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Interactions between Control and Organizational Learning in the Case of a Municipality

A comparative study with Kloot (1997)

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Abstract

Control systems are frequently described as hindering organizational learning. The reality is far more complex. This article tries to complete Kloot's work (1997) by coming up with a more comprehensive approach. Indeed, it highlights through an analysis grid the impact of controlling systems on the questioning of organizational methods, resources and objectives. In this research on a local community our standpoint consists notably in taking account of the political aspect, more concretely, of the influence of elected representatives whose role is predominant in questioning the validity as well as the rationality of controlling tools.

Keywords: control systems, organizational learning, local government, case study.

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1. Introduction

Control systems are often viewed as hindering organizational learning. The apparent contradiction between organizing and learning has prompted Weick and Westley (1996) to describe organizational learning as an oxymoron. The way organizations deal with this contradiction is crucial: they have to face up to ever more rapid and unexpected environmental changes whilst keeping their operations under control. The relationship, even the interaction, between control and organizational learning is therefore becoming vital although it was hardly an issue when control only focused on surveillance.

However, though this issue is often studied (Lorino, 1995; Simons, 1995; Burlaud & Simon, 1997), it is seldom approached in a systematic way. Such an approach as identified by Bouquin (1999) is all the more promising as the main source of information is provided by control systems (Huber, 1991). Only Kloot (1997)¹ has investigated this interaction further. She shows notably that the use of an appropriate control system can facilitate organizational learning driven by organizational changes. In the first place, analysing the relationships between control and learning should involve a theoretical synthesis that takes three important elements into consideration: (1) the extension of the notion of management control to that of organizational control; (2) the existence of both cybernetic and non cybernetic controls; (3) the fact that learning can be considered as organizational if it gives rise to the collective acquisition of knowledge and modifies the behaviour of the entity concerned (Huber, 1991)². This concept is particularly relevant in the case of a public organization: the fragmentation into centres of responsibility and in particular the vertical structure mean that distribution of knowledge within the organization is not automatic.

This article attempts to add to Kloot's work (1997) by highlighting the way control tools can be used to challenge organizational methods and/or associated objectives and strategies. Like Kloot's study, which is the point of departure of our own work, our research focuses on a local public organization, whose specific features have a major influence on the way relationships between control and organizational learning are analysed. Such organizations are culturally marked by the influence of bureaucratic control, characterized by formalized procedures, hierarchical relationships and the importance of goals of legality and compliance with regulations. As regards organizational learning, local public organizations are also culturally marked by the influence of social and political rationales on decision-making, rather than the simple predominance of a single managerial rationale. These specific features, compared with exclusively market-based private organizations, thus provide a rich and complex contribution to the study of relationships between control and organizational learning. Consequently, in this research on a local community, we pay particular attention to the political aspect and, more specifically, to the influence of elected councillors whose role is predominant in questioning the validity as well as the rationality of control tools.

After clarifying the fundamental constructs (part 1) and presenting a conceptual framework to study the relationships between control and learning (part 2), we describe the empirical, mostly exploratory study (part 3) we carried out to verify the relevance and realism of our analysis grid (part 4). The main purpose of this approach, based on a series of formal interviews, is to understand the connections between our theoretical hypothesis - that control

¹ Bollecker (2000, 2002) has also shown interest in this problem within the particular framework of the analysis of the management accountant's role in terms of organizational learning.

² Koenig (1994) asserts that the implementation of new skills rests either on the circulation of ideas and the dissemination of practices or on the creation of relationships between pre-existing entities.

fosters organizational learning - and the viewpoints of the actors taking part in our case study by emphasizing several major aspects of the problem: “Which management control systems hinder the distribution and mobilization of knowledge and which, on the other hand, stimulate organizational learning?” or “is knowledge provided by control systems especially and at which level of the organization?” (at which point in the organization do these pro- or anti-learning controls act?). Such questions, raised by Kloot (1997), deserve to be examined further.

2. Control: from inspection to strategic planning

To analyse the relationships between control and learning, it is necessary first to assess the way control in organizations has developed in recent years. Recent shifts in terminological and conceptual approaches to control mean that it is now possible to establish close links with organizational learning, which its original paradigm did not allow.

Organizational control is a major concern in literature dealing with organizations and performance-enhancing methods. Since Tannenbaum (1968) - who proposed a process through which an individual (a group or an association of people) affects or intentionally influences another's (a group's or organization's) behaviour - and Olsen (1978) - who advocated a method to ensure that the members of an organization do their utmost to achieve its objectives - the environment has changed and organizations have become more complex as they respond to various economic and technological changes. New issues arise, notably the quest for a form of control that is formalized, yet flexible enough to adjust to diverse environmental changes. Organizations, which hitherto operated regardless of the past, now show interest in learning.

2.1. Common control systems: the state of the art

A classic design control based on definitions

Anderson and Oliver (1987) consider organizational control as a set of processes aimed at supervising, leading, appraising and rewarding its employees. For Anthony (1965), “*management control is the process through which managers make sure that resources are obtained and used effectively and efficiently towards the achievement of objectives.*” Chiapello (1996) includes in this concept control developed by management as well as control emerging from human behaviour within the organization. His vision is close to Hopwood's (1974) definition when he specifies that the factors which can influence this control are those which are controlled by managers as well as the resulting overall control of the company. Therefore there are a very large number of aspects involved in organizational control systems.

The forms of cybernetic control

When based on formalized control instruments, organizations function according to traditional forms of control. For instance, budgetary control, which is at the heart of the planning process, involves allocation of resources and then assessment of the financial results achieved as a result of management decisions. The tools in use are performance indicators and reporting, which provide information for senior management. When they are used within the framework of bureaucratic control these tools reflect top-down planning and indicate that work is performed according to highly detailed instructions. In this context the term ‘bureaucratic control’ is often synonymous with hierarchical supremacy – failure of which undermines the system – and assumes that actors understand their roles in achieving

objectives – which implies appropriate communication from the top management, and then the middle management.

An evolution in the design of control

Given the frequent shortcomings of these cybernetic controls, Hofstede (1981) describes the characteristics of non-cybernetic controls as an opportunity for both public and private organizations. Though there is no doubt about the usefulness of cybernetic forms of control, informal management tools can go further, complementing rather than replacing traditional control.

Similarly, Bouquin (1997) sees management accounting as a process that encourages behaviours insofar as it is not only an instrument designed to assist managers in the decision-making process but also, more generally, a tool enabling all operators in the organization to detect and exploit sources of competitiveness. Lorino (1995) contrasts the basic principles of traditional control with new systems which, in his view, would be better tailored to the new environment. Among other things, this means taking into account not only costs, but also value, coping with change, not stability and ensuring continuously that actions and behaviours are in keeping with the organization's objectives (strategic management). Burlaud (1990) tries to classify control systems in complex organizations. For him, there are two kinds of control: "hard" control and "soft" control. The former puts the premium on calculating administrative expenses and overheads whereas the latter focuses on the behaviours of the organization's workforce and recommends indirect use of cost controls. The connection between management control and behavioural control is made through language, "*a vehicle for culture and a system of integration that involves a value system and thus favours particular behaviours*" (Burlaud & Malo, 1988). For Guibert and Dupuy (1995), the notion of trust appears to strike a balance between formal and informal control.

Whatever the approach, the field of management control remains relatively open. That is why we would rather use the term control which covers management control, yet goes much further. Kloot (1997) extended the notion of control since management control systems are perceived as sets of control mechanisms, each of which is intended to perform part of the control, therefore including more than accounting and budgeting systems and coming up with a new purpose centred on organizational learning.

