

Personal Web Usage in the Workplace:

A Comparative Study between the U.S.A. and Thailand

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Abstract

The Internet plays many important roles in supporting and sustaining organizational business practices. Organizations today essentially have invested their resources into countless Internet related applications, including necessary physical infrastructures, to support and enhance their employees' decision-making and communications. Regardless of the efforts, some employees are spending more and more time on the Internet at work for personal reasons—communicating with friends and family, enjoying Internet games and chat rooms, or even shopping on-line.

The study surveys 313 full-time employees from the U.S. and 328 full-time employees from Thailand. The survey reveals that nearly one-third of the employees admitted spending their time for more than one hour per day on personal web usage (PWU). Based on the survey, we intend to examine how the three determinants (job satisfaction, attitude, and subjective norm) leads to three different types of PWU behaviors—Personal Communication and Information Seeking (PCS), Personal E-Commerce (PEC), and Personal Recreational Activities (PRA). The research later investigates the impact of these behaviors on work inefficiency.

The result of this study shows that employees' attitudes and subjective norms play important roles in predicting PWU behaviors. Job satisfaction influences PWU behaviors only for Thai employees. The research also finds that PWU behaviors do not lead to work inefficiency for some employees. The finding suggests that not only should managers clearly communicate their organizations' Internet usage policy to their employees but also they should encourage productive Internet usage in the workplace through their employees' attitude changes and peer influences as well. Keeping the cultural differences in mind, we recommend the strategies that organizations should implement to enhance the quality of work life and, at the same time, use the Internet in the workplace productively.

1. Introduction

The Web—or the Internet—has become an integrated part of business communities. It is estimated that by the year 2005 Internet users will reach 15%¹ of the world's population with more than \$5 trillion spending in Internet commerce [21]. As more and more individuals and organizations have Internet access, countless Internet related applications are being used or being developed to enhance the quality of our work lives. E-mail provides a cost effective communication that allows us to keep in touch with our children, families, friends, and colleagues from anywhere in the world. Numerous search engines on the Web provide hyperlinks and information that satisfy and stimulate our hunger for knowledge and/or emotional needs. Evidently, the playfulness of the Internet attracts and draws our attention to stay on-line—shopping, news, sports, movies, music, traveling, chat, games and many more—for our personal pleasure and entertainment.

In today's global business, managers and employees also find e-mail to be a more efficient and effective way to conduct business “anywhere, anytime” than the traditional methods of communications, such as telephone, fax, and cellular phone [1]. Some organizations rely mostly on the use of e-mail for their internal and external communications through the use of e-mail [24]. In this era of E-commerce, where e-mail and Internet access have become a necessity in business, companies are bound to utilize them extensively for day-to-day operations and strategic advantages. Obviously, whether it is for business or pleasure, the Internet has touched most daily lives.

¹ Nearly one billion people.

The benefits of the Internet are recognized by its ability to gather, communicate, distribute and share information publicly [9]. Since the Internet has proved to be a useful tool for businesses, many companies provide employees with access to the Internet and/or employees' e-mail accounts. Employees themselves may also find the Internet to be indispensable; they use it to communicate with their colleagues, managers, and subordinates, and to maintain relationships with valued customers. The Internet provides an array of substantial and essential information that allows them to do research and look into market trends, analyze competitors' moves and products, and investigate other factors that may be affecting the company's competitive position.

Despite being a productive tool, many employees are spending more and more time on the Internet during work hours, in ways not totally job related. During a stressful work day and maybe due to pure boredom, who could resist the temptation to check out some local news and sport scores, send e-mail to family and friends, or read some jokes on the Internet? One survey conducted by Elron Software, Inc., a developer of Internet filtering and monitoring software, finds that 30% of the surveyed employees spend at least 25 minutes a day surfing the Internet for personal reasons [11]. SurfControl software also reveals the percentage of sites that employees visited during their work hours are 60% shopping, 54% entertainment, 37% financial, and 12% adult sites [28]. Based on such surveys, is having Internet access now becoming a productivity loss to companies?

