EMPLOYEE INTERNET USE POLICY: AN EXAMINATION OF PERCEIVED EFFECTIVENESS

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ABSTRACT

As the Internet continues to permeate the organization, the IS department is challenged with the increasing problem of employee Internet misuse. One tool that is utilized is the Internet Use Policy. A primary question, however, relates to the effectiveness of these policies. This paper empirically investigates the perceived effectiveness of employee Internet Use Policies. Over a six-month period, fifty-two web-administered surveys were collected. Respondents ranged from human resource managers to company presidents. Results suggest that Internet Use Policies may not be as prevalent as previously indicated in industry surveys and may be related to organization size. In addition, findings indicate that employee signature is generally required and perceived to greatly increase the effectiveness of the policy in deterring employee Internet misuse. Finally, results suggest that Internet Use Policy is related to the type of employee outcome (discipline and/or termination).

Keywords: Internet Use Policy, survey, Internet, effectiveness

INTRODUCTION

The Internet is an integral part of the fabric of business today. Organizations use the Internet for communications, electronic commerce, and vital business operations.

Business usage appears to be increasing at a feverish pace. Evidence of this growth can be obtained by examining trends regarding the number of users, sales of Internet devices, the number of telecommuters, and communication applications. For example, Nielsen//NetRatings report, as of April 2001, there are approximately 38 million Internet users in the U.S. organizations, an increase of 21% from 2000 (13). Cahners In-Stat Group report the Internet Access Devices market (which includes personal computers, mobile telephones, and smart Internet devices) is expected to grow at an annual rate of 41.6% in units from 2001 to 2005 (1). Moreover, according to a 2001 study by Telework America, 2.8 million new telecommuters set up home offices, up 20.6% from 1999 (14). Finally, one of the newest Internet applications, Instant Messaging (IM), is dramatically increasing (21). A Jupiter Media Metrix survey of 68,000 individuals indicates that in September 2001, there were 13.4 million unique users of IM at work. This represents a 34% increase in 12 months. The total minutes of IM at work also increased to 4.9 billion, a 113% increase.

However, one outcome associated with the increase usage of the Internet is the incidence of Internet misuse. Activities such as accessing pornography, online chatting, gaming, investing and shopping at

work have been documented in the workplace (19). These behaviors directly result in productivity losses and have led to employee discipline and termination. For example, the New York Times fired 22 employees in Virginia for allegedly distributing potentially offensive electronic mail (3). Xerox terminated 40 workers for spending work time surfing pornographic and shopping sites on the Web. And, Dow Chemical Company fired 50 employees and suspended another 200 for up to four weeks without pay after an electronic mail investigation uncovered hard-core pornography and violent subject matter (6).

The organization's Information System (IS) function may be an important factor in minimizing Internet misuse. The IS department has two primary tools which may be employed to combat the Internet problem. Two keys include monitoring and utilizing an Internet Use Policy (10).

Several studies have explored monitoring. According to a 2001 American Management Association (AMA) survey of 1627 managers, nearly 50% of companies monitor electronic mail and 63% monitor Internet use (17). In a 2000 survey, the AMA found that approximately 38% of 2,100 major U.S. companies check their employee's electronic mail and 54% monitor Internet connections (8). A survey of 670 companies by carrier site Vault.com indicate that 41% of organizations restrict or monitor Internet use and four out of five employers surveyed stated they have caught employees surfing the Web for personal use during work hours (22). An *Information Week* research survey of 250 information technology (IT) and business professionals found 62% of companies monitor its employees' website use (20). Approximately 60% monitor phone use, 54% monitor electronic mail, and less than 20% monitor productivity of home-office workers. Overall, monitoring appears to be pervasive and increasing.

The second key is the implementation and use of a written Internet Use Policy. The Internet Use Policy is a visible tool that should provide guidance and detail acceptable/unacceptable behavior. Honeywell CIO Bill Sanders notes that a motivated workforce guided by a clearly written company policy can give the company a big boost (2). Having an Internet Use Policy has been identified as one mechanism in which a company can mitigate legal liability regarding Internet misuse (16). Telemate.Net Software, Inc., a provider of Internet usage management and eBusiness intelligence solutions, conducted a research study via the Internet and surveyed more than 700 companies from a diverse cross-section of industries (4). Survey respondents included executive, senior IT, and human resource managers. Findings indicate that 83% of surveyed companies were concerned with inappropriate employee usage of the Internet and the resulting legal liabilities and/or negative publicity.

