

A MODEL FOR CULTURAL CHANGE IN SCHOOLS: AN EVALUATION OF SOME NEW LEARNING ORGANISATION METHODOLOGIES

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Abstract:

Schools are complex systems and have traditionally been resistant to change due to a combination of complex social and cultural factors. In spite of many attempts to effect meaningful change and improvement, schools have remained relatively unchanged in a deterministic scientific paradigm, rather than a systemic change paradigm, or in the context of modernity rather than post modernity. To change the culture of schools therefore requires new, advanced and sophisticated approaches.

The essential task in creating a LO was the creation of enabling cultures and structures, which were needed at the individual and organisational level. This was the essential focus for the creation of a LO "Model of Cultural Change in Schools", that would augment such cultures and structures.

This paper looks at such a model for cultural change and presents the results of research into the effectiveness of selected learning organisation methodologies in changing a school's culture. These methodologies include "dialogue", "scenario analysis", and "learning histories".

INTRODUCTION:

The seeds of school education's current failures are found in its successes in the past. From its inception school education has been called on to transmit core knowledge and cultural values, provide custodial care, and prepare students for life after school, the most important aspect of which is critical thinking for problem solving and decision making (Betts, 1992).

School education has been very successful in its first function, generally successful in the second and much less successful in the last. School education has been one of the prime sources of stability in our society. School education's overwhelming success as a pattern maintenance institution is at the heart of its failure to match changing societal expectations (Betts, 1992).

Mass education by schools over the past century, in most western countries, has therefore successfully created a generation with a reductionist/functionalist, individualistic, moral relativist organisational paradigm that expects good organisation to be naturally evidenced in controlling, bureaucratic type structures. It is therefore not surprising that schools, populated, staffed, managed, directed and subject to governmental policy generated by such people, are not learning organisations and have difficulty becoming learning organisations (Barnett, 1997; McLeod, 1997).

Over the past decade most educational organisational reform has aimed at refining the existing organisational style through targeted application, of ever narrower versions of the same perspective. Therefore no amount of fine tuning of the old system will produce significant improvement. Fukuyama (1996) asked the question who will replenish the social and moral capital that such organisational thinking draws upon, unconsciously assuming it to be an inexhaustible, natural, and environmental resource?

If education, defined in the broadest sense as stimulating learning for the whole school community, is to be the mechanism of reinvestment, then the problem is how to encourage schools to learn new forms that model this wider definition of learning. The underlying problem is that a century of school management practice has buried, in the general organisational cultural unconsciousness, the values, attitudes, and beliefs needed for the transformation.

Assuming that there is enough genetic material remaining to permit cultural regeneration, the solution is in widespread reawakening, amongst education professionals, of holistic/interpretative understandings of knowledge, education and organisations. Such systemic change will necessitate the creation of learning communities where the aim of schools will be to serve the needs of their communities and the needs of the nation by promoting learning at all levels.

Fullan (1996) takes this perspective a step further and suggests that what is at stake here is a fundamental redefinition of teachers and professionals that includes radical changes in teacher preparation, in the design and culture of schools, and in the teachers' day to day role. The role of the teacher of the future will be both wider and deeper, involving at least six domains of commitment, knowledge and skills including; teaching and learning; collegiality; context; continuous learning; moral purpose; and change process (Fullan 1996, p. 422).

Fullan (1996, p.423) added the rider that it was impossible to improve student learning for all or most students without improving the learning of all or most teachers. It is clear

that to improve this learning process and achieve all the other requirements for cultural change a new management paradigm has to be established in schools.

Systemic reform mainly involves strategies (such as reculturing) that help develop and mobilise the conceptions, skills, and motivation in the minds and hearts of educators. Such systemic reforms increase the capacity of systems to manage change on a continuous basis. However, such change will not result from regulation and structural reform, but will only be successful when those within the system are given the opportunity to change the system. Such ownership and control by those responsible for the change, will be effective and long lasting.

This paper will investigate the possibility of establishing a new systems paradigm for schools that concentrates on changing mindsets of the staff concerned, so that they may assume more responsibility for change, and thus dissolve many of the ineffective structures described above. A LO model that expedites a path to cultural change, the “Model of Cultural Change in Schools” will be evaluated in the process.

LEARNING ORGANISATION SCHOOL IMPROVEMENT MODEL:

Much of the literature on LO's was written from the perspective that LO's produced positive outcomes for the organisation. Although numerous authors (Garvin, 1993; McGill, Slocum & Lei, 1992; Senge, 1990a) have considered the notion of a LO culture, there was no widely accepted theory on how this could be achieved.

Some have identified LO culture as: entrepreneurship and risk taking (e.g., Cahill, 1997; Kanter, 1989; Naman & Slevin, 1993; Sykes & Block, 1989); facilitative leadership (e.g., Meen & Keough, 1992; Slater & Narver, 1995); organic structures (e.g., Gupta & Govindarajan, 1991; Woodman, Sawyer & Griffin, 1993); decentralised strategic planning processes (e.g., Day, 1990; Hart, 1992; Mintzberg, 1994); and individual development was valued as an end in itself (Garvin, 1993), but there was little attempt to test their existence empirically, or to measure how they contributed and ultimately enhanced organisational culture and improved performance (Garavan, 1997, pp.20-21).

Perhaps new light can be focused on this dilemma by developing a LO model that expedites a path to cultural change. Garavan (1997, p.26) suggested that the essential task in creating a LO was the creation of enabling cultures and structures, which were needed at the individual and organisational level. This was the essential focus for the creation of a LO “Model of Cultural Change in Schools”, that would augment such cultures and structures.

WHY USE A MODEL?