2.2. Towards a learning system of control

Although the various control methods all have their own strengths and weaknesses, each of them proves effective in certain conditions. As a result we have chosen to study the case of organizations that effect minor or major changes and have focused our attention on Simons' specific approach to control (1995). This approach explains how control can be a source of organizational learning, which is at the heart of our problem.

The interactive control system, source of organizational learning

Simons (1995) has developed a new framework in terms of management control. Control is closer to an action-driven process (Denis, 2002), far from the original vision of fixed control. While control no longer serves to maintain some sort of conformity, it becomes a key element in the organizational learning process (Lorino, 1995).

According to Simons, a control system is characterized by the role played by different control tools and the opposition between restrictive and motivating systems. The author highlights

four levers of control. Within the organization there are “*belief systems*”, which aim to encourage employees to seek new opportunities, “*boundary systems*”, which prevent them from seeking opportunities, “*diagnostic control systems*”, which urge them to achieve objectives and reward them when they succeed, and lastly, “*interactive control systems*”, which focus on dialogue and knowledge exchange. While the first three systems play “traditional” roles – conveying the organization’s values, setting boundaries for the organization’s actors, appraising and either rewarding or penalizing individuals according to their performance, the interactive quality of the fourth system fosters organizational learning (Simons, 1991). When they choose to use a control system interactively, top managers make clear that they are trying to find new solutions. All the decision-makers at middle management level then take part in the dialogue, thus allowing the emergence of new strategies.

Simons’ new analytical framework changes the fundamental typologies of control significantly. What matters most is the validity of such a model. How can the organization as a whole then question its processes and operating standards in order to distribute existing and future knowledge better? In this case, the problem in organizations is to implement controls based on indicators, goals and resources which ensure that employees respect these constraints and at the same time are free to take initiatives and foster innovation.

3. Interactions between control and organizational learning

It may appear trivial to assert that there are interactions between organizational learning and control processes but the relation between them is relatively complex. Organizational knowledge feeds into the control system, and the purpose of the control system is partly to generate knowledge. The real question is how important that objective is.

3.1 Control and learning: two concordant notions

Kloot (1997) confirms that the definitions of control systems and organizational learning involve similar objectives: both have to do with change and an organization’s adjustment to its environment. Similarly, Dent (1990) argues that control systems can make a dynamic contribution to managing organizational changes by suggesting several new possibilities. But this link needs to be clarified.

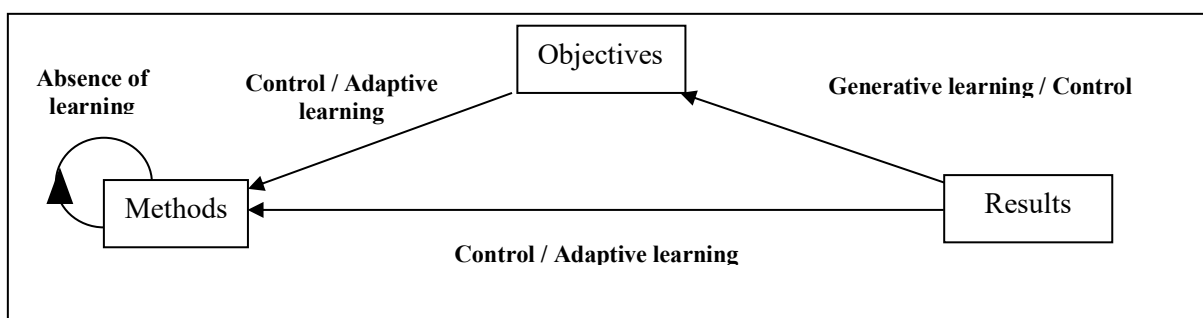


Fig. 1 - Chart of the adaptive learning/generative learning typology applied to the control/ learning relation - adapted from Argyris and Schön (1978)

When a discrepancy or deviation appears between objectives, methods and results, learning mechanisms are initiated (fig.1). The following learning levels (Senge, 1990; Argyris & Schön, 1978, 1996) can be identified: the first level (adaptive or single loop learning) consists in generating behaviour changes which are adaptive but do not lead to any major changes in

values, since the objectives remain the same. A higher level of learning (generative or double loop learning) occurs when the organization revises its objectives and the criteria it uses to measure its performance. It is thus easier to understand the relationship between control and learning in the management control loop.

This representation of adaptive and generative learning includes a number of control systems. Strategic management accounting (Simons, 1991), activity-based costing (Lorino, 1995), planning (De Geus, 1988) and performance indicators (Kaplan & Norton, 1992) are all concepts that involve organizational learning. Langevin (1996) refines this approach by considering two major orientations of control. Firstly a contractualist “vision” considers control as a way to supervise individuals. The aim is not to learn, but to control (Bollecker, 2000). Secondly the conventionalist approach implies controls through information systems that collect, process and pass on information. Control may be viewed as an iterative trial and error process (Bouquin, 1994). In this sense, organizational learning has an effect on behaviour patterns within the organization. Practices are changed when errors are detected, and the correction of those errors confirms that a process of organizational learning has taken place. In this case there are two types of change: change in the methods implemented to achieve objectives (adaptive level) and change in the way the objectives themselves are defined (generative level). Finally, control systems appear to be among the principal factors encouraging organizational learning processes.

3.2 Control, a vector for organizational learning

In a Taylorist organization, learning follows a single loop that arises from the detection of a deviation and its correction so as to restore the fit between objectives and outcome (Argyris & Schön, 1978). The repetition of objectives/actions/results loops entails knowledge acquisition processes. But such learning is restricted by the barriers between the different operating units and by the relational aspects imposed by an authoritative structure. Yet, in an unstable environment, learning must be achieved at a higher level and involve the evolution of traditional control systems associated with bureaucratic organizations.

3.2.1 *Relationships between control and organizational learning*

When control systems point at inadequate performances and behaviours ill-adapted to the context, they become a source of learning for the organization (Huber, 1991). Yet if control provides knowledge and thus fosters organizational learning, slow, complex and authoritative decision-making can also inhibit it (Benavent & de La Villarmois, 2000). These interactions have only been examined at an empirical level by one study, which we have used as a basis for our research.

In her analysis of two Australian cities, Kloot (1997) associates control systems with stages in the learning process, looking above all to illustrate the role of control systems in generative learning, which is the only way to respond to changes in the environment. Such varied control systems as appropriate accounting information, performance assessment systems or quality improvement programmes therefore appear to allow generative learning. Those observations have already been described by Simons (1995): organizations generally have an interactive control system which is designed to allow new ideas and strategies to emerge. However there seems to be a contradiction between the two approaches (Batac & de La Villarmois, 2002). Kloot (1997) identifies numerous control systems enabling higher level learning whereas Simons (1995) believes organizations should have only one interactive system. There are two

complementary rather than exclusive explanations for this difference: either the identified learning is not done at a high level or the cities studied are in crisis so they use diagnostic control systems interactively.

Although there has been some research into learning/control interactions, the small number of these investigations makes it difficult to interpret them and this raises important questions about which systems are used interactively and how do they impact behaviours? Which diagnosis/control systems must be developed jointly so as to ensure the proper working of interactive systems?

3.2.2 Analysis grid of relations between control and learning

The fundamental issue guiding our construction of a theoretical model is the way control systems contribute to organizational learning. We focus on the way control creates and distributes knowledge, sometimes derived from learning processes. Thus, it aims to work out how control restricts the autonomy of the workforce, and hence the ability of operational departments to adapt, or how it favours innovation throughout the organization.

