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An Exploratory Study on how Weblog Technologies fit Virtual Community Members' Social Needs

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ABSTRACT

Initially perceived to be a medium for amateur journalists and other individuals to share their knowledge, weblog appear to suddenly merge into the community building tool of choice for young people. This study explores this new use of weblog and how technology creates this new wave of social community by fulfilling the bloggers' needs.

Keywords

Virtual communities, Xanga, tasks, social needs, technology, fit

INTRODUCTION

Virtual communities are now one of the most popular cyber-platforms for people to interact. 14 out of the top 20 most popular English/Chinese web sites are either virtual communities or consisting virtual community functions (Alexa.com as of 19 February 2005). The most common features being used in virtual communities are real time chat rooms, P2P newsgroups, discussion boards, and listserv. Weblog technology, a rather new Internet technology, is now popularly used in virtual communities, especially those formed among young people. Many hosts providing Weblog technology experience rapid growth in their membership size. Xanga, Bloggers, and Moblogs are the typical successful examples.

Blog-writing has become a daily habit of numerous bloggers (bloggers are people who keep blogs in the Internet). Bloggers write their blogs or visit others' blog for several reasons, such as seeking knowledge and information, making cyber friendships, helping others, or killing time, etc. No matter what the underlying reasons are, it is undeniable that blog-based virtual communities are attractive to them and fulfill their needs. Besides individual incentives, other factors such as the nature of a community, organization of a community, and particularly, the technologies deployed by a community, also encourage members' participation.

This paper aims at exploring how specific technologies can meet community members' needs and eventually increase their participations. Blog-based virtual communities were chosen as our targets of study as Weblog technology is now widely used and has rapidly increased its importance as a communication medium for virtual communities. Studying this successful example would definitely give us insight of the fit between weblog technology and its users' needs. Case studies had been carried to study how individuals used particular weblog technology features to fit their specific social needs.

BRIEF HISTORY OF WEBLOGGING

Although Weblog was first coined by John Barger in December 1997, it is difficult to determine when it firstly appeared in the Internet as it is developed through the evolving of individual postings, and no single person has developed the format for it. However, it is generally agreed that weblogs are a chronological listing of online postings, containing personal opinions, personal daily lives, or personal stories.

The majority of these postings shared a similar format, that is, *short bursts of text on a single, rapidly changing page, instead of adding new pages to a website* (Bausch, p., Haughey, M. and Hourihan, M., 2002). These postings often provide visitors the authors' individual stories as well as links to interesting sites. Weblogs kept growing steadily until 1999. The change was made when the first free build-your-own-weblog tool, Pitas (www.pitas.com), was introduced to the public (rebeccablood net, 2000). Shortly afterward, Blogger (www.blogger.com) appeared and provided web users with similar features as Pitas did. With the services provided by these blog hosts, there is no need for users to know how to program, how to maintain or archive their website information, and everything can just be done by simple clicks. This easy-to-use

technology attracted thousands of Internet users to start their blogging experience. All of a sudden, a wave of weblogging burst out. From 2001 onwards, weblogs have become very popular, and many other feature-rich tools appear, such as LiveJournal, Modblog, and Xanga.

Although weblogs have just existed for a few years, three generations can already been identified (Wagner, 2005). The first generation weblogs were first-person diaries, allowing non-technical people to share text content with single-click web publishing, and to comment on other web-based articles. The second generation blogging software included more between-blogs communication features, had improvement in the user interface for word processing, and also embedded with abundant multi-media components. The current third generation (3G blogs) combines these characteristics and further enhances them. With applications embedded in the weblogs, connectivity on the Web can be built easily. These weblogs allow supporting an increasing amount of activities from the real world into the cyber environment. Xanga appears to be the most popular among the 3G blogs. Its features seem to be designed to create closer relationship between friends, from pure virtual to physical. If bloggers want to share their affairs with a controllable circle of friends, all of the 3G blogs allow this. To increase membership size, the blog hosts likely have the desire to create stickiness and reach by providing more desired features for the blog users to widen their social networks.

MOTIVATION TO USE WEBLOG

Blog users share knowledge, information, and emotion in their blogs. There are many reasons that people use weblogs for sharing, such as, blogsphere provides a good environment for them to let their audience know their thoughts and their stories, and the provisions of easy-to-use weblog technology which requires no pre-requisite of any particular technological knowledge. Besides these macrostrutural properties of blog-based virtual communities, microstructural properties of individuals, such as individual personality and attitudes towards personal information sharing, the desire to build social networks and the off-line relationships among community members also contribute to the popularity of weblogging. Some participants, however, just want to spend time through blogging activities.