Cleary (1992, pp.117-126) described a model as a simplified representation of the real world and suggested that it took the form of a diagrammatic representation (chart, drawing) or may be conceptual in that words, statements, or phrases were used to describe the overall operation of the research at hand. Whether the model be a diagram or

be conceptual, its purpose, according to Dye (1992, p.20) was to: simplify and clarify thinking; identify important aspects; suggest explanations; and predict consequences. In management theory, models have been consistently employed to help clarify relationships and processes, for example: McGregor's (1960) linear theory "X", theory "Y" model; Blake & Mouton's (1964) more complex nine part grid diagram model that linked "concern for production" to "concern for people"; conceptual models developed by Maslow (1954); and later Herzberg (1974), helped to explain teacher behaviour in schools. These studies confirmed that models assisted the researcher to understand the real world, and provided a useful "touchstone" between the real world and the reality of the researcher, and thus fulfilled the purposes as described by Dye (1992) above.

Today, there are many models to choose from including: analogue models (mostly used in physical sciences); semantic models (expressed in verbal form and sometimes called figurative or metaphoric); schematic models (resembled a map and generally grouped and clustered constructs into an ordered relationship); mathematical models (quantitative predictions that may be tested with empirical data); and causal models (structural equation model of causal processes) (Kaplan, 1964; Tatsuoka, 1968).

The "Model of Cultural Change in Schools" presented later in this paper is a schematic model of OL which allows a link between theory and the real world. It is analogous to a map that links analysis and investigation with the world of observable events. The schematic model is an extension of the semantic model and displays the relationships and processes of OL and cultural change in schools.

Keeves (1997, p. 388) claimed that semantic and schematic models lacked precision, which rendered them not amenable to testing, and did little to advance the development of theory. However he later acknowledged that semantic and schematic models were none the less very popular in educational research and such symbolic and diagrammatic form models, helped to make explicit the structure of the model, that would be otherwise hidden in an excess of words.

Morecroft and Sterman (1994) warned that when constructing a model, it was better to adopt the "client" perspective rather than the "expert" perspective as this avoided the problem of giving little consideration to the client's existing mental models. In the "Model of Cultural Change in Schools" presented later, this valuable piece of advice was strongly considered.

MODELS OF EDUCATIONAL CULTURAL CHANGE AND LEARNING:

A plethora of educational and LO change models have been forwarded in recent years (e.g., Acker-Hocevar, 1996; Benoit and Mackenzie, 1994; Castle and Estes, 1995; Cicmil, 1997; Garvin, 1993; Kim, 1993; Marquardt & Reynolds, 1994; Nevis, DiBella & Gould, 1995; Robinson, Clemson & Keating 1997; Roth & Kleiner, 1995). Here a brief analysis of three of the above models of OL and cultural change will be reviewed as these models have been influential on the evolution of the "Model of Cultural Change in Schools" presented later in this paper.

Firstly, Acker-Hocevar (1996, p.80-81) presented an “Education Quality Culture Model” for schools that had for the centre of its focus customer success and satisfaction and this resulted from the interconnected action of six performance areas that included: strategic planning; systems thinking and action; information systems; human resource development; quality services; and visionary leadership. An additional dimension of continual improvement stimulated all the performance areas into ongoing, system wide improvement.

Acker-Hocevar claimed that a quality school culture influenced the system wide response to customer needs and expectations and affected desired outcomes in customer success and satisfaction. Thus customer needs and expectations drove school development over time and affected shared vision and school purpose. New customer requirements affected both the individual’s and the school’s capacity for increased adaptation and change. The school’s ability to respond to altered conditions and trends in the educational environment, was essential for the success of the school (Acker-Hocevar, 1996, p.81). The importance of this model resulted from its strong links and dialogue with the customer/community and the importance of visionary leadership, strategic planning, systems thinking and action, and human resource development.

Secondly, Castle and Estes (1995) created a model of the high performance learning community. This model depicted a learning community that was learner-centred, community based and strategically managed, and assumed that all individuals were able to learn to their fullest capacity. The model promised education, health and social services to children, their families, and the community. It provided coherence and support for all citizens from birth to death. Through the mastery of specialised skills in preparation for employment at the individuals highest level, learners acquired the abilities and motivation necessary for lifelong learning.

Although the scale of impact of the above model may have drawn criticism as it extended in breath from lifelong education for all community learners to health and social services of the community, and in time span from “birth to death”, it nevertheless displayed rich qualities of a systemic nature, that separated it from the rest of the recent school improvement/cultural change models.

Finally, a LO model that incorporated a sophisticated notion of process, was presented by Benoit and Mackenzie (1994). This model expanded the simple definition of process and recognised process as a time-dependent sequence of elements, which also incorporated the role of people and structures in the organisation.

MODEL OF CULTURAL CHANGE IN SCHOOLS:

The above three educational-LO models emphasised strong LO processes but offered limited insight into the methodologies required to implement such processes in schools, and were also unsympathetic toward teacher emotions that had both positive and negative impacts on cultural change outcomes.

The discovery of effective methodologies for cultural change in schools remained the crucial challenge. Nevertheless the rich diversity of the three OL models outlined above strongly influenced the formulation of the “Model of Cultural Change in Schools” outlined below in Figure 1.

The “Model of Cultural Change in Schools” highlighted the need to accurately establish the existing culture of the school before any methodologies were applied. This was essential according to Drucker (1998, p. 3-5) who claimed that most organisations moved to correct the culture of the organisation, before they accurately established the assumptions on which the organisation had been built.

These were the assumptions that shaped the organisations behaviour, dictated its decisions about what to do and what not to do. To successfully carry out cultural change in an organisation, it was necessary to establish correct assumptions about the environment of the organisation, that included the society and its structures, the market, the customer and technology. In addition it was necessary to establish assumptions about the specific vision/mission of the organisation, as well as to establish correct assumptions about the core competencies needed to establish the organisation’s vision/mission (Drucker, 1998 pp.9-10).

