Rethinking Educational Reform - A Better Approach to Educational Improvement

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Abstract

This paper focuses on the influence of changes to the administration of school based education and explores its impact on learning systems. A critical comparison is made of the influences of 'managerialism' and institutional economics, in particular principal-agent theory. It is argued that these are based on philosophies and assumptions hostile to the achievement of improved learning. From such a comparison a new possibility becomes apparent. The alternative model reveals the potential benefits of using self-organisational properties to improve educational performance. Unlike the 'rationalist' management and economic approaches, this reveals the need for a focus on people, relationships, learning rather than structures, and centrally determined standards and conformance.

Key words: Educational reform, managerialism, new public management, public choice, agency theory, school improvement, complexity theory, loosely coupled systems.

Introduction

The nature and structure of education in the Western world has changed little over the last century (Sarason 1990; Evans 2001). The dominant approach has its origins with enlightenment (Modernist) concepts of knowledge and assumptions about 'knowledge needs' derived from class based conceptions of social role (Goodson 1997; Sterling 2001). The many and repeated attempts to reform education have been motivated by a desire to improve effectiveness – focusing on the quality of *outcomes* for both individuals and the wider community/society – and/or with administrative *efficiency*.

Attempts to improve effectiveness have been informed by changing thinking about knowledge and alternative theories of learning. Educational practice draws rather eclectically on such theories. Modernist (behaviourist) instrumental approaches are still evident while post-modern (constructivist) influences have also been increasingly embraced, at least at the level of policy (Boudourides 1998; Vanderstraeten and Biesta 2002). Irrespective of the approach to learning advocated at the policy level, the evidence suggests that there has been minimal change in teaching practice (Sarason 1990; Tyack and Cuban 2000). This has confronted reformers with the realisation that no matter what the philosophy informing their thinking, ultimately there is a need to influence the practices of teachers. In many instances this has been attempted by increased emphasis on managerial/administrative control. As the focus on administration has developed so educational reformers have drawn on wider thinking about administrative change. As a consequence, approaches to education reform have followed trends in public sector reform. It should be noted that the design of an education system that is informed primarily by learning theory might look very different to one derived from administrative/management theory. The two sets of ideas are the product of different domains of discourse and can lead to contradictory prescriptions for practice.

Christopher Hood (2000) has argued that throughout the history of public administration, four broad 'styles' can be discerned. These are *fatalist*, *hierarchist*, *individualist* and *egalitarian*. The hierarchist (classical bureaucracy), individualist (neo-liberal) and egalitarian (social democratic) approaches are most relevant in Australia and other Western Democracies. More specifically, the administrative styles that have informed education reform over the past decade include:

- The heirarchist approaches of rational/bureaucratic/management; and

- The individualist approaches of public-choice/principal-agent/institutional economics.

These perspectives intertwine. It is worth disentangling them, as they do not always share consistent assumptions and/or implications for practice.

This paper examines the assumptions, advantages and disadvantages of these perspectives as they have applied to education reform. It is argued that while each has brought some valuable insights and can be demonstrated to have led to some useful change – neither provides a basis for future improvement and indeed, if pursued further, will diminish the quality and effectiveness of education. An alternative based on assumptions at odds with those of both these perspectives is illustrated. This is based on research into an educational improvement program undertaken in the public government school system in the State of South Australia. This practical and successful example is used to draw out the limitations of past approaches and provide a grounding point for the development of a set of principles to guide future reform. These principles draw on a well established set of ideas – that of educational systems as 'loosely coupled' – but draw also on recent advances in thinking about the application of complex systems to organisational design and management.

Recent Approaches to Educational Improvement

A political reality in Western democracies during the post war period has been the increase in the range of services demanded of governments. To respond to increasing demands, governments have needed to do 'more with less' (Wilenski 1986; Keating 1988). Drawing on neo–classical economics and neo-liberal political thinking, advocates of small government have increasingly called for budgetary restraint, downsizing, privatisation and deregulation (Wilenski 1986; Self 1993; Davis 1997). Two major sets of ideas have influenced approaches to administration during this time (Aucoin 1990):

> *Managerialism*: also called the 'new public management', which is an application of business management principles to public institutions; and

> *public choice theory*: also known as the 'economic theory of politics', which is an extension of the logic of economic markets to processes of administrative and political exchange.

While this downplays the significant influence, particularly in Australia, of social democratic reform (Orchard 1998), it is an accurate reflection of the influences from the mid to late 80s to the present. During the 1990s other neo-liberal and neo-classical economic influences have also had a significant impact, most notable among these is principal/agent theory. These ideas proceed from different basic assumptions and premises. Each is worth examining as each has important implications for educational reform. Wright (2001: 280) observes that debate about 'managerialism' has come late to the education sector, and *"has not really taken place in a critical and rigorous fashion"*. By contrast the debate spans over a decade in the broader realm of public administration.

'Managerialism' or the New Public Management.

For advocates of a new approach to 'public management', private sector practices embrace a series of disciplines (such as planning and budgeting, marketing and human resource management) which had no clear precedents in public administration and which offered potential for improved performance. Such practices were seen as relevant to achieving a shift from the bureaucratic pre-occupation with *processes* to a focus on *results* (Keating 1990). Management theory, however, draws on eclectic influences. Early concepts and practices drew from the Weberian concept of bureaucracy as an 'idealised' model of the formal and rational organisation and thus shared a common origin with approaches to administration. For detractors, approaches to management are considered too diffuse, being subject to trends and

fads (Collins 2000). Critics argue that uncritical adoption of such loosely derived practices may and have led to inappropriate consequences for public practice (Considine 1990).

Advocates proposed 'managerialism' as a value neutral or instrumental/technical approach to improving the efficiency and effectiveness of organisations. As such it is seen as applicable to organisations whether they be public, private or non–profit. Pollitt (1990: 60) illustrates this by asserting that the instrumental nature of managerial theory is such that it represents *'...a concentration on the immediate, concrete, controllable things which go on within one's own organisation and an avoidance of entanglement with wider–value questions'*. Advocates of 'managerialism' argue that this 'neutrality' enhances its applicability to administration which, in the Westminster model, is underpinned by a notional policy/administration dichotomy (Wilenski 1986). From this perspective administration is seen as value neutral— concerned with the *means* of government rather than with *outcomes*. However, as many have argued no social theory or set of practices is value neutral. Wilenski (1986: 52-53) among others has also pointed out that the way in which government policy is interpreted and implemented involves choices and alternative choices have alternative effects on the intended beneficiaries of policy. Administration, then, is not and cannot ever be entirely politically or value neutral and nor can management.

