



# School and Business IT Leaders In Action

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## ABSTRACT

This paper advances an argument that greater emphasis needs to be placed on developing the leadership and management skills in the people with responsibility for the adoption and implementation of information technology in schools. In addition to this it also provides evidence indicating where there is scope for development and change. This is done by comparing the results of a survey conducted by the *CIO Leadership Research Center* with a survey of New Zealand school IT leaders. The evidence and associated argument strongly support the notion that the focus of attention in the management of IT in schools needs to move more away from hardware and infrastructure requirements to the quality and style of the associated human resources. As part of this process it is contended that the current constructs of the nature of the job have evolved in much the same way as has happened to the former business *it manager* role and as a consequence the focus should move from the *art* to the *artist*.

## 1. INTRODUCTION

This paper suggests that greater acknowledgement should be given to the role leadership qualities should have in IT in schools. It also seeks to identify areas where there is scope for change.

In 1999, the *CIO Leadership Research Center* conducted a *Self-Assessment Survey* (US CIO Survey) designed to determine the relative importance of 18 leadership activities. Respondents were also asked to rate how much time they spent on each so that the perceived importance of each activity could be balanced against the amount of time spent on it.

The author developed another survey, designed to parallel the survey conducted among Chief Information Officers (CIOs). It was emailed to approximately 100 New Zealand people identified as having relevant responsibilities in schools.



## 2. DIFFERENCES BETWEEN THE TWO SETS OF RESULTS

The largest difference between the two sets of responses to the section of the survey on *Leadership Activities* occurred with *Prioritising the investment portfolio prioritising the investment in equipment, software, infrastructure*. While it ranked as number 7 for the IT people, it rated the lowest scoring for CIOs. This appears to be at odds with the strategic nature of the highest rating activity for CIOs, *Aligning IT with business goals*. It may reflect a possible difference in the cultures of businesses and schools as the business environment is perhaps more likely to be more strongly focussed on business goals. For businesses the prioritising of investment most likely follows from the determination of these goals while schools may have a less marked orientation to goals and a greater degree of concern with ensuring an equitable distribution of expenditure over all departments. Furthermore, schools typically operate on much smaller budgets than many businesses with a consequent need for schools to attribute greater importance to prioritising expenditure. As the NZ IT people rated *Efficiently implementing IT* as their most important activity, this would seem to further reinforce the notion that they have a greater level of concern over funding issues than do CIOs. However, both groups gave a comparatively low rating to *Keeping a tight rein on expenses* (CIO –11, IT – 8) so the explanation may not be quite so obvious.

Substantial differences were also apparent between the importance ratings of *Building a top-notch IT staff* (CIO – 2, IT – 11) and *Building the IT department's reputation for value and service* (CIO – 3, IT – 12). Despite the prevalence of outsourcing businesses are more likely to have higher levels of staffing in their IT departments than schools typically do. Concern over the department's reputation for value and service is consistent with the CIO's ranking of *Satisfying internal customers' needs* (5). This does not follow in the case of the IT leaders who rated *Satisfying internal customers' needs* at 5 but *Building the ICT Department's reputation for value and service* at 12. This apparent anomaly may be attributable to the rather artificial nature of a school IT Department. Schools often may have only one person with IT responsibilities. Alternatively, perhaps many IT leaders do not fully appreciate the importance of their

reputation. This would be consistent with their views of the importance of political type activities. While both groups accorded this activity the same importance rating, the IT group did not see the same degree of alignment of satisfying internal customers needs, as did the CIO group. This may be attributable to the typically low levels of IT staffing in schools which may in turn, lead to a lower set of expectations of IT staff performance. Hence, it might follow that the reputation of a school's IT department would not be seen as important as would apply in business.

Differences occurred between the rankings of *Educating officers and business unit heads about IT and its possibilities / Educating staff about IT and its possibilities*. CIOs ranked this 8 whilst the IT people ranked it very highly at 2. This would seem to indicate that schools believe they still have much to do to persuade staff about the possibilities of IT whereas CIOs may feel that much of this has already been achieved. IT has been more accessible and its use and benefits have been widely understood and accepted for business for longer than is typically the case for most schools. There are too still schools with only very limited IT facilities and debate continues about the merits of computers in education.