2. Personal Web Usage and Internet Abuse

The word "abuse" might be a strong word to use when some employees occasionally use the Internet in the workplace for their personal interests. Most of the time they feel that their actions are relatively decent because they have not visited any illegal or pornographic websites, revealed their company's private information, or harassed anyone. However, as more and more employees are unaware of the probable threat of personal web surfing, their behaviors may lead to Internet abuse in the workplace. For example, in October 1999 Xerox Corporation fired at least 40 employees for unwarranted Internet misuse by accessing non-business related Web sites during working hours [10]. Some terminated employees had been on-line for eight hours per day on company time despite the company's strong Internet usage policy and software monitoring tool. In August 2000, Dow Chemical Corporation fired 50 employees and took disciplinary action against another 200 employees when they found out that their employees had been distributing violent and pornographic images via the company's e-mail system [27]. In the case of Internet abuse, companies often suffer from lost productivity, sluggish network efficiency, and increased risk of potential lawsuits [29].

According to *BusinessWeek* (Feb 2001), many companies have taken action to reduce the occurrence of Internet abuses in the workplace. These actions include:

- Policy prohibiting Internet for personal use 64%
- Monitoring software 40%
- Restricting web site access 34%
- Restricting hours of access 10%

Although Internet policies and software monitoring tools may help prevent the problem of Internet abuse, they may not provide effective monitoring and filtering for occasional personal web surfing. Generally, most employees consider personal web usage as "normal" Internet usage behavior in the workplace because they seem to have less severity and impact on their organizations' productivity. Some employees may feel that their personal web usage will not lead to Internet abuse. They rationalize that spending an hour or more per day on the Internet for personal tasks is a part of healthy work life.

In this research, we define personal web usage (PWU) as the use of the Internet and e-mail in the workplace for personal interests. We also classify PWU behaviors into three categories: (1) Personal Communication and Information Seeking (PCS), (2) Personal E-commerce (PEC), and (2) Personal Recreational Activities (PRA). Because the Internet provides such a vast array of information, some employees use it for personal communication and information seeking (PCS), which include using personal web-based e-mail for personal communication, using Internet search tools for personal interests, and surfing the Internet to view entertainment products and services. Other employees use their companies' Internet access to conduct personal E-commerce (PEC), such as conducting personal investment and banking, doing personal on-line business activities, performing personal on-line shopping, or booking personal on-line travel and vacations. Unfortunately, some employees perform personal recreational activities (PRA) through their workplace Internet access, including chatting on-line, participating in non-work-related newsgroups or auctions, or even playing on-line games.

This study is designed to address the issues regarding personal web usage in the workplace by asking three research questions: (1) What is the impact of employee demographic characteristics (U.S.A. vs. Thailand) on personal web usage? (2) What are the determinants of personal web usage in the workplace? and (3) Does personal web usage lead to work inefficiency in the workplace?

3. Research Model

The determinants of this research model are based on workplace production deviance research [6, 17, 18, 19, 20] and Ajzen's Theory of Reasoned Action [2, 12]. Fig. 1 shows the proposed research model used in this study.

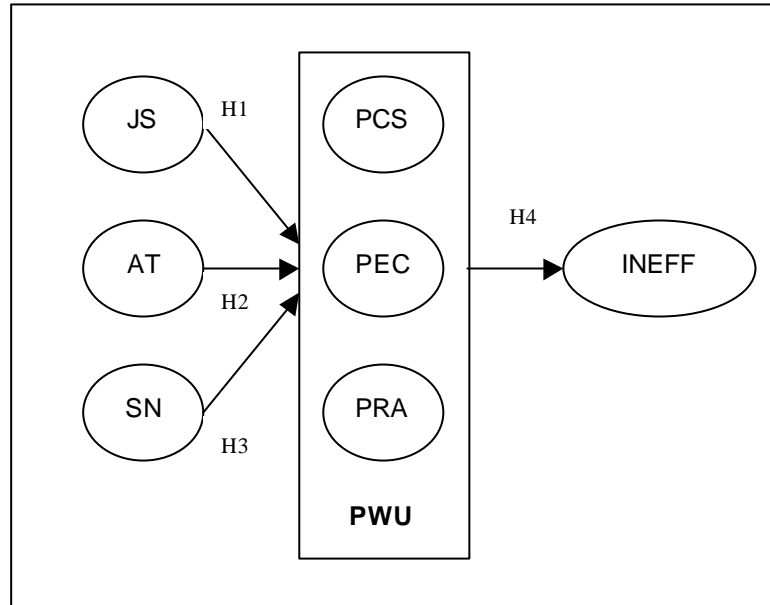


Fig. 1 Research Model

According to the model, we proposed 12 hypotheses:

H1a-H1c: Job satisfaction (JS) is negatively related to three types of personal web usage (PWU) behaviors in the workplace. Low job satisfaction has been found to predict counter-productive behaviors in the workplace [17]. Hollinger (1986) concludes that job satisfaction predicts employees' production deviant behaviors, such as frequent sick leave, taking longer breaks, absenteeism, and using drugs on the job [18]. Huiras et al. (2000) find that employees who are satisfied with their jobs are less likely to perform workplace misconduct [20]. Dissatisfaction and intent to quit also lead to a higher incidence of minor counterproductive behaviors, such as absenteeism and privilege abuse [6].

H2a-H2c: Attitude toward using the Internet (AT) is positively related to three types of personal web usage (PWU) behaviors in the workplace. According to Ajzen's Theory of Reasoned Action, attitude toward the behavior refers to a person's positive and negative beliefs in performing the behavior [2]. Evidence suggests that attitude toward the computer influences computer usage in general [8, 22]. In this research, the attitude toward using the Internet is defined as an individual's positive and negative feelings about using the Internet for productive or nonproductive purposes. Therefore, the attitude toward using the Internet should be an important predictor of personal web usage behaviors.

H3a-H3c: Subjective norms (SN) are negatively related to three types of personal web usage (PWU) behaviors in the workplace. Subjective norms are the perceptions of people important to employees regarding them in performing the behaviors in question [2]. Organizational behaviorists find that informal social controls (fellow workers' influences) are more effective in controlling employees' behaviors than managerial controls. Hollinger (1982) posits that peers seem to be more influential in establishing norms of counter-productive behaviors [19]. Lewicki et al. (1997) emphasize that workplace deviant behaviors are controlled and influenced more by "informal normative mechanisms" rather than by "formal organizational mechanisms" [23, p. 57]. Robinson and Greenberg (1998) also report that there is evidence of the effects of social norms on counter-productive workplace behaviors. Therefore, it is reasonable to assume that employees who are influenced by social norms are less likely to use the Internet at work for personal reasons.

H4a-H4c: Three types of personal web usage (PWU) behaviors in the workplace are positively related to work inefficiency (INEFF). Work inefficiency refers to the time to complete work, the amount of wasted time, and the amount re-work and extra work materials occurred from Internet usage [5]. Employees' work efficiency suffers when employees do not effectively and efficiently use Internet access because they use it for personal gain. Wen and Lin (1998) suggest that the time employees spend on counter-productive activities at work reduces their productivity [30]. Colin (2000) reports that 57% of employees say that Internet surfing decreases their productivity [7]. Anandarajan and Simmers (2001) suggest that accessing personal-related websites at work leads to serious loss of productivity and

clogged networks [4]. Therefore, we hypothesize that the three type of PWU—PCS, PEC, and PRA—will lead to employees' work inefficiency.

4. Research Design and Data Collection

The methodology used for this research was a web-based field survey. During the data collection phase, e-mails were sent directly to the targeted population asking them to complete the questionnaire. The e-mail emphasized the importance and confidentiality of the research. This was to ensure that the targeted respondents would answer the questionnaire honestly since the research was investigating the non-work-related behaviors in the workplace.

Several respondents, who responded less than five hours per day or more than fifteen hours per day of their daily working hours, were excluded from the sample. Working less than five hours per day could mean that the respondents did not have a full-time job. Neither samples had any missing values or unusable data because the web-based survey constantly checked for these, asking the respondents again a request for their resubmission. Table 1 shows the total respondents included in this study.