Theoretical roots

While diverse in many respects, management theory shares broadly consistent assumptions about the nature of the social world. Consistent with its Modernist and functionalist root organisations are seen as comprising concrete entities and relations. These are studied to identify underlying *cause-effect* relations and derive *laws* governing behaviour. This view leads to the most common 'image of organisation' within management theory – that of 'organisation as machine' (1986). From this view an organisation is assumed to be purpose-driven and purpose-designed and that the individuals comprising the organisation share common goals (Dunford 1992). Organisational effectiveness is assumed to be a function of structure, task design and the specification of rules and procedures to govern how people go about realising that goal. This accords with the simplest representation of an organisation as a *system*, that is, as a set of transformative processes for acting on *inputs* in order to produce predefined *outputs*. This technical focus—seeing organisational components (people) as cogs in a machine—fails to address the major contributor of organisational dynamics, the complexity of human behaviour (Dunford 1992). Furthermore, the assumption that all people in the organisation share a common goal suggests that each gives up his/her personal interests, subordinating them to those of the principal (Coleman 1994). This assumption runs contrary to those of agency theory, which has also influenced administrative reform, often contemporaneously.

Managerial approaches to Education

Figure one illustrates the classical bureaucratic/hierarchical model of educational administration. The central hierarchy, accountable to a Minister of State, will commonly be structured by grouping functional specialists (curriculum, evaluation, personnel, finance). The district level provides an oversight function to the schools and schools to teachers and a hierarchical chain. For their part, Principals have line responsibility to the regional administrator but may also have looser reporting obligations to functional specialists within the Department. Within the school, teachers experience a traditional hierarchy with the principal having educational and administrative responsibility for the school as a unit. There is an assumption that there is a tight coupling between education policy (eg curriculum) and the action of teachers in classrooms. Where such a response is not observed, the solution is

assumed to be in the manipulation of formal mechanisms such as rules and procedures, structures and rewards or in sub-systems of evaluation and regulation.
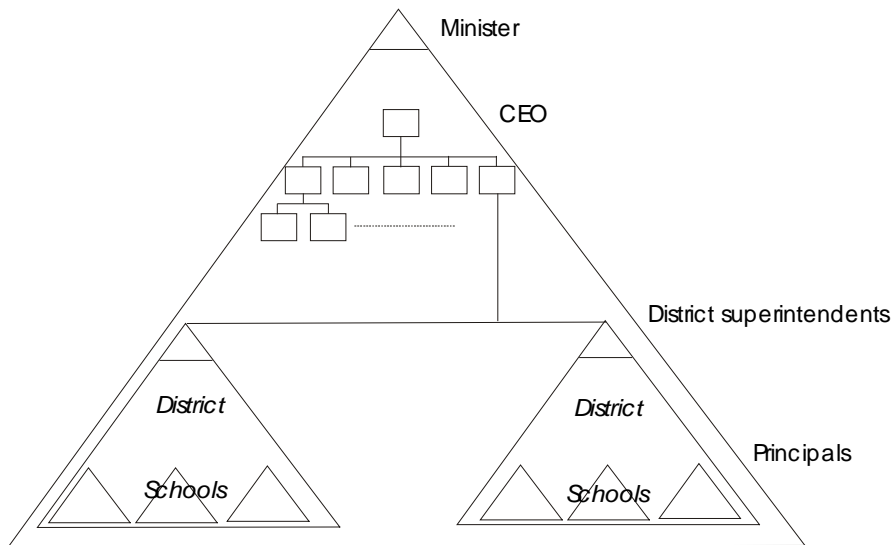

Figure 1 – Education system as Hierarchy (classical Bureaucracy)

This classical conception has seen some modification under the influence of 'managerialism'. Discussing the situation in the UK, Simkins (2000: 321) cites Clarke and Newman (1997) as arguing that 'managerialism' has initiated a migration from what they refer to as a bureau-professional structure to a technicist management one.

> *Bureau-professionalism gives primacy to the roles of the professional and the public service bureaucrat; managerialism, in contrast, justifies and legitimates managerial power and challenges the values and power bases embodied in the traditional bureau-professional settlement.*

Under the bureau-professional model there is some scope for independent action between teacher and school Principal in responding to the needs of students. Other than this, power rests at the principal nodes of the hierarchy. Under the influence of 'managerialism', the role of the teacher is 'industrialised' (Smith 1999). Power shifts to the school Principal for both educational and managerial responsibilities (Gewitz and Ball 2000; Simkins 2000). This suggests that under 'managerialism' an even tighter linkage between the teacher, school and centre is seen as both desirable and achievable.

Advocates of both bureaucratic and managerial approaches to administration value task differentiation and place great store in the efficacy of command and control structures and confidence in the possibilities for rational action. Under the influence of 'managerialism'. there will, however, commonly be changes to some internal practices. These will include devolution of responsibility to middle managers for a range of budgetary and administrative functions and changes to the focus of accountability from process conformity to output delivery. It has been observed, however, (Evans 2001) that within education such devolution may diminish performance as stress and excessive workloads demands more of principals than can be sustained. Increased demands for planning and reporting upwards may unintentionally diminish school leaders capacity to attend to more strategic matters of educational leadership. This may reduce rather than enhance the quality of education.

It has been observed that under the influence of 'managerialism' there is a shift away from a 'learner needs perspective' to an 'institutional needs perspective' (Gewitz and Ball 2000)

This is echoed by Morley and Rassool (2000: 181) who state that under the managerial influence school effectiveness becomes regulatory:

> *Professional meaning and purpose have been framed by the performance culture…There are few indications of the nature of educational development beyond concerns about performativity. A positivistic view of educational change and development relies predominantly on quantitative data as a basis for policy…*

In short, what these critics are observing is a displacement of a discourse on and about education and its concern with social purpose with a much narrower debate about *instrumental means*. Given that managerialists had a desire to move a *process* orientated bureaucracy towards an *outcome* focus, this would seem to be an unintended consequence of some significance. Wright (2001) draws attention of the potential for this unintended consequence to undermine the very thing that Governments claim to be looking to schools for – a capacity to support and build social as well as economic capital.

Conclusions on managerialism

Overall, the assumption that educational systems are or should be approached as formal command and control hierarchies and that they can be expected to be responsive to purely technical and administrative interventions has been shown to be unrealistic. In and of themselves, the importation of ideas drawn from management thinking and practice has not profoundly changed the way in which education is administered when compared to more traditional bureaucratic approaches. It has resulted in the uptake of more contemporary practices and these have, in some instances, yielded improvements in operational efficiency. While 'managerialism' was intended to shift educators focus from *process* to *outcomes* there is some evidence that it has had the opposite effect, establishing a focus on the administrative means rather than the intended social ends.

Under the influence of Managerialism, educational administrators have embraced a wide range of initiatives. These have sometimes been based on conflicting assumptions and have compelled action in contradictory directions. To the extent that change has focused on formal and instrumental means, there has been a tendency to drive staff to an inward looking perspective and to load them with additional responsibilities and to diminish morale. This has been particularly strongly influenced by the perceived 'industrialisation' of teaching that has resulted from the attendant power shifts. Placing greater administrative responsibilities on principals has raised concerns that this is at the cost of educational leadership. Finally, it can be readily observed that with very few exceptions, management theory is quintessentially Modernist in its assumptions. This places it philosophically at odds with post-modern thinking about and approaches to learning.