Significant differences emerged from the rankings of *Efficiently implementing IT, Developing leaders within the IT staff* and *Studying the competition and its use of IT*. Concern about efficiency ranked as the most important activity for the IT people while CIOs ranked it 6. With schools typically having to work hard to fund even small scale IT projects it is not surprising that the leaders from this sector should have such a concern with efficient implementation. It is possible that a distinction may also be made between the significance of the use of *efficiency* and the possible alternative use of *effectiveness*. IT people are perhaps more likely to have concerns about doing *things right* rather than doing the *right things*. (Drucker, 1964). IT people may be more oriented to achieving goals at the lowest possible cost in contrast to a process that critically appraises the appropriateness of the goal. CIOs may not only be more management literate in this sense than the people with comparable responsibilities in schools. They may have more opportunities to reflect and evaluate the desirability of particular courses of action. The difference in rating for the *developing leaders' activity* is again almost certainly attributable to the differences in staffing levels. With IT staffing in schools often less than one full-time equivalent

position for non-teaching IT tasks, this activity may become of only marginal importance to schools.

While neither the CIOs nor the IT leaders ranked *studying the competition and its use of IT* very highly (IT 17/18, CIO 12/18) there is still an appreciable difference between them. The low ranking by the IT people may reflect the fact that competition is part of the reality of life in the business world. Certainly, schools in New Zealand have a long tradition of co-operation. This is reflected in the extent to which teachers involve share idea. That CIOs also gave *Studying the competition* quite a low ranking may indicate that while they may see IT as of strategic importance they do not see monitoring the competition as so important. This low ranking seems compatible with those given by both the CIO and IT groups to *Identifying competitive threats and business disrupters*. (IT 16/18, CIO 14/18).

### 3. SIMILARITIES BETWEEN THE TWO LEADERSHIP SURVEYS

There were several activities about which both groups had similar views. As has already been noted *Satisfying internal customers' needs* attained the same importance rating (5) from both groups. There were only two activities to be ranked by both with no activities appearing in the top three for both ranking lists. It would however be presumptuous to ascribe too much significance to this. *Reacting to change* also had the same rating for both groups (10). There were minimal differences in the ratings for *Building strategic partnerships with IT vendors* and *Influencing and anticipating the moves of the technology vendors*. Both groups deemed these activities of minimal importance. Similarly both groups produced a difference of only one rating point for three other activities: *Networking/schmoozing with other executives*, *Networking in the industry or CIO community* and *Identifying competitive threats and business disrupters*. Interestingly with the exception of *Satisfying internal customers needs*, all these activities rated very low on both lists.

This suggests that both the CIOs and IT people do not have the same perception of the usefulness of politics as a tool for leaders and may be consistent with the identification of *not being politically minded* as a major barrier to effective leadership.

## 4. TIME ALLOCATED TO LEADERSHIP ACTIVITIES

There is some variation between the perceived level of importance and the amount of time devoted to leadership activities. There are many leadership obligations that both groups consider they do not have enough time to address.

## 5. TIME ALLOCATION OF CIOs

CIOs rated several activities high on the scale of relative importance yet indicated they were possibly not spending enough time on them. These included *Developing leaders within the IT staff* (fourth - 58% not enough time) and *Developing the IT department's reputation for value and service* (third - 53% not enough time). There were too those activities that rated lower in importance yet respondents felt that they should be giving them more time. Among these were *Educating officers and business unit heads about IT and its possibilities* (eighth - 67% not enough time), *Networking in the industry or CIO community* (fourteenth - 65% not enough time) and *Studying the competition and its use of IT* (twelfth - 58 % not enough time). The apparent paradox of comparatively important activities being seen as deserving more time is probably attributable to there being too many leadership activities for the time available. Certainly this is consistent with the identification by both CIO and IT groups of *lack of time* as the major impediment to effective leadership.

None of the activities rated by the CIOs however indicated that too much time was devoted to that activity. Three activities in particular were identified as demanding quite high levels of time. These included *Reacting to change* (26%), *Keeping a tight rein on expenses* (23%) and *Satisfying internal customers' needs* (19%). While none of these activities ranked at the top end of the importance scale they were not in the bottom group either. The CIO perceptions of these activities may be that they while are necessary pursuits they drain time away from even more important and neglected duties.