The analysis grid we used is represented in the following table (table 1) and developed below. It displays the different aspects which will be studied empirically:

- as regards control systems (A) the broad definition of control rules out any systematic analysis. We therefore opted for a wide range of control systems (internal/external);
- as for learning, three descriptive criteria were favoured: learning stage (B: production, distribution and/or memorization / mobilization), learning levels (C: adaptive and/or generative) and organizational levels (D: administrative and/or political).

CONTROL SYSTEMS (A)	LEARNING STAGES (B)	LEARNING LEVELS (C)	ORGANIZATIONAL LEVELS (D)
<p>1. <u>Internal control</u> <input type="checkbox"/> 1a) Accounting control ; 1b) Budget control ; <input type="checkbox"/> 1c) Operational control ; 1d) Management control ; 1e) Control of satellites ; 1f) Legal compliance control ; 1g) Political control ; 1h) Cultural control ; 1i) Bureaucratic control.</p> <p>2. <u>External control</u> <input type="checkbox"/> 2a) Prefect ; 2b) Public accountant ; <input type="checkbox"/> 2c) RCA; 2d) External auditing practice.</p>	<p>1. <u>Production</u></p> <p>2. <u>Distribution</u></p> <p>3. <u>Memorization / Mobilization</u></p>	<p>1. <u>Adaptive</u></p> <p>2. <u>Generative</u></p>	<p>1. <u>Administrative</u></p> <p>2. <u>Political</u></p>

Table 1 - The analysis grid

(A) Control systems

Our research focuses on internal and external control practices, which can be formal or informal, voluntary or legal. Internal control in a local community consists of implementing processes that will give elected councillors and council staff a reasonable assurance that the organization's objectives will be achieved. The purpose of these internal controls is to guarantee "protection of assets (property, personnel...), reliable information, observance of laws and regulations, observance of the management's policy and optimization of resources" (COEC, 2001). Most of the time, this control reflects the organization's degree of

bureaucratization. First of all, this definition includes accounting controls **(1a)**. Such controls, introduced to ensure compliance with laws and regulations in local communities (Auby, 1996), are primarily concerned with verifying the existence of valid paperwork (order and delivery forms) or specific procedures (signature by the hierarchical superior and head of the appropriate department, existence of appropriate accountancy coding, availability of funds on the account concerned). This definition also includes operational control **(1c)** and budgetary control **(1b)**, which are based on performance indicators concerning activity and public expenditure. For example, these indicators might include the number of visitors to a facility or the amount of funds actually used. On top of this first layer of controls, a local authority might also introduce management control which can, among other things, seek to control purchasing, especially with regard to the respect of procedures. Local internal control can also include control of satellites and associations **(1e)**. Insofar as some local public services can be contracted out to private sector service providers, local authorities may decide to set up systems enabling them to verify that the outsourcing contracts are properly executed and, more generally, to control the risks, and especially the financial risks, associated with this type of delegation of responsibility. At a legal level **(1f)**, internal control may involve carefully following up all incoming mail (complaints, etc) received by a local community with a preventive dimension (control/initial advice) completed by another dimension defined as litigation management and impact control.

On top of these formal internal controls, local internal control could be also performed through what Rémy (1992) calls “ecological” control (direct on-the-spot control) which he defines as “*control based on visibility and direct observation and on everyone’s knowledge of everyone else’s activities*”. The formal controls (budget, accounting, management controls) are thus complemented by informal, cultural and political controls. In particular, this culture **(1h)** can be seen in all the elements which give an organization its specific character and determine the behaviour of its workforce (Livian, 1992), and can be used to increase staff motivation around broad objectives and at the same time be used alongside other control systems (Macintosh, 1994). This culture seems to exert a form of control since it has a real effect on behaviour. In particular, it can speed up or slow down the organization’s ability to adapt to change in an increasingly complex environment. It can also cause resistance to change and poor staff motivation or, on the contrary, facilitate change and can either enhance or restrict the exchange of information within the organization. Similarly, the type of organizational structure may restrict or facilitate organizational learning. While bureaucratic control systems are generally regarded as obstacles to innovation, the control systems used in organic structures seek to support innovation (Burns & Stalker, 1961; Thompson, 1961; Mintzberg, 1982). Administrative and hierarchical organization is a significant obstacle to individual initiative, but also to the memorization of new knowledge within the organization. Consequently, the existence of a bureaucratic control is considered. **(1i)**.

Beyond internal controls, external controls in local authorities are implemented by legal stakeholders, in this case the Prefect³ **(2a)**, the Public Accountant⁴ **(2b)** and the Regional Chamber of Accounts⁵ **(2c)**. They verify that the budget complies with the regulations and

³ The Prefect verifies the legality of the actions of local government agencies. He is responsible for ensuring that they comply with their legal obligations.

⁴ The existence of the Public Accountant is related to the principle of separation between the director and the accountant, a basic principle of French public budgetary and financial law. It offers a guarantee to the local government agency which benefits from the fact that its expenditure is validated before it is actually carried out.

⁵ The Regional Chambers of Accounts were created under the 1982 French decentralization law. Their mission is to ensure the regularity, quality and the probity of local public administrations and thus ensure that local finances are balanced.

assess the honesty and reliability of accounts, evaluate the efficiency of local management and ascertain the proper use of public funds as well as the legality of cities' actions. Local government may now choose voluntarily to use external financial auditing (**2d**), “*control of control*” (Bouquin, 2001). In this case, these contractual interventions are designed to assess and improve the reliability and performance of systems and operations.

Finally, the articulation between these different forms of control can be presented schematically as follows (fig. 2)

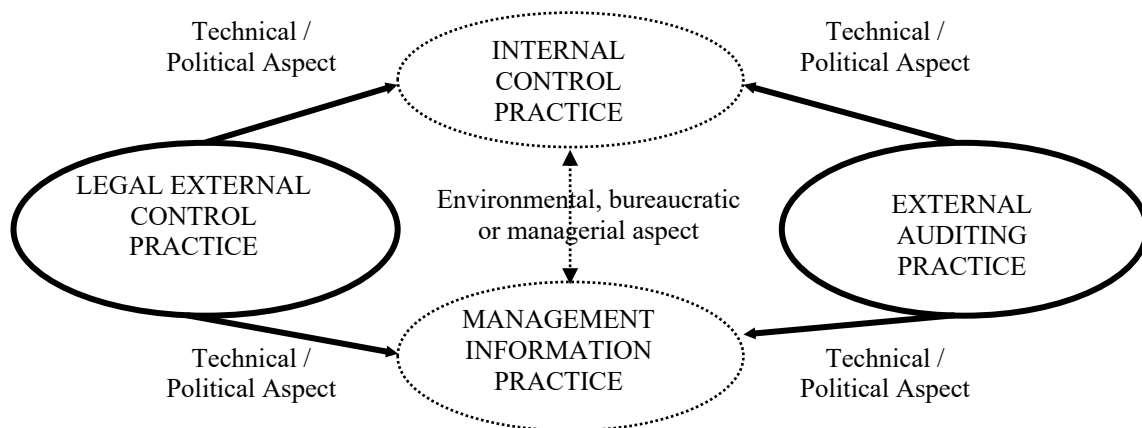


Fig. 2 - Information and management control systems in a local authority

In this framework, control systems are analyzed through two series of relationships. The first⁶ links the elements of external control, namely legal external control and external auditing practices, with the local community (visualized here by internal control methods and information systems). External controls are analysed here in two dimensions. The first is a technical dimension, used in close cooperation with administrative staff to determine whether external controls are not only able to control the local authority but also to improve its performance. A second, political, dimension is then used, in close connection with local councillors, to determine whether external controls can also be decision-making aids. We thus try to find out whether the forms of external control contribute to the city's internal control and the city's management information. Those standards of assessment (technical / political) will enable us to appreciate the nature as well as the organizational level of relations between control systems and learning. Do the external controls have technical and/or political consequences? Do the practices introduced at the administrative level spread to the political level? Does the political level challenge decisions taken by administrative staff? These are the questions we will be attempting to answer.