MODEL OF CULTURAL CHANGE IN SCHOOLS

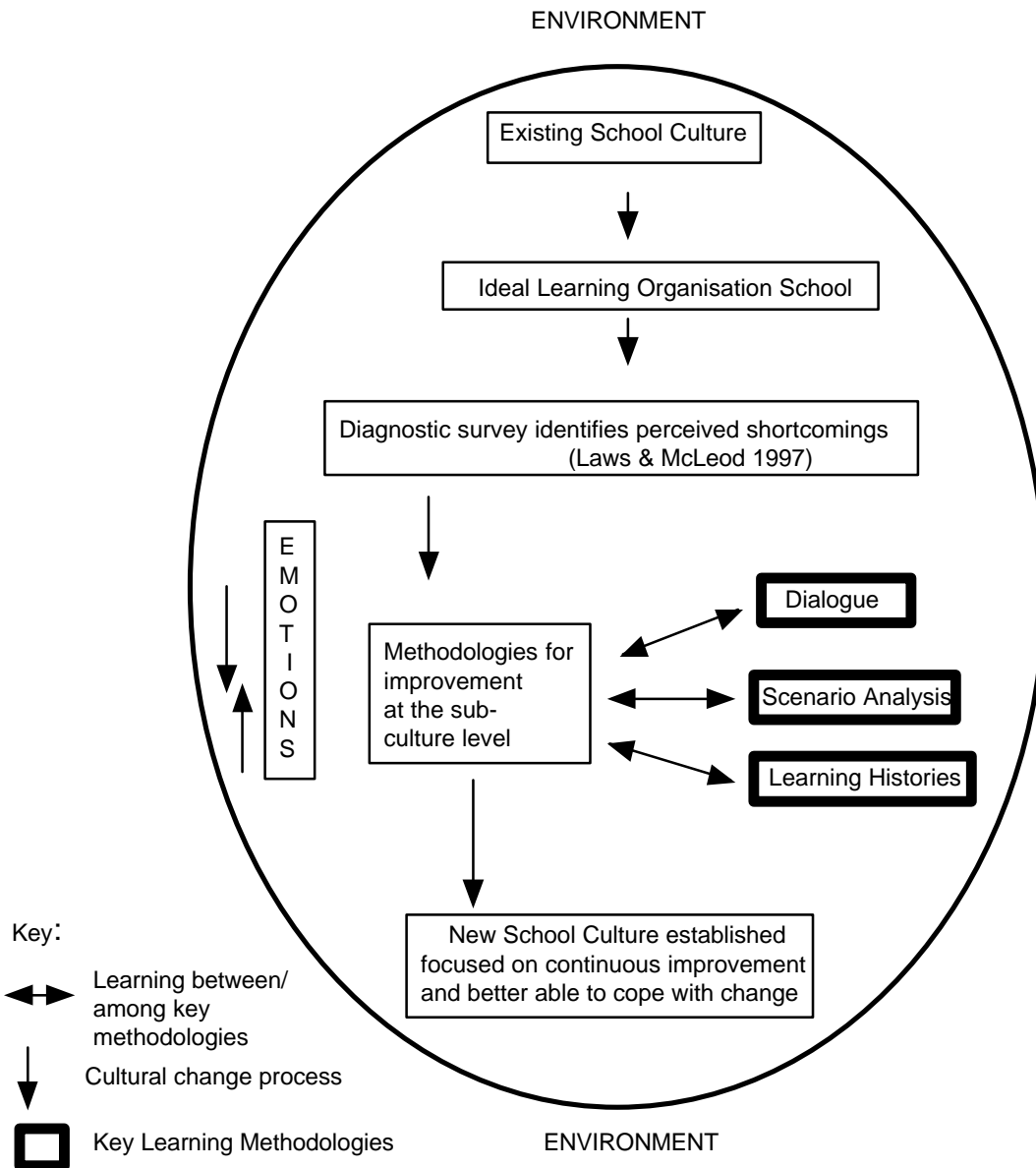


Figure 1

The assumptions about the environment, vision/mission and core competencies must fit reality and must also fit one another, and be known, understood and constantly tested throughout the organisation (Drucker 1998, pp.10-11). The above “Model of Cultural Change in Schools” aimed to establish accurate assumptions about the school’s environment, mission/vision and core competencies and to record the impact that LO methodologies had on these processes taking into account the possible positive and negative impacts of staff emotions.

The importance of emotions to any systemic cultural change model was emphasised by Bawden (1998) who suggested that long term effective cultural change in many instances depended on just that. Others also shared this emphasis on emotion (Fineman,1997; A.Hargreaves, 1994; Langford & Oliver,1997; Marshak, 1996).

At the school research case study, data were collected on the above assumptions by administering the Organisational Diagnostic Survey, at the beginning of the year, to all staff. Survey results were augmented with data collected at staff interviews of the College Principal, the Coordinator of Studies, and leaders of faculties. These data provided an accurate assessment of the existing culture (or assumptions about the environment) of the College, thus allowing suitable methodologies to be selected that could lay the foundations for the core competencies that were required to foster long term cultural change.

Dialogue, scenario analysis and learning histories were selected as the most appropriate learning organisation methodologies to assist in the discovery of the above three assumptions at Jay College. After the Organisational Diagnostic Survey was administered, dialogue was used to help in the process of establishing a shared vision/mission for the College. This process was commenced during the seminars and was supported and continued later by the College Principal and staff.

In addition to dialogue, scenario analysis and learning histories were also employed at Jay College to help create the core competencies necessary for successful cultural change within the College. With the assistance of the three LO methodologies, all staff were given the opportunity to experience and reflect on these assumptions and in the long term were encouraged to take on change policies and practices, which enhanced the school's culture. All three methodologies were followed up with numerous visits by the researchers to the College staff, who were encouraged to apply the methodologies to their workplace practice.

The importance of the "Model of Cultural Change in Schools" and the effectiveness of its methodologies, in assisting schools to become LO's, will be the focus of the latter part of this paper.

A brief description of Jay College

Jay College is a large K-12 Independent Church School in Sydney that began in the early 1970's. It has a pupil population that has grown rapidly in recent years to reach over 1400 students. The College is governed by a Board of Management with a President as its head. The Board formulated policy and was responsible for the maintenance of all College activities. It was elected by members of the College Association, of which parents could become members by making application to the Board.