## 6. TIME ALLOCATION OF IT LEADERS

The IT leaders also rated several activities high on the scale of relative importance yet indicated they were possibly not spending enough time on them. Included in the category were *Educating staff about IT and its possibilities* (second – 70%) and *Identifying new opportunities made possible by IT* (sixth – 61%). This result reinforces the earlier observation that schools may believe they have much to do to persuade staff about the potential of IT. Certainly the high ranking of *Educating staff* (2) combined with the clear indication that this activity does not receive enough attention (70%) identify this as an area of concern to IT leaders. It may also suggest that schools ought to allocate more staffing time to fulfil needs in this area. The rating of 70% is also very close to that given to the comparable activity in the CIO survey (67%) suggesting a general need for staff education about IT. Two leadership activities relating to staffing, *Building a top-notch IT staff* (61%) and *Developing leaders within the IT staff* (58%), appear in the top five activities IT leaders identified as needing more attention. This may reflect a perception of IT leaders that they need more opportunities to develop their own skills and knowledge. While CIOs did not place *Building a top-notch IT staff* as high on the list of activities needing more time as did the IT leaders, the *Developing leaders* activity was given the same rating of 58% by both groups. There may be a perception that more time needs to be given to leadership development in both the educational and business sectors. Also getting similar ratings from both groups was the identification of the new *opportunities made possible by IT* category (CIO – 58% and IT 61%) although the IT group rated it slightly higher in importance than did the CIOs.

In contrast, there are activities that the IT leaders felt received too much time. Highest was *Satisfying internal customers needs*. This also appeared on the comparable list for CIOs (19%) but its significance is ameliorated by the three-way split in the IT leaders ratings (27% - too much time, 39% - enough time, 30% - not enough time). These results may reflect a feeling that although satisfying internal customers is reasonably important (5/18) much of the effort spent in this area might be better allocated to more productive activities. An example of a more productive activity might include staff development and education since an increase in the knowledge

and skill of teachers might in turn reduce the demands for help-desk type assistance. Even with its comparatively low rating of 12/18 *Building the IT department's reputation* was still rated by 21% as getting too much time, yet more people thought it did not receive enough time (30%).

The *Efficient implementation of IT* is in the top five activities receiving insufficient time (55%). It also appears in the list of the top five activities that do not receive enough time (18%) though the balance of opinion is clearly towards it not getting enough time. Given its ranking at the top of the importance list it is surprising that nearly a fifth (18%) of the IT leaders felt it was receiving too much time. This may provide further evidence that there is not enough time to do justice to all the important responsibilities. *Keeping a tight rein on expenses* while seen by 18% as getting too much time, rated much lower on the importance scale (8/18), and so provides an interesting contrast to the views on the amount of time spent on *Efficiently implementing IT*. The fifth activity on the list, *Developing and implementing a strategic plan*, ranked quite high on the importance list (3/18) yet was rated by 15% as receiving too much time, though more people felt it was not receiving enough attention (24%). In recent years, the New Zealand Ministry of Education has focussed on the need for schools to develop IT plans so this may heighten awareness of the need for this kind of documentation. Most (58%) felt that *Developing a strategic plan* was receiving enough time. As with the CIOs there was no instance of a majority of the IT leaders indicating that too much time was spent on any activity.

## 7. BARRIERS TO EFFECTIVE LEADERSHIP

The vast majority of CIOs and IT leaders cited *Too many distractions/not enough time* as the biggest deterrent to being an effective leader. For both groups, this was the biggest hurdle. IT leaders, however were more concerned than the CIOs about this, with 88% of them identifying it as a major obstacle. This is further evidence that there is a strong need for additional staffing in this area of New Zealand schools. For the IT leaders the next biggest obstacle was *Change happens too fast to get in front of*. This is consistent with their concern about the lack of time and number of distractions. Although the CIOs gave it a lower rating, their concern about the lack of time, was not as marked as it was for the IT group. Over a

quarter (27%) of the IT leaders felt that not knowing the skills presented a hurdle for them. This further reinforces the need for leadership and management training for these people. While a higher proportion of CIOs saw that not being politically minded was a hurdle than was the case for the IT leaders, it was still identified by a significant number of the IT Leaders.

Many IT leaders, just like CIOs, may regard it as a skill they either do not have or even want. Both groups rated the networking and schmoozing activities at similarly low levels of importance so the perceived political hurdle might not be so daunting if these sorts of activities were accorded more attention. Certainly, Blodgett (1999) in her outline of ten tools that every CIO needs to succeed, included building relationships with other senior staff and all key-decision makers.

## 8. GENDER DEVIATIONS

While there was unanimity by gender in both groups over the selection of the first and second most important leadership activity some variation is apparent from the third choice on. The IT leaders' selections are consistent through to their third ranking although the ranking order was different from those chosen by the CIOs. Female CIOs rated the building of their department's reputation as the third most important activity while male CIOs opted for *Efficiently implementing IT*. While this aligns the male CIOs more with the views of the IT leaders, the female CIO choices, with the exception of the first one, have a strong orientation to staff concerns. This pattern is not reflected in the responses of the female IT leaders. This may be an indication of the size of school IT departments. This conclusion is also reinforced by the significant difference in ranking of *Building a top-notch IT staff*, ranked at number two by both male and female CIOs, but only appearing at position thirteen for both male and female IT leaders.