The second relationship outlined in the chart above⁷ mainly concerns modes of internal control and of production and distribution of information. In part 2, we emphasized that internal controls could be directed either towards inspection, as in bureaucratic control, or more generally towards comprehensive dashboarding in the case of managerial control. Still, one must add to that traditional dichotomy a more informal dimension when it comes to analyzing local public internal controls. What is the effect of this complementarity on interactions between learning and control? Do formal controls tend to hinder learning and

⁶ In bold in the figure.

⁷ Single relationship indicated by a dotted line.

informal controls stimulate it? We will be attempting to answer these questions through this study.

(B) Learning stages

Having briefly discussed control systems, we now turn to our method of analysis, and to do this we need to examine the learning stage. In an organizational learning process, knowledge is first of all produced (production stage). This stage occurs when knowledge is intentionally produced, for example when a report is written, a set of indicators constructed, meetings held or other organizations visited with a view to doing benchmarking. The second stage – i.e. the distribution of knowledge - occurs only if individual learning is shared among the members of the organization. Collective learning is the necessary condition for organizational learning: an individual or group of individuals shares his or their knowledge with another individual (or group of individuals). Finally, the memory / mobilizing stage occurs if the organization has implemented mechanisms for preserving the knowledge produced. This involves mobilizing previous learning and adopting practices that have already proved effective. For example the dashboard of indicators is adopted and copied in other departments within the organization or the conclusions of a focus group are debated in other meetings involving other members of staff.

(C) Learning levels

Our analysis grid is also based on studying the learning level. Although Levitt and March (1988) emphasize the organizational dimension and Argyris and Schön (1978) insist on the role of the individual, both studies identify distinct learning levels. Referring to Cyert & March (1963) and Nelson and Winter (1982), Levitt and March argue that two categories of routine must be distinguished. Coriat and Weinstein (1995) call them static and dynamic. “*Static routines*” involve mere repetition of previous practices whereas “*dynamic routines*” are constantly directed towards new learning. Those two categories can be usefully compared with the two learning levels identified by Argyris and Schön (1978): adaptive and generative learning. The first level produces adaptive changes in behaviour but does not lead to major changes in values. This kind of learning is restricted to the symptoms and not to the fundamental problem when a deviation is observed, it is corrected by modifying practices. The second level of organizational learning is the level at which organizations review their values and the criteria by which performance is defined. So it is a cognitive learning process which challenges understanding of the causes of the problem and tries to find sustainable solutions: it requires reshaping the principles underlying the practices to correct the observed problem. Passing from the first to the second level requires a collective effort through more interactive dialogue to limit inhibitions and reduce error-generating behaviour which tends to be amplified in an interactive pattern.

(D) Organizational levels

Finally, our study is based on identifying the organizational level. As our research focuses on local public organizations, characterized by very specific features, it would appear important to distinguish between the two different types of people operating within it. Using the same framework as Parry (1994), we consider here that the separation between the administrative and political levels is a factor which can influence the link between control and organizational learning. This separation is “*based on the acceptance of the supremacy of the legislative and on the concept that good administration is the result of the apolitical application of technical know-how to achieve goals defined by political objectives*” (Parry, 1994).

Overall our analysis grid focuses on control systems, learning stages, learning levels and organizational levels. This method is designed to determine whether control systems in local government bodies encourage or on the other hand restrict, and even hinder, organizational learning. Our purpose will be to identify the internal and external control systems which produce, distribute and mobilize knowledge in order to generate — or not generate — adaptive and generative learning processes within the specific context of a local public organization, characterized in particular by separation between administrative and political stakeholders. For each control systems (**A**), we thus analyze their relationship to the process of organizational learning: if it causes learning, with which stage (**B**: production, distribution and/or memorization / mobilization), which level (**C**: adaptive and/or generative) and which “locus” of the organization (**D**: administrative and/or political) ?

4. The methodology of the study

As a preamble to this empirical application we should stress that the context we are observing, namely the public sector, has gone through the same evolution in terms of control as the private sector. Hence, while there has been a shift from a budget and cash management logic to a financial and fixed asset management logic, the vision of public internal control centred on inspecting local management has become outdated (Bouquin, 2001; Guibert & Dupuy, 1997; Carles, 1996; Patry, 1994; Borgonovi & Brovotto, 1988; Young, 1988). These changes are illustrated by a shift from inspection and surveillance practices to the notion of control, a passage from a logic of inputs to a logic of outcomes, as well as an emphasis on complementary formal and informal controls. This new conception of local public control fully justifies the empirical context – a local community – for our study of the question as to whether control systems which encourage learning actually function.

Our empirical approach is based on observations and data collected during semi-directive interviews in a medium-sized municipality. This qualitative approach enables us to analyze and classify the relations envisaged on the conceptual level, that is to say the links between control systems and learning within a particular organization, namely a local community. The research is therefore performed in the same organizational context as that of Kloot (1997). In her article, the municipality is faced with an organizational change, characterized by competitive tendering to enhance local performance and by attempts to improve reporting. In our research, the municipality⁸ is faced with a recent reversal of the political majority. The community studied is a town in southwestern France with 40,000 inhabitants. The council employs more than 1,000 people. After the elections of 2001, the council radically changed political orientation. More generally, we try to show that in France the evolution of control tools may be necessary, notably on account of the increasingly challenging environment in which national responsibilities are transferred to local authorities in a context of declining revenue, but the primary concern is to take this factor into consideration to prompt adaptive, even generative learning.

⁸Our initial contacts with the authority date back to October 2002 and were completed in April 2003.

4.1 Research design

The case study method is well suited to our research goals. Indeed, in spite of the strongly contextualized and restricted range and of the incomplete results obtained by this type of approach because of the limited understanding of the relationship between control and learning, the case study method remains the best way of gaining an insight into this phenomenon. This mode of research, within a constructivist framework, is justified by the limitations of empirical measurements of the relationship between learning and control.

Our method of research is qualitative. It calls upon a whole range of different methods. Semiotics, discourse analysis, observation and data studies are potentially fruitful techniques for our purpose.

We complemented our initial results with interviews. Throughout the study, we chose to consolidate the research by comparing theory and observation; interviews provide valuable additional evidence. The sample was limited to a dozen people holding key positions in the organization. The number of interviews was sufficient for the validity of the study, as the interviewees were the people most involved in the decision-making process.

There were two major stages in the research: the first involved data collection and the second a series of interviews. Our framework was a “multi method” model which varied according to the data sources, collection tools and data analysis. This two-level method, according to the definition proposed by Yin (1993), will now be described.