Advocates of 'managerialism' argue that it has replaced a rigid, un-responsive and un-accountable bureaucracy. Its critics reply that a bureau-professional administration with strong concern for public interest and ethical commitments to citizen welfare has been undermined. For those who look fondly at history, the question must be asked – could we have done no better in education than we have done throughout the 20th century? Manifestly, what was in place failed adequately to respond to changing social needs and economic conditions even before societies were as pluralistic as many now are. Despite claims that the bureau-professional system embraced a public ethic, there is little evidence that teachers used their relative freedom to drive improvements in the overall approach to education. In their defence, their scope of action was seriously circumscribed by the bureaucratic structures that overlaid the classroom. Nevertheless, the professional scope which some argue has been diminished did not provide a potential for wider systemic learning. Managerialism may have

its problems – but so too did that which preceded it. What is needed is a way forward, not a way back.

Public Choice Theory and Agency Theory – Markets for education?

Recent approaches to reform of public administration have been strongly influenced by neo-classical economic thinking as well as the related neo-liberalism. These are linked to 'managerialism' in that the superiority of private sector managerial practices is argued to be a consequence of private companies being continually tested in a competitive economic market. This is not to say that they theory bases are compatible however.

It is widely accepted that markets are not efficient at allocating resources for public and merit goods (Wolf 1993; Bailey 1995). This suggests that 'free' markets are inappropriate for school based education services. Markets will under-allocate resources for such services and this under-allocation will accrue inequitably in the community. There has, however, emerged a countervailing argument which has it that political processes also are subject to failure and can therefore be expected to be at least as ineffective as markets for the supply of merit and public goods. The main theoretical contribution for this case comes from Public Choice theory.

Public Choice

Known also as the 'economic theory of politics' (see Udehn 1996), public choice theory has its origins in notions of 'rational economic man'. It is concerned with the relationship between the administrative and political arms of government and between voters and elected representatives. Advocates approach the political arena as a 'market place' in which individuals make political choices on the same basis as they do economic choices, that is, on the basis of narrow self–interest. The theory characterises bureaucrats and politicians as self seeking and budget maximising, concerned to act for themselves rather than a concern for citizen's interests (Brennan 1996; Udehn 1996). Advocates assert that government grows large, not in response to genuine social need, but due to the empire building of politicians and administrators possibly compounded by having been 'captured' by special interest groups or 'elites'. Government instrumentalities are, often by necessity, monopolies. Further, in the Westminster system, political neutrality had, in the past, been pursued by giving public servants life tenure—thereby protecting administrative ranks from the influence of political appointment and dismissal. For the advocates of Public Choice, though, this creates a privileged labour monopoly and an absence of incentive to perform. In addition, as Pollitt (1990) notes, professions monopolise the provision of particular services and this 'restraint of trade' is predicted to lead to under-supply of labour and therefore higher costs. Public choice advocates can therefore be expected to be very unsympathetic to teachers' claims of a lost sense of professionalism under the influence of 'managerialism'.

Empirical validity of Public Choice

The position of public choice advocates rests on two critical points, firstly that neo–classical economics has something meaningful to say about real economic systems and secondly that political/administrative systems are sufficiently like economies to justify the application of neo–classical approaches to that domain. Economics has been increasingly criticised for the development of arcane theory with little or no relevance to understanding real economies and their influence on social and political development (Galbraith 1994; Ormorod 1994; Hodgson 1996; Arthur, Durlauf et al. 1997; Ormorod 1998). Despite this growing disquiet there has been an increased influence by economics on other social disciplines. For some this is an unwelcome ideological and methodological 'imperialism' (Pitelis 1993; Baert 1998). Ronald

Coase (1995:37), winner of a Nobel Prize in economics, comments perhaps somewhat sarcastically:

> *The reason for this movement of economists into neighbouring fields is certainly not that we have solved the problems of the economic system; it would perhaps be more plausible to argue that economists are looking for fields in which they can have some success.*
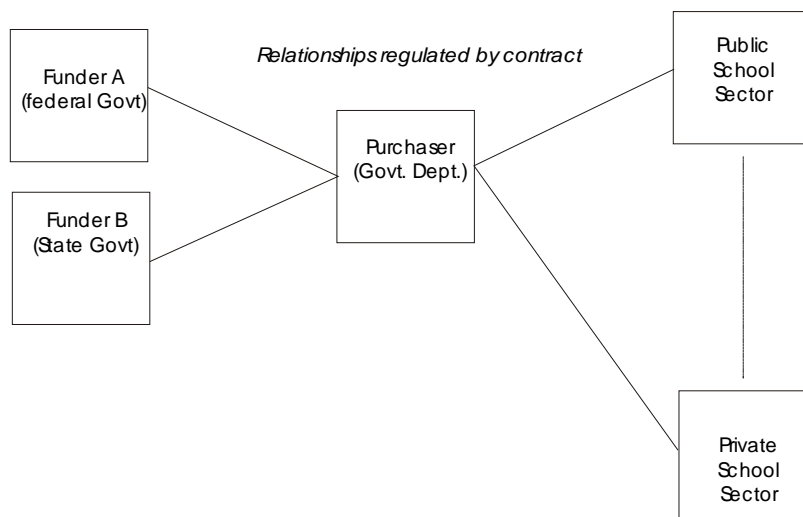
Perhaps not surprisingly, then, empirical support for the theory of Public Choice has proven difficult to find, indeed, Uhden (1996: 204) states emphatically that '*...there is no empirical support for [it].* The appeal of Public Choice theory to politicians persists, however. We may speculate as to the reasons for this. Advocates seek to minimise the role of administration in public affairs and reassert the primacy of the elected politician over the bureaucrat for both budgets and policy (Halligan and Power 1992), consequently Public Choice may represent a politically expedient ideology (Self 1993; Stretton and Orchard 1994; Self 2000). During the 80s and 90s it has been pervasive. Applied to education the effect is to eschew any movement for the increased professionalisation of teachers (favouring further industrial de-powering and tighter accountability) and to argue for the creation of 'markets' for the provision of educational services. The theoretical compatibility between Public Choice theory and education must be viewed as hostile. The self-interested atomism of Public Choice can not entertain ideas of social capital as from this perspective, as Margaret Thatcher once asserted (Glover 2002) - '*there is no such thing as society*'.

Both the 'managerialist' argument supporting the value of market discipline and the Public Choice argument, have contributed to the push for public agencies to be subjected to 'contestability'– competition with or comparison to equivalent or comparable private agencies. But how might this best be done? Two additional theories, also derivative of neo-classical economics, are relevant. These are Agency theory and Transaction Cost Economics.

Agency theory

Agency theory, or principal/agent theory as it is also known, has had a significant impact on thinking about the organisation of public service provision – including education. De Laine (1997) suggests that agency theory '*...derives from the idea that political life can best be represented as a series of contracts between parties...*' From the perspective of agency theory education is cast as a chain of exchanges between a principal (Government) and agents (ie schools both public and private) mediated by contract. This facilitates a separation between the policy aspect of education – regarded as necessarily a core role for government ('steering not rowing' - Osborne and Gaebler 1993), and the provision of education services. The providers now operate at arms length from government – i.e. in a quasi market. Providers can be brought into competition with one another addressing the monopoly concerns of Public Choice and generating the notional 'discipline of the market' advocated by both 'managerialists' and economists.