Rather surprisingly in view of the hurdles that were identified only the female IT leaders ranked networking in the top five and the *schmoozing* activities do not appear in the first five for any of the four groups. This is despite Blodgett's views on the merits of building empathy through listening and building goodwill. Of all the leadership activities only one, *Aligning IT with business goals* appeared in the top five for each group.

Just as there was unanimity about the choice of the most important leadership activity so there was similar agreement over the identification of the major barrier to leadership. All four groups chose *Too many tactical distractions/not enough time* as the major hurdle. This level of agreement was not sustained elsewhere. Women CIOs lamented a *Lack of role models and mentors* as their second biggest barrier while their male counterparts gave this rating to *not being politically minded*. Women's concern over the lack of mentors is consistent with observations made elsewhere (Schneider, 1999). Given that there has been considerable discussion of the need for role models for women this is perhaps not surprising. Female IT leaders did not identify this as a hurdle at all, although a quarter of their male colleagues did see a lack of a suitable role model as a hurdle. (Mentors are critical to males as well as to females, Bennis, 1999). Certainly the majority of IT leaders do not have an identifiable leadership role model or mentor although nearly half indicated that they would like help to find one.

Perhaps this reflects the fact that there are proportionately more females in teaching than there are females in commercial IT management. Only 10% of CIO positions in the USA, UK, and France are held by women (Schneider, 1999 p. 6). The situation in New Zealand schools may not be as severe for female leaders. Teaching as a career in New Zealand is increasingly dominated by women with only 21% of primary teachers being male and most of them being in the older age groups (Roger, 2000, p. 34). It may be that women in teaching in New Zealand may not have the same level of concern about their role as women who work in the IT section of businesses.

Male IT leaders allocated second place to *Not knowing the skills* where as their female counterparts opted for *Change happens too fast to get in front of it*. *Don't know the skills* was only chosen by the male IT leaders and as the statement did not make clear what range of skills it refers to there may be some ambiguity in the meaning of this response. Male IT leaders may see their roles being concerned mainly with technical issues and that increasingly significant proportions of these are tending to be outside their area of expertise. Alternatively, male IT leaders may now perceive their responsibilities involve them more in a management and leadership role, one for which they may feel ill equipped. Such a conclusion may be supported by the fact that 61% of

IT leaders reported that they have not attended a leadership training programme in the last two years. It may also reflect that many of these people may have taken these positions because of their technical interests and expertise rather than their leadership skills.

Males seem more likely to feel that they are not part of the leadership group, though this did not rate as a concern for females. Given the increasingly important strategic role of IT and the size of the investment in it both for education and business, this must be a cause for concern. As Earl (1996) observes, both a vision shared with the wider management and a close working relationship with other senior staff are especially important qualities. While the survey did not explicitly gather such data, it seems likely that IT leaders in schools may not yet be part of the senior executive of schools. It may be that IT leaders, unlike their CIO counterparts, still have to gain recognition for a position that has advanced from a repository for the “closet geek”, to one for key information strategist.

Notwithstanding the common belief that IT technology changes very rapidly, male CIOs did not perceive this as a significant barrier to effective leadership. Female CIOs and both male and female IT leaders did express concern about the obstacles created by the pace of change. The IT people certainly rated this much higher on the scale of barriers than was the case for the CIOs.

## 9. LEADERSHIP ADVICE

Respondents were asked to identify the extent to which five groups could be classified as credible leaders. The most effective advisors on effective leadership for IT leaders come from two similar groups: “Successful veteran School HoD-Its” and “Successful ‘next generation’ School HoD-Its”. These results seem to be consistent with the male IT leaders who indicated that a lack of models/mentors was a hurdle to effective leadership. It may also reinforce their feelings of inadequacy about their knowledge or skills. About half the IT leaders saw academics as having at least some credibility as advisors. Principals are not generally perceived as credible advisors on effective leadership. The Ministry of Education has targeted school principals however as key leadership people with its Principals First seminars. Other people with major leadership responsibilities, distinguished politicians, fared even

worse with a resoundingly high proportion of the IT leaders rating them at the bottom of the credibility scale.

