Why do teachers continue to use teaching blogs? The roles of perceived voluntariness and habit

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ABSTRACT

The importance of teaching blogs motivates schools to adopt them. The value realized from these teaching blogs depends on teachers' ongoing participation and contribution, but limited research explains why teachers continue to use teaching blogs after their initial adoption. To promote teachers' continued usage of teaching blogs, it is important to know the underlying reasons. This study extended Bhattacherjee's expectation–confirmation model by adding two moderating effects (perceived voluntariness and habit) on the intention–usage relationship. Longitudinal data were collected from a survey questionnaire completed by 195 Taiwanese senior and vocational school teachers. The partial least squares model was used to test the measurement and structural models. The results indicate that confirmation has a direct effect on perceived usefulness, while satisfaction is jointly determined by perceived usefulness and confirmation. The continuance intention of teaching blogs is jointly determined by satisfaction and perceived usefulness, with 34% variance explained. The continued usage of teaching blogs is jointly determined by perceived voluntariness and habit, with 42% variance explained. The results also show that a higher level of perceived voluntariness for teaching blogs increases the effect of continuance intention on continued usage. However, habit does not moderate the intention–usage relationship. The implications for theory and practice, as well as suggestions for future research, are also discussed.

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1. Introduction

As a Web 2.0 technology, the blog is one of the most popular online communication tools (Chai, Das, & Rao, 2011), which employs all resources (e.g., text, graphics, audio, video, etc.). In the educational context, blogs have been used to enhance communication between students and teachers (Kim, 2008); they are also not geographically or temporally constrained (Luehmann & Tinelli, 2008). It has become an inevitable trend for teachers to use blogs to assist them in teaching (Lai & Chen, 2011). The teaching blog, also called an Internet-enabled or web-based learning system, allows teachers to upload teaching materials, review students' homework, interact with students, post matters related to the courses, share information, and review students' learning processes. In this study, the teaching blog is defined as a learning tool established by a school, with teachers as primary information providers and content contributors. Students can use this platform to assist them in developing positive learning behavior, either within normal school hours or after classes. Students can interact or communicate with their teachers through this platform as well.

In Taiwan, most schools commonly use online tools to create their teaching blogs; they also encourage teachers to use these in teaching as an important evaluation indicator stipulated by the Ministry of Education. Although it is essential to create numerous teaching blogs, the ratio of continued use is still very low. Successful teaching blogs depend on teachers' ongoing participation and contribution. Thus, it is important to investigate teachers' continued behavior in using teaching blogs and how to promote the practice. For this purpose, we chose

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Bhattacherjee's (2001b) expectation—confirmation model (ECM) as the theoretical basis in our research because ECM has been widely used in investigating the post-adoption behaviors in various information system (IS) contexts.

Additionally, prior studies pointed out a gap in the intention—usage link regarding the use of an IS (Limayem, Hirt, & Cheung, 2007; Sheeran, 2002). The considerable variations in correlation, from a minimum of 0.12 (Horton, Buck, Waterson, & Clegg, 2001) to a maximum of 0.76 (Sánchez-Franco & Roldán, 2005), indicated that these results were inconsistent and that behavioral intention was unable to predict usage behavior (Wu & Du, 2012). Thus motivated, we develop a theoretical model based on ECM and explore the context of teaching blog to identify the key variables that can predict teachers' continued usage of teaching blogs.

Many teachers began to use teaching blogs because they were made compulsory by the school system or would validate the school's own evaluation; as such, many teaching blogs or platforms were adopted at the initial stages. Why have some teachers stopped using their teaching blogs over time, while others continue to do so? So far, it is still unclear whether or not perceived voluntariness has affected the continued usage of teaching blogs. However, perceived voluntariness should be an important factor affecting the continuance of the IS, because whether users continue their usage or eventually experience a lack of motivation is somewhat different between compulsory and voluntary environments (Sørebø & Eikebrokk, 2008). Consequently, perceived voluntariness is treated as a moderator in this study.