4.2 Data collection techniques

For the first part of the empirical study, a specific methodology was implemented, composed of two main stages first getting to know the organization as a whole and then analyzing the municipality’s information and control processes⁹. In the first place it involved determining the community’s partners making up the local community, and then identifying the functions and departments within the community. We needed to get a clear overall picture of the organization of the community and its satellites’ through interviews and study of the documentation. Secondly we focused our attention and operations on the organization of local management information and control systems. The recorded interviews, designed to understand these characteristics, are the following

Chief Administrative Officer	Nov 14 2002	one hour
Deputy Chief Administrative Officer	Nov 14 2002	one and a half hours
Chief Finance Officer,	Nov 11 2002	one and a half hours
Communication Manager	Nov 28 2002	one hour
Administrative Secretary-General	Nov 28 2002	one and a half hours
Technical Department Manager,	Dec 11 2002	one hour
Management Control Manager	Dec 11 2002	one hour
Mayor’s Principal Private Secretary	Dec 11 2002	one hour
First Deputy Mayor First Deputy Mayor	Jan 21 2003	one hour
Deputy Mayor for Arts	Jan 21 2003	one hour
Mayor	March 12 2003	one hour

Table 2 - Interviews conducted

⁹ See Carassus (2002) for a more detailed description of local management information and control systems.

The data and analysis were presented as follows:

- collection of data from participants produced in the context of the study;
- linking themes or objects with observations about the people interviewed.

The interview guide was prepared on the basis of results accumulated during the information gathering phases. The interviews were guided by the researcher's interpretations (cf. Alvesson, 2003). The approach tended to be subjective and followed the recommendations made by Kilduff and Mehra (1997) so as to go beyond the "neopositivist" approach which was long considered as the only possible scientific method in case studies. We are looking at the observed phenomena to try and find a plausible interpretation rather than a causal explanation.

Conducting interviews is a necessary complement to observation of behaviour. Indeed, the observations themselves may sometimes change depending on social or professional codes. Individual interviews give a different understanding of the results. For example, we noticed that statements obtained were often critical, particularly regarding the way control systems hindered the learning processes and created difficulty mobilizing local knowledge in the rest of the organization.

4.3 Methods used to theorize the data

During the interviews, we concentrated on five subjects: employees and the organization, control systems (internal, external), information practices (information tools used by councillors, municipal staff and other local stakeholders), external auditing practices (auditors' operations, assessment of practices, achievements and difficulties), and organizational learning. In order to analyze relationships between control systems and organizational learning, we conducted interviews and studied the documentation to identify the main features of the city's control and information processes that foster learning, not only with regard to employees' autonomous decision-making and their ability to spread innovative practices throughout the organization, but also considering their influence on the organization's methods, and even objectives. Here the term 'objective' is to be understood in the context of ongoing public policies at the heart of municipal action.

The methodology used in the analysis of data from interviews was inspired by Miles and Huberman (1991), Yin (1993) and Eisenhardt (1989). We coded the data in two stages. First, we coded the talks from the transcript made from the recording. This was done using a list of themes drawn up on the basis of our review of the literature, then enriched by study of the initial talks. We then verified the reliability of this transcription by recoding a sample of the interviews to check that the initial coding could be applied sufficiently objectively to the interviews so as not to introduce any bias into the processing of the answers.

For the analysis of these qualitative data, we proceeded by reclassifying the words transcribed on the basis of their theoretical theme. This precaution is explained by the fact that the words 'learning' and 'control' cover meanings which are both broad and subjective. They can be interpreted in different ways.

The final results of our study were produced after data from all the phases in the investigation had been compared and crosschecked. Instead of promoting a particular category of data, we simultaneously addressed primary data collected during interviews and secondary data from

internal documents. For example, during the interviews, new factors emerged as a complement to the observed data. We thought that the choice of methodology was the most suitable to analyse the relationship between control and learning. These results enabled us to match all the controls observed in the authority we studied with the organizational learning process identified at both the production and mobilization/memorization stages. The results will be in the following form (table 3)

CONTROL SYSTEMS	HINDERING	STIMULATING	MEMORIZATION
Accounting control		X	
Bureaucratic control	X		
Political control		X	X
Prefect		X	
Public accountant		X	

Table 3 - Example of presentation of results according to a control / learning interaction matrix

The intersections checked represent the type of relationship between control and learning. Within a single control system, some forms can either hinder or stimulate the learning process. They also act differently depending on whether one considers the phases of production and memorization.

5. Results: analysis of empirical interactions between control and organizational learning

In this last section we will systematically analyze interactions between control and organizational learning. We will describe them more precisely according to two standards. The first focuses on the nature of the relationship. We will deal essentially with two major types of identified interactions: control systems that hinder organizational learning and controls which stimulate it¹⁰. The second analysis standard refers to the type of learning (adaptive/generative) as well as to the organizational level (administrative/political).

5.1. Controls which hinder learning and controls which stimulate learning

Our analysis of interactions between control and organizational learning is based on the premise that organizational learning varies according to the type of control, where learning is either adaptive or generative. Kloot (1997) has also upheld this hypothesis in the case of a comparative study of two Australian local communities in the midst of organizational change. In our study the situation is much more stable. Yet our purpose is to add to Kloot's results by increasing the possible forms of control and by systematically checking how much influence each of them has on organizational learning. The first stage of our work is presented in the chart below (table 4). It displays the empirical results of our study, which will be discussed below.

¹⁰ This classification is related to the context of the study, as is also the case in the Kloot's article (1997): the authority is confronted with a change (election of new councillors) and wishes to adapt to its environment better. In this search, certain control systems slow down this process of adaptation, while others stimulate it. However, we consider that this type of reflexion is common today in the French local authorities: mayors, management tools, citizens' behaviour. Also, this research, even though it is contextual, can provide perspectives for other cases where local authorities have adapted to changing contexts.

Control systems	Learning stages			Nature of control systems
	Prod.	Dist.	Mem.	
1. Internal control				
<input type="checkbox"/> <input type="checkbox"/> 1a) Accounting control	x	x		stimulating
<input type="checkbox"/> <input type="checkbox"/> 1b) Budget control	x	x	x	stimulating
<input type="checkbox"/> <input type="checkbox"/> 1c) Operational control	x	x	x	stimulating
<input type="checkbox"/> <input type="checkbox"/> 1d) Management control	x	x	x	stimulating
<input type="checkbox"/> <input type="checkbox"/> 1e) Control of satellites	x	x		stimulating
<input type="checkbox"/> <input type="checkbox"/> 1f) Legal compliance control	x	x	x	stimulating
<input type="checkbox"/> <input type="checkbox"/> 1g) Political control	x	x	x	stimulating
<input type="checkbox"/> <input type="checkbox"/> 1h) Cultural control				hindering
<input type="checkbox"/> <input type="checkbox"/> 1i) Bureaucratic control	x			hindering
2. External control				
<input type="checkbox"/> <input type="checkbox"/> 2a) Prefect	x	x	x	stimulating
<input type="checkbox"/> <input type="checkbox"/> 2b) Public accountant	x	x		stimulating
<input type="checkbox"/> <input type="checkbox"/> 2c) Regional Chambers of Accounts	x	x		stimulating
<input type="checkbox"/> <input type="checkbox"/> 2d) External voluntary audit				(not applicable)

Table 4 - Determining hindering and stimulating controls

We may comment on this chart by distinguishing between hindering and stimulating controls in terms of organizational learning. The status of ‘hindering control’ and ‘stimulating control’ is linked to the ability of control systems to hinder or stimulate the transfer of knowledge within the organization. As stated above, this transfer is done in stages: production, distribution and memorization.

- Control systems hindering organizational learning -

Control systems often seem to stifle initiative. In the case studied, some processes, essentially bureaucratic control but also certain forms of cultural control, are considered as “hindering” learning.