Figure 2: Education configured according to Funder/purchaser/provider arrangements with a resulting quasi-market at the point of provision.

Funder A (federal Govt)

Funder B (State Govt)

Relationships regulated by contract

Purchaser (Govt. Dept.)

Public School Sector

Private School Sector

Contracts commonly specify *'outputs'* rather than the more general *'outcomes'* (Finance 1997). An 'output' is a tangible intermediate deliverable, pursuant to some broader policy 'outcome'. Being tangible it is easy to ascertain if it has been delivered – it is measurable. The development of outputs relevant to policy is assumed to improve accountability but in practice – particularly in government – the relationship between output and outcome is often necessarily unclear. In this context, strategy is based on hypotheses about how taking a particular course of action may impact on some desired change, given the prevailing environment. The relationship between any 'output' then is a hypothesis to be tested rather than assumed. Strategists increasingly realise that where there is a high level of environmental uncertainty, unintended consequences are guaranteed. Under such conditions there is a need to adopt flexible postures and to change them in response to observed effects rather than to believe that the necessary outputs can be fully specified in advance (Mintzberg 1994; Boisot 1995; Boisot 2000). Such flexibility is difficult to specify in a formal contract.

Under these conditions a focus on outputs results in goal displacement – something which earlier reforms were directed at reducing (Ryan 1993). The agent may seek to maximise their performance against the output, irrespective and perhaps without regard for its relevance to the policy outcome. For example, if a school is rewarded for its ability to attract students (outputs = number of new enrolments and average school score attained on an academic benchmark) there may be an incentive to target high performance and discourage disadvantaged students from enrolling. In this way it may increase its talent pool and raise its average performance against the output measures for which it is accountable. This may frustrate government concern for school retention and social inclusion, for example.

Given these examples it should be no surprise that a key concern of agency theory is how to manage self-interest. Agency theory incorporates the (neo-classical) assumption that each of the parties will work to maximise their own benefits. If contracts are not well designed, there is the potential for agents to maximise their benefit contrary to the interest of the principal. This is referred to as the 'Principal's problem'. Hendry (2002) summarises the issue as follows:

> *In a perfectly certain world, rational economic principals would pay agents to whom they delegated authority simply for their output. In an uncertain world, however, where outcomes are influenced by external factors beyond either the principal's or agents control, it is normal to engage in incomplete contracts with agents who receive payments for their effort rather than their output. If agents were perfectly honest and dutiful, this would not be problematic. But in agency theory it is assumed agents are*

not. And this gives rise to the principals problem. For if people in general are self-seeking and opportunistic economic utility maximisers, if the interests of principals differ from those of their agents, and if the principals have incomplete knowledge of their agents' actions, how can they ensure that their agents act, as agreed, in the principals' interests and not in their own?

In practice the problem is even more pervasive than this. Controlling activity by contract is limited not only by the problem of agent opportunism but by the principal's difficulties in precisely specifying goals (given uncertain futures) and by agent's honest incompetence. Better information and/or oversight of agent activities can reduce the principal's problem. However, the more complex the environment and type of service, the harder it is for the principal to evaluate agent compliance. In such circumstances the relationship between strategies, outputs and outcome may well be quite uncertain and subject to contingency. In addition, structuring contracts on the basis of assumed opportunism and subjecting the agent to close scrutiny signals lack of trust. Assuming self-interest may diminish a felt sense of responsibility and professionalism on the part of agents and make opportunism more likely (Christensen and Laegreid 2001). This is particularly concerning given that both public and private sector organisations are increasingly realising that where complex services are to be delivered, high trust is an essential characteristic of the relationship between principal and agent (Hardy and Wistow 1998).

Incentives are an alternative to oversight and should act to regulate local behaviour without the need for the principal to closely monitor compliance. Incentives must be designed in such a way that the agent is compelled, in striving for its own interest, to act in ways consistent with the principal's also. However, getting the incentives right is critical. As the recent abuses of corporate authority by CEOs in the USA and in Australia have shown, the consequences of getting the incentives wrong can be catastrophic for the principal. In Government an accountability framework is often seen as a basis for providing incentive to perform. The literature on school reform highlights the relevance and need for accountability to increase the likelihood of engagement by schools in the change process. Marks states:

> *Increasing organizational learning requires that schools be made more autonomous and more accountable for their work...Without a clear set of performance benchmarks and incentives that people within the organisation can agree upon, the capacity for organizational learning is deficient. However, if schools are to accept their collective responsibility for the outcomes of their work, they need the autonomy to determine locally meaningful standards.*

What schools are held accountable for, then, is of the most fundamental importance not only for generating change but also for ensuring that the change achieved is in the right areas. Given the broad and aspirational goals identified for education (see for example OECD 1999; Delors 2000), accountability will necessarily imply the need for a rich set of information and will not lend itself to a handful of intermediate 'output' measures. No surprise then that teachers commonly report dissatisfaction (Commonwealth 2000) with many of the indicators and frameworks for performance assessment and accountability introduced as a part of the move towards principal/agent arrangements and the associated output orientation. In the context of devolution, performance information can be used to 'control' and 'police' rather than to improve local learning. This is indicative of a residual commitment to the principles and practices of command management. Such an approach offsets the potential benefits of decentralisation, sending messages of mistrust.

Due to uncertainty and complexity, there are as many limits to being able to effectively control agent behaviour using contracts as there are for achieving control using rules and

regulations in bureaucracies – but usually less ways to detect non-compliance. The arms length relationships contracts imply may also reduce information and further reduce the capacity for the principal to monitor compliance. Both monitoring and/or incentives increase cost and offset efficiency gains that might otherwise be realised. Trying to control compliance through contractual terms means increasingly complex contracts as administrators (and their legal advisers) try to cover off all possible contingencies much as drafters of bureaucratic regulations did before them. All of these factors substantially increase the transaction costs involved. Transaction costs have been seriously under evaluated with respect to public sector marketisation.

Transaction Cost Economics.

Economists assume that in markets all agents (firms and consumers) have access to all relevant information and that there are no time delays or costs associated with obtaining it. Recognition that obtaining information in real markets does entail cost has led to the development of what is now known as 'transaction cost economics' (TCE). TCE is used in the private sector as a way of making decisions about where to use internal (hierarchist) processes for production and where to use markets. Hence it has some bearing on the preceding debate about the viability of educational markets.

Ronald Coase (1995) first raised the issue of transaction costs by asking, *'if markets optimise production and distribution, why do 'firms' exist?'* The firm clearly presents a limit to market operation, in that market mechanisms are absent within it. Coase concluded that if transaction costs were accounted for, then it was conceivable that the cost of negotiating business in a market might exceed the cost of achieving the same result from the coordinated action within an institutional framework. Where the cost of hierarchical coordination fell below the cost of market coordination, there would be a rational incentive for institution forming. Hence, for any particular industry and organisation, based on the way it is organised, the management approach, type of technology employed etc, there will be a point at which the cost of internal production equals that which would pertain using market production. Decision about where to employ markets or hierarchies must then consider both market (transaction) and institutional (agency) costs.