Table 1 Total Respondents in the Study

Respondents	Initial Respondents	Excluded Respondents	Total Respondents Working 5-15 hrs/day
U.S.A.	350	37	313
Thai	376	48	328
Total	726	85	641

From the data collected, we find that both groups are composed of more males than females (59.1% vs. 40.9% for the U.S.A. respondents; and 52.4% vs. 47.6% for the Thai respondents). A large percentage of the U.S.A. respondents, 45%, are under 30 years old, while the mode for the Thai respondents was 30 to 39 years old. This is likely due to the fact that most respondents from Thailand, 86.9%, are non-students who have been working in industry for some time, while the majority of the U.S.A. respondents, 49.8%, are part-time students. Both groups work in the manufacturing industry (25.6% for U.S.A. and 42.4% for Thailand), however, the U.S.A. respondents are from very large organizations with more than 10,000 employees (27.2%), while the majority of the Thai respondents are from organizations with 1,000 to 5,999 employees (28.4%). The average working years for the U.S.A. respondents is nearly 6 years, while the average working years for the Thai respondents is 7 years. On average, the respondents from Thailand also work about 30 minutes longer than the respondents from the U.S.A. (8.75 hrs/day vs. 9.34 hrs/day). These differences could come from the fact that the majority of the U.S.A. respondents hold technical positions (24.9%) and the majority of the Thai respondents are middle level managers (29.6%). Also, it is possible that the average working years for technical positions is shorter than those of other positions in organizations. More than two-thirds of the respondents in the U.S.A. are currently studying at the graduate level or having graduate degrees, but nearly the same amount of the Thai respondents only hold bachelor degrees without any further graduate level studies.

The demographic variables also indicate that both respondents are biased samples, which are not representative of employees Internet usage behaviors. Because of our limited time and research budget, this exploratory research used convenience sampling to target some convenient groups or individuals as the samples. It is not justified to use a convenience sample except possibly for exploratory research [26]. Readers should keep in mind that the results from convenience sampling may not be generalized to a larger working population.

For data analysis, we used structured equation modeling (SEM) to test both the measurement model and the structural models in this study. The software that we used were Microsoft Windows-based SPSS 9.01 and AMOS 4.0. We used SPSS to determine the convergent and discriminant validity of our constructs before testing the measurement model. Three tests were performed using SPSS: 1) Item reliability using factor analysis to ensure that the items for each latent variable should load together but do not cross to other variables—the predicted value of each variable is calculated by the loading of the variable on each factor. Items that have low inter-item correlations, or do not “hang together” may not belong to the same construct, and should be dropped from the instrument [14]. 2) Composite reliability of each scale (Cronbach's alpha). 3) To assess discriminant validity, the correlations between the measures of two constructs were examined. The measures of constructs should correlate with the constructs that they try to measure, not with other constructs in the model.

The measurement model consists of the relationship between the constructs and their measuring items. The measurement model needs to be examined prior to the test for significant relationships in the structural model using AMOS 4.0. After the measurement model testing, we evaluated the structural model using the respondents from both

groups. We then assessed the explanatory power of the variables and examines the size and the significance of the path coefficients. The path coefficient of each independent variable (job satisfaction, attitude, and subjective norms) describes the direct effect of that variable on the mediating variable (personal web usage) and the dependent variable (work inefficiency).

5. Result of the Study

The survey reveals that nearly one-third of the employees admitted spending their time for more than one hour per day on personal web usage (PWU). We also find that 14.2% of the respondents admitted spending more than two hours per day on personal web usage (Thai = 8.7%, U.S.A. = 5.5%). When asked about the extent to which the respondents used the Internet to perform personal web usage, our survey reveals that the respondents perform PCS and PEC with very little to moderate usage, and PRA with none to very little usage. By comparing the differences between the two groups of respondents, we find that our Thai respondents spend time doing PCS and PRA more than the U.S.A. respondents do ($p < 0.001$). However, they spend less time performing PEC when compared to the U.S.A. respondents ($p < 0.05$).

For hypotheses testing, Table 2 displays the results.

Table 2 Results from Hypotheses Testing

Types of PWU	U.S.A.	Thai
Personal Communication and Information Seeking (PCS)		
H1a: JS \rightarrow PCS	Not Supported	Supported*
H2a: AT \rightarrow PCS	Supported**	Supported**
H3a: SN \rightarrow PCS	Not Supported	Not Supported
H4a: PCS \rightarrow INEFF	Not Supported	Not Supported
Personal E-Commerce (PEC)		
H1b: JS \rightarrow PEC	Not Supported	Not Supported
H2b: AT \rightarrow PEC	Supported**	Supported**
H3b: SN \rightarrow PEC	Supported*	Supported**
H4b: PEC \rightarrow INEFF	Not Supported	Not Supported
Personal Recreational Activities (PRA)		
H1c: JS \rightarrow PRA	Not Supported	Not Supported
H2c: AT \rightarrow PRA	Supported**	Supported**
H3c: SN \rightarrow PRA	Supported**	Supported*
H4c: PRA \rightarrow INEFF	Supported*	Not Supported