(1h) Cultural control - In the local authority we studied, there was a reduced turnover and a high degree of compartmentalization. “*Local administrative culture has bred such a compartmentalized system: many people have worked here for a number of years*”, says the Chief Administrative Officer. Moreover, he tells us: “*we need indicators that can help us follow what is happening, and above all do not add any bureaucracy*”. Along the same lines, the Secretary-General¹¹ says that “*one of the main factors of improvement is internal communication. There should be less compartmentalization; municipal staff and councillors should not hesitate to meet. The latter should take the first steps and the former should see further than the ends of their noses. We operate in a hierarchical system: people will not act unless they have been ordered to*”. Finally, the workforce is not naturally encouraged to share their knowledge: cultural control hinders the transfer of knowledge.

(1i) Bureaucratic control - Bureaucratic control is strongly established in the case in our study. It is the result of a number of direct supervision mechanisms and marked hierarchical dependence of subordinates with respect to their superiors. The situation reduces the number

¹¹ The Secretary-General works in direct contact the mayor. He implements the decisions of the municipal council and is responsible for the administrative and budgetary management of the city.

of individual initiatives and encourages a tendency to “mind your back”. The Technical Department Manager admitted that *“decision-making is performed according to a well-defined process. No one will take initiatives of their own free will. [...] Ours is an administrative and hierarchical structure where everyone stays in their place. There are attempts at cross-functional work, but it is not easy. These problems originate in the application of the organization chart”*.

- Control systems stimulating organizational learning -

(1a) Accounting control - By definition accounting entails exchanges of information between heads of administrative departments and political representatives. These accounting controls in administrative departments traditionally take the form of documents which have to be checked and signed, in particular to enable invoices to be paid, while for the political representatives they take the form of credit notices.

(1b, 1c) Budget control / Operational control - Performance indicators, in terms of public expenditures or activities, are first presented to the Chief Administrative Officer. They are used as a basis for discussion during meetings with heads of department and are then presented to the mayor’s office. In addition, the Chief Finance Officer implements *“budgetary control and a regular cash schedule to anticipate problems, using accounting forecasts.”* This is first done half way through the year by means of a report submitted by the Chief Finance Officer to the Chief Administrative Officer. The mayor and the Chief Department Officer then discuss it. The heads of department’s mission is to prepare detailed budgets and present them to the Chief Administrative Officer who proposes a decision. Then the mayor and the council management define the final budget strategies. According to the Chief Administrative Officer, the consequences of this distribution of information are both political, as they modify decision-making, and administrative, as this is where heads of departments are most likely to experience trouble: *“We try to adjust the system accordingly”*. The First Deputy Mayor’s opinion as to the use of information provided by performance indicators clearly establishes the process through which information is distributed from the administrative to the political field *“Information such as variations in staff costs or absenteeism figures gives us some freedom and room for manoeuvre to introduce modifications and corrective measures within the city council. Other information such as statistics on the evolution of expenses provided by the management control department have made some changes possible we were able to streamline purchasing management”*.

(1d) Management control – In the local authority in our study, management control has two main objectives: controlling departmental overheads and controlling purchases. *“The goal of the new council, which came to office in 1991, is to strengthen the purchasing committee and reintroduce the expenditure commitment process [...] Through more stringent purchasing management the current purpose of management control is to take direct responsibility for organizing competitive tendering in order to obtain the best prices and the best opportunities for negotiation and render the best services”*, according to the head of the Management Control department. This type of control, obeying goals/means/results loops, is so based on the production and distribution of results (reporting systems) and in most cases on the mobilization phases (correcting the gap between results and goals).

(1e) Control of satellites - Regarding control of satellites and associations, the subsidy application process, which takes place every year at precise dates, is carried out by the council committees concerned (assessment of the application, proposal of a subsidy to the Mayor’s

office before it is presented in the budget). There are in fact no real processes in place to control their activities. The official in charge of management control adds, *“We keep an eye on attendance at day-care centres, canteens... We have a quantitative view. We do not assess the quality of the services provided; this is done informally by councillors. As far as associations are concerned the Mayor specifies that “some controls are not carried out because there are too many organizations. However, in some cases control verges on interference.”* In some cases control is performed through annual financial statements. *“Associations can only be controlled a posteriori since they have to submit administrative accounts and a number of reports”*, as the Finance Manager states. The official in charge of management control specifies that there is also some monthly auditing *“We have a quantitative vision [...] This auditing allows us to become aware of problems and, most of the time, to solve them”*. However the outcome of that auditing is difficult to assess since, according to the Mayor, beyond agreed objectives and interventions by councillors *“council commissions should become involved in the city’s activities. That would allow us to assess the efficiency of our auditing”*. Finally, remarks and suggestions made have already been conveyed to the local council, which has taken them into consideration, although not systematically, showing that knowledge has been produced, distributed and mobilized.

(1f) Legal compliance control - This action consists in centralizing in a database all the processes and legal directives necessary to solve problems and to give all of the organization’s stakeholders access to that information. The database created by the main legal advisor is made available to all the city hall staff. This concerns the form and content of letters and the tendering process (competitive tendering regulations).

(1g) Political control – In the case we studied, this kind of control through fieldwork done by councillors is the basis for controlling the council’s actions. According to the deputy mayor, *“control means above all being present in the field, in town. For example, when a clean city policy is set up, the best way to check if the policy is being properly implemented is to listen to the citizens. It is a very fruitful experience of local participative democracy”*. Moreover, there have been clear changes in the way the council operates, notably when it comes to political/administrative relations or relations between councillors and citizens. The Mayor explained political control as follows *“we are using the participative method because we trust our employees’ competences. For example, the Deputy Mayor for Civil Engineering often meets technical teams at 5 a.m. to talk things over. [...] This creates an atmosphere of trust through close contact, which they had never experienced before. [...] We have created a special team composed of the Mayor, the Deputy Mayor for Traffic and Parking and of two or three officials in charge of local community jobs. This team does fieldwork every Thursday to call on the citizens who write to us. We listen to them and then try to take action.”* These practices help ensure that information is communicated to the city hall and, in some cases, that the expectations of citizens are taken into account in the development of policy.

(2a, 2b, 2c) Prefect / Public accountant / Regional Chambers of Accounts - Some managers wonder about the usefulness and relevance of such external control legal practices. According to the Chief Administrative Officer, *“certain local characteristics could be better taken into account. The relational aspect also ought to be improved”*. The Administrative Secretary-General sums up the latent perception of external control perfectly *“when it comes to legal control, the prefecture’s purpose should be to advise us and act as our partners so that we feel comfortable about going to them for help. On the financial level the Regional Chambers of Accounts should perform more regular controls. It would also be useful to have easier access to these institutions, which are perceived more as punishing institutions than as*

institutions that provide help to local authorities: there are errors that we could try and tackle without considering them as deliberate”.

(2d) External financial auditing - On this subject, the Chief Administrative Officer declared that despite the recent removal from office of the party in power, *“the city council has not carried out that kind of operation. We performed our own auditing. A few months after the municipal election, the mayor presented a number of internal auditing indicators with comparisons with other cities. For example, he used them to justify rate increases. But resorting to outside consultants would have been considered as breaking away from the previous city council, and also from the administrative departments”.* So no organizational learning can be identified for this type of voluntary external control.

Finally, this first stage in the study of interactions between control and organizational learning consisted in distinguishing between hindering and stimulating controls. In the second and third stage we will now try to understand why learning arising from control systems can be considered either as adaptive or generative, depending on the learning stage (production, distribution, memorization/mobilization) and on the organizational levels (administrative, political).

5.2. Determining learning types

In order to determine organizational learning types we need to use the analysis grid presented at the end of the third section. This stage is the culmination of our work since it assesses the degree of interaction and above all analyzes control as a lever of organizational change. Table 4 showed the distinction between stimulating and hindering organizational learning; the following table (table 5) presents in greater detail the types of learning levels and of organizational levels (for controls which stimulate organizational learning). Some examples of learning are also given.