The educational goals of the College emphasised the development of the total person and encouraged students to realise their full potential. In promoting intellectual, spiritual, moral, social and physical aspects of student development, the College fostered critical

thought, independent learning, adaptability, cultural interests, tolerance, social responsibility and self discipline. In addition to the above there was a deep spiritual commitment that fostered life-long spiritual values that characterised the religious beliefs of the parent community.

A Leadership History of Jay College

In the mid 1990's, on the retirement of the very long standing and well respected Principal, there began a turbulent and unstable period of leadership for Jay College. This began with the dismissal of the newly appointed Principal, after a few months, due to serious discontent from both staff and parents. The next three years saw the current Deputy Principal appointed as Acting-Principal, while the College Management Board searched both within Australia and internationally for a suitable replacement. Eventually an appointment was made and a highly qualified and experienced person from overseas was appointed as the new Principal.

Staff perceived that a "leadership vacuum" existed during those years and this was compounded by the sacking of the previous Principal and the winding down processes of the retiring Principal, over a period of years beforehand. Leadership it was argued had therefore been missing for much longer than three years.

APPLYING THE LEARNING ORGANISATION METHODOLOGIES IN THE CASE STUDY SCHOOL "JAY COLLEGE"

Needs Analysis for Jay College

The identification of the positive, neutral and negative perceptions of staff were obtained from the "Organisational Diagnostic Survey". This was a valuable tool in establishing the of existing climate and culture of Jay College, and were valuable data in helping to establish the format for the organisational learning seminars.

The survey identified problems that included a poor shared vision/mission for the Jay College community as well as substantial evidence of fractured dialogue within the school and it was revealed that creativity and risk taking were not encouraged by the performance and attitude of the existing leadership of the College. Lessons were not being learnt from mistakes as mistakes were being punished rather than viewed as opportunities to learn. In addition ambivalent responses indicated that staff were not being as reflective on their practice as perhaps they could have been.

In addition there was concern that team decision making was not part of the present culture of the College and that creative work systems were not part of the normal processes of the College. Staff also perceived that the College had made few plans to assist their long term professional development, and collaborative decision making needed to be fostered so that staff gained some ownership of the policy creation processes.

These concerns were presented to and discussed with the Principal and the Co-ordinator of Studies, who were not surprised by the findings and agreed with the diagnosis of the problems. In an attempt to overcome these problems it was agreed that the learning organisation methodologies of dialogue, scenario analysis and learning histories be employed during the seminars and over the course of the year. They also agreed to allow the proposed seminar sessions to run as suggested previously, as this would address the important issues raised in the survey.

Why Use Dialogue, Scenario Analysis and Learning Histories?

Jay College had experienced a “leadership vacuum” for a number of years and this had permitted a number of strong power bases to be developed. This made the prospect of changing the culture of the staff by the new Principal, all the more difficult.

However the new Principal had at least approached this task with an open mind and was prepared to take some risks. One of those risks was to allow some external change agents into the school to try to move the culture forward toward a more systemic and global perspective, and one that would allow learning to flourish at all levels in the school community.

Essential to the task of cultural change and to help dissolve the “power bases” that had developed in the College, it was essential to try to establish high levels of dialogue within the school community. This was considered a high priority and it was decided to begin the process by utilising dialogue to help in the processes of establishing a shared vision for Jay College.

Anticipating the future in a rapidly changing, volatile environment required far more than systematic analysis. It demanded creativity, insight and intuition. Scenarios - stories about future possible futures - combined these elements into a foundation for robust strategies and was therefore a tool for ordering one’s perceptions about future environments. Scenario analysis thus presented alternative images, instead of extrapolating current trends from the present.

The schools of tomorrow are likely to be invented in places where leaders and teachers have a vision of a different kind of schooling and also possessed knowledge and skills to nurture change over time toward that vision. It was decided to employ scenario analysis at Jay College to help teachers to be reflective on their teaching practice and to try to imagine the type of worlds that their pupils were moving into in the future. This methodology was employed in the seminars and was encouraged to be continually practised in the day to day activities of the College.

Learning histories were selected to assist in the cultural change processes at Jay College as they: saved valuable time at meetings; allowed discussion to begin at meetings, at a much higher level than was possible previously; involved all staff in the change processes and derived the benefits of a corporate intelligence; implemented change at all levels irrespective of the scale or the

issue at hand; flagged staff who were “in left field”, distant from the mainstream thinking on an issue; encouraged staff members to adopt a more “global or systems” approach; and embellished rich debate on key issues by all members of staff. It was for these reasons that dialogue, scenario analysis and learning histories were selected as appropriate learning organisation methodologies to be employed at Jay College.

The use of Dialogue at Jay College

The initial survey at Jay College clearly indicated that there was fractured communication at many levels and that this situation needed immediate attention. To assist Jay College to establish better communication at all levels, it was decided to devote several sessions to dialogue, during the seminar programme.

The seminars sessions on dialogue initially began with an explanation of the central purpose of dialogue and that was to establish a field of genuine meeting and enquiry, which was referred to in the literature as a "container".

Dialogue is a basic process for building common understanding, in that it allows one to see additional meanings of words. By letting disagreement go, meanings became clearer and participants gradually built a shared set of meanings, that made much higher levels of mutual understanding and creative thinking possible.

To illustrate the operation of dialogue during the seminars, an example was taken from the work of Sergiovanni (1994, pp.200-201) who described the operation of a “talking circle”. In the “talking circle” all members of the faculty sit in a circle and quietly prepare for a time of sharing. Then at a time when sharing was ready to begin, one person held a sacred object, an eagle feather for example, and while this person held that object only she/he could talk and the others listened. Within that “talking circle” members of the community shared their frustrations and their celebrations. Such deep, honest, dialogue was confidential and augmented the process of community building. This example had a strong impact on the members of staff at Jay College.

Once the group experienced dialogue, the process tended to gain momentum. Dialogue by definition was a process that only had meaning in a group. Several people had to collaborate with each other for dialogue to occur.

