

Email Use and Abuse – A Case Study at an Australian Winery

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Abstract

This paper presents on-going research, in an Australian Winery that investigates email policy awareness and the problems organisations' face in managing email usage. The first stage of the research with this organisation identified the extent to which employees were aware of, and practised, the organisation's email policy, the extent to which they used the email and the type of messages they sent. This phase seeks to identify whether employees can recognise email messages that are inappropriate for the email medium and whether they understand the attendant implications of choosing to send these messages using email.

Keywords

electronic mail, records management systems, record keeping, IS policy, legal issues, IS security

INTRODUCTION

A recent study by the Australian Bureau of Statistics (ABS) found that email was used by 92% of Australian business with internet access, with 29% of Australian businesses having internet access (E-commerce Today 2000). This study noted the larger the company the more likely they were to use email. Romm et al (1996, p37) estimated the number of email users world wide at fifty million with an additional one million being added each month. Forrester Research Inc (1997, cited in Wallace 1998, p1) reported an increase from 2% to 15% in the United States between 1992 and 1997 with expectations that this will increase to 50% early in this decade. A study conducted by Krapels & Moss (1997) demonstrated that many organisations have become dependent on email.

Organisations are recognising the growing use of email world wide in their implementation of policies to try to manage this popular communication medium. However, there is a proliferation of poor policies to be seen in organisations and still, in many instances, no policy at all. Those policies that do exist, in the main, tend to be "typically directed towards issues on the proper uses of email, employee expectations of privacy for their email, employer ownership of email, email etiquette, proper composition of messages, copyright, security..." (Wallace 1998, p4). They do not consider which types of message might be appropriate for distribution via the email.

What many organisations are failing to recognise is that email created or received by the organisation may constitute an official record and could therefore be subject to legally-binding records management controls (Wallace 1998, p 4).

LITERATURE REVIEW

Email can, and is, used for a number of purposes. In the previous research examined no common classification was found. Schramm & James (1992) offer professional and social categories. Steinfield (cited in Ku 1996, and Kettinger & Grover 1997) specified two dimensions of email messages, task related such as co-ordinating project activities and scheduling meetings, and social. Steinfield, Jin and Ku (cited in Ku 1996) in a subsequent study suggested that four dimensions exist: information exchanging, negotiating and bargaining, social and broadcasting. Enneking (1998) identifies categories of business use such as the discussion and revision of policy and procedures, circulation of draft documents and meeting minutes, distribution of work assignments and schedules, and business transactions.

Email Policies

Researchers have investigated the comparisons and the appropriateness of various communication media. However, a standard guideline for selecting the email medium for messages has not been found. Furthermore, Hill (1992) and Krapels & Moss (1997) found that few email policies exist within organisations.

It has been considered that policies should address at least personnel's privacy expectations (Enneking 1998), a message's content liability (Fusaro 1998, Hackett & Jacobs 1998), an acceptable email message to communicate (Enneking 1998), retention of E-mail (Enneking 1998, Hackett & Jacobs 1998), and security assessment (Goodman 1997, Enneking 1998). Hill (1992), Waldman (1995), Raysman, Brown & Nemeth (1998), and Sipior & Ward (1995) acknowledge that organisations need to develop intuitive email policies to protect the organisations best interests.

In Monday and Rudge (1999) it was found that, although 65% of the survey population had read the organisation's email policies, they did not necessarily understand or practise them. They further found that many of the survey population were unaware of the legal implications of email messages and were deleting messages that should be archived. In addition, a large proportion of the survey population duplicated their electronic files by saving their attachments both in their email application and elsewhere. There were three key legal issues identified in the findings. Email messages were being communicated through the email medium that potentially can create legal liability for individuals or the organisation. Email messages were not being archived in a format that will satisfy a court of law. Finally, those messages that were being retained ran the risk of being lost in the accumulation of email messages. This leaves organisations open to the costly legal discovery threats. The evidence presented suggested that employees of this organisation were not fully aware of the value of their emails as corporate records. In addition, the survey demonstrated that although a number of personnel were aware of the organisation's email policy which informs them that other people can access the email that they send and receive, they were not aware of the level of privacy the email medium offered them.

Education

Enneking (1998) claims that introducing policy alone is not enough. Organisations need to educate personnel and make them aware of the policies. In addition, measures are needed to ensure personnel are complying with the policies.

