CHAPTER 9
STAFF PERCEPTIONS OF THE IMPLEMENTATION OF ENTERPRISE RESOURCE PLANNING SYSTEMS IN THREE AUSTRALIAN UNIVERSITIES

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Abstract

This chapter reports a study that examined the staff perceptions of the implementation of an Enterprise Resource Planning system (ERPs) in three Australian universities. The literature on issues impacting on effective Enterprise Resource Planning (ERP) implementations identified a number of issues that translate from the corporate sector to the higher education sector and included a number that require particular focus in this sector.

Case study methodology is used to examine the staff perceptions of the management of ERP implementations in three Australian universities in the process of implementing ERP systems. The study was conducted in two phases. The first phase of the study obtained data through a series of focus groups at one university and, combined with an analysis of the relevant literature served as a framework for the development of the research process in the second phase of the study. This phase involved in depth interviews with staff that enabled the researcher to undertake a more detailed exploration of the staff perceptions of influences affecting ERP system implementations at three Australian universities.

This chapter reports that staff perceptions of the process of ERP implementations are central to their efficacious implementations in Australian universities. Staff perceptions demonstrate that particular consideration of organisational influences related to their context and the perceptions of the users of the systems must be factored into the planning for ERP implementations in Universities.

INTRODUCTION

Enterprise Resource Planning Systems (ERPs) are commercial software packages designed to assist organisations to integrate existing administrative systems in the areas of finance, human resources, supply

chain information and customer information (von Hellens, Nielsen & Beekhuyzen, 2005). Since the late 1990s there has been an increasing use of ERPs in most large businesses and organisations and, more recently, in the higher education sector. The trend of ERP adoption has continued in higher education institutions globally.

This research explores the issues that influence the implementation of an Enterprise Resource Planning (ERP) system in the university sector. The unique focus of this research is on staff perceptions in three Australian universities (henceforth referred to as University X, Y & Z) which were in the process of implementing ERPs. These universities implemented ERPs as a means of replacing their existing administrative information systems. More specifically, this study explores the staff perceptions of human and organisational issues influencing implementations at these three Australian universities. It identifies the issues which university staff perceive contribute to an effective and efficacious implementation of an ERP system in a university setting.

BACKGROUND TO THE INTRODUCTION OF ERPS INTO THE HIGHER EDUCATION SECTOR

Internationally in recent years, declining levels of government funding, with an accompanying growth in student numbers in the higher education sector, has resulted in increasing government pressure on universities worldwide to operate as businesses. These factors, combined with interventionist strategies from governments to adopt corporate ways of doing business, have driven the need for universities to improve the administrative efficiency of their operations (Allen, 2001). In response to these pressures from governments to create administrative efficiencies, a strategy for many universities, similar to businesses, is to implement ERPs (Allen, 2001). ERPs have been introduced into universities with the aim of improving and integrating their administrative systems and efficiency while at the same time providing a focus on improved customer service by offering e-commerce strategies (Frantz, 2001).

There are many citations in the literature of the high cost of ERP implementations, commonly running both over time and over budget, and with little or no business benefit achieved (Nielsen, 2002). Furthermore, the implementation of ERPs in the higher education sector has raised new organisational issues for universities because these systems were primarily designed for corporate non-university organisations with little effort made to fit them to universities (Beekhuzen, 2001; von Hellens et al., 2005). It is argued that universities are different to businesses in that they rely on

broad representation and consensus rather than managerial prerogative, which can provide challenges in implementing an ERP system (Gates, 2005). The packaged nature of the ERP software is also problematic for university users because of the need to adjust the organisation's business processes to fit the package or to modify the package considerably to fit the organisation (von Hellens et al., 2005). The difficulty for universities is fitting the software to business processes that are regarded as best practice for industries. Universities have increasingly adopted business processes from the corporate sector; however, the advent of an ERP has created further pressure to change their business processes within a limited time frame. Pollock and Cornford (2004, p.32) argue that ERP systems are accompanied by "tensions in which ever setting they are implemented"; however, ERP systems are actually "refashioning the identity of universities".

Some Australian universities have reported major problems associated with their implementations of ERP systems and the majority of ERP implementations in the higher education sector have been considered unsuccessful and ineffective (Beekhuzen, 2001). From this perspective, this research is particularly important because there is generally little research evidence about how to successfully implement business systems in non-business settings such as universities (Beekhuzen, 2001) and specifically from a staff perspective.