The characteristics that dialogue fostered in participants included: learning to think together; taking on a new perspective by listening (suspension of judgment); thoughts, emotions and actions belonged to all; participants acted in an aligned way; “hot” issues were discussed in a “cooler” climate; a container was built; a shared intention of enquiry; and a desire to touch the dangerous (Schein, 1993).

Dialogue was used to assist in the processes of the initial creation of a shared vision/mission for Jay College and this was attempted at one of the initial learning organisation seminar. At this seminar each participant was invited to write down three characteristics of the ideal learning organisation school that they would like to work in.

They were then invited to combine with another staff member and dialogue their selected characteristics, and then distil their combined choices to just 4. This process continued when they then combined with two other staff members and they reduced their total choices to 5. Again they combined with four other staff members and they reduced their total choices to 6. As the groups became larger, more time was required for dialogue. At the conclusion of this process there were three separate groups and each elected a spokesperson to report to all the seminar participants on the results of their groups distillation process.

The application of the shared vision distillation process allowed the staff to dialogue with their colleagues their reasons for selecting their characteristics of an ideal learning organisation. They were then invited to take these characteristics forward to an ever growing forum of colleagues until the selected number of characteristics had been distilled. This distillation process had the advantage of commencing the process of developing a “shared vision” that had endured the processes of dialogue from all colleagues.

Other Dialogue Practice at Jay College

After the initial session that highlighted the above dialogue characteristics, a seminar workshop was held that invited participants to read through a transcript of a simulated faculty meeting that had a combination of recognisable examples of fractured dialogue that could be effortlessly identified by the participants.

Participants were then invited to form groups that included members of different faculties/departments at Jay College and to answer a series of questions. These questions asked participants to identify any dialogue “roadblocks” that they identified in the simulation case study as well as identifying the assumptions that determined the actions of the staff in the simulation. They were then asked to extract some strategies that would assist the imaginary Faculty Head in the simulation, to enhance dialogue in his Faculty.

Seminar participants identified some “roadblocks” to dialogue as: lack of respect for each other; resistance to change; sensitivity to criticism; poor motivation; fear of own staff; poor relations and poor attitude. The assumptions that had led to the fractured dialogue situation included: lack of authority by leader; no team culture; and no predetermined outcomes. It was identified the faculty leader should have learnt from the meeting that there was: little shared vision; no trust; shallow respect for him; poor teamwork; and no clearly defined outcomes for meetings.

College staff suggested the following would foster dialogue: more professional development; sharing leadership positions; shared vision; developing a code of conduct for meetings; rotating of the position of chair at meetings; valuing staff more; becoming more of a servant/leader; and developing better crisis management.

During the seminars it was clear that all the College staff including College executives were becoming more aware of the need to develop high levels of dialogue within the

school community. This planted a seed of expectation in staff that communication in Jay College would improve in the near future. It became clear, later in the study during staff interviews, that staff felt that the College executives were still not engaging in dialogue in an open and honest manner, and that there was a hidden agenda to much of what was said at staff meetings and on other occasions.

The Final Report on Dialogue to the new Principal.

It was agreed to send to the Principal a written report of the findings of the LO seminars and staff interviews held during the data collection period. The report suggested the Principal should consider strategies such as:

To carry out an interview with each executive (even each member of staff if possible) before the end of the year, to allow them time to express their concerns but more importantly to express their highlights for the year and their aspirations for the following year.

Additional strategies suggested that the Principal begin to delegate much of the work load that now dominated his working day during school hours, and that he needed to spend much more time with staff and students, and to be more “visible around the school”. He needed to allocate time for parent interviews before and after the school day (to free up school hours) resulting in more time being given to students and staff.

Some weeks after the final report was submitted, the Principal invited the researchers to attend an interview to discuss the report. It was gratifying to learn that the suggestions outlined above were taken very seriously by the Principal and in fact many suggestions had already been implemented by him.

In agreeing with the overall thrust of the report, the College Principal claimed he had carried out other surveys himself, and these findings had confirmed that the presented report was extremely accurate and perceptive.

The Principal made it clear that he had told the staff at the start of the year that the staff appraisal programme was a mandate from the board and that it was not negotiable. However what was negotiable was the way the scheme was to be implemented. He insisted that the pupils themselves were to be involved in the appraisal process and that this led to the design of a pupil questionnaire, which he said he was very happy with and that this was now in use.

He acknowledged that staff access was a problem and he had tried keeping his door open for staff to drop in from recess to lunch (without appointments) but this was frequently interrupted and thus staff were locked out again. This had failed in the eyes of staff who clearly perceived that it was almost impossible to see him during the day. He said that it would take some time to break down the parent cultural expectation that they “wanted to see the Principal” and “nobody else but the Principal”.

SCENARIO ANALYSIS

During the LO Seminars at Jay College, participants were challenged to look at four different possible future scenarios of education. The four scenarios were crafted from Ogilvy's (1996) work on "Education and the Community: four scenarios for the future of public education". Ogilvy (1996) suggested that the scenarios demonstrated that community-related dimensions of uncertainty were at the core of educational issues.

Ogilvy (1996) indicated that two clear axes could be identified. One dimension of uncertainty surrounding the nature of community was labelled hierarchical versus participatory, capturing a contrast between various kinds of down-from-the-top, authoritarian approaches to education on the one hand, and up-from-the-bottom, grassroots approaches (captured, for example, in the enthusiasm for site-based-management) on the other. Expressed in another way this axis could be described as traditional (in place of hierarchical) as against radical (in place of participatory).

It was from this matrix Ogilvy's scenario team had built four scenarios. The four scenario narratives included: Orthodoxy, Hierarchical (traditional) Inclusive; Orthodoxies, hierarchical (traditional) Exclusive; Wired for Learning, Participatory (radical) Exclusive; The Learning Society, Participatory (radical) Inclusive.