Control systems	Learning levels	Examples of learning	Organizational levels
<u>Internal control</u>			
(1a) Accounting control	Adaptive	Change of information distribution processes	Administrative
(1b) Budgetary control	Adaptive	Change of budget	Administrative and/or Political
(1c) Operational control	Adaptive	Microdecisions which are taken on a day-to-day basis but modify neither resources nor objectives	Administrative
	Generative	End of a political project further to technical assessment	
(1d) Management control	None	No change of methods concerning drama, the day-care centre or absenteeism.	Administrative and/or Political
	Adaptive	Change of methods (menus, etc.) of the canteen due to falling activity	Administrative
(1e) Control of satellites	None	No change of methods concerning big sports or cultural associations	Political
	Adaptive	Change of methods (subsidy amount) concerning small associations	
(1f) Legal compliance control	Adaptive	Change of government procurements, pay structure processes	Administrative
(1g) Political control	Adaptive	Creation of a flying team	Political
	Generative	Politicians’ adjustment to citizens’ needs	

Control systems	Learning levels	Examples of learning	Organizational levels
External control			
(2a) Prefect	Adaptive	Change of government procurements, pay structure processes	Administrative
(2b) Public accountant	None Adaptive	Change of posting processes	Administrative
(2c) Regional Chambers of Accounts	None		Administrative

Table 5 - Determining the level of organizational learning

The main purpose of this work was to identify control systems in the organization we studied which were able to challenge the organization's objectives. Such systems as we understand them correspond to controls that bring about generative learning. Therefore, knowledge produced and distributed by control systems can eventually produce a new system of reference in the organization, when it is re-used by a certain number of people or groups of people.

On a theoretical and conceptual level, controls developed in a public organization are considered as poor mobilizers of learning (Kloot, 1997). They function in cybernetic loops and rarely challenge objectives, since they focus on surveillance and sanctions. Yet, when local practices are analysed, it appears that the reality is far more complex. Thus some controls produce no learning, although theoretically they should stimulate learning, while others produce adaptive or generative learning.

First of all, as regards accounting-type internal controls (**1a**) and budgetary controls (**1b**) they generally facilitate adaptive learning. For example budgetary control can cause changes in use of financial resources as a function of earlier practices and deviations generated between prediction and actual outcomes. Accounting control can also be considered as "pro-learning" in so far as the problems encountered in document signing and accounting coding can generate changes in information processing.

As regards internal and external legal control (**1f**, **2a**, **2b**, **2c**), the Finance Manager asserts that " *legal regulations are sometimes taken into account to adjust processes as regards government procurements a committee has been created within technical departments that updates processes. In that case control is performed by outside actors like the Prefect or the Public Accountant*". The Administrative Secretary-General supports such actions, pointing to the potential of external control practices to encourage change – " *the Prefecture's observations are able to make us aware of things we had not necessarily noticed in matters of regulation*". These controls propose new procedures designed to adapt practices to the law. Knowledge mobilized by such forms of external control cannot give rise to generative learning as recommendations generated by those forms of control are restricted to the required standards and aspects that guarantee the legal constraints imposed on this type of public organization.

More pragmatically, in some cases operational control (**1c**) carried out by civil servants proves to be a means to re-orientate policies advocated by elected representatives, and redefines the organization's objectives. Thus, according to the Technical Department Manager, " *since we act as permanent advisors if we can persuade councillors, they will*

review their projects.” For instance, the party in power wished to build a conference centre in a former market hall in the city centre. It was an election campaign promise and as such could be considered as a political goal. The technical department thought that there would be major operational problems, e.g. failure to satisfy safety standards and poor acoustics. Councillors undertook a technical and operational feasibility study, which proved the project to be impossible, and it was subsequently dropped.

Conversely, in other cases control performed by operators may not influence political choices. The Management Control **(1d)** manager reports that a detailed analysis of the working of local council services concluded that attendance at the city’s day-care centres was decreasing. There were two day-care centres in the city and the conclusions tended to suggest that ultimately one would be enough. Yet the city’s representatives included the building of another day-care centre in the following year’s program. The Mayor specifies, *“choices are not always consistent we decided to build another day-care centre with an extra ten places while attendance at the current day-care centre, that had been located in new premises, had decreased by over 5%. There is no consistency, only subjective reasons. Indeed day-care centre staff are very difficult, demanding and anti-authority, so we have to be very careful”*. The problems that would be caused by closing a day-care centre (strike action, redundancies...) and the risk of damage to the council’s image overruled rational management considerations.

As regards the control of satellites **(1e)**, it would appear that this kind of control can generate learning — or not generate learning — depending on the kind of satellite involved. In the case of highly subsidized associations, paradoxically, the existing control systems do not generate modifications of resources or objectives, even when problems are detected. For example, sports and cultural associations without any major results or any exemplary actions may, contrary to the conclusions drawn from control systems, be given increased subsidies from one year to the next. On the other hand, when small associations which receive little subsidy come up against the same problems they may have to face cuts in their subsidies. Political factors, such as the reputation or influence of these associations in local life, are here decisive to explain differences in organizational learning.

Finally, in order to explain further the relationship between administrative management and local council action, the First Deputy recalls the importance of political controls in public decision-making, especially in the context of district meetings **(1g)**. Elected councillors meet citizens, who express their needs; those needs are taken into account first by elected councillors, who readjust the political objectives accordingly, and then by administrative staff, who review resources.

All in all, even though it appears difficult to produce a concrete illustration of the way knowledge is mobilized through control systems over a short period and within the context of our study, it would appear that when used jointly some control systems (operational, political) are able to produce generative learning, not least owing to their ability to influence the final political decisions. The examples given here show that this is possible: a new use of internal controls can lead to a review of political decisions. These controls should be compared to the conception of interactive systems as expressed by Simons (1995). Elected councillors and municipal staff interact through dialogue and discussion, and the managerial and political dimensions appear totally interconnected in the organizational learning process. So it would seem that it is not the type of learning which makes the most difference, but the way it is used within the organization.

5.3. Discussion determining links between control and learning

An overall approach to public management control considers, not only the impact of achievements on the environment, but also the objectives, methods and results of public action. Huron (1998) points out that the results of public action must be compared from a traditional angle with objectives and methods, but also more originally, must be related to the local community's public dimension measured by people's satisfaction. Assessing public policies is therefore part of a broader approach than traditional management control. As Santo and Verrier (1993) point out, assessment is to be viewed as a strategic control system of public action, complementary to other control systems. In this framework, assessment of public policies and management control may be considered as a help to strategic and political decision-making. In this sense, they can influence the links between control and learning in different ways:

Firstly, mere comparison of results with objectives or simple adaptation of resources; a basic control mechanism (accounting and budgetary control, management control, legality control, public accountant's control, legal control, control of satellites) can produce organizational learning.

Secondly, there can be other relationships when a public organization questions its operating processes (adaptive learning), and even its political objectives (generative learning). We have previously noticed that a control system which produces, mobilizes and distributes knowledge does not necessarily entail either adaptive or generative learning. Such knowledge actually has to be "accepted" by the decision-makers, here the politicians. The knowledge produced is indeed most of the time based on a technical and managerial logic (at least when it is generated by the administrative level). The political logic may or may not bypass that level of knowledge to impact decision-making (examples of the day-care centre and the market hall). We have also noticed that on those occasions control systems that stimulate organizational learning produce adaptive rather than generative learning, the political domain having more influence on the organization's objectives than on its methods – except for "political" controls, the degree of control exerted on a political level remains more powerful than that exerted at an administrative level.