In order to identify costs there is a need to be clear as to their source. Hodgson (1996: 201) criticises Williamson for failing to define 'transaction costs' and pinpoint their origin. He cites Dahlman as providing a useful extension in identifying three primary costs. These are costs associated with *search and information, bargaining and decisions* and *policing and enforcement.* Hodgson goes on to argue that all of these ultimately collapse to a single source - they all arise due to lack of information. Applied to Government reform, transaction costs are a seriously under considered area. Decisions to use markets/quasi-markets for supply (outsourcing) have generally ignored any assessment of transaction costs (Hodge 1998). It has commonly been the case, that they have not been appreciated until new institutional arrangements have been put in place. As a result, hoped for savings have not been realised or have been much less than expected.

Conclusion on Economic approaches to Education

The influence of economic thinking on administrative reform and educational reform has been to advocate a narrow, economically derived ideology, based on dubious theoretical foundations with little empirical support. The approach, as with managerialism, claims value neutrality yet can be seen to embrace ideas which are intrinsically hostile to any ideas of social development and social capital other than those which result from market competition and the contention of alternative individual interests. Arguments that such approaches lead to

increased efficiency fail to confront the fact that efficient means may not be socially or ethically desirable. Wilenski's (1986) has argued that efficiency cannot become an end goal in and of itself. We should actively pursue efficient means for valued social ends but it may be that some important ends can only be achieved using relatively inefficient means given the state of technology and the nature of the environment of the time.

The 'agencification' of institutions may work well where transactions are clear and involve concrete 'goods'. Where they do not, they may result in high transaction costs due to increased risk resulting from intrinsic uncertainty, incompetence or opportunism by agents. These factors require higher levels of oversight or the use of incentives, which themselves can result in goal displacement and diminished program effectiveness. Given that, as Williamson has argued, 'every contract will always and necessarily be incomplete', there will be uncontrollable risks in contracts and again, as a consequence, higher transaction costs. In the public context, where the relationship between policy and outcomes is unclear, the separation of policy from delivery limits the possibility for harvesting institutional intelligence about 'what works' and may lead to a reduction in the quality of policy and program effectiveness by reducing the institutional capacity for learning. Perhaps most concerning is this view based on analysis of reform in New Zealand and Norway by Christensen and Laegreid (2001: 89). Such approaches have:

> *… replaced a system based on mutual trust among civil servants on different levels, and between politicians and administrators, with a system which potentially furthers distrust. The main idea of NPM [new public management] is that if only the external incentives are right, good governance is guaranteed whatever the character of the individuals. It is however, difficult to construct workable democratic administrative institutions in a civil service where the bureaucrats are driven solely by external incentives and private benefits.*

Possibilities for a Better Way Forward

There are valuable insights that can be drawn from the traditions of administration, management and economics applied to education and lessons to be drawn in retrospect. However, doing more of either or a bit of both is not a useful way forward. In this section, a preferable alternative is outlined with reference to a recent educational reform within the State of South Australia.

Learning as a basis for educational improvement

Between 1999 and 2002 the South Australian Department of Education and Children's services (DECS) introduced an innovation to improve schooling. This has since been expanded to embrace whole system change. The author has been involved with researching the basis and impact of the change for the past 12 months. The detailed findings are being documented elsewhere. The change process was project managed by an administrator with considerable teaching experience and hence with a sound appreciation of school based practices, constraints and culture as well as the attitudes and values of teachers. The reform grew out of dissatisfaction with the past 'consultative' approaches to curriculum renewal, which was seen as inadequate in that it did not assist with:

> *The generation of new thinking and understandings about the learning process - knowledge generation [and] the translation of this knowledge and learning outwards to the system as a whole. (Foster 2000: 5)*

The intention was to catalyse and facilitate local initiatives consistent with the overall goals of improving the quality of learning for students. This was to be achieved through the development of a leading edge, futures oriented curriculum arrived at by:

1. *Connecting South Australia to leading edge learning research and world's best practice to develop Project sites' knowledge base.*
2. *Reconnecting teachers to their vocation.*
3. *Influencing the System Knowledge Base.* (Foster 2000: 4)

The following key precepts were identified as having informed the design of the project. (inferred from Foster 2001)

- Meta learning skills are increasingly important to society and business as a basis for knowledge;
- Education is increasingly expected to be future orientated;
- There was a need for a catalyst or leader to trigger partnership to bring this change in orientation to learning;
- That complex problems need complex solutions and that these can come from those who are confronting them at a local level;
- That vocation matters and constitutes a motivational resource in the context of education;
- That learning comes through trust and acceptance of risk;
- Reflection on deeply held worldviews and a questioning of identity was needed, not just administrative change, for sustainable benefit;
- That transformation was needed not incremental improvement;
- Change and uncertainty are ubiquitous and form the backdrop for transformation;
- Sustainable change would only come through responsibility taken at a local level not through imposition.

This project drew on and promoted 'constructivism' as a theory appropriate to rethinking learning processes and towards achieving improved meta-learning. This guiding theoretical position was seen to be relevant to learning not only at the teacher/student level but teacher/teacher, interschool, school/administration and school/policy levels. Systems theory was also influential in thinking about the design of the project. The project was informed therefore by developments in learning theory, particularly that derived from post-modern assumptions about knowledge. In this it is in sharp distinction to the essentially Modernist assumptions which underpin both managerial and economic approaches to reform. This distancing from the more extreme 'ultra-rationalist' management theory was sometimes explicit. The Project was influenced, for example, by Mintzberg's emphasis on emergent strategy rather than the prevailing planning based model common within the Department. The approach avoided:

- excessive formalism and quantification;
- seeing planning as a useful activity in and of itself;
- an institutional view of 'human resources' focusing rather on whole people and reinforcing professionalism;
- seeing leadership as about authority, focusing more on quality relationships.

The distancing is evident also in an eschewing of the assumption of the possibility of centralist control typical of bureaucratic and managerial thinking.

The constructivism informing the approach meant embracing a diversity of perspectives and valuing alternative knowledge bases. This meant placing as much emphasis on practitioner experience as central research – a striving for a balance of theory and practice (praxis). This

compelled a need to approach change as a co-developmental process rather than as top-down imposition. It implied that no one 'knowledge' base or position would or could grasp the complexity of the task of education within the diverse communities in which it was enacted. The emphasis was therefore on providing an environment in which all parties (administrators, teachers, parents, children) could 'learn their way forward'. This involved avoiding any idea of 'one best way' but rather provided multiple stimuli that encouraged active experimentation in a context of trust. The focus was to re-engage teachers intrinsic concern for students learning in order to focus on student and social outcomes of education rather than short term achievement. This implied identification of core values as a central target and integration point. It increasingly led to a development of richly connected structures around curriculum (as enaction) while loosening structures of compliance and administration.