In examining the issues affecting ERP implementations in universities, there is a body of literature for successful implementation of ERP systems in the corporate sector (Nah, Lau & Kuang 2001; Somers & Nelson, 2001; Shehab et al, 2004, Boonstra, 2006). This body of research into ERP implementations in the corporate sector can be applied to the higher education sector to determine whether the issues affecting implementations of ERPs in universities are similar or different to the corporate factors (Nielsen, 2002 & 2005). Amoako-Gyampah and Salam show in their research that staff perceptions of the changes associated with ERP system implementations influence how they view the success or otherwise of an implementation (2004). User satisfaction is often a factor affecting whether an implementation is viewed as successful and many success factor studies to date have been based on the perceptions of managerial level employees only (Frantz, 2001; Amoako-Gyampah, 2004).

When an ERP system is implemented there are a number of characteristics which determine a positive and successful outcome of the undertaking. However, despite these characteristics, the term successful is too broad and imprecise for this study. The desirable characteristics

of a successful implementation tend to be seen as completion within the planned timeframe and the allocated budget (Al-Mashari, Al-Mudimigh & Zairi, 2003). An implementation which does not engender unnecessary use of resources and which optimises the use of available resources is an efficient ERP implementation. It is also important that the system, when implemented, is fully functional and operates as it was envisaged. There should be minimal difficulties with the system and available support after go-live. This is an efficacious implementation. The characteristics of an ERP implementation considered in this study are those that make it an efficient and efficacious implementation.

DESIGN OF STUDY

The specific phenomenon explored in this study focused on the staff members' perceptions of the issues influencing ERP implementations in their university. Thus underlying philosophical assumptions that relate to this dissertation include the assumptions that underpin an interpretive research paradigm. Interpretive studies attempt to understand phenomena through the meanings that people give to them (Denzin & Lincoln, 2000). Interpretive research methods applied to the study of information systems are aimed at "producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context" (Walsham, 1993, pp.4-5). The emphasis in the interpretivist approach is on empathic understanding of human behaviour and their perceptions and reactions towards and about the ERP implementation (Denzin & Lincoln, 2000). This research was not so much concerned with explanation but rather to gain an understanding of how the staff, who lived through the ERP implementations, constructed this experience. Thus, the research focus of the study was one of discovery and understanding of issues influencing ERP implementations in Australian universities rather than verification.

The research design for this study consists of two phases. The first phase of the study involved the conduct of a series of focus groups at one university. This was done to enable the identification of problems and issues related to an ERP system implementation in one university. The second phase of the research conducted in-depth interviews which involved collecting data about these identified problems and issues at three universities derived both from the first phase of the study and the relevant literature. The interview data was then used as a framework for establishing the staff perceptions of an ERP system implementation at three universities. Figure 3.1 (below) shows the two phase research

plan that starts with the first stage at University X with focus groups and proceeds to stage two of the research plan with the conduct of in-depth structured interviews at University X, University Y and Z.
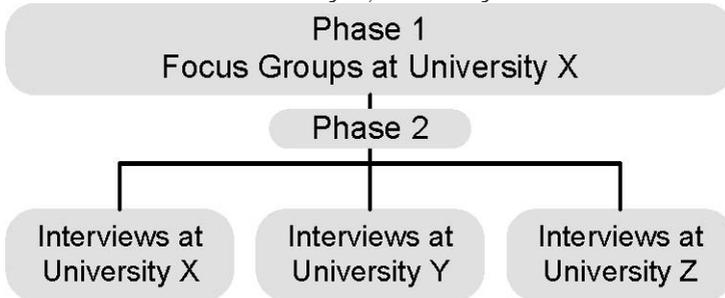
Figure 1 Diagrammatic view of the research process

The perceptions of staff in three universities contribute to the validity of the data, in that there may be a number of different ways of interpreting the ERP implementations in three different sites providing data from a number of perspectives (McKay & Marshall, 2001). This is the reason for deciding to approach two other universities who had implemented ERPs. Individual characteristics and contexts of universities may effect an ERP implementation. Interviews at three universities with different characteristics assist in overcoming these possible individual variations and characteristics. Using the three universities included in this research allowed for triangulation between the universities to strengthen the internal validity of the study and to allow comparisons and contrasts to be made between their ERP implementations. In this way the results from this research are able to be applied more generally to the university sector.