* Significance at $p < 0.05$ level **Significance at $p < 0.01$ level

The result in Table 2 indicates that job satisfaction is not a significant factor that leads the U.S.A. respondents to engage in personal web usage behaviors, but the result from the Thai respondents suggests that job satisfaction has a negative consequence with personal communications and information seeking (PCS). The findings also support the hypothesis that attitude toward using the Internet is a significant predictor of all types of personal web usage activities. Subjective norms negatively influence only personal E-commerce (PEC) and personal recreational activities (PRA). Interestingly, we find that the three types of personal web usage do not lead to work inefficiency for the Thai respondents, however, personal recreational activities (PRA) lead to work inefficiency for the U.S.A. respondents.

6. Discussions and Recommendations

Are we spending too much time in the workplace performing personal web usage so that our productivity suffers? According to our findings, performing personal web usage does not lead to work inefficiency, except for

personal recreational activities (PRA). However, by comparing the differences between both of the samples, we find several interesting points.

- Attitude toward Internet usage is a major predictor of PWU behaviors. In other words, if employees feel that there is nothing wrong in using the Internet in the workplace for work-related and personal-related tasks, it is very likely that they will use the Internet for some personal reasons. Most employees can justify that their personal usage of the Internet is valid. The comments given by the respondents suggest that most employees consider that their personal Internet usage is permissible if they use them during break hours, without any impact on their work. Some respondents state that their work requires extensive Internet and e-mail usage that make work-related and personal-related tasks somewhat blurry. In any case, most employees have justifiable reasons for their PWU behaviors. We suggest that management can reduce negative effects of personal web usage behaviors through changing of their employees' attitudes by clearly and openly communicating to them proper organizational Internet usage.
- Subjective norms do not prevent employees from engaging in personal communication and information seeking (PCS). The support for this finding can be viewed in the perspective of *social networks* [13, 15]. Haythornthwaite et al. (1998) also suggest that even in a workgroup, Internet usage may wander into non-work-related issues that include socioemotional content—the exchange of instrumental, social, and emotional communication [16]. Therefore, the Internet and e-mail can be used socially to deal with work coordinating, relationship building, or even voicing to fellow employees their stressful or unsatisfactory situations within their organizations. This finding, however, does not imply to personal E-commerce (PEC) and personal recreational activities (PRA) where subjective norms of peer/boss do prohibit the employees from engaging in such behaviors. Therefore, we warn management to monitor some negative social behaviors that can influence their employees' personal web usage. Management could also encourage and promote positive Internet usage behaviors through peers' influences as well.
- Job satisfaction influences personal communication and information seeking (PCS) for the Thai respondents, which indicates that the Thai employees who are dissatisfied with their jobs may spend more time enjoying and entertaining themselves by researching personal hobbies, using search tools for their own interests, and viewing entertainment products and services on the Internet. In addition, it does raise questions about cross-cultural issues regarding personal aggressiveness. Instead of confronting and expressing workplace dissatisfaction with their boss or supervisor, the Thai employees may try to avoid any confrontation with their superiors, and use the Internet and/or e-mail as a means to escape from their undesirable situations or to express their distress to close, trusted friends.
- Personal recreational activities (PRA) lead to work inefficiency for the U.S.A. employees but not for the Thai employees. Because work inefficiency is based on a self-reported survey, we can interpret that the Thai employees perceive that personal recreational activities (PRA) will not hinder their work efficiency, while the U.S.A. employees perceive it differently ($p < 0.01$). The research raises concern that the Thai employees may have more free time to enjoy themselves through the Internet, and/or that they perceive that the behaviors do not affect organizational productivity. Management needs to change these erroneous perceptions.
- The Thai employees perform personal recreational activities (PRA) and personal communication and information seeking (PCS) more than those of the U.S.A. employees ($p < 0.001$). This finding brings up another concern regarding how the Internet has been used in the Thai workplaces. We should encourage, educate, and motivate Thai employees to utilize their Internet technology productivity. Equipping employees with computers and network infrastructure without adequate employee training, knowledge, and the proper attitude to use these tools efficiently and effectively is can be wasteful hence futile.
- Moreover, the research also finds that the U.S.A. employees perform personal E-commerce (PEC) more than do the Thai employees. Although this is a good sign that Thai employees do not engage in on-line shopping while at work, it also means that the Thai E-commerce and its infrastructure are still not fully accepted and/or trusted by the Thai business community. We, however, do not encourage personal E-commerce activities while at work, but we would like to persuade Thailand to embark on the E-commerce infrastructure that will eventually make it necessary to compete in the global electronic markets.

