The impact of effective it systems management on end-user productivity: IT academics have their say

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This paper examines the use of technology partnership agreements (TPAs) and service level agreements (SLAs) for the provision of IT services by internal IT departments, from the perspective of a group of academics involved in the teaching of information and communication technology (ICT) in the Institute of Technology and Polytechnic (ITP) sector in New Zealand. Also examined in the paper are the use of cost centres and profit centres for measuring the financial performance of internal IT departments.

This paper is part of ongoing research into the management of the provision of IT services by internal IT departments, with future research likely to include the perspectives of a wide grouping of those in IT management roles in the public sector; a group of people in IT management roles in the ITP and wider tertiary education sector; those teaching in non-ICT subject areas in the ITP sector and a cross section of practitioners in the IT Industry.

Keywords

Agreements, partnership, technology

1. INTRODUCTION

This study is based on a previous study by McCarthy and Nesbit (2003), that was in part based on a literature review of a number that included Shneiderman (2002), Fowler & Levine (1993), Gray, King, McLean & Watson (1994) and DeCoster, Schafer & Ziebell (1988). This earlier study investigated issues relating to the use of technology partnership agreements (TPAs) and service level agreements (SLAs) for the provision of IT services by internal IT departments. In addition, issues related to the measurement of financial performance using cost centres and profit centres were explored. The participants in this study included individuals involved in IT Management roles.

A number of trends were identified that would provide the basis for further research, with these including that:

■ IT service delivery can impact on end-user productivity.

■ The financial accountability of internal IT departments appears to be an important factor.

■ Being able to outsource for some parts of the IT function may be a way of encouraging value for money service by an internal IT department.

■ Adopting a cost-centre approach to measuring the financial performance of an internal IT department may not be best practice.

Now the same issues have been examined and analysed from the the perspective of those teaching Information and Communication Technology (ICT) related subjects in the Institute of Technology and Polytechnic (ITP) sector. This group have been chosen, because they are one group of recipients of the service provided by internal IT departments in the ITP sector.

2. METHODOLGY

A questionnaire was constructed and distributed to via email to those who had attended the annual conference of the New Zealand National Advisory Committee on Computing Qualifications (NACCQ) in 2003. The questionnaire was based on that used in the earlier study by McCarthy and Nesbit (2003) with the respondents being asked to rate their level of agreement with the eleven statements shown in Table 1. Note that Approach A refers to the cost

Table 1 - Statements Respondents Were Asked To Rate

1. IT service delivery has serious impact upon the quality of end-user productivity

2. Organisations should have a formal contract (IT Services Contract) that covers issues relating to the provision of IT services by an internal IT department

3. An IT Services Contract should set out specific measurable objectives for service delivery

4. An IT Services Contract should deal with issues of non-compliance

5. An IT Services Contract should provide for reimbursable expenses resulting from non-compliance

6. The financial performance of an internal IT department should be measured

7. A good way to measure the financial performance of an IT department is to measure actual costs incurred against expected costs (Approach A).

8. A good way to measure the financial performance of an IT department is to charge its services to the rest of the organisation, and compare the income received with the cost of providing the service (Approach B).

9. Adopting Approach A could result in an IT department focusing on reducing cost as opposed to increasing quality

10. Adopting Approach B could see IT departments increasing the rate at which they charge their services to the rest of the organisation.

11. If parts of the organisation had the option of purchasing their IT services from an external source, this would encourage the internal IT department to provide a better value for money service

centre approach and Approach B refers to the profit centre approach.

The questionnaire also asked respondents to indicate how long they had worked in the ITP sector, the number of students enrolled across their entire institution, and the number of equivalent full time staff teaching computing in their institution. The respondents were also given the opportunity to make comments and observations on issues relating to IT service management in the ITP sector.

For the statements shown in Table 1, respondents were asked to make a rating based on 1="Strongly Agree", 2="Agree", 3 ="Neutral", 4="Disagree", 5= "Strongly Disagree".

A set of criteria was developed to classify the statements into groups based on the levels of agreement and disagreement. This enabled the respondents' statements to be analysed and discussed so that appropriate conclusions could be drawn.

3. RESULTS

Responses were received from 22 people, with all 22 people being involved in academic roles in an ITP in New Zealand.

Table 2 shows a summary of the levels of agreement with each statement.

4. ANALYSIS AND DISCUSSION

Table 3 shows the criteria used to classify the statements into groups, with the groupings of the statements being shown in Table 4.

4.1 Technology partnership agreement and service level agreement

The Service Level Agreement (SLA) is being promoted as a best practice for IT support providers' dealings with their customers – in this case computing staff and students of NACCQ programmes. SLA's include the services to be offered to an IT department's customers, performance, tracking and reporting, problem management, and fees for service, along with details of the customer's duties and responsibilities. One of the contentious issues about SLA's is that they are are also evolving to include compensation for non-compliance (The SLA Toolkit, 2003).