Thirdly, taking into account the assessment of public policy, which in this case can be compared to the knowledge produced by district meetings, previously described as political control, makes it possible to allocate resources to particular operations rapidly (for instance, repairing pavements) or to consider constituents' opinion to implement or change a policy. This element, which is specific to public organizations, highlights our main conclusion as to the study of interactions between control and organizational learning; political controls performed by the senior management may create generative learning whereas operational controls performed by rank and file administrative staff are filtered by elected representatives.

5.4. Comparison of the results of this study with those of Kloot (1997)

Despite their limited scope, the observations made during this study contribute to the little-explored field of interactions between control and organizational learning (Kloot, 1997; Bouquin, 1999). The aspects of the problem of the relationship between control and organizational learning are now well established, as shown in the first three parts. However, it is difficult to define specific causal relations between those different aspects, so we mainly

restricted our analysis to a descriptive approach with a few recommendations, enabling us to exemplify control systems that foster learning, albeit in a rather simplified way.

Although a more systematic analysis would allow us to respond with greater confidence to the question of the ability of control systems to foster learning, there are a few elements in our study which do seem to shed light on the relationship between controls and learning, thereby complementing Kloot’s study (1997), which was the first practical investigation to examine interactions between control and organizational learning in the context of a local authority and was the guiding principle behind our work. We can therefore compare our results (table 6).

Features of Kloot (1997)’s learning control system	Deltaville case study
Appropriate accounting information	Improvement of accounting and financial tools and of advice provided by external controls, notably the RCA and the Public Accountant.
Performance assessment systems	Not mentioned
Associated reward systems	Not mentioned
Real participative decision-making	Attempt at better co-ordination between elected representatives and administrative staff
Strategic planning	Greater participation of technical and managerial sectors in annual political decisions
High quality	Creation of management commissions, legal development auditing service, « field teams » aimed at improving internal analysis and services rendered to citizens
Development of a common viewpoint	Attempt at better co-ordination between representatives and the administrative staff

Table 6 - Comparative elements between the Kloot (1997) and Deltaville case studies

The comparative chart above reveals an overall fit between Kloot’s results and ours. There are, however, differences which appear when the analysis is taken further. First of all, it seems that the two studies did not have explicitly identical purposes, in particular when it came to the existence of training and development programs or reward systems. In those fields, according to Kloot’s conclusions, it seems obvious that clarifying performance measuring systems together with introducing appropriate reward systems could also, as in the Deltaville case, be considered as a form of control which stimulates learning. Then, contrary to that first difference, it seems that our analysis complements Kloot’s conclusions insofar as they analyze the influence of the political dimension on the relationship between control, which is essentially influenced by a managerial logic, and organizational learning.

5.6. Suggestions as to how local public control systems could change in order to favour organizational learning

Obviously the existence of a form of control that stimulates learning by encouraging the free exchange and distribution of information and then knowledge across the various layers of the organization means that existing practices have to change. This is confirmed by Bœuf (1999) who advocates new forms of control in public organizations. They seem to follow three directions: the will to reform external controls, more thorough internal controls, and genuine assessment of public policies.

Firstly, councillors often urge us to seek truly “honest” relationships between managers and elected representatives; the difficulties of local management being at the heart of that relationship. In our case such a transparent relationship, notably between representatives and the administrative staff, could be achieved by reviewing control methods that hinder learning

(bureaucratic culture, extremely hierarchical structures), for example, by introducing forms of project management more often and by involving administrative actors in political decision-making.

Secondly, while control of local public expenditure, which is identified as essential, requires organization methods and representatives' and civil servants' practices to be clarified. Observations issuing from external control, made either by the Regional Chamber of Accounts or the Prefect, must also be better integrated into local communities' information processes through the creation of a legal watch committee or the drafting of a guide to government procurement processes. Knowledge produced by external controls needs to be distributed throughout the organisation and stored in the organisational memory.

Thirdly, when it comes to assessing public policies by comparing impacts with objectives and methods, while control must focus on establishing structured organization in departments, based on clear objectives (control through performance indicators, fieldwork assessing implemented measures, etc.), its purpose must reach a higher level, not only by highlighting insufficient performance or inappropriate behaviour, but also by favouring public organizations' adjustment to the environment. In this context control would play a major role in organizational learning: improved coordination between representatives and the administrative staff, the creation of management commissions inside the organization to distribute and mobilize knowledge, comparison of control practices, and more consistent use by representatives of management data.

To sum up, improvements can be achieved by setting up control systems that stimulate generative learning. Yet we may have doubts as to whether the conditions necessary to implement these improvements are satisfied, given that representatives and the administrative staff are only beginning to work complementarily.

6. Conclusion

The problems experienced by local authorities in adapting to their environment provided an ideal opportunity to analyse the relationships between control and organizational learning. However, the choice of the case study method presents biases and limits. Beyond the choice of the employees interviewed, the report on the organization studied, both in terms of its culture and its history, provides a powerful insight into the nature of the answers. A multi-level method, with both individual and group interviews, would have allowed for better identification of the circuits that can accelerate the process of knowledge transfer. Moreover field observations, as they relate to the concept of organizational learning, need to be qualified, in the sense that they can be highly subjective and difficult to measure. Also, another limitation is that we have not indicated the behavioural differences linked to the effects of experience or motivation. Finally, although it is appropriate to limit the case study, we see an opportunity to continue work with this methodology and take our research much further. Extending our case study to cover a longer period would have enabled us to confirm or disprove our results, and thereby verify the ability of some control systems to stimulate generative organizational learning.

Thus, the aim of this study was to analyse the relationship between control systems and organizational learning in the particular context of a local public organization. We have shown the existence or absence of the influence of different internal and external controls on modifications of resources, in the form of adaptive learning, and on modifications of

objectives, in the form of generative learning. It appears that cultural and bureaucratic controls, as predicted by the literature, tend to hinder organizational learning and require in response the implementation of transverse forms of management and organization. It also appears that, for control systems which stimulate organizational learning, decisions are influenced by the information provided, which is produced on the basis of a purely managerial rationale. However, this influence depends on where the learning takes place, at an administrative or political level, and on the nature of the public activity.

Finally, in the context of a local public organization, contrary to what might happen in a private context, a political logic may in some cases prevent a control system that apparently fostered organizational learning from generating changes of the organization's methods and/or objectives. In other cases, control practices seem more likely to foster adaptive and generative learning. In the same way, as Kloot suggests, the existence of the characteristics necessary for a control system to stimulate learning would not be enough on their own to trigger a learning process. So, beyond those traditional stages of organizational learning, there seems to be a further stage, which we propose to call "knowledge filtering", which needs to be added. By integrating this stage into the previous model we gain a better insight into the nature of public decision-making. The influence of control systems on organizational learning is thus easier to understand. This sheds new light on the way in which control systems affect public decisions leading to changes in methods, in the case of adaptive learning, and to the organization's objectives, in the case of generative learning.

The search for a balance not only between controls implemented by administrative staff and elected councillors, but also between the managerial and political rationales, can finally be summed up as follows in the words of the Mayor "*we manage public services which are often commercial services and users are becoming customers. The results of management control are useful but we are not a multinational bent on achieving objectives and meeting financial targets: management control is not the only factor in the decisions we are making but it is essential for decision-making. As we are a political organization, too, there is something irrational about our decisions. In this context, management control teaches us not to cross the line between the irrational and the unreasonable*".

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