## 10. POSITION DESCRIPTION

Unlike business where the term CIO now has wide currency, there is no equivalent term that adequately reflects the responsibilities of the IT leaders in schools and which has the same level of acceptance, as does CIO. While the responses were spread out rather thinly they do provide enough evidence to make some observations. The traditional term of Head of Department (HoD) is still widely used in many New Zealand schools although several alternatives have been adopted. A particular difficulty with this title may be that it has normally been used to describe a teacher with responsibility for the delivery of a particular curriculum area. Though computing topics are taught in schools and there is still a recognised computing subject offered at Year 12 (Sixth Form Computer Studies), IT does not readily conform to this sort of classification. Typically, IT leaders have responsibilities that are much broader than just subject responsibilities and some may not have direct teaching responsibilities. People working in finance and general administration of are not customarily described as Heads of Department, but rather as Managers or Directors. They of course, have not normally had teaching or direct subject responsibilities so in this respect IT may be unique. Further evidence of this confusion of roles can also be found in the connection between IT and Technology. Technology is now officially a part of the New Zealand Curriculum, but the role of IT is less clear. IT is increasingly a core part of the business of education and as such it serves a key strategic function. Despite this, there is still no official funding for positions of designated responsibility like Local Area Network (LAN) Administrator. Perhaps in response to the difficulty in fitting the new IT role into traditional terminology new descriptions like Manager and Director may be emerging. There was no substantial indication from this survey that there is any trend in education to follow the path taken by business who have recognised that a new role, that of CIO, has emerged and that it is a different one to that undertaken by an IT Manager. The associated issue of where responsibilities for areas like Learning Technology, Audio-Visual Technology, Copying Technology, Document Management, and Telephony lie is not clear. With

the trends in technology, these are all areas that will become increasingly difficult to distinguish. Perhaps schools should therefore be planning and acting in a manner in that allocates senior positions of responsibility accordingly.

## 11. CONCLUSION

The role of leadership in the operation of any enterprise a critical one. Further to this notion is the importance of people in the operation of IT. Perhaps too much attention has now been paid to the hardware and infrastructure and that now more attention must to be accorded to human resources. It is these people who will be the critical ingredient in determining the quality of return on the IT investment. The analysis of the rankings of leadership activities suggests a number of issues for schools to respond to. There is likely to be a need to change the orientation from one concerned with efficiency to one that focuses more on effectiveness. Acknowledgement needs to be made of the importance of staff development as a key activity for IT staff. Allowance must be made in both staffing and time for this function to be adequately fulfilled. Whereas CIOs see aligning IT with business goals as their number one leadership activity, their counterparts in education may not regard this as so important. Schools may need to make more provision in their thinking and planning to assist their IT staff to be more effective in aligning the goals of IT with those of the school as a whole. CIOs rate the development of a 'top-notch' IT staff and developing IT leadership as very important. A similar level of importance is not evident in the views of IT leaders. This is perhaps another area where schools can learn from the business orientation where greater stress is placed on the value and contribution of IT staff. In doing this, schools must assist their IT staff to appreciate the tactical importance of establishing, a reputation for value and service. It may be that IT staff may not fully appreciate the significance of leadership skills especially in the areas of politics and PR areas.

Allied with identifying these leadership and management needs, schools must also become increasingly aware of the relevant barriers. Paramount among these is time. The recurrence of a lack of time as a general complaint by many managers and teachers alike is clear evidence means that a case can be advanced for a greater time allowance for IT staff. Their tasks and responsibilities have not only but their relevance to core educational

activity has also increased. This problem can be addressed by altering staffing arrangements. Teaching duties can be reduced or replaced, specialist people can be appointed to LAN administration, technical duties, training, web management and the like, and recognition given to the need for IT management in schools. The time demands may also represent a serious barrier minimising the attractiveness of these sorts of positions to women. Whether IT staff in schools should become a part of the senior management group or not is a key question they must answer. If the effectiveness of the IT investment is to be optimised it is critical that the IT leaders are closely allied with key decision-making processes. Gone are the days when IT could be regarded as a comparatively amateur operation with little or no relevance to the main thrust of schools' operations. Now, computers and other forms of IT are now often mission-critical and thoroughly intertwined into almost every aspect of a school's operations. School principals must play an especially important role in this respect. They must appreciate the importance of establishing a close and trusting relationship with the person with the key responsibilities for managing and leading IT for the school. Just as the realisation in business circles that the term IT Manager no longer properly reflects the scope of the work undertaken by such a person, so too schools may need to reach a similar conclusion. As part of that process, principals must acknowledge that their IT leaders are really more than can adequately be described in traditional curriculum based terms. The focus for IT in Education must now move away from the Art and on to the Artist.

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