Email may have been introduced into organisations in a structured way or simply evolved from the development of a network environment. In either case, training for technology tends to lean towards a piecemeal and haphazard approach rather than a structured and planned one. Hill (1992), Schramm & James (1992) and Palme (1995) claimed that email training was needed in many organisations. Herndon (1997, p124) states “individuals must be adequately prepared and trained, both in technology use and in decision-making”. It is important that training programs in all facets of email are developed and implemented in organisations (Igbaria, Schiffman & Wieckowski 1994, Webster & Trevino 1995). Training programmes that did exist tended to concentrate on applications training, not policy issues.

Organisations need to consider the appropriate training method for personnel so that they gain an understanding. Three training methods computer-based training, video tutorials, and instructor-led training were recently studied to establish what method personnel preferred (Harp, Taylor & Satzinger 1998). It was found that personnel preferred either computer-based training, or instructor-led training. The selection of a training program is important for an organisation to ensure that personnel perform favourable practices (Igbaria & Chakrabarti 1990).

Experience

Experience continues to prove be a primary factor for explaining different results (Igbaria & Chakrabarti 1990, Henderson, Deane & Ward 1995). They claim that computer knowledge has an impact on a person's utilisation of a computerised system. The more experienced tend to develop comfort with communication media and are aware of its capabilities (King & Xia 1997).

Job Description

Research has established that a person's job description impacts on how they accept technology (Henderson, Deane & Ward 1995). They are more likely to accept the technology because of the functions it can perform for them (Igbaria, Schiffman & Wieckowski 1994, Ku 1996, King & Xia 1997). Rice and Shook (1990) found this to be no different for email. Another factor, identified by Webster and Trevino 1995) was their perception of their colleague's use of the medium. Rice & Shook (1990) further state that the task of lower level personnel requires smaller social presence, therefore they are more likely use the Email medium.

Age

To a lesser extent, age has an impact on how technology is accepted (Igbaria & Chakrabarti 1990). Young personnel are more likely to be sending social Email messages, and older personnel have been found to resist Email more than other age groups Ku (1996).

Monday and Rudge (1999) conclude that more and more email messages contain information that provides evidence of the organisation's business. Email is thus seen as a powerful tool for exchanging information that can contribute to one of an organisation's key assets, its knowledge. Postrel (1998, cited in Monday and Rudge 1999) identifies this as a dilemma for organisations where two important business trends collide. Whilst they are being advised to

become less bureaucratic and more open to ideas and feedback from all employees, they face the threat of legal liability. Therefore organisations need to establish systems that will manage their information.

RESEARCH SETTING

A case study was used as the vehicle to investigate email policy issues. The organisation's employees involved in the study belong to a division of a production corporation. The organisation is an international enterprise, although it is predominately located in regions throughout Australia. Although the research was conducted from a central location the research population was selected from the entire organisation.

Email technology was made available to the majority of the organisation's Australian sites in mid 1995, and initially had only text-based capabilities. Early in 1996 the organisation expanded its email capabilities, enabling personnel to send attachments with their email, to communicate to the entire organisation, and to communicate with other organisations. Not all personnel had immediate access to these new features due to their phased introduction.

Almost everyone in the organisation now has access to email but not all staff has access to the newer features (for example, attachments). In most instances these personnel are located on remote sites that have to dial into the organisation's network systems.

In recent times the organisation has experienced a sudden email traffic increase, in fact, quadruple for some of the same comparative time periods.

RESEARCH METHODOLOGY

The case study approach adopted by this study enabled the collection of data using survey and field experiment.

Research design

The survey established the learning approaches adopted by subjects and their experience in using email.

The study sessions were developed to evaluate post-test views of respondents regarding email issues. The study sessions are a one-group pretest-posttest pre-experimental design (Leedy 1997, Graziano & Raulin 1996, Neuman 1997), *figure 2*. Five study sessions were conducted over a period of time, which enabled the measurement of the treatment impact over the entire study sessions. Choice of message classification (formal, informal, personal, attachments and other) was determined from the literature review and in consultation with the organisation and their understanding of the types of messages they distribute.

The research design adapted for this study is illustrated in *figure 1*.