In contrast to managerially inspired reforms (one of which operated concurrently with this initiative), The response by the teachers involved was overwhelmingly positive. Many reported having become excited about their role for the first time in many years. The process generated a strong self-driven element and a wide range of creative responses to transforming teaching practice.

The strategies used were simple. They comprised minimum prescription, instead providing funding support in exchange for a minimal set of commitments from schools. The latter were captured in a Service Agreement and reviewed annually. A support framework was established and this involved:

- Provision of a core learning framework to expose teachers to new and leading ideas relevant to their profession;
- Learning circles to deepen understanding initiated by the core-learning framework, particularly among leaders;
- Formation of a project colleague network that extended the reach of participants to the work of other key institutions and/or professionals;
- Practicums, where schools synthesised their learning and communicated it to others. (Foster 2001)

Research into the change reveals that it was not only the provision of these specific support processes and resources that was critical to the Projects success. Rather it was the way in which they were consistently supported and underpinned by a coherent change in attitude about the relationship between sites and centre and the trust that this established. While the approach began with a focus on school base change, it has increasingly been seen as providing a foundation for whole system change. It offers significant insights into change factors important to the achievement of successful outcomes, these are:

- Appealing to teachers'/administrators intrinsic motivation is key to both preventing resistance and this can ameliorate other de-motivating factors present in the general environment. Motivated people will self-organise to bring about substantial change in practice.
- Pursuing change with high levels of flexibility and a learning and risk tolerant approach to accountability, can lead to rigorous approaches to change and a focus on results, contrary to 'managerialist' and economic assumptions.
- Maintaining a high level of congruence to core principles/values informing the change is vital. This included the need to establish and maintain trust as the basis for the relationships. Provided this is established, substantial benefit in terms of teacher commitment and productivity can be realised.
- A 'non-deficit' approach to reform opens up possibilities for institution wide learning and such learning can be grown from the local area out.

- Evaluation, which is pursued as an opportunity for learning, maintains a focus on outcomes and adds substantial value to the policy development process, ensuring practice can be improved in complex and unpredictable environments.
- Tight hierarchical/administrative control is not necessary to achieve a very high level of strategic coherence. Indeed, emergent insights into possibilities for strategic improvement arise in systems that encourage diversity and pluralism of perspective.
- Reciprocal obligations based around trust can be effective in maintaining a high level of compliance to principles and in protecting and balancing stakeholder interests.

All of these observations are at odds with the prescriptions of managerialists, burearacrats and advocates of principal/agent and public choice approaches.

The Department is now moving to apply these principles not only as a basis for school improvement but to transform the role and practices of increasingly wider aspects of the whole education system. Accordingly, the methods, practice and principles of Learning to Learn will be recognised as an integral part of policy renewal, and used to drive innovation more widely within the organisation such that it informs the design and leadership of preferred learning.

An alternative theory base

Given that traditional management theory and prescriptions derived from economics seems to have little to offer those seeking better education – is there an alternative basis for thinking about educational reform? It is proposed that an approach compatible with post-modern assumptions about the foundations of knowledge is available in a combination of Karl Weick's proposition that educational systems be viewed as 'loosely coupled' and complex systems theory.

Educational Organisations as loosely coupled

Karl Weick's approach draws on a wider body of systems thinking including Ashby's (1974) concept of requisite variety and Cohen, March & Olsen's 'Garbage Can' theory of organisational choice (Cohen, March et al. 1972). Loose coupling has been variously interpreted (Orton and Weick 1990) and seen by some (Weick included) as a characteristic to be valued and by others as a problem to be addressed. Consistent with the findings of a great deal of educational reform research, the critical insight is that systems organised loosely do not lend themselves to formal or bureaucratic control, rather they need a different form of management if their distinctive advantages are to be realised and disadvantages minimised

Figure three illustrates educational system conceived of as loosely coupled. In contrast to both hierarchist and contractual perspectives, it suggests a rich multi-dimensional coupling between the many 'agents' which make up the system. Agents may be individuals (teachers, principals) or institutional units (schools, regions). The coupling may include formal and informal, rational and emotional interactions. These interactions can combine to form complex paths and linear cause effect is not assumed. Weick expressly identifies such systems as more capable of remaining viable in complex and uncertain environments – an area where both management and economic approaches have been identified as deficient. It is immediately apparent also that the Learning to Learn Project approached educational improvement from a perspective much more in keeping with a loose-coupled perspective than a hierarchist one.

Insert Figure 3

Benefits of loosely coupled systems include, 'persistence', 'buffering', 'adaptability', 'satisfaction' and 'effectiveness' (Orton and Weick 1990: 217). These contribute to a capacity to continue operation in the face of turbulence from a capacity for experimentation and learning. Loose coupling does not require coherence between different parts of the system for it to remain viable. While Loosely coupled systems deal with local challenges well, system wide challenges may not be well dealt with by a multitude of local adaptations. Where large-scale change is necessary, loose coupling implies slow diffusion of central initiatives. As a consequence, Weick (1982: 675) argues *"...the administrator has to start projects earlier, start more projects, start projects in a greater variety of places, talk more frequently about those projects that have been started, and articulate a general direction in terms of which individual members of the system can make their own improvisations"*. Again, Learning to Learn, with its emphasis on:

- learning as the change framework
- Provision of multiple stimuli at multiple points throughout the system
- Encouraging active experimentation in a context of trust
- Maintaining a focus on outcomes and core values as a central target and integration point
- Encouraging and striving for rigour while encouraging diversity
- Valuing expertise (including practical experience and tacit knowing) but eschewing 'experts' as holders of truth.
- Tightening and providing richly connected structures around curriculum and loosening structures of compliance and administration

Provides an example of this approach in practice.

The perspective of educational systems as 'loosely coupled' seems to be weak at explaining one clear fact upon which most commentators of education agree - schooling is remarkably uniform yet if loosely coupled it should not be. The autonomy enjoyed by actors at local levels can be expected to lead to very different approaches at different sites. This consistency needs some explanation. Ingersoll (1993) points to deeply embedded assumptions about schooling and education and these may act as potent source of self-organisation at multiple levels. Similarly Evans (2001) has argued that everyone has a view about education and thinks they know what it is and how it should work. These views operate as taken for granted facts and influence teachers, parents, students and policy makers. The evident consistency then, may be a product of deeply embedded assumptions within the community as well as within the education system itself. Changing education requires changing these assumptions. Heirarchist reform has failed to have much of an impact in this area through 'top down' or 'outside in' approaches.

The 'loosely coupled' approach has a strong parallel in more recent approaches to viewing organisations as complex systems. Complex systems can display both high levels of order and disorder. Importantly, order in complex systems is usually a result of micro structuring processes that provide for robust self-organisation. This form of order is not dependent on hierarchical control but is distributed and local in its operation but can lead to macro or system wide stability. The two observations (that schools seem to lack formal mechanisms for order, yet display remarkable order in many respects) are not, therefore, necessarily in

contradiction. Complexity also leads to insights not possible from Weick's earlier work although to the extent that the two sets of ideas overlap, they are consistent.