Therefore, to encourage productive Internet usage in the workplace, we suggest that management should focus on their employees' attitudinal change, including trying to improve productive Internet usage norms through social networks in the workplace. Education and training are necessary for employees to understand Internet usage policy, which must include how to use the Internet effectively and productively and not abuse it. This education and training include: (1) Training regarding general technological background of Internet technologies. Employees' knowledge and comprehension about the nature of informational storage and the permanency of computer records are tremendously

helpful. For example, employees should understand that their e-mails messages remain in their computer's hard disk and the organizations' servers for technological retrieval purposes even if employees see the e-mails being deleted from their terminals. The information is important for employees to remind themselves that their actions could be revealed and organizations would have evidence against them. (2) Training regarding personal consumption of information. Employees should be responsible for their own information consumption, such as having the ability to evaluate and to screen news, information, and other advertising messages, and at the same time being responsible for their own information output by ensuring that the information they supply is accurate, timely, and legally irreproachable. (3) Educational videos regarding Internet abuse in the workplace. To avoid costly continuous training, organizations can create their own training videos that educate their employees as to how to use the Internet and e-mail in the workplace along with related consequences.

Most of all, management should also understand that some personal-related Internet and e-mail usage can enhance the quality of work life for motivated employees, hence, we must take precautions against the restriction of personal web usage. Too much or too little control leads to Internet abuse [3]. Monitoring restrictions, based on acceptable Internet usage policy, should be based on employees' work performance, and vice versa.

"Quality of work life" is related to the psychological contract between employees and their organizations; it is the "sets of expectations that are held by individual and that specify what the individual and the organization expect to give and receive from each other in the course of their working relationship" [25, p. 51]. We recommend that management can maintain a healthy psychological contract of Internet usage through an ***adaptive Internet monitoring and filtering policy***. To improve employees' quality of work life, organizations may allocate some time for personal web usage, while at the same time employees should perform to their organizations' highest expectations. The adaptive Internet monitoring and filtering policy requires a reciprocal sense of respect and fulfillment of organizations' and employees' psychological contract. It also suggests that Internet monitoring and filtering must take employees' needs and job characteristics into consideration.

7. Limitations

There are several limitations to this study. First of all, our results are based on a convenience sampling method. Both of the samples are biased toward the manufacturing industry, including employees' positions in organizations, age, and their education. It is likely that demographic differences between the samples could contribute to the inconsistency of our findings. For example, higher-ranking employees generally spend more time on performing administrating, coordinating, and managerial types of work, thereby, increasing the propensity to utilize the Internet more than lower ranking employees do. Second, work inefficiency may not have captured all the important underlying factors of workplace productivity. The proposed model does very little to explain work inefficiency. There is a need for additional research to incorporate other potential variables regarding workplace productivity. For example, Davis and Naumann (1999) suggest that knowledge work productivity has two components: (1) *Effectiveness*, which relates to the quality and usefulness of knowledge work outputs, and (2) *Efficiency*, which relates to how well informational resources are managed and used [9]. And lastly, because the questionnaire asked the respondents about their negative behaviors of Internet usage and because the questions were based on self-reported items, there were still some possibilities that the results were somewhat biased toward positive behaviors, even if the research specified clearly that it maintained anonymity and confidentiality.

8. Conclusion

Productive use of the Internet in the workplace has become a necessity in order to remain in business. Evidently, management should encourage productive Internet usage in the workplace through attitudinal changes and social norms. Management must also be vigilant and cautious when it comes to certain types of personal web usage behaviors. This research calls for proper training and educating employees as well as providing them with some freedom of personal web usage. We hope that this research will draw management's attention and help us to better understand the employees' Internet usage behaviors in the workplace. From the results and recommendations, we feel that management needs to foster productive Internet usage in the workplace, while maintains a high quality of work life for their employees.

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