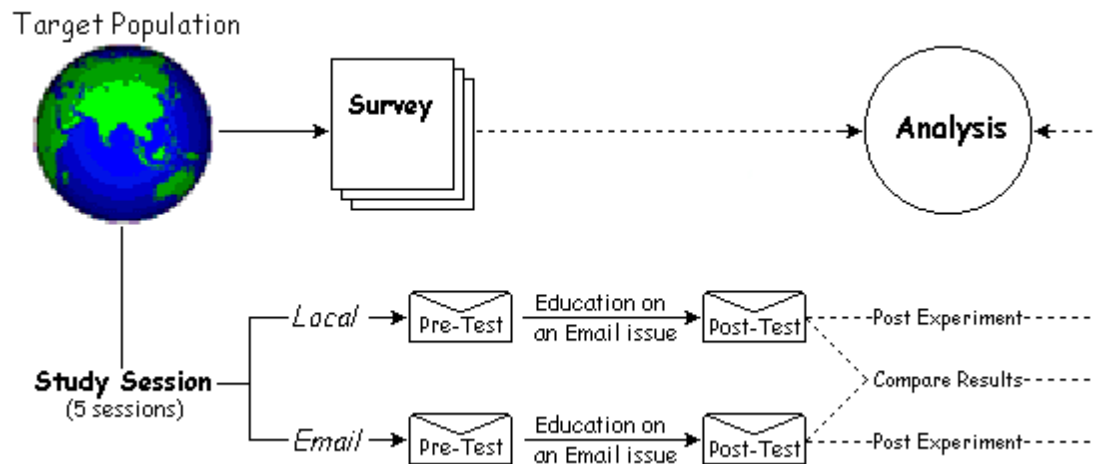


Figure 1: Email research design

Sample

The target population was all personnel who have the capabilities to send and accept email attachments. Any of the potential survey population who did not have the capabilities to accept an attachment with their email message was excluded because they were unable to accept the electronic survey and respond. A total of 514 personnel were identified as potential subjects through the organisation's email address book.

Survey

Email was used to distribute and accumulate the electronic survey. Survey response was dependent on a survey subject's accessing their email account, and having the knowledge to open an attached file. It was also dependent on the subjects' ability to successfully complete the survey using the associated Microsoft Word application. The electronic survey was pilot tested, for content, on personnel within the organisation's IT department, prior to the survey's distribution. Although no changes were made to the structure of the survey some wording modifications were made to improve the clarity of the survey.

Experiment

Two pre-experimental groups (study sessions) were established, one via email, and the other in a face-to-face setting.

The sample was randomly selected from the various levels of the organisation using an organisation chart. An organisational level was ignored if it did not contain three or more personnel to ensure a random selection. This method was chosen to ensure all departments within the organisation had an opportunity to be represented. Both groups were initially provided with an information sheet describing the purpose and requirements of the sessions.