Moreover, Limayem and Cheung (2008) built on the ECM by adding habit as a moderator; they found its moderating impact on the intention—usage link when students used Internet-based learning technology. When a high level of IS habit exists, such behavior may no longer require a conscious effort; the habit may reduce the predictive power of behavioral intention. Consequently, habit is considered as a moderator in this study.

As mentioned previously, we attempted to explain and predict teachers' continued usage of teaching blogs. A moderation perspective was applied to illustrate that the predictive power of continuance intention would be weakened, depending on whether the teachers were habitually or volitionally using teaching blogs. Those two factors—initial voluntary use and habit—were helpful in explaining teachers' intention to continue using teaching blogs, as they were particularly useful in strengthening long-term usage. Specifically, this study aimed to answer the following research questions: (1) Can initial voluntary use and habit explain a teacher's continued use of a teaching blog? How do these factors influence the intention—usage link? (2) Is the ECM adequate to explain and predict teaching blog usage by teachers (i.e., contributors)?

Since the network is available virtually everywhere, the teaching blog has become the main support mechanism for students' after-class learning. If students can be effectively encouraged to use teaching blogs as an extension of school teaching, their learning performance can be considerably upgraded. If teachers continuously contribute and update the contents on their teaching blogs, students will benefit. In this longitudinal study, an extended ECM containing two factors—perceived voluntariness and habit—was proposed to explain the reasons why teachers continue to use teaching blogs. This information would provide school managers and system trainers with suggestions regarding the promotion of teaching blogs in schools.

2. Theoretical background

2.1. Teaching blogs

The blog is an essential and innovative tool in daily life. For an individual, the blog acts as a medium for communicating with friends; for a company, the blog serves as a tool for advertisement; and for teaching, the blog is immediately available to help educate students according to their natural abilities (Gong & Yan, 2008). The terms "teaching blog" and "education blog" are often used interchangeably. In this study, the authors used the term "teaching blog" to represent the role of teachers' usage of it.

In school, many teachers have achieved new performance goals by using teaching blogs. For example, some teaching blogs have been used to solve problems directly or to explain a concept more clearly with a combination of words and pictures or videos.[1] Other teaching blogs have been employed for classroom management,[2] for sharing photographs and broadcasting class activities, and for teachers to communicate and interact effectively with students and parents.[3]

The importance of studying educational technology has been well recognized in previous studies, as shown in Table 1. These can be generally classified into two streams: initial usage and continued usage of educational technology. These prior studies offered a sound understanding of *students*' initial and continued use of educational technology. Most previous research on *teachers*' continued use of educational technology involved evaluation of behavioral intention (Hung, Chang, & Hwang, 2011; Sørebø, Halvari, Gulli, & Kristiansen, 2009). Knowledge of teachers' continued usage behavior is still quite limited to a few studies (Motaghian, Hassanzadeh, & Moghadam, 2013; Pynoo & Braak, 2014; Pynoo et al., 2011).

Thus, it is imperative to (1) extend research from the intention model to the actual usage behavior model and (2) focus on teachers who are free contributors in order to understand why they continue to use teaching blogs after long periods of time.

2.2. Expectation—confirmation model

Oliver (1980) proposed an expectation—confirmation theory (ECT) to study consumer satisfaction and repurchase behaviors in the marketing literature. The main constructs in the ECT included expectation (ex ante), perceived performance (ex post), confirmation, satisfaction (ex post), and repurchase intention (ex post). Bhattacherjee (2001b) adapted the ECT to the IS context and proposed the ECM to understand users' continued/post-adoption IS usage. Bhattacherjee believed that IS users displayed a behavior similar to that of consumers intending to purchase a product, that is, the first-time user experience in the IS context affects the user's decision to continuously use the IS. The key constructs of the ECM included perceived usefulness (ex post), confirmation (ex post), satisfaction (ex post), and IS continuance

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