The three universities included in the study consist of a sample of three Australian universities including an older large university located primarily on one site and two regional Australian multi-campus universities with different characteristics of their environments, their operations and their ERP implementations. To protect the anonymity of the universities involved in this study, the three universities will be referred to as University X, University Y and University Z.

IMPLICATIONS OF STAFF PERCEPTIONS

This section discusses the implications of the findings from the staff perceptions in terms of an ERP system implementation in each of the universities in this investigation. This discussion brings together both the

findings of the research and the literature on ERPs and is discussed under the headings of context, process and other issues.

CONTEXTUAL ISSUES

The findings from the three universities show implementations in differing organisational contexts and in differing stages of readiness for ERP implementations. These three differing contexts were shown in the data to include the particular history, culture and circumstances of the institutions. The contextual differences between universities appear to be an important factor in the readiness for the ERP implementation. Other issues identified in the literature in relation to context are: the level of organisational complexity; the prior experience of implementations at the institution and its particular culture; the approach to the management of changes accompanying the implementation; and the possibility of staff resistance to the new system and its implementation. These issues are considered in relation to the findings in the study.

The three universities in this research had different organisational environments in relation to their ERP implementation. University X, at the time of the ERP implementation, was a multi-campus organisation rapidly increasing in complexity in both the size of its operations and its global and national geographical spread. It planned to implement three ERP modules (in reality stopping after two because of the difficulties encountered with the first two). University Y and Z were both universities which were in periods of sustained growth experienced by most Australian universities during the period of implementation though not at the same rapid rate as University X. They were not increasing the complexity of the operations and increasing their size in the proportions of University X. Both universities operated from one main campus with University Z having two smaller campuses in the same state and an off-campus operation for distance students. University Y implemented one ERP module and University Z was implementing their third ERP module at the time the research was undertaken.

These findings show that the differing levels of complexity of the three universities in this research support the literature. The implementation of ERP systems increases in difficulty and effort when the organisation is structurally complex and geographically dispersed. Additionally, the number of modules and users involved in the implementation increases the difficulty of the implementation. The findings show that the context of all three universities, in terms of their experience in implementing an ERP system, is perceived to be a particular issue that differentiated the three

universities. University X was an institution where there was a decision to implement ERP technology in an environment where there was no history and experience of having implemented an ERP system previously. Perceptions of respondents were that senior staff at the institution did not appear, from the comments in both the focus groups and the interviews, to have the necessary knowledge and experience of what they were undertaking. They were viewed as believing that an ERP system was just another piece of software similar to previous software enhancements. This was supported by the views of staff at University X that the appropriate planning and preparation in the institution were not undertaken prior to the implementation. The adoption of an ERP system at this institution was undertaken in a period of rapid growth and expansion in terms of student numbers and campuses.

By contrast, the other two universities implemented their ERP module at a later time and were able to learn about the ERP module under consideration from the experience gained in other universities. One project staff member at University Y stated that *"the University of New South Wales was the one that hoed the rocky road for us"*. The data indicated that contextually these universities were more prepared for an ERP implementation compared with University X. Both universities had taken steps to prepare their institutions for the implementation in terms of re-engineering their academic administration processes. This was evidenced by the following comment provided by a staff member at University Z:

> Preparation for the project and setting the climate for the implementation of the system is critical. You can have the best system to implement in the world and poor preparation negates any benefits when the preparation is not done adequately.

As well University Y, though not having a history of an ERP system implementation, had waited until various other universities had implemented a student module and understood what was needed to prepare for an implementation. A quote from a staff member from University Y illustrates the preparation for the implementation:

> University Y was well prepared for the change and the implementation as they had been prepared for the change that needed to occur and that they had already implemented an in-house web enabled student system and academic structures had been changed in preparation and there was already a strong IT structure in place to support the PeopleSoft system.

This is different to University Z which had undertaken an implementation of two PeopleSoft modules previously and therefore had experience in undertaking an ERP implementation. They had staff at the university at a range of levels, including at the senior level, who had experience gained from previously implementing two ERP modules.