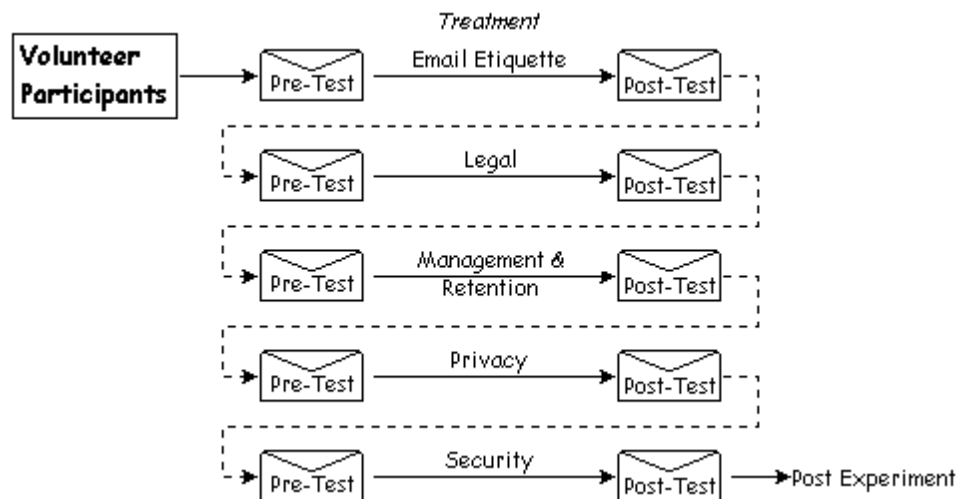


Figure 2: Study session

Procedure

The subjects were emailed or given a reply sheet and ten examples of email messages. They were asked to record their responses on the reply sheet provided. For each message they were asked if they would send the email message, if they had sent a similar email message and how they would rate the value of the message content to the organisation. Subjects were then provided with information relating to each of the email issues. The subjects were given another reply sheet and another ten examples of email messages. The email messages followed the same structure as the pre-test examples. At the completion of the five study sessions the subjects were asked whether the session had changed their mind about their use of the email medium. An explanation of their response was also requested.

FINDINGS

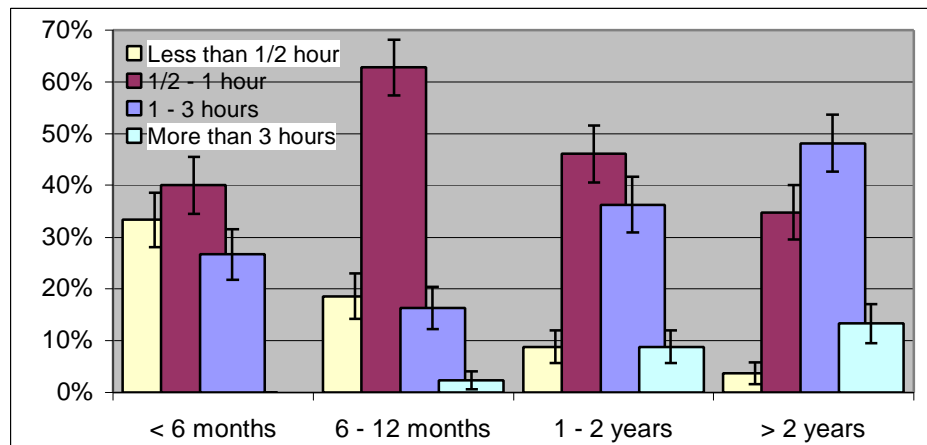
Sixty-five percent (336) of electronic surveys were returned. This far exceeded traditional mail out surveys, and the 38% response rate Kettinger and Grover (1997, p523) experienced with their study. Although not proven, the high return rate could be attributed to a novelty factor of an electronic survey, and/or the company's introduction of the researcher, to the survey subjects. Twenty subjects took part in the email study sessions and nine subjects in the local study sessions.

Education

Learning approaches adopted by subjects prior to the study were self-taught, trainer-taught and document-taught. Those subjects who had received training, or used documentation to learn about email, were more likely to have read the organisation's email policies.

Experience

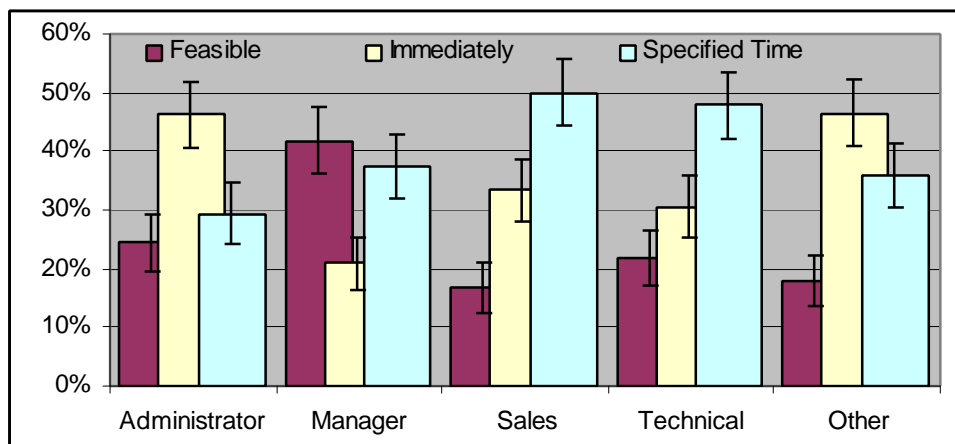
Over one-third of the subjects had more than 2 years' experience of using email, with only 10 per cent having less than 6 months' experience. Subjects with more than 2 years' experience spent more time archiving messages on a daily basis (Graph 1), a possible explanation for the length of time spent using email.



