obstacles [Espejo et al, 1996]

Explaining in detail each one of these learning obstacles is beyond the scope of the present paper. The interested reader may go to the relevant literature instead (see for instance [Kim, 1993, Espejo et al, 1996]). What interest us here, for the purpose of the paper, is twofold: firstly, to point out that all these learning obstacles affect the effective leadership of the managerial roles involved (i.e., leadership roles) and, secondly, the need to develop a methodological tool to observe the occurrence of these learning obstacles in a particular organisation. The first point should be, by now, apparent. The second point constitutes the core of the paper and will be addressed in the following section.

4 Show and tell: a method for observing individual and organisational learning obstacles

Instead of conducting traditional interviews [Hyman, 1967, Davies, 1994], carrying out surveys or using some of the common techniques from ethnography, we decided to appeal to people's *episodic memory*.³ We wanted organisational members to remember and tell us those episodes that could be related as possible instances of learning obstacles.

In order to achieve this, we used as a trigger a set of cartoons depicting particular situations. We expected that the cartoons would evoke specific situations for the interviewees that we could interpret later on in terms of

learning obstacles. That is why we call the method: show and tell.

We developed a set of thirty cartoons based on different ways in which we may generalise each one of the seven types of individual and organisational learning obstacles⁴. Let us illustrate this with a concrete example.

One of the individual learning obstacles in the OADI-SMM model is called *information-restricted learning* (see Figure 4 above). This is a kind of 'non-learning' situation caused by a failure to measure the environmental responses to our actions. This learning obstacle can be related to ambiguous reporting, lack of receptors to make sense of actual communications or out of date reporting [Espejo et al, 1996]. In all these cases it is clear that the individual learning loop is not properly closed.

Based on these characteristics, it is possible to devise several abstract situations that can be used to trigger particular anecdotes as suitable instances of this learning obstacle. Figure 5 is an example of this.

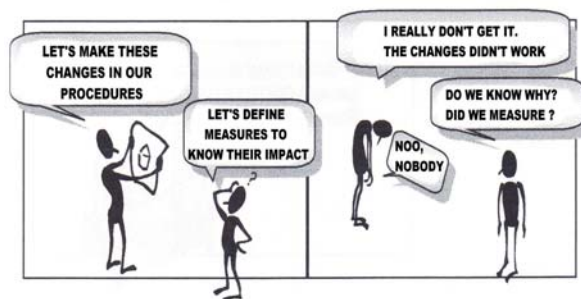


Figure 5. A cartoon that may trigger instances of information restricted learning

Let us use this example to stress, once more, that the learning obstacles we are referring to affect not only the performance of a particular individual but the role this individual is embodying. In effect, the cartoon suggests a situation in which an action (e.g., a new project, the use of a new teaching method in a department of a university, etc.) has been taken by a managerial role for which there is no information system in place that allows him/her to keep track of its evolution and impact. This may point to the way the specific organisation manages (i.e., defines, measures, stores, processes and distributes) relevant information. In this sense, the obstacle goes beyond any particular individual embodying the role in focus at any moment. It is an obstacle that is grounded in the communication mechanisms that support organisational relations. That is why we say that these learning obstacles are mainly structural.

Once the selected organisational roles have been 'interviewed' in this way,⁵ each story can be transcribed

³ By episodic memory we mean those events, at work or in daily life, of which we have been an active part and that have produced such a strong impression upon us that they come back as vivid images when triggered by some particular stimuli.

⁴ These cartoons are based on an original idea worked out by Julia Diaz in her master thesis under the direction of the author [Diaz, 1998].

⁵ The actual form used for these 'interviews' collects more useful information such as: the role played by the

and interpreted using both the OADI-SMM model and our understanding of the structure of the organisation in focus as a reference point.

The outcome of this process is a set of possible individual and organisational learning obstacles that can be used to guide a further process of reflection among the organisational members. The assumption here is that by working through these learning obstacles, the individual and organisational capacity for learning will improve. This, in turn, would allow the alignment of structural and individual requirements for effective leadership throughout the organisation.

5 Practical applications

The method was used in two successive runs of a postgraduate course on organisational learning carried out in the master program of industrial engineering at the Universidad de los Andes during 2004. Students were organised in ten groups of four and each group was assigned to a particular organization⁶.

During two months each group used different sets of cartoons to apply the method. Figure 6 illustrates the complete instrument used. At the end of the course each group presented a set of hypothesis regarding possible learning obstacles they had found during the process. These hypotheses were validated, in some cases, with managers of the companies. In all cases students and managers reported the usefulness of the method in guiding further discussions to improve on specific processes carried out in the organizations. Possible learning obstacles were the triggers of these discussions.

6 Final remarks

The purpose of the paper was to provide a method that could be used to observe possible individual and organisational learning obstacles. The relevance of the method resides in our claiming that individual and organisational learning obstacles negatively affect the development of distributed leadership. This is so because these obstacles will interfere with the effective management of the tasks that individual leadership roles may promote within the organisation.

Finally, although the show and tell method to observe individual and organisational learning obstacles has been applied to a small set of organisations in the context of academic work as part of a postgraduate course (the master program in industrial engineering at the Universidad de los Andes) it is clear that a further refinement of it could be applied to many others organizations. We feel that a larger scale in this

application may indicate some structural archetypes [Senge, 1990] in the structure of companies in particular business areas. Current research is being carried out by using other kinds of triggers to episodic memory in the same context. We are using fables and plan to employ short video clips in the near future.

A CASE STUDY IN ORGANISATIONAL LEARNING
- Interview Guidelines -

Interviewee's Name: _____

Position at the company: _____

Date of the interview: _/ _/ _

Please observe the following situation as illustrated by the cartoon below.

Situation 5.7

- Have you seen this situation in your organization? Yes No
- If your answer was YES, how often has occurred during the past year?
(Please mark on the appropriate box). More than once a week Once a week Less than once a week but more than once a term Once a term
- Have you been part of the situation at any time? Yes No
- If your answer was YES, please mark with an arrow the character on the cartoon you identify with.
- Please tell us a short anecdote of a situation like this. You don't need to say the actual names of the persons involved.

Figure 6. An instrument to observe learning obstacles⁷.

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⁶ 'interviewee' in the story s/he is telling; and the frequency of this situation in the organization, among others.

⁶ Postgraduate students were part-time attending to the master program. All of them were regular workers in different organizations. Each group selected the company where they had more change to interact with other roles of the organization.

⁷ This cartoon refers to a case of superficial learning. It happens either when double-loop learning does not occur at all (i.e., models or procedures are not revised although they should be) or when it occurs but is not simultaneously conceptual and operational. This means that either procedures are changed in a way not supported by mental models changes or the procedures are not revised in accordance with changes in individuals' mental models.

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