As identified by the Gartner Group (2001), early adopters of any new technology are more likely to experience greater implementation difficulties than organisations which wait until the technology has been implemented in other organisations. This finding is demonstrated by the evidence obtained from the three universities in this research. The prior experience of ERP implementations of the three universities, or the learning able to be gleaned from other universities in the case of University Y, was shown to impact on the level of planning and preparation undertaken in the three universities and therefore on the outcomes of the implementations in this research.

The climate of the environment where the implementation occurs impacts on the ERP system implementation processes and outcomes according to Bancroft, Seip and Sprengel (1998) who reported that an organisation must understand its culture if an ERP is to be implemented successfully. Allen and Kern (2001) found that the academic culture made it particularly difficult to implement in a large ERP system in a university because of the particular structures and decision-making processes which are different to those in the corporate world. In this research the particular culture of a university was an issue identified in the data by staff in each of the three universities. As well the differing organisational cultures of a university and a corporate institution were observed by staff from all three universities who implied that the difference between the two were in the degree of staff resistance to the ERP implementation, with university staff much more likely to resist a new system. This perception is reflected in this quote from a staff member at University Z that *"a university is much more of a democracy than a corporation – there is no guy at the top saying this is what will happen and it happens"* exemplifies this perception.

The development of effective change management strategies, including communication and training strategies appropriate to the particular culture of the organisation, is an important issue. Because of the particular culture of the university environment, where staff routinely question management decisions as a matter of course, different strategies for managing change and gaining staff acceptance and involvement require particular emphasis. The data from the three universities demonstrated that staff responded positively to regular communication about the process

of the ERP implementation, in language which 'undersells' the new system and is understood by all levels of the organisation, so that all staff are informed and understand what is happening. Further, the rationale for the system implementation needs to be clear to all sectors of a university. Leaving academics out of the planning and implementation processes, as was perceived to have happened at University X, was associated with increased staff resistance to the new system. The rationale for the student system implementation at all three universities was understood by all participants in this study as they all had student systems which were not able to cope with the increasing demands on them. However, the issue of replacing the finance system at University X was an issue about which staff expressed strong views. They saw that this had been a decision made in haste and as a result there was a great deal of resistance shown to this system implementation in particular.

The provision of timely and comprehensive training for staff has been shown to be an important change management strategy in this research. In particular, the additional training provided to staff at two of the universities in this study, as a result of the delay in the timing of go-live dates, was perceived to be very beneficial for training of staff and acceptance of the new system. Inadequate training and training support for the first stage of the project was identified by numbers of participants in all focus groups at University X. Training was limited to 'too few' staff, and there appeared to be no provision for relief staff to be employed while regular staff attended training. The timing of training was an issue identified by staff. Staff reported that access to the new system was delayed until a number of months after the training was conducted. The conduct of training too early in the implementation at University X was cited as a reason why staff were not comfortable with the new system in the go-live stage.

The findings show that the change management strategies at Universities Y and Z were perceived positively by staff at both universities. Comments related to the need for more change management resources at both universities by an observation were exemplified from a manager at University Y that even though they had a dedicated change management team "we underestimated the need for change management". On the other hand, participants reported that staff were •change weary• at University X and that, overall, appropriate change management strategies for the first stage had been ineffective. The university had been through a period of intense change in the years preceding the implementation, including the rapid growth of student and campus numbers. The administrative

area primarily impacted by the first stage of the project had a history of particularly poor morale and a turnover in senior leadership that was not addressed by the organisation during the period of implementation. Participants also cited negativity and the failure to include academics in the change process as further critical issues which were neither identified nor addressed at all in the first stage. This research shows that the particular context of an institution, such as the one at University X at the time of the ERP implementation, may require more attention to be paid to planning and managing appropriate change management strategies than at other institutions. That participants in the other two universities in this study reported an underestimation of resourcing and time needed for change management in their institutions suggests that this is an aspect that requires an increased emphasis in a university ERP implementation.

Managing the resistance to an ERP system was an issue to some extent in the contexts of all three universities in this investigation. Randolph and Main (1995) reported that the typical reaction to the perceived power redistribution was likely to be some sort of resistant behaviour in the form of unconstructive political behaviour or the development of shadow systems. Markus (1983) described a number of activities indicative of resistance to new systems in organisations such as frequent complaints about the new system, parallel operation of both the new and old systems, poor cooperation in dealing with problems and avoidance of the system.