It is our understanding that very few ITPs have an SLA, but they are more likely to have a Technology Partnership Agreement (TPA). Whether ITPs have either a SLA or a TPA, there was certainly a very high level of agreement that IT service delivery has serious impact upon the quality of end-user productivity, and a high level of agreement that organisations should have a formal contract (IT Services

Table 2 – Summary of Levels of Agreement

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1	11	11	0	0	0	22
2	7	11	2	0	1	21
3	10	9	1	0	0	20
4	9	7	4	0	0	20
5	4	6	7	1	0	18
6	8	11	2	0	0	21
7	0	7	6	5	1	19
8	1	11	2	4	1	19
9	1	13	4	2	0	20
10	1	13	5	0	0	19
11	1	9	3	6	2	21

Table 3 – The Set of Criteria Used to Classify Statements

Group	Criteria
Very High Level of Agreement	At least 50% strongly agreeing At least 90% agreeing at some level No more than 10% disagreeing
High Level of Agreement	At least 30% strongly agreeing At least 80% agreeing at some level No more than 10% disagreeing at any level
Moderate Level of Agreement	At least 50% agreeing at some level No more than 10% disagreeing at any level
Mixture of Agreement of Disagreement	At least 25% agreeing at some level At least 25% disagreeing at some level

Contract) that covers issues relating to the provision of IT services by an internal IT department.

The results of our research further show that there is a very high level of agreement with the fact that an IT Services Contract should set out specific measurable objectives for service delivery, and a high level of agreement that an IT Services Contract should deal with issues of non-compliance.

Finally, although there was a high level of agreement over the issue of non-compliance, there was only a moderate level of agreement that an IT Services Contract should provide for reimbursable expenses resulting from non-compliance.

4.2 Cost centres and profit centres

When it comes to issues relating to the financial performance of an internal IT department, there is a high level of agreement amongst the respondents that the financial performance of an internal IT department should be measured, with this being consistent with the emerging trends identified by McCarthy and Nesbit (2003).

**Table 4 – Classification of Statements
into Groups**

Group	Statement
Very High Level of Agreement	• IT service delivery has serious impact upon the quality of end-user productivity • An IT Services Contract should set out specific measurable objectives for service delivery
High Level of Agreement	• Organisations should have a formal contract (IT Services Contract) that covers issues relating to the provision of IT services by an internal IT department • An IT Services Contract should deal with issues of non-compliance • The financial performance of an internal IT department should be measured
Moderate Level of Agreement	• An IT Services Contract should provide for reimbursable expenses resulting from non-compliance • Adopting Approach A could result in an IT department focusing on reducing cost as opposed to increasing quality • Adopting Approach B could see IT departments increasing the rate at which they charge their services to the rest of the organisation.
Mixture of Agreement of Disagreement	• A good way to measure the financial performance of an IT department is to measure actual costs incurred against expected costs (Approach A) • A good way to measure the financial performance of an IT department is to charge its services to the rest of the organisation, and compare the income received with the cost of providing the service (Approach B) • If parts of the organisation had the option of purchasing their IT services from an external source, this would encourage the internal IT department to provide a better value for money service

There was a moderate level of agreement with the idea that a cost centre approach (Approach A) could result in an IT department focussing on reducing costs as opposed to increasing quality, however with at least 25% of the respondents agreeing that this was a good approach and 25% disagreeing with this being a good approach it appears that this is a contentious issue. The same can also be said for the idea of adopting a profit centre approach where there was a moderate level of agreement with the idea that IT departments could increase their charge out rate, and with at least 25% of respondents both agreeing and disagreeing that this was a good idea.

This mixture of agreement of disagreement also existed when it came to whether the option of outsourcing the IT function for parts of an organisation would encourage better value for money service.

Given that those surveyed were academic staff that had attended the Annual NACCQ Conference in 2003, it may be that the views relating to the measurement of financial performance might be more consistent if a group of academic staff that had attended a business conference were surveyed.

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5. CONCLUSIONS

Given the possible bias of the orientation of the respondents in this matter, namely that they are all IT Academics within ITPs, it is no wonder the high level of agreement over such issues as the impact on the quality of end-user productivity (their students) of effective IT service delivery. Again, given this bias, there is no wonder the high level of agreement that an IT Services Contract of some description should exist and that it should set out measurable objectives for service delivery, and that it should deal with the issues of non-compliance.

However, one way of dealing with non-compliance, namely the provision for reimbursable expenses resulting from such non-compliance was a divisive issue for the respondents with only half of them choosing this option.

Therefore, bias aside, IT Academics within ITPs will need to further consider the issues of non-compliance, or how best to deal with the cost of not providing effective IT services. It would appear this issue at least is not yet concluded and need further study

When it comes to the financial performance of an internal IT department the IT academic staff surveyed have a high level of agreement that its financial performance should be measured, but have differing views as to how it should be measured. An area for further study is to explore whether there is the same divergence of views amongst business academic staff as there is amongst the group of IT academic staff that were surveyed

It is recommended that further research into the management of the provision of IT services by internal IT departments, should include the perspectives of:

■ A wide grouping of those in IT management roles in the public sector

■ A group of people in IT management roles in the ITP and wider tertiary education sector

■ Those teaching in business related subject areas in the ITP sector

■ A cross section of practitioners in the IT Industry.

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