The results indicated that teachers generally did not set aside, in their normal working day, sufficient time for "philosophical reflection" on whether they were adequately preparing their students for the future that faced them. Preparing teachers for this new mindset deserved far more attention than was available in the scope of this present study. This has been recently further researched and refined (Laws & McLeod, 1996, 1997, 1999, 2000)

LEARNING HISTORIES (LH's)

Another important learning organisation methodology introduced at Jay College during the seminar programme was the concept of "learning histories" (Laws & McLeod, 1998). This involved an explanation of the theory behind and a practical application of learning histories. As an example, the evolution of a better system of taking the daily student school roll using learning histories was presented and discussed.

This simulation learning histories document was well received by the College staff as this problem was one that the staff had been working on over the past few days, and the comments contained in the simulation learning histories document were considered to be very felicitous. As follow up after the seminar on learning histories, the researchers visited each KLA and pastoral care leader and discussed with each the specific application of learning histories to their area.

As an example KLA leader No.7 had used learning histories to develop policy areas in her Faculty so that the Faculty handbook could be completed. KLA leader No.7 reported that:

At a faculty meeting we discussed and listed the policies we felt needed attention. It was a long list. To sit and discuss each one and formulate it through discussion would have been very time consuming. We decided that two policies (student welfare/discipline and differentiation) did require this sort of discussion to write an effective policy ... but for the others we decided to use learning histories.

KLA leader No.7 further commented that this was achieved by:

1. A member of staff took responsibility for 1-3 policy areas.
2. The member of staff prepared a learning histories document and circulated it for comment.
3. On receiving it back (this had been very efficient, taking only 2-3 days for each document to get to 8 members of staff), the author made some adjustments and recirculated. This continued until the document was publishable.
4. Staff were made aware that their comments would be read by other members of the faculty, so therefore to make any unpublishable comments direct to the author.
5. The final policy was then transferred onto a disk so that it can be published in the faculty handbook, which will be ready for publication later in the year.

KLA leader No.7 was very pleased with the success of the learning histories process for her faculty. Another leader, KLA leader No.8, had also used an abridged version of learning histories for policy development in her large faculty. The Religious Studies Coordinator used learning histories to develop policy for Year 12 Religious Studies instruction and the Accelerated and Enrichment Programme Coordinator reported some positive feedback by using the learning histories technique to develop the "Inter Campus Curriculum Support Team".

Suitability of Learning Organisation Methodologies to assist school leaders, in achieving cultural change

The evaluation documents also revealed that staff were able to comment on the effectiveness of the new Principal with comments such as "I was pleased that an opportunity was given to consider seriously the major issues affecting the school re: leadership" and another who commented "it is hoped that some of the concerns addressed in discussion may be acted upon in the future".

The planned strategy for the final seminar session was to allow staff as much time as possible to discuss their impressions of the seminars and also to report back on their attempts to implement dialogue, learning histories and give their impressions of scenario

analysis. However after staff had completed their reports the discussion was opened up for staff to give their impressions of the year so far under the leadership of the new Principal. This session was quite remarkable as staff finally felt free to engage in deep dialogue. This allowed the seminar presenters to withdraw a little and allow the dialogue to flow which prompted one staff member to comment, “I was disappointed that the presenters did not seem to contribute much to the final session. What were they writing all the time? Taking notes on teacher stress”?

All schools have different cultures and indeed within each school there are staff who are at different levels within that culture. Perhaps this final comment is reflective of this:

I think our school is definitely a learning organisation and the vast majority of staff who work here are extremely intelligent, highly motivated and good communicators. While I enjoyed the opportunity to introspect and listen to others, I did not learn a lot from this seminar.

The above comment indicates that not all staff perceived that they had benefited from the seminars but at least this comment came from a member of staff who seemed proud of the quality of professionalism shown by staff and was prepared to say so. However the comment does confirm (as do many of the other comments) that staff were prepared to share their deep emotions during the final seminar’s dialogue session.

Emotions play a large part in cultural change processes and Jay College staff were no exceptions and they frequently spoke passionately, during the seminars and interviews, about their teaching practice and dedication to the task of educating children. This is to be highly commended and the processes of reflection on practice encouraged and supported by the learning organisation methodologies sharpened staff awareness of the need for this reflection to continue.

The above written comments from staff provided an excellent guide to the changing nature of the culture at Jay College over the year. The researchers confirmed these data results when a statistical analysis of the Organisational Diagnostic Survey was undertaken.

STATISTICAL ANALYSIS OF ORGANISATIONAL DIAGNOSTIC SURVEY RESULTS

To assess the organisational culture that existed at Jay College at the time, it was decided to administer the Organisational Diagnostic Survey (ODS) at the conclusion of the first seminar. The aim of the ODS was to assess any changes in culture that could be identified in the “mindsets” of staff, and thus allowed some evaluation of the effectiveness of the OL methodologies, that had been introduced into Jay College through the seminars and follow up meetings with staff.

The survey was designed with eight questions allocated to each sub-section as follows:

- * Leadership;
- * Culture and Professional Environment;
- * Competence and Innovation;
- * Professional Development and Recognition;
- * Work Processes and Systems.

Responses were statistically analysed using t-test scores to determine if changes noted were statistically significant. The sample populations of staff were considered to be “correlated samples” (Huck and Cormier, 1996).

Before the t-test analysis was carried out it was decided to select 0.02 (2%) as an appropriate level of significance for a “Two-tailed Test”. Returned survey responses indicated the sample populations were 49 participants (n1) in May and 41 participants (n2) in September for Primary and Secondary staff and 39 participants in May and 35 participants in September for the Secondary only analysis. This computed to degrees of freedom (df), as (n1-1 and n2-1) or 88 and 72 respectively. On rare occasions participants choose not to answer some questions and this resulted in some variations to the total number of responses. The critical t-score and relevant “levels of significance” (preselected at .02) for two tailed test with degrees of freedom to 88 and 72 was 2.390.

Analysis of the May and September Responses to the Survey

Leadership

The first eight questions of the survey focussed on leadership. One question raised the issue were the “senior staff of this school... encouraging of and interested in the aspirations of staff”. Here staff indicated a positive shift in their mindsets in the period between May and September with a statistically significant response (t-score=2.434).