Several legal precedents have occurred relative to electronic mail privacy, intimidation, and company policy (7). For example, companies can be held liable for employees sending racist, sexist or offensive electronic mail. Such behavior can be used to show the employer created a hostile work environment (15). As a result, there are a variety of published materials and Internet sites such as GigaLaw.com that provide advice and sample electronic mail/Internet policies (9).

Prior research examining Internet Use Policy has been limited. It is industry-driven and has examined few aspects. Websense, Inc., an Internet access management company, surveyed 224 human resource

management (HRM) directors (11, 12). Findings indicate that 83% of the companies indicated they have Internet Use Policies. Even though Internet Use Policies exist, 64% of the companies have disciplined employees and more than 30% have terminated employees for inappropriate use of the Internet. Approximately 50% are not concerned about the problem and/or have done little to enforce the Internet Use Policies. 60% of the companies use self or managerial oversight and only 38% use filtering software.

Several important questions have yet to be answered. Are Internet Use Policies an effective deterrent to employee Internet misuse? Is effectiveness related to whether the employees are required to sign the Internet Use Policy? Is there a relationship between Internet Use Policies and the incidence of disciplining and/or termination of employees? Is the proportion of companies with Internet Use Policies identified in previous research consistent with current research? Does the use of Internet Use Policies vary by size of the organization?

RESEARCH DESIGN

The study employs a survey research design. A web-based survey instrument was developed by the authors and administered over a six-month period. Prior research suggest that Internet-based research studies have results comparable to postal-delivered surveys but can be administered more quickly (5).

The instrument was utilized to collect company demographic data and examine company Internet behavior. In terms of behavior, respondents were asked to specify Internet policies and detail the organization's response to Internet misuse. The survey was administered during the Winter of 2000-2001. Although the surveys could be completed anonymously, 55% of the respondents included his/her name and electronic mail address in his/her survey response.

Messages were converted from ASCII format into a computer-based database management system to improve the ease of tabulation. A program was written to summarize and filter data. In addition, respondent position (i.e., manager, president, and so on) was analyzed using word or thematic content analysis. Content analysis is a qualitative research technique that uses a set of procedures to classify or categorize to permit valid inferences to be drawn (11, 18).

RESULTS

Fifty-two web-administered surveys were collected during the six-month period. Respondents ranged from human resource managers to company presidents. 66% or 35 respondents identified himself/herself as a manager. Seven of these respondents indicated he/she is either a president or vice president.

Results indicate that 48% of the respondent organizations have an Internet Use Policy. 52% did not have a policy. Table 1 presents a breakdown of Internet Use Policy incidence relative to organization size. Of the organizations that utilize an Internet Use Policy, 36% have 1-100 employees. 36% have

101-500 employees and 24% have more than 500 employees. Of the organizations that do not utilize an Internet Use Policy, 66% have 1-100 employees. 15% have 101-500 employees and 15% have more than 500 employees.

TABLE 1
Use Policy by Organization Size

# of Employees	Have Internet Use Policy	Do Not Have Internet Use Policy
1-10	12%	37%
11-50	12%	22%
51-100	12%	7%
101-500	36%	15%
501 and over	24%	15%
No response given	4%	4%
Total	100%	100%

The study further examined those organizations that utilize an Internet Use Policy. Table 2 illustrates that 68% indicated that employees were required to sign the policy agreement. 32% did not require an employee signature. Moreover, 40% indicated that the policy has been an effective deterrent in curbing employee Internet misuse. 40% indicated that the policy has not been effective and 20% did not respond either positively or negatively to the question.

TABLE 2
Use Policy Factor by Response Percentage

Factor	"YES" Responses	"NO" Responses	BLANK Responses	Total
Require Signed Agreement	68%	32%	0%	100%
Policy Is Effective	40%	40%	20%	100%

Effectiveness was next compared to the signature requirement (Table 3). Of the organizations requiring an employee signature, 53% indicated that the policy was an effective deterrent. 35% indicated that the policy was not effective and 12% did not provide a response. Of the organizations not requiring an employee signature, 13% indicated that the policy was an effective deterrent. 50% indicated that the policy was not effective and 37% did not provide a response.