Graph 1: Time spent using email by experience in use

Job description

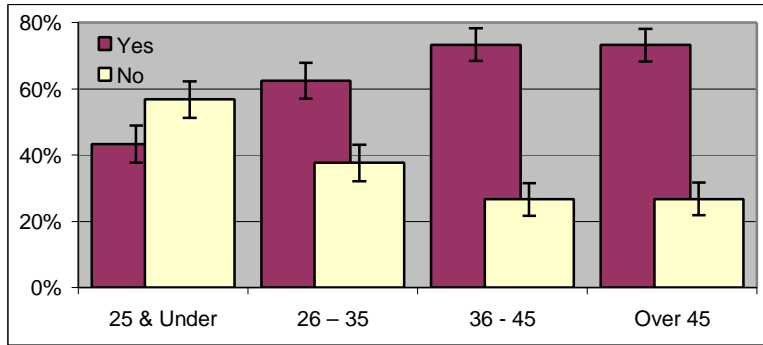
The category 'administrator' was found to be more likely to respond to their emails immediately, followed by 'sales' and 'technical'. Not surprisingly the category 'manager' was more likely to respond when feasible.



Graph 2: Email sorting preference by job description

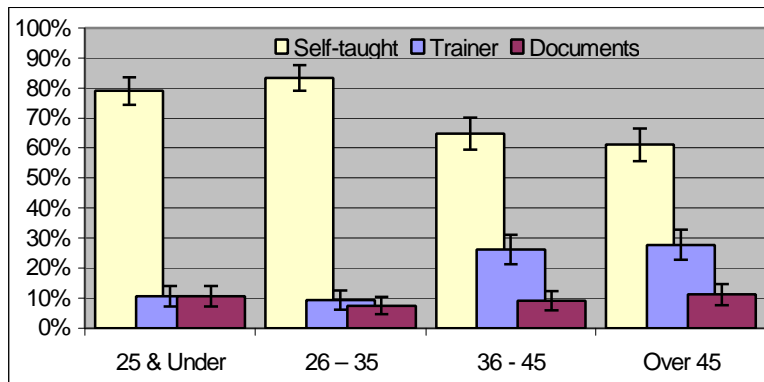
Age

Email policies - The survey showed that the under 25 age group are less likely to have read the email policies. This figure increased as the subjects' ages increased.



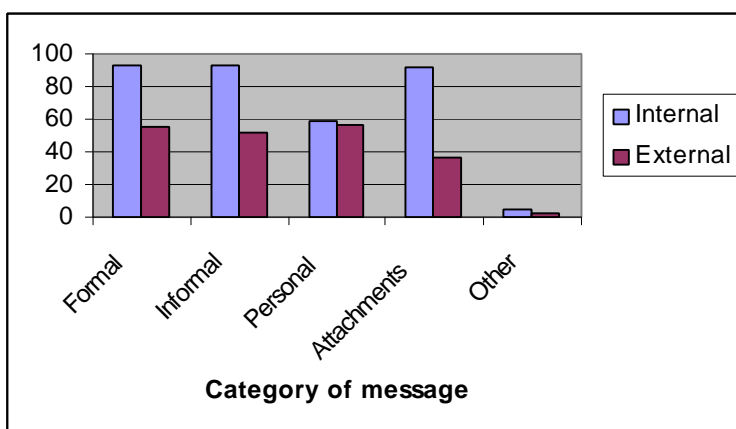
Graph 3: Age groups that have read the email policies

Learning experience - Those in age groups 35 and under had a tendency to teach themselves and relied less on formal training whereas more subjects over 35 opted for formal training.



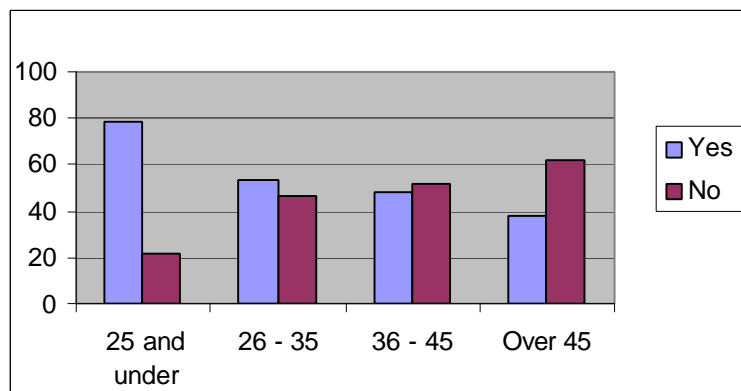
Graph 4: Email learning experience by age

Type of email messages sent - Almost all staff had sent formal and informal messages, and messages with attachments, fewer than 60 per cent claimed to have sent personal messages. The research recognises that subjects may not have acknowledged distribution of personal messages.