On a more pessimistic path, another question raised the issue of whether “senior staff of this school facilitated working conversations which brought new knowledge and new competencies” there was a statistically significant negative response from staff (t-score=3.393).

This data were triangulated with the negative responses recorded in staff interviews as well as the “watershed” dialogue session at the final seminar where supporting evidence of fractured dialogue with school leaders overflowed. The Principal’s “monologues” at staff meetings and his general inaccessibility were clearly frustrating to all staff. This strong evidence of fractured dialogue between the school leaders and the staff was a key focus of the final report presented to the Principal.

Culture and Professional Environment

Responses to this section of the survey indicated that the OL seminars had been effective in commencing the dialogue processes necessary for the evolution of a clearly stated and coherent shared vision for Jay College’s future. This was evident in one question, which

asked staff had the College a clearly stated and coherent shared vision of its future. A statistically significant (t-score=5.147) shift in mindset was recorded.

Responses to another question indicated that Jay College staff acknowledged that they were part of a school where people felt personally responsible for high quality teaching (t-score=4.830).

At interviews staff had indicated that management and leadership at Jay College looked down on staff and that if they did not perform they would be replaced. They also felt that parents expected a great deal from staff but were at the same time prepared to deride and undermine their performance if it did not match parent expectations. This feeling of staff being “second class citizens” had existed for “a long time” at Jay College and staff were not confident that things would improve in this area in the future.

Competence and Innovation

This sub-section of the survey recorded some very positive shifts in staff perceptions and mindsets. In response to one question which asked if “staff communicated regularly and creatively with one another about their picture of the future of the school”, there was a statistically significant (t-score=5.298) shift in staff mindsets and to question 23 which asked if Jay College staff “were continually focused on developing new and/or better services and competencies by working co-operatively together”, there was also a statistically significant (t-score=5.884) positive shift in the mindsets of staff.

More very strong positive professional views were expressed in response to the question, “were staff continually working at improving their knowledge and skills” when 77% of Secondary and 76% of Primary and Secondary staff agreed or strongly agreed with this statement in May and 80% of Secondary and 70% of Primary and Secondary staff agreed or strongly agreed with this statement in September.

This sub-section on competence and innovation also displayed other positive shifts in culture. To the question, “were staff confident that if they made a mistake, they would not be penalised but that it would be considered an opportunity for productive learning”. Here the response was 60% of Secondary and 60% of Primary and Secondary staff disagreed or strongly disagreed with this statement in May and 46% of Secondary and 48% of Primary and Secondary staff disagreed or strongly disagreed with this statement in September.

Staff felt intimidated at times by senior management, and believed that mistakes made by staff would be punished as had been the case in the past. This threat had stifled innovation to some extent although the LO methodologies had been somewhat active in overcoming this problem as evidenced above.

Professional Development and Recognition

This sub-section of the survey revealed some very positive statistically significant changes in mindsets. For example one question asked if staff were “continually reviewing the way they thought about bringing the best out in their pupils” and the response indicated a very positive shift in mindset by staff over the year (t-score=7.730).

This is a most important result for any school cultural change intervention and that is the impact the change has had on the daily classroom performance of the teacher and subsequent improvement in the learning processes by the students.

Another question asked were “team based initiatives and solutions prized by this school” and this received a statistically significant response (t-score=2.434) along with another question which asked “when teams or work groups acquired new skills or created new solutions to difficult problems, then this was celebrated both formally and informally” and also received a statistically significant response (t-score=4.268).

This sub-section on professional development and recognition revealed one clearly negative response. Staff were asked if their career development was integrated into a long term plan for each individual. This was an area that senior management of the school needed to address as 71% of Secondary and 68% of Primary and Secondary staff disagreed or strongly disagreed with this statement in May and 61% of Secondary and 59% of Primary and Secondary staff disagreed or strongly disagreed with this statement in September. The perception by staff at Jay College, of little or no long term career development and promotion path, may also be the concern of teachers in many other schools as well. This question required further research investigation.

Work Processes and Systems

This final sub-section of the survey revealed several statistically significant results. Staff at Jay College were asked if they were aware of “the specific measures used to plot the school’s progress towards shared goals”. Here the response displayed a clear shift in staff mindsets from the position held in May and the methodologies adopted in the LO seminars on the creation of shared vision had a significantly positive impact (t-score= 5.440).

Another question asked if “the systems used at Jay College ensured that work produced was consistent with a clear picture of future directions shared by the staff”. Here results (t-score=3.942) displayed a clear positive shift in mindset. The same applied to another question (t-score=2.481) which asked if “normal procedures of work guided people to look past their first impressions when looking for solutions to problems”

This sub-section of the survey, revealed that considerable progress had been accomplished in the creation of shared vision, in process re-engineering and systems thinking by the application of the three LO methodologies during and between the seminars.

ANALYSIS OF THE RESULTS

The preceding analysis on the effectiveness of the learning organisation methodologies that included dialogue, scenario analysis, and learning histories, clearly indicated that such methodologies had been very effective in assisting Jay College becoming a learning organisation.

From the data collected from the Organisational Diagnostic Surveys, it was clear that progress had been made in terms of improved leadership at Jay College. Now staff recognised that senior management were encouraging and interested in their aspirations, however there was still evidence of fractured dialogue between the staff and senior management and this resulted in an a lack of confidence by staff of senior management at Jay College.

The cultural and professional environment questions in the survey revealed that dialogue had helped in the processes of establishing a clearly stated and coherent shared vision for Jay College and that staff were now more professionally responsible for high quality teaching. The competence and innovation survey questions acknowledged that staff were trying to communicate more effectively and creatively but there was still concern that mistakes made by staff would be punished.

The professional development and recognition survey questions indicated that staff were consciously trying to be more reflective on their practice and were also trying to improve the quality of teamwork throughout the College. One concern that remained was that staff still felt that their career development was still not integrated into a long term plan for each individual in the College.