Staff in all three universities indicated that they were aware of staff who resisted using the *"cumbersome new system"*. For instance, a staff member at University Y, where the implementation was generally reported to be well received by the staff, indicated that she did not use the new system at all and arranged for a more junior staff member to use it on her behalf. A recurring theme showing the level of resistance by staff at University X, in both the focus groups and interviews, was that shadow systems were in constant use by staff in many areas of the university as an alternative to using the new system. All three universities investigated showed forms of resistance to change in varying degrees. It was perceived that the personality conflicts at University X impacted considerably on the implementation. The resistance to using the new finance system was partly attributable to the absence of a perceived rationale for the finance system being replaced. Two staff interviewed at University Z reported some personality issues which had caused some difficulties in the earlier implementations of modules at their university. Staff at University Z described one senior staff member's current role in the implementation as

doing considerable mediating and negotiating between staff rather than his technical role. The staff perceptions in this study show the existence of staff resistance to the changes accompanying their ERP system implementation. These resistant behaviours, as previously identified by Markus (1983), were displayed to some extent by the staff involved in all three university contexts in this study.

PROCESS ISSUES

The themes identified from both the findings from the staff perceptions and the literature on ERP implementation processes include leadership of the implementation, effective project management and the appropriate management of external consultants. As the influence of the context underpins all other aspects of an organisation there is also a discernable impact of the context on the process of ERP implementations in all three universities.

As revealed in the literature senior managers need to have a high level of responsibility in an ERP implementation to ensure that the particular context is considered and that the implementation is supported by the appointment of an identified sponsor and an effective project manager and team. The responsibility of senior managers includes the appropriate management of consultants and ensuring appropriate planning and monitoring across the organisation (Somers & Nelson, 2001; Livingstone et al., 2002; Skok & Legge, 2002;). If leadership support is low then the ERP implementation is considered a failure and if it is high then the implementation is generally considered a success (Akkermans & van Helden, 2002). In this research it was shown that the perceptions of the staff at the three universities about the quality of leadership of implementations at their institutions appeared to impact directly on the course and efficacy of their implementations.

It was shown in the findings from the focus groups and interviews with staff at University X that the institution appeared to have difficulties in coping with the new system implementation and ensuing changes. There was a widely held view expressed by participants that leadership and planning issues were a major impediment to the success of the ERP implementation. It was viewed that senior management had not sanctioned the ERP project unequivocally and neither did they fully understand the magnitude of the consequent changes to the organisation. Most participants expressed difficulty in understanding the rationale for implementing the finance module prior to the student administration module, which held the place of perceived highest priority.

Furthermore, senior management was viewed as lacking both an understanding of the scope of the project and the capacity to manage the potential and real risk factors impeding the progress of the implementation. The data alluded to a lack of a clear 'champion' for the project, as was evidenced by the number of changes to the structures of committees and staff responsible for the project. Participants commonly cited the poor relationship between two senior staff, in areas critical to the project, as a risk factor that impacted negatively on the outcome of the first stage of the implementation. Focus group and interviewee data both indicated that there was a genuine concern about losses of existing jobs as a result of the purchase and implementation of the new ERP system. Participants interpreted the cost savings as potential job losses and this subsequently lowered morale and encouraged resistance. In reality, as discussed previously, implementation of the new ERP system required increased rather than decreased staff levels as reported by staff at University X.

By contrast, staff at University Y and Z had very different perceptions of the leadership of their implementations. At both universities there appeared to be good support from senior leaders and, consequently, adequate preparation and planning undertaken for the implementation. The reason for the differences between the three universities may be related in part to the difference in experience of prior ERP implementations and the early adoption by University X. Interview data from University Z indicated that there was a need to explain to the Vice-Chancellor about why the project was not precisely costed. However, the rest of the staff at the university appeared to perceive that there was senior support for the project. This support is reflected in the positive perceptions generally for the implementation efficacy.