Graph 5: Type of email messages sent

Type of email messages retained - There was also a correlation between type of message retained and age. The 25 and under age group were less inclined to delete personal messages and the over 45 age group less inclined to save them. For other categories of message the variation was small.



Graph 6: Personal messages retained by age group

Influence of study sessions on email use

The aim of the study sessions was to identify whether educating users about significant email issues would improve their assessment of whether email was an appropriate medium for a range of messages. The study sessions began with an exploration of email etiquette and then moved on to consider legal, retention, privacy and security issues. The trend movements for the study sessions' pre-test were almost identical, with the local group increasing slightly (0.04%) and the email group decreasing slightly (-0.02%) over the five study sessions. The post-test graph indicated a different trend movement with the email group increasing by 0.1%, five times greater than the local group.

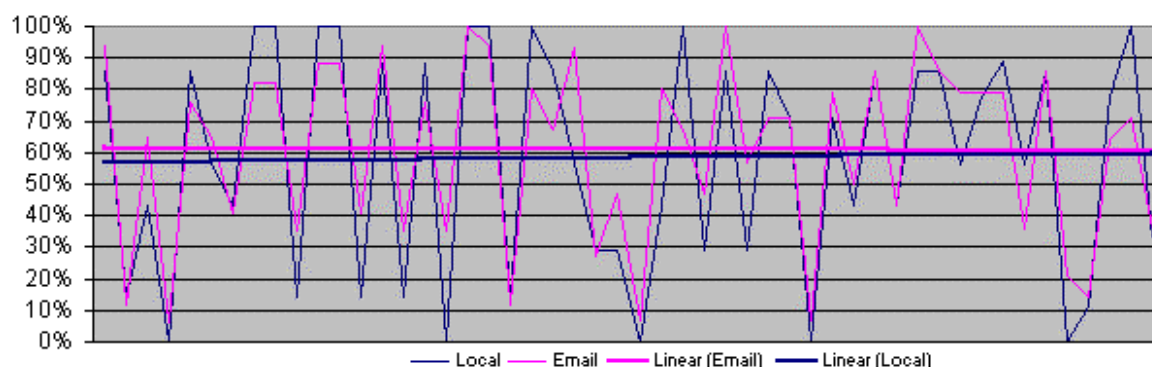


Figure 7: The trend for the five Study Sessions' Pre-test

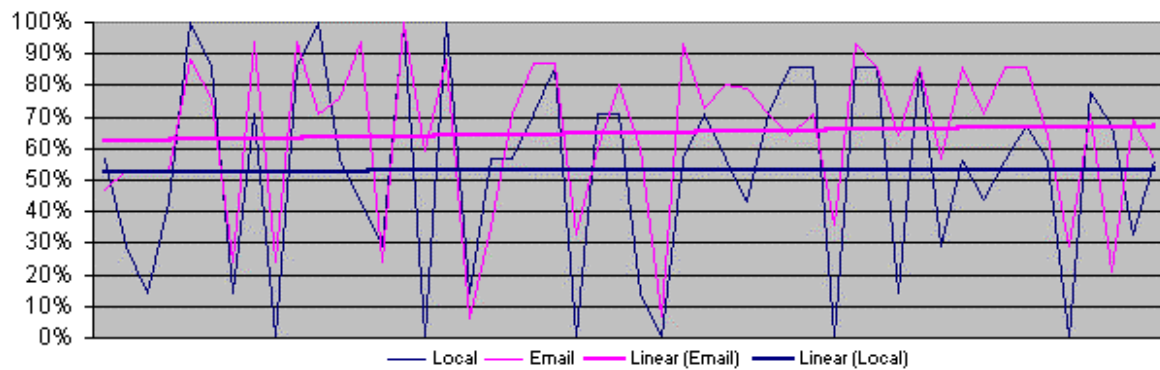


Figure 8: The trend for the five Study Sessions' Post-test

In session two the study session groups evaluated the sample email messages from the perspective of legal liability to the organisation. A total of twelve email messages were identified to be a potential legal liability, and three email messages potentially could have implications for tax rulings. Both groups stated they would send all of the messages that had potential legal implementations for the organisation, except for the 'local' group, who discounted three of the messages.