Common Usages of Weblogs

Socialization/Entertainment-oriented activities

Many weblogs are used for socialization and entertainment-oriented activities. One of the most successful examples is Xanga.com. *Xanga is a community of online diaries and journals* (Xanga.com, 2005). It is so popular because Xanga provides an easy and convenient platform for the Xanga users to start creating their free journals. These journals not only allow the Xanga users to share their thoughts among their friends, but also provide opportunities for them to make new friendship among other Xanga users. The majority of Xanga users are young people, and they share their daily activities and emotion in their diaries and let their friends read and respond. This interaction and social exchange create social networks among Xanga users.

Learning and other activities

Weblogs have becoming popular in education. Many schools, ranging from primary schools to tertiary educational sectors, have begun to use weblogs as tools to enhance learning and teaching. These schools try to incorporate instructional teaming and other features in weblogs and aim at building a sense of learning community. Stories told in (Intel Innovation in Education, 2005) demonstrated that blogspace is an ideal environment for introducing teachers' innovative ideas to the classrooms. Other educators use blogsphere as a platform for students to post their work-in-progress or assignments and seek comments from peers (Du & Wagner, 2005).

Blogging can not only enhance individual learning but also cooperative learning because the simple use of weblog technology provides great potential for collaboration and discussion among students/students and students/teachers. It is also convenient for team researchers to brainstorm and generate new ideas for research. Intimate relationship can also be formed among bloggers. Recently, companies are trying to adopt weblogs in their organizations to encourage both knowledge and information sharing between employees/employees and company/customers.

TECHNOLOGICAL FEATURES DEPLOYED BY POPULAR WEBLOG HOSTS

Bloggers can use abundant technological features to build their blogs. For example, the bloggers can use *Skin* to create unique web sites that distinguish themselves from others. Journal positing is relatively easy with simple word processing features. *RSS feeds* allow bloggers to know the updated status of their interested blogs. *Friends' list* let them easily choose "who" can "talk" to. To remain private, *Protected/private Blogrings* can be used to restrict access. *Restricted subscription*

also provides weblog owners to select their audience. Table 1 summaries the commonly used weblog features.

Functions	Features		
Community Building	Bulletin	Blogrings	Chatterbox
	Commentary	Counters	Eprops
	Look & Feel	Skin	Xanga Metro
	RSS Feeds	Latest Updated Blogs	
	Link	Most Recently Visitors	
Journal writing	Archival	Look & Feel	Skin
Content Management	Archival	Link	
Table 1. Commonly Used Features			

Organization of the postings, ease of posting retrieval, ease of uploading, and ease of organizing comments are all critical factors to either encourage or discourage bloggers to blog. All these factors are attributed by the technologies deployed by the blog hosts. Thus, it is important for the blog hosts to know what features of blog technologies should be implemented so as to fulfill both the social and technological needs of the bloggers.

EXPLORATORY STUDY

Many successful blog hosts can be found in the cyberworld, such as Xanga, LiveJournal, Bloggers, and zorpia. To analyze any blog hosts, two distinct perspectives are recommended: the temporal and spatial perspectives (Kumar, Novak, Raghavan, & Tomkins, 2004). Detail investigation of these two perspectives of weblog hosts will be our future study. Xanga performs excellently in these two perspectives and was selected as our target of this exploratory study. Firstly, Xanga has a rapid growth within a short period of time. Xanga was established in early 2003 and grows exponentially to have a current daily visit of around 15,000 visitors as per one million Internet users (i.e. 1.5% of Internet users will daily visit Xanga). Moreover, members of Xanga are from all over the world, and the recent rapid growth of Xanga's social Metros evidences this.

Xanga Metros was first introduced in November 2004 and a speedy growth is observed among several geographical metros. In 20 February 2005, the Hong Kong (HK) Metro had a membership of over 46,000, while Los Angeles and Chicago had over 30,000 members. Surprisingly, the metro of HK (a rather small city in the Asia) is the fastest growing one and is still keeping a stable growth rate. With a sample survey of HK Xanga social metro users, we found that their average age was only around 16. These give strong evidence that carrying out case studies in HK to investigate weblog usages can definitely provide a real picture of how blogging technologies fit the young people's needs in the cyberspace.

Findings

We had carried both individual cases and focus group discussions to study the bloggers' technological usages of Xanga, and aimed at finding the pattern of the users and their usages of specific technologies. All interviewees are Hong Kong young people, age from 20 to 22. All of them were university students, studying in different tertiary institutions, including local and overseas universities. According to their usages, we categorize these Xanga users into 4 types: Habitual, Active, Private, and Dormant. Habitual users are those who have already formed the habit of frequent visits to Xanga. This type of users access Xanga several times a day to see whether their blogs are commented, and to see what their friends have posted to their blogs. Habitual users will access Xanga as often as they can access the Internet. They will usually spend hours to post to their blogs and make comments to their friends' posting. We may consider them have already addicted to Xanga.