Senior management support underpins a number of other factors associated with the effectiveness of the implementations of technological changes. The responsibility for initial planning and development of the scope of a system implementation usually rests with senior management initially, and is then delegated to project managers. Data collected in this study suggests a relationship between the involvement of project managers from within the organisation, chosen for their people management skills rather than technical expertise, leading to the greater satisfaction of staff with the university implementations. For their implementation projects University Y and University Z apparently both chose managers who were highly regarded people managers. Staff at both University Y and University Z described the managers' capacity for problem solving and people management skills in addition to their capacities for motivating

staff across the universities to support the implementation project. Both these project managers were involved in the decision-making process to delay the timeframe for go-live dates on these projects. These decisions were perceived very favourably by staff at both universities.

On the other hand, the project manager appointed for the implementation project at University X was an external appointment who had been involved in a large public sector implementation. The staff perceptions of this project manager were very different in nature to the perceptions of the managers at the other two universities. Further the go-live dates at University X also were not changed as in the other two universities and were viewed by staff to be very tight. The management of increased staff workloads surfaced as an important issue at University X and the tight timeframes for the implementation project were viewed as a factor impacting on the workloads. Overwhelmingly, the unforeseen increase in staff workloads as a result of the implementation of the new ERP system was identified as the major impediment for many staff. This increase in workloads for staff is cited by a number of the papers describing the management of change projects in the US higher education system. It appears that the increase in the workloads for administrative staff was shown at all three universities and this is related in part to the increased complexity and capacity of the new information system which involves a greater number of keystrokes to enter data. However, it is in the consequent management of workloads of staff where the differences between universities occur. University Y and University Z appeared to have better understood these consequent workload issues, possibly related to their capacity to learn from previous implementations, and attempted to ensure that there were strategies in place to deal with it.

Staff perceptions at the three universities differed in relation to the three universities' management of consultants involved in their implementations and the ensuing outcomes. University Y, which had implemented ERP modules previously, was perceived to manage their consultants effectively and benefited from their involvement. University Z staff were viewed as being on a learning curve in relation to their management of consultants. They had a few issues in relation to the management of consultants at the start of the project and then were perceived to manage their consultants positively with comments about the benefits of the consultants' involvement. Neither university's implementation was viewed by staff to be controlled by their consultants. The experience at University X is supported by the literature on consultant-driven implementations leading to difficulties in ERP implementations. This finding is consistent with that

of McCredie and Updegrove's (1999) who found that it is important to manage the role of the consultant in a university, a finding particularly relevant to the staff perceptions obtained from this study.

OTHER ISSUES

A number of additional issues which may have particular relevance for university implementations emerged from the data and these are now briefly considered. The literature from US higher education institutions alludes to the positive benefits from both delayed go-live time frames for universities and the value of developing and maintaining positive vendor relationships. These two issues were also identified in the data from the focus groups and interviews in this research. The ERP literature and the higher education literature report better outcomes with vanilla implementations. Perceptions towards change and the adoption of new technology became more positive following a delay in timeframes in the implementations at Y and Z universities in this research. This positive attitude towards the delayed timeframe for university implementations is contrary to the view in the literature from the corporate sector which values keeping to specified timeframes for a successful implementation (Livingstone et al., 2002). If more time is needed for an implementation this was shown to have positive consequences in a range of areas for both implementations and may be a strategy that works well for the higher education sector. The additional training provided to staff because of the delay in timeframes had a positive effect on staff. There were comments from the staff that this decision had a positive effect on staff morale as the pressure was perceived to be lifted from staff on the project and in areas of the university involved in using the new system. Managing timeframes and workloads and minimal changing of the software system are additional issues for close attention in universities.

Vendor relationships are particularly important for the higher education sector in relation to the PeopleSoft product that was originally developed for the US market. The PeopleSoft student module was the common module implemented by all three universities. This module had to be modified for the Australian context with particular elements being required for inclusion by the federal government. An effective relationship with the vendor was necessary to be able to influence the necessary changes made to the PeopleSoft product. It was reported that, generally, the relationships between senior staff at University Y and Z were very positive and productive. The senior managers at both universities perceived that they were able to raise issues with PeopleSoft when they

needed to and have those issues responded to promptly. At University X, some of the interviewees perceived that the project manager had a less than satisfactory relationship with the software vendors. As University X was an early adopter of the ERP module it needed assistance from the vendor to iron out any problems. As the student system was a new product the software required considerable work to be done in a few areas of the software so it would work in Australian conditions. It was perceived that this relationship could have been better managed in the circumstances and that vendor relationships are important to foster and maintain, particularly as the university sector is not the core business focus for the particular products.