The subjects identified various messages (pre-test) that they perceived to be inappropriate for the email medium. Both study groups ('local' and 'email') identified a total of twenty-two email messages they have sent but now would not send. Some, but not all, of these messages were common to both groups. The 'local' group (41%) was responsible for identifying a smaller portion of these messages compared to the 'email' group (77%). Within the 'local' group only forty-four percent of subjects identified these messages compared to sixty-nine percent in the 'email' group. In addition, the results identified three email messages that have been sent before, and would still be sent, but only by subjects in the email group. The survey results suggest that of the twenty-two messages, there are seven that respondents are much less likely to send now.

There were interesting deviations in study sessions three to five (see Appendix 1). In study sessions three (retention) and four (privacy), whilst the email group continued to find email appropriate, the trend for the local group decreased. In session five (security) the trend reversed.

In total twenty-five percent of the study sessions' email messages were perceived to be inappropriate. The majority of these were categorised as 'social' although there were examples from all categories. The results showed that the email group was more likely to continue to send inappropriate messages via email though the increase was marginal.

CONCLUSIONS

The survey showed that the majority of subjects had either received email training via a trainer or documentation, or were self-taught. Those subjects who were self-taught were less likely to have read the email policies. The more experienced users of email spent a longer period each day using email but were more inclined to archive their emails.

There was no evidence of any correlation between choice of message and email use prior to the study sessions but given that the majority of training was in the practical application of email this was unlikely. The local study group did show a disinclination to send messages via

email after the session on privacy. The survey had earlier demonstrated that subjects were unaware of the extent to which the organisation could access their emails.

Although, throughout the study sessions, the research subjects demonstrated an understanding of the implications of different types of email, they still chose to send inappropriate email messages. The only category where any significant change in perception was noted was for 'social' messages but subjects still chose to distribute these messages via the email. There was no significant decline in the use of email, as subjects became more familiar with the importance of their choice to the organisation.

Email was clearly identified as the chosen method for communicating all categories of email message in this case organisation. The research's findings suggested that the value of an email message may be a factor when deciding to send a message through the email. Messages that subjects perceived to have a high importance value to the organisation were more likely to be sent by email, regardless of the implications to the organisation.

Thus the organisation still faced a number of potential threats relating to the management and use of emails. Email messages that potentially could create legal liability for individuals or the organisation were still being communicated via email. Email messages were not being archived in a format that will satisfy a court of law. Finally, those messages that were being retained ran the risk of being lost in the accumulation of email messages. The evidence presented suggests that employees of this organisation are now more aware of the value of their emails but are still prepared to distribute inappropriate messages via the email system.

Monday and Rudge (1999) suggested that policies need to be introduced or shaped to remove or reduce ambiguity. Even when policies are put in place there may be problems of interpretation about the significance of particular emails generated by staff. Making staff aware of these policies and their implications to the organisation was not sufficient in this particular instance to encourage them to choose alternative methods but their reasons for this choice have not yet been explored. To understand the reasons for their choice may help the organisation to determine whether further education may be appropriate. If the staff within an organisation are aware of, and understand, the implications of distributing inappropriate messages via the email the organisation may need to consider the need for and implications of introducing further procedures that will monitor and control the messages.