The second type of users is active users. Active users are not so eager to visit Xanga as the habitual users do. They will normally visit Xanga once a day, usually during their leisure time. As almost all Xanga users do, they will post their own journals and read their friends'. However, they may not post to Xanga every day, but will make postings once they find the needs to share. Although not as enthusiastic as the habitual users, they are also very eager to keep connected with their friends.

The third type of users is private users. Private users use Xanga as their own personal journals. They will post their personal journals to the Web and will either only allow a few of their friend to read their postings or keep the journals completely private. Finally, the fourth type of users is dormant users. Dormant users use Xanga as the media to read others' postings, but will not post anything about themselves to the blogs. Table 2 summarizes the characteristics of different type of users, and table 3 lists the common features used by different type of users.

Type of bloggers\ Characteristics	Habitual/Enthusiastic	Active	Personal	Dormant
Personal characteristics	Extravert	Extravert	Introvert	Unknown
Willingness to sharing through blogging	High	High	Low	Low
Peer influence	High	High	Low	Unknown
Frequency of blogging	Several times a day	Once daily	Once daily	Not fixed
Duration of blogging	Hours per day	Around 1 hour per day	Depends on own need	Not fixed
Group feeling	Strong	Strong	Weak	Unknown
Preferred tools	Community building featured tools	Community building featured tools	Publishing and archival	Reading
Table 2. Characteristics of different type of bloggers				

Users	Technological needs
Habitual/Enthusiastic	Content Management Tools Community Building Tools Time Structuring Search by Category Commentary
Active	Content Management Tools Community Building Tools Search by Category Commentary
Personal	Content Management Tools Secured Closed Blog
Dormant	Reading
Table 3. Features Used by Different Users	

Discussion

From the interviewees' blogging behavior, we find different types of users use different features provided by blog hosts. Habitual, active, and private users use *Skins*, *Look & Feel* to customize their sites, *Add, Edit, and Delete* to manage their postings. Not only the habitual and active users would make their site special and comfortable, private users also customize theirs by applying different features. Some users will spend considerable time in decorating their webpages so as to make them unique, and win the reputation among the community members.

In order to keep interactions among friends, habitual and active users use more community building features than private users. The most commonly used features are *Chatterbox* (which allow instant chat among online friends), *Counters* (to know how many people have visited their sites to ensure their sites are popular and being visited), *Commentary* (to know the feedbacks from their friends), *Eprops* (to know how good their writings are in comparing to the public), *profile info and pics* (to let the world know their personal information and image). *Blogrings, Xanga Metro* and search features are also widely

used by Xanga users to widen their virtual social circles. In order to remain clandestine, private users will use *Protected Rings, Restricted Subscriptions*, *Blocking*, and *Protected Postings* to keep their postings from the public.

The social needs of these young Xanga users are mainly to have bigger social circles, to be socially accepted, and to have social exchange among their peer groups. Blogging technologies allow their blogs to be accessed freely by other bloggers, thus their goals for sociality can be achieved. With deeper understanding of other Xanga users within their communities, their virtual relationships can even get closer and some of them become close virtual friends and may eventually go offline. In addition to sustain a sole virtual relationship, Xanga can also be used in extending Xanga users' offline friendship to online, to make the relationship be more solid by providing an additional platform for them to communicate.

It is obvious that Xanga's success is contributed by its provision of technologies which fits its members' needs. The reasons of why Xanga outperforms other blog hosts may be attributed by peer influence, ease of use of its provided technologies, and most significantly, there is an abundance of community creation features provided. In fact, Xanga is not the only successful case. LiveJouranl, Blogspot, TypePad, and Modblogs also provide similar features to their members, and are all doing well in this business.