TABLE 3
Policy Effectiveness by Response Percentage

Agreement Type	Effective Responses	Not Effective Responses	BLANK Responses	Total
Require Signed Agreement	53%	35%	12%	100%
Do Not Require Signed Agreement	13%	50%	37%	100%

Finally, outcomes were examined relative to the use or non-use of an Internet Use Policy. The outcomes relate to the number of employees disciplined and terminated as a result of Internet misuse. Table 4 illustrates that for those organizations utilizing a policy, an average of 4.22 employees were disciplined-only. .22 employees were terminated-only and .22 employees were both disciplined and ultimately terminated. For those organizations not utilizing a policy, an average of 2.50 employees were disciplined-only. 1.63 employees were terminated-only and .75 employees were both disciplined and ultimately terminated.

TABLE 4
Internet Misuse Outcomes

Outcome	Have Internet Use Policy	Do Not Have Internet Use Policy	Variance
Average # of Employees Disciplined Only	4.22	2.5	1.72
Average # of Employees Terminated Only	0.22	1.63	1.41
Average # of Employees Both Disciplined and Terminated	0.22	0.75	0.53

CONCLUSIONS AND FUTURE RESEARCH

Results indicate that Internet Use Policies may not be as prevalent as previously indicated in industry surveys. 48% of respondents indicated that his/her organization had a policy. This is in stark contrast to the Websense study that found 83% of organizations had a policy.

An examination of organization size may explain the relative equal incidence or non-incidence of a policy. Of the organizations that employ a policy, 60% could be classified as being either medium-size (101-500 employees) or large-size (more than 500 employees) companies. Of the organizations that do not have an Internet Use Policy, 66% can be classified as small-size (1-100 employees) companies. Thus, results strongly suggest that organization size may be related to the use or non-use of a policy.

Approximately two-thirds of those companies with a policy were medium and large size and the majority of organizations without a policy can be classified as small.

The study also indicates that of the organizations utilizing an Internet Use Policy, most (68%) require an employee signature. It may be surmised that organization officials feel that a signature increases compliance and/or can be utilized if future legal violations occur.

Another facet of Internet Use Policy relates to its effectiveness in curbing employee Internet misuse. Of the organizations employing a policy, only 40% indicated that the policy has been an effective deterrent. However, a comparison of effectiveness to the signature requirement provides further insight. Of the organizations requiring an employee signature, 53% indicated that the policy was an effective deterrent. 35% indicated that the policy was not effective and 12% did not provide a response. Of the organizations not requiring an employee signature, 13% indicated that the policy was an effective deterrent. 50% indicated that the policy was not effective and 37% did not provide a response. Thus, the study suggests that requiring an employee signature is perceived to greatly increase the effectiveness of the policy in deterring employee Internet misuse.

Finally, a comparison of outcomes relative to the use or non-use of an Internet Use Policy assists in further examining effectiveness. Results indicate that if an organization utilizes a policy, discipline-only is the most common outcome (average of 4.22 employees) when Internet misuse is found. A considerably smaller average of .22 employees was terminated-only and average of .22 employees were both disciplined and ultimately terminated. If an organization does not utilize a policy, the outcome of termination (average of 1.63 employees) is much higher and close to the number of employees disciplined (average of 2.50 employees). It must be noted that the organizations employing a policy were medium and large companies, thus the average number of employees being disciplined and/or terminated should be higher than non-policy organizations. However, the relative comparison within use and non-use categories is useful. Consequently, results indicate that Internet Use Policy is related to the type of employee outcome (discipline and/or termination).

The limitations of this study are primarily a function of sample size and type of research. Even though responses were relatively equally distributed among organization size, a larger sample size would increase the robustness of results. The second limitation relates to the use of survey instruments. On-line surveys offer the researcher less control in selecting respondents. In addition, surveys provide less opportunity for the respondent to explain his/her responses and for the researcher to further probe answers. In this survey, reliability is increased because most respondents provided his/her name and electronic mail address. Thus, researchers have the ability to verify responses and further probe respondents, if necessary.

Future research should be directed examining more organizations to strengthen conclusions. In addition, research needs to the conducted to further examine Internet Use Policy composition to determine what

facets, if any, directly relate to increasing effectiveness. Overall, the current results and future research will assist organizations in improving employee Internet management, maximizing productivity, limiting risk, and minimizing misuse of the Internet resources.

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