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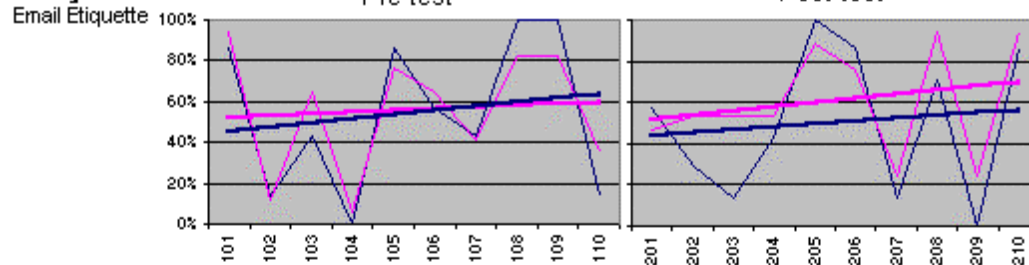
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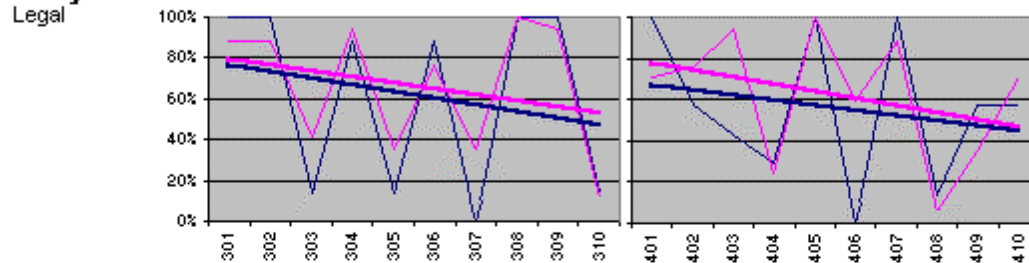
APPENDIX 1

Individual Study Sessions

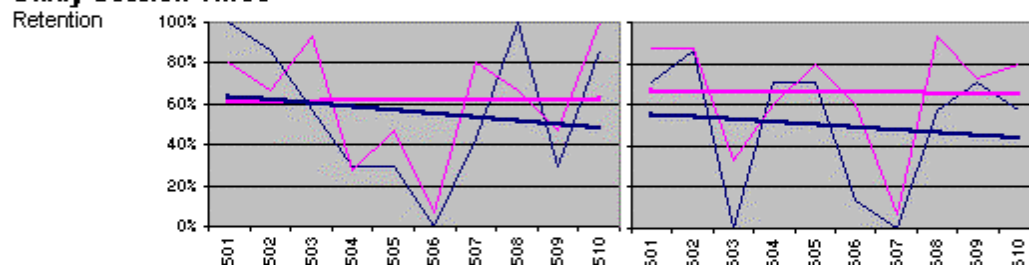
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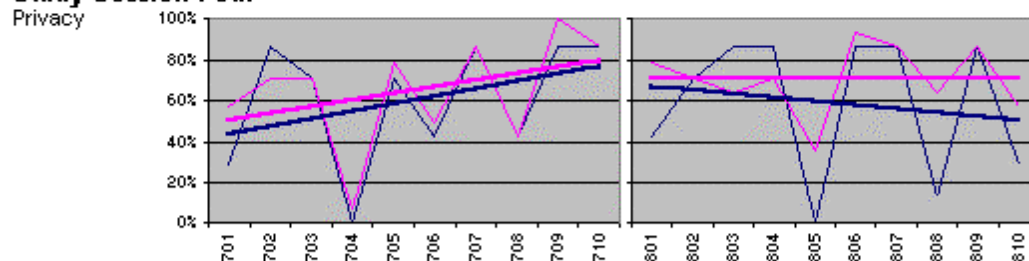
Study Session Two



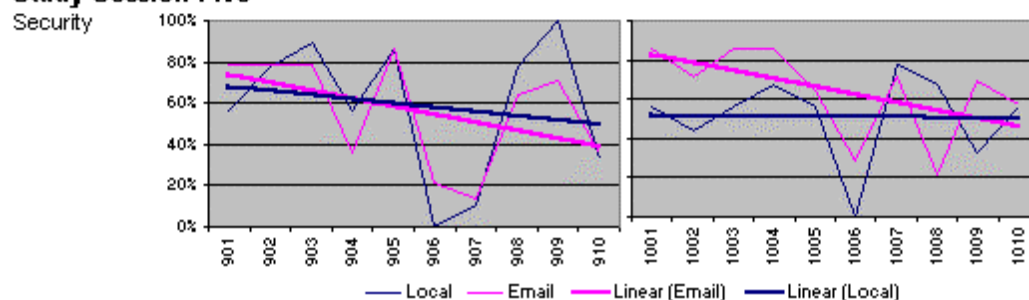
Study Session Three



Study Session Four



Study Session Five



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