With these findings, we propose a research model to explain how the fit between the needs and the provided blogging technology impact on the utilization. Task/Technology Fit (TTF) concept (Goodhue and Thompson, 1995; Goodhue, 1998; Zigurs and Buckland, 1998) is the foundation of the building of our research model.
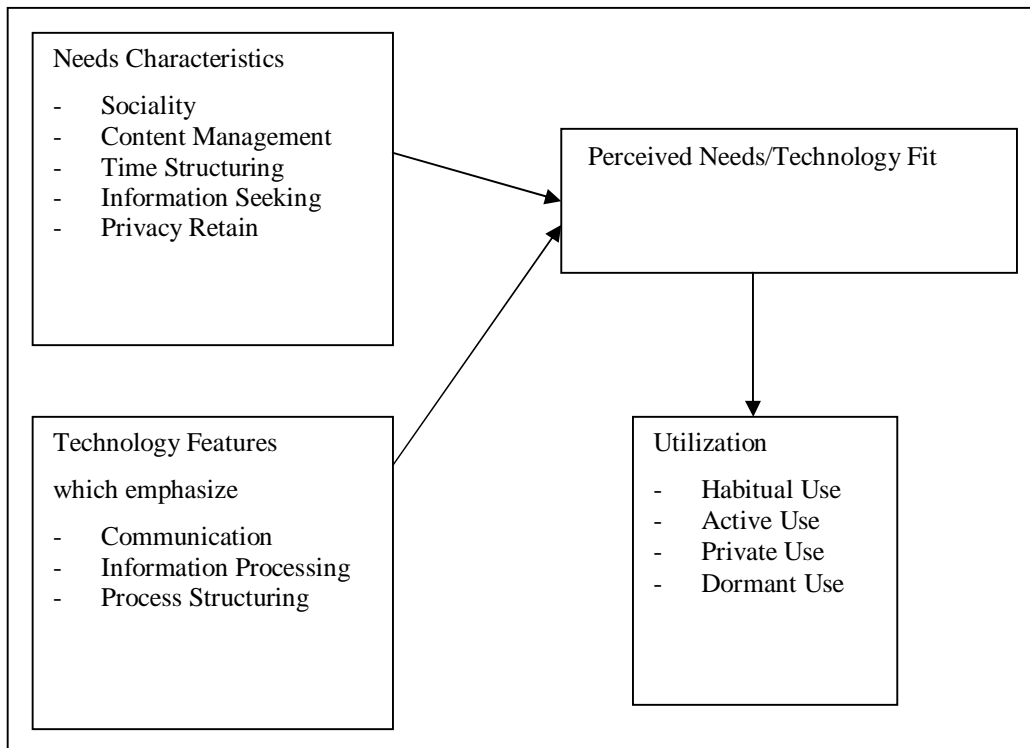

Figure 1. Research Model

We modified the original TTF models with the following rationales:

1.   Task, itself, is not sufficient enough to reflect our research context. The tasks measured in the (Goodhue et al., 1995) and (Zigurs et al., 1998) are all business related tasks, which are assigned by the superiors or the management level. However, in blog-based virtual communities, task performed are purely driven by individuals' needs and desires. For example, habitual and active users would prefer more community building tools to build their social networks, while personal users will be satisfied with abundant tools for publishing and archival. We then modified the research model by replacing the *Task* construct with *Needs* construct.

2.   Adopting the concept of fit by (Venkatraman, 1989), we define Fit as Mediator in our model.

   With this model, we should be able to answer "How blogging technology will influence a user's utilization of weblogs?" and "To what degree the fit between technology and a user's needs will have influence on the utilization of weblogs?"

CONCLUSION

The cases told us that different types of bloggers require different types of blogging technological features. The major need of habitual and active users is to make a wider social circle, thus the widely used features are those abundant community building features. To fulfill their needs of social exchange, blog technologies have to provide appropriate features, such as *Chatterbox, Short Message Transmission.* Social presence can also be enhanced by the *Recent Visitors* feature. The findings tell us that part of Xanga's success is contributed by these community building features. On the other hand, those who want to maintain a close circle among their offline acquaintances can utilize protective features, such as *Protect Blogrings* and *Restricted Subscription.* For the private users, the *comprehensive text processing features* and the *archiving functions* can satisfy their needs. For the dormant users, as they are just silent watchers, it is important for both the researchers and practitioners to find ways to motivate them to participate and ehopefully be active users. We found that archival is important for any types of users as archival can provide persistent communication, i.e. the communication content can be retrieved in the future.

Contribution

Theoretical: This study is the starting point of investigating the fit between technology and the users' needs. Theoretical foundation is based on Task/technology fit. We believe that the tasks performed by bloggers are principally driven by the users' needs and desires. Blogging is a personal issue and no arbitrary assignment will be assigned to the bloggers. Individual users can choose to/not to use any technologies to complete their tasks, so the tasks performed are solely based on their own needs as well as the perceived importance of the enrichment of their virtual sociality. With the findings of our extended Task/technology fit concept, we can then predict the effectiveness of any specific blogging technologies.

Practical: With the finding of the suitability between the needs and the technology, blog hosts can design more useful technological tools to improve their blogs services. Furthermore, blog hosts can raise their awareness of designing better technological support to ensure their blog hosting's sustainability. Our model can also be used as the predictor to a web-based virtual community's future.

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