Complex systems and education reform.

Complexity (or non-linear) systems theory has attracted considerable interest among management and organisation theorists (Goldspink 1998). It has also begun to attract some interest by educationalists and can be seen to have considerable implications for approaches to education and education delivery (Goldspink 2002). Complexity derives from the natural sciences and so might be assumed to make no or few concessions to post-modernism. The focus of complexity is, however, with the development of an understanding of the implications of non-linearity and this has wide repercussions for both natural and social science. In particular it challenges the Newtonian foundations of contemporary management and economics and the assumption that order in social systems arrises primarily from rational control (McKelvey 1997). It is not that rationality is eschewed, rather that in the face of the intrinsic uncertainty that can result from non-linear interactions, it is somewhat diminished in importance. In addition, non-linear interactions give rise to other order producing mechanisms (self-organisation) which can complement or conflict with rational order.

From Changed Thinking to Changed Practice

Incentives

In loosely coupled systems centrally driven change initiatives may diffuse slowly at best. How then may change be effected in such systems? The economists have provided a key insight – micro order (order arising from local transactions) can lead to socially desirable macro outcomes. This is the basis of operation of the incentives used by agency theorists to align the actions of agents with the desires of the principal. As noted, the problem with this is finding the 'right' incentives. From the perspective of agency theory incentives are seen as extrinsic – conceived of and introduced by the principal. This implies that the principal can identify relevant and viable incentives in advance and include them in the contract, something that has proven difficult if not impossible in practice – but there is another possibility.

It has been argued that much of the craft of teaching is about teachers tacit knowing of 'what works' in a classroom situation (Evans 2001). Tacit knowledge presents significant difficulties for management because it is difficult to localise, describe and harness (Lumley 1997: 18). Tacit knowing is a emergent product arising from the complex interplay between teachers experience, formal theory, culture, leadership style and school structures and possibly community contexts. Simple incentives, such as rewarding class level academic achievement, may lead to unintended consequences when introduced into this type of environment. Rational design of appropriate incentives by a central policy agent implies the possibility of that agent understanding the interplay between these factors and how they can be influenced in desired ways. It is clear that it will be impossible for a central authority to develop, from a distance, the depth of insight needed – those best placed to know are those that experience it – teachers and school staff. Provided educators are expected to focus on, and are provided with rich information about, progress towards desired social and individual outcomes, then their well documented *intrinsic* concern for student learning (Dinham and Scott 2000) furnishes a powerful incentive to use that information for system improvement. Evidence from the Learning to Learn project suggests strongly that when these conditions are met there is sufficient power to overcome the intrinsic conservatism of teachers own conceptions of 'how school works' and those of the community.

Evaluation and reward

Managerialism and economic approaches suggest that performance should be evaluated in terms of tangible results (outputs). However, goal displacement inevitably arrises when these are substituted for the desired longer term social and individual benefits that are the real concern of stakeholders. Individuals or groups that are rewarded on the basis of short-term tangible outputs may self-organise to maximise performance in ways that reduce their capacity to deliver against these longer-term outcomes. In addition, Lumley notes that *"…rewarding only quantitative results tends to drive the system back towards the "fabricative" pole and suppress both creativity and organizational learning"* (1997: 19). As a result adopting such approaches can erode the longer-term capacity and viability of educational institutions. The Learning to Learn approach to evaluation as about collecting evidence to inform learning towards long-term goals rather than as about 'ticking off' outputs combined with allowing schools to identify sources of and to collect both qualitative and quantitative evidence, avoids such problems.

Loose coupling suggests the need for arms-length or devolved institutional arrangements. This appears similar to recent advocacy of local school management. However, these commonly have been pursued under the influence of management or principal/agent theory and therefore usually have an outputs focus and emphasise the role of selected individuals (formal leaders) and individual performance failing to recognise the tacit and distributed or systemic basis for effective performance. Such 'rule' or 'contract' based systems strive to take personality out of the performance equation focusing on instrumental aspects of performance. This is consistent with the machine view of organisations but comes at a considerable cost. Stacey (2000: 146) argues *'As a consequence of being compelled to obey rules…employees lose the capacity for independent thought, resulting in trained incapacity.'* This is probably the best of it; more likely employees' creative talents are turned to alternative focuses – possibly ones detrimental to the interests of the employer. Kelly and Allison (1998) argue that high command low trust systems generate self-organisation that works to the detriment of the organisation. They emphasise the need to concentrate on the more informal aspects of organisation to effect self-organisation that is advantageous. This includes facilitating self-reinforcing cycles based on deep commitment, open learning, responsible action and trust. Again we see evidence of this in practice with Learning to Learn, and the research makes clear that this 'informal' and 'high touch' orientation was central to the success of the project.

Institutional Innovation, learning and adaptability

A great deal of school reform has focused on making education more flexible and better able to respond to changing global and societal needs. Any theory which can help educators better understand such processes and how to manage within a constantly changing and heterogeneous/pluralistic environment would be of interest – assuming it can be turned to practical application. Complexity theory offers valuable and fresh insights here also.

Adaptability

Recent explorations suggest strongly that the size and number of semi-autonomous units in loosely coupled systems matter. Kauffman & Macready apply complex systems concepts directly to the problem of improving organisations capacity to adapt to change and explore what is required for an organisation to have the greatest capacity for ongoing improvement. The results are at odds with contemporary management and administration theory and practice. They advocate the use of approaches that introduce 'error' or 'deviance' from short–term optima, in order to sustain innovation and adaptation. Several factors determine the level

of stability of such a system; the density of connectivity between 'patches' (autonomous units) and the size and number of 'patches' are particularly important. As the level of inter–connectivity between organisational units ('patches') increases the patch size must decrease to keep the system in the ordered regime. They conclude that if organisations are managed in this way: *"...it may be possible to achieve coordination in a complex organisation which is well partitioned, even if no department is paying attention to the overall performance of the entire organisation"* (Kauffman and Macready 1995: 40).

This would seem ideally suited to approaches for school management, where there are increasingly devolved responsibilities but within a context of a need for overall conformance to broad policy directions. Moves to impose strict accountability and to circumscribe local action (to prevent error) may limit system adaptive potential and long-term viability. Genuine autonomy means freedom to experiment in response to local needs and room for error but with a clear focus on a central organising principle. This points to an approach to organisation which has at its core some agreed mission, core values or distinctive capability (as with professions). All of this fits well with education systems and the Learning to Learn project again illustrates how schools and wider aspects of the system can work at identifying an organisational locus and that this can provide coherence. The potential of such processes are highlighted by Badenhorst (1995:14) also when he states:

> *Complexity theory suggests that it would be better, in planning an education system to let it emerge from a few simple rules rather than attempting to plan and design it in detail from the top.*

He identifies 'values' as a suitable rule base from which an educational culture and set of practices may emerge. Significantly, several of the case studies conducted for the research into Learning to Learn dealt with schools which engaged in deep searches to surface the individual and collective values informing their practice. These schools report finding such a process fundamentally important to their rethinking of their professional approach and the way in which they worked together and harnessed technologies in the pursuit of improved learning for the community, students and themselves.