Finally the work processes and systems survey questions revealed that there had been significant improvement in staff perceptions of the processes and systems used at Jay College. The application of learning organisation methodologies that enhanced shared vision and solved problems was positive and indicated that perhaps “double loop” learning was starting to be practised at Jay College.

From the beginning, the researchers had suggested that their role was to only begin the learning organisation processes, and that the role of College staff was to take up the challenge and begin to approach their tasks with a new systems mindset, and to continue practising the learning organisation methodologies in the future. It is hoped that Jay College staff will continue to operate in this new systems paradigm in the future and that the culture of Jay College will continue to change and adapt to the demands of the College community and the environment.

CONCLUSION

The processes of systemic change and the establishment of systems thinking in schools is a lengthy and time consuming exercise. There are no quick solutions and systemic change is subject to many roadblocks in an education system that is characterised by a culture of

autonomous well-trained professionals, who generally feel that their way is the right way, because they have thought about it, and they believe it to be right.

The adoption of systems thinking within any organisation is acknowledged as a difficult task to achieve. It is interesting to note that, in a recent email discussion Forrester (1961, 1968) (acknowledged as one of the founding fathers of systems thinking), effectively declared that after 40 years of trying to influence senior management about the wisdom of systems thinking, he had given up. At the age of 75 years, he now prefers to put his considerable energy, into trying to achieve a generational change, through the education of young children. Perhaps this view is a little pessimistic and reflects a lack of focus on the issue of systems thinking 'practice', and the methodologies that facilitate this practice.

The failure of the systems movement over that period to develop suitable methodologies that can assist in this process is difficult to fathom. If systems thinkers are going to make a difference in education, then vigorous amounts of energy and thought must be directed toward the creation of effective methodologies and tools that educators can utilise in schools to successfully change the mindsets of staff and thereby commence the journey toward successful cultural change in schools.

The aim of this paper has been to test the suitability of the three learning organisation methodologies for schools (dialogue, scenario analysis and learning histories) and to assess the effectiveness of these three methodologies, on the cultural change processes in the case study school. In addition, an attempt was made to assess the importance that school leaders placed on the three methodologies as effective tools, to assist in the process of cultural change in schools.

The evidence from the case study school presented in this paper strongly indicates, that these methodologies have not only been effective at Jay College but indeed are worthy of strong consideration for use in many other schools and educational settings in the future. These methodologies are still in their infancy and need to be further researched, fine tuned and adapted to each school's particular cultural needs.

Dialogue has come under close investigation and has provided some startling results. Perceptive insights were gained from open and honest dialogue by both the Principal, his executive team and the staff at Jay College. By supporting and reinforcing the processes of dialogue at all levels in the school community, all participants gained from the process. The new found openness and honesty that was experienced at Jay College provided a rock solid platform for further cultural change. Such "high level honest and open communication with appropriate structures" was one of the characteristics that the staff considered most desirable when they delineated their "ideal learning organisation" school at the beginning of the LO seminars.

Dialogue was therefore a critical LO methodology that was essential for cultural change to be effective as it underpinned the other methodologies. The success of dialogue at Jay

College manifest itself in the final seminar which was described as a “watershed” meeting between the Principal, his executive, and the staff.

This dialogue session was almost like a cleansing ritual, as staff freely expressed their deepest feelings and vexations, without fear of reprisal, within the presence of senior management. During this session the researchers were able to take a “back seat” and relax and watch the fruits of their labour.

In addition this “watershed” dialogue session was a gratuity for the Principal and the executive team who were now privy to what staff really thought and what was really happening in the College. The very clear and sincere message they received was that the staff were not coping with all the changes and something had to be done to relieve the pressure immediately. The Principal responded to that message by promptly reducing the workload of the KLA leaders, by abrogating staff meetings thus giving them more time to carry out their normal duties.

In a similar fashion, scenario analysis changed the mindsets of those who attended the LO seminars and provoked all staff to be more reflective on their teaching practice, and to consider the future worlds that their students would be moving into, and to try to image some of the possible future scenarios that will present themselves to their students over the next ten to twenty years. This opportunity to be reflective, allowed the teaching staff to become more perceptive of their own strengths and weaknesses, and thus be more effective in planning their day to day teaching tasks, so as to better prepare their students for the future worlds that they will move into.

The introduction of learning histories into the faculties, departments and middle management at Jay College was a very rewarding experience for the whole school community and the researchers as well. Staff were quickly able to see the advantages of learning histories in their daily work practices and the very positive prospects of saving valuable time was most encouraging to staff. It is hoped that the practice of using learning histories will flourish at Jay College and indeed any other school that is prepared to apply this methodology.

The research presented above opens up a plethora of further questions that are deserving of further research. Such questions will expound on additional learning organisation methodologies that may be constructive in achieving cultural change in schools. The opportunity, at Jay College, to research the effectiveness of this new systemic paradigm for schools has been exploratory and has broken new ground in school management research.

The key to successful cultural change in schools, that lies at the heart of this new learning organisation paradigm, is concerned with the aspirations and emotions of the human beings who make up the system. The model of cultural change in schools gave serious consideration to the impacts of emotions on the cultural change processes of staff. Emotions can be both supporting and debilitating to cultural change. At Jay College, the learning organisation methodologies successfully negotiated the minefield of staff

emotions and unambiguously indicated that they have the armoury to deal with this complex issue in a competent way.

Staff are a rich and precious resource that school leaders need to learn with and to learn from. Staff allow their ever changing mindsets to govern their ever changing behaviours. To make changes to these mindsets requires extremely sophisticated and complex change agents. The learning organisation methodologies investigated in this thesis offer new hope in achieving this most difficult of tasks.

This is therefore not the end, but only the beginning, of a new era of cultural change in schools. It is time for those responsible for cultural change in schools to focus on a new systemic management paradigm, that is a worthy recipient of greater research resources. In the immediate years ahead, it will be an urgent task to commence to fine tune existing, and discover new learning organisation methodologies, that will bring about effective cultural change in schools. There are many young Australians, and future young Australians, that are depending on it.

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