From the literature on ERP implementations in US and Australian universities, it was shown that institutions where the software was not greatly customised or was implemented as a vanilla version had more successful outcomes (Feemster, 2000). Implementing vanilla versions of the software presupposes that the re-engineering of university administrative processes had been undertaken prior to the implementation. The undertaking of re-engineering is in turn dependent on appropriate planning for the implementation prior to the start of an implementation. Process re-engineering needs to be undertaken prior to the implementation rather than during the implementation, as was attempted at University X. This is necessary to enable a vanilla version of the ERP to be upgraded more easily later. The vanilla implementation at University Y was able to be undertaken because of the re-engineering of university processes undertaken prior to the adoption of the ERP system. The implementations at University X and University Z were less vanilla versions than intended. However, all three universities were attempting to support a vanilla implementation with the aim of obtaining more positive outcomes for their institutions.

The foregoing discussion of the other issues identified in this data showed that even though both the corporate and university environments aimed for a specific go-live date, universities might benefit from delaying the go-live date. This was shown to have beneficial outcomes for two of the universities in this study. The discussion also showed the value of developing good vendor relationships in universities in order to maintain the ERP vendors' responsiveness and support. It is a recommended strategy for all organisations to implement a vanilla ERP system, and this is particularly so for universities which are particularly complex and diverse corporate structures.

CONCLUSIONS

This chapter has presented selected results of the research carried out as part of a Doctorate study to investigate the issues impacting on ERP implementations in three universities. The evidence presented in this chapter has shown that staff in different universities reported varying experiences of the implementation of Enterprise Resource Planning systems. The varying experiences perceived by staff highlighted the significance of the particular context of universities and of preparedness for an ERP implementation underpinning the planning undertaken prior to an ERP adoption.

Further, the staff at the three universities, in both the focus groups and interviews, identified the important issues from the ERP literature as impacting on their ERP implementation. They recognised the importance of senior management responsibilities in relation to ERP implementations that is acknowledged in all the ERP literature. Further, they identified the need for careful planning, and appropriate change management strategies as responsibilities of senior management. In addition, there were some other issues identified that can be discerned as particularly important for consideration in university ERP implementations. These were the management of consultants, project management capacities, vendor relationships and possible benefits from delaying go-live dates. It can be concluded from the research that, according to these staff perceptions of ERP system implementations, though there are many similarities in approach for an ERP system implementation in all industries, there are particular issues that impact on universities. These need more careful consideration than in other industries to achieve an effective and efficacious implementation.

In conclusion, it has been demonstrated in this study that senior managers have a responsibility to ensure that the particular context of the institution is considered in planning for the adoption and implementation of the ERP system. Staff from the three universities perceived that the quality of leadership of implementations at their institution appeared to impact directly upon the course and efficacy of their implementations. Managing the organisational culture and change in organisations is critical to the outcome of the implementation. Senior managers also need to ensure that an ERP system implementation is demonstrably supported by the appointment of an identified sponsor. Managers also need to ensure effective project management, which includes the consultants and project manager and team choice and that appropriate planning and monitoring occurs across the organisation. Staff consultation, communication,

managing the potential staff resistance to change and re-engineering of processes prior to implementation are also necessary responsibilities of senior management. Additionally, managing timeframes, workloads, training and minimal customisation of the software system are additional issues for close attention in universities.

The data presented in this chapter clearly shows that the environment or context in which the implementation occurs impacts on the process and outcomes of the project. This context includes the institution's structure and processes, its experience of ERP implementations, readiness for change, and its culture and leadership capacity. An assessment of the particular context underpins the planning needed in preparation for an ERP adoption and implementation. The results intimate that the process of the ERP implementation is impacted upon by the quality and appropriateness of the planning processes and by the capacities of the leadership of the implementation. Furthermore, it has been shown that both the planning processes and leadership affect the way an ERP implementation progresses, its acceptance by staff and whether the ERP delivers the planned outcomes for the institution. The literature and findings from this data show that staff resistance to change is a further feature of university ERP implementations (Allen & Kern, 2001). In this respect, staff perceptions have been shown in this study to be an accurate barometer of the progress and outcomes of ERP implementations in their universities and therefore can be used to monitor the course and outcome of other ERP system implementation in other universities.

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