Initiating change

Much of the management literature works from the assumption of the need for change to begin from the top. While this is frequently argued as a lesson of history and of past experience, it is possible that it is also a truism, ie. it is true within the management structures and organisational environments that result from adoption of this view. Lewin et al (1998: 37) note *"…managers have learned that change does not happen simply because they plan or mandate it"*. This is only too evident in education reform where real change has been identified as difficult to achieve despite significant top down effort (Sarason 1990; Fullan 1994; Spillane 1999; Evans 2001).

If change is to be grown from the inside out, what is the role of the centre in initiating or supporting the diffusion of system wide change? Working from first principles it is clear that a critical factor in choosing an intervention to help precipitate change in a loosely coupled system is to isolate the loci of change, i.e. the parameters to which the system is sensitive. Assuming that these are complex and diffused – such a task is beyond central rational analysis. An appreciation of the potential sensitivity of the system will more likely be gained by active experimentation or may be derived from collective experience of participants in that system, whose varied experience, in effect, constitutes the experiment. Approaches to change based upon Participatory Action Research (see Carr and Kemmis 1986 and Whyte 1991) are consistent with a viable approach as are contemporary approaches to organisational learning.

Chris Argyris' (1986; 1990) 'defensive routines' may also be useful as a way of identifying sensitive dimensions by pointing to where the members of an organisation have had to construct significant 'unspoken' structures to maintain the current organisational form. In addition, the approach to analysis proposed by many advocates of the Cultural school (see for example Schein 1985) suggest useful means for discovering underlying patterns which reflect regulatory mechanisms. Evidence (see Beer et al. 1990) suggests that culture changes that begin in small areas of an organisation and propagate more organically are more likely to succeed, providing further evidence as to the importance of self–organisation. This is precisely the conclusion Sarason (1990) draws from his work in educational reform and its effectiveness is evident in Learning to Learn.

Shaw (1997), drawing on a complex systems perspective notes that the emphasis for intervention needs to shift from formal systems to informal and from macro level intervention to micro. This reinforces Weick's observation and the lessons from Learning to Learn, that multiple simultaneous interventions at multiple points throughout the system are necessary and effective at influencing change in loosely coupled systems. Stacey's (1996a; 1996b) work highlights the importance of the 'shadow-system' of organisations. By 'shadow system' he means the informal relationships that overlay the formal. These are fundamental to the operation and dynamics of organisations and present additional nodes for intervention or potential loci for change. They are also the aspects of the organisational system that are inherently self-organising and failure to attend to them means that the most potent organisational dynamics of the system as a whole are ignored or overlooked. Similarly, from their qualitative research into firms who claim, or have been identified as adopting a complexity based approach to management, Regina and Lewin (Cited in Lewin et al. 1998) contrast 'command' based cultures with cultures of 'care and connection'. They observe that the latter are more prevalent or are distinguishing features of organisations run in order to harness self–organising potential. The education reform literature also identifies a relationship and people focused culture as important to effective school performance and to effective change (Marks and Louis 1999; Evans 2001).

Conclusions

Educational systems demonstrate considerable robustness and resilience in the face of both environmental and intended change. Despite many attempts to reform educational systems to make them more effective and efficient, little change has been realised in over a century. Classical bureaucratic, managerial and economics based approaches to reform have proven to be limited in effect. In part this is attributable to inappropriate assumptions about the nature and origins of order in educational systems. The assumptions that lead to stability of educational systems are deeply embedded in the intersecting structures that comprise the system and indeed, within the social environment in which they operate. Understanding the micro structural 'rules' that shape the macro behaviour of the system is essential if change efforts are to be rewarded. Indeed, understanding the origins of the dynamics of educational systems opens up a fresh perspective for thinking about and managing these systems.

The experience of the Learning to Learn Project within South Australia is consistent with much other research into what works in educational reform. These suggest that the following observations be considered when considering how to generate effective change:
1. Learning theory and practice as the primary focus for institutional building and change as well as the basis for policy forming and strategy development. Learning processes should involve stakeholders in coalitions for change.

2. The centre acts as a catalyst for change – providing and supporting multiple stimuli for change at multiple sites at the same time. This is necessary to overcome the slow diffusion potential of loosely coupled systems and to provide multiple sources of active experimentation as a foundation for innovation and transformation. Some of these stimuli may be directed at disrupting or questioning existing self-organising processes that prevent change.

3. Change comes from the 'inside out' as active experimentation in encouraged and supported in a principles based framework based on trust. This emphasises that micro (site/group based) intervention is to be preferred to macro (system wide-prescription based).

4. Focus on long term social and individual benefits (ie the orientation of policy) as a central target for improvement rather than short-term outputs.

5. Have all stakeholders work to establish a set of core values/principles as an integration and reference point for decisions.

6. Encourage a striving for rigour in an environment endorsing pluralism – this can be advanced by multiplying information about 'difference' and examine in it sources of opportunity to improve practice (ie as an opportunity for learning more) rather than striving for consensus or conformity.

7. Value expertise (including practical experience) but eschew 'experts' as holders of universal truths. In other words encourage a constructivist or critical realist orientation to knowledge and one which values praxis – both theory and practice – or knowledge as process/enaction.

8. Tighten structures by focusing temporary coalition building around curriculum and instruction while loosening structures of conformance and control – in other words build self-organising heterarchies and loosen controlling hierarchies

9. Provide rich information to all actors in the system about the impact of their action on the long-term goals that matter to them and to others stakeholders. Avoid substituting the simplicity of tangible outputs for the richness and complexity of issues of deeper relevance and concern. In this way the collective intelligence of the system is used to respond and develop viable responses to the more perennially difficult aspects of administration.

10. 'Patch' the system into small groupings of committed people. Establish opportunities for these groups to interact, share (ideas and members) and ensure groups address diverse focal points to widen the search for fresh insights upon which to base action for improvement.

11. Adopt a holistic orientation to stakeholders (i.e. focus on a concern with social and emotional wellbeing rather than instrumental) – focus on relationship building, integrity and trust.

A theoretical foundation relevant to understanding why these orientations are important and effective can be derived from a loosely-coupled/complex systems perspective. This provides a theory base for future development of policy, practice and research better suited to understanding educational reform issues. This approach advocates working with and harnessing the robust self-organisation possible in such systems while also revealing the basis for strategic intervention and change. This includes having those involved find ways to build intrinsic motivation and innovate at a local level to find solutions to wider institutional problems. A key to this is a focus on relationships and the building of congruent behaviour based around trust. The results achievable are in sharp distinction to the failures of decades of reform based on more conventional managerial and economic derived theories and ideologies. Such a theory base is also compatible with recent post-modern influences on, and advances to, our understanding of learning. In this way it is more intrinsically compatible

with contemporary learning practices than are either conventional management approaches and/or economic derived theory bases.

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