Predictors of E-Learning Satisfaction in Teaching and Learning for School Teachers: A Literature Review

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This paper develops a theoretical model of the determinants of e-learning satisfaction in teaching and learning among secondary school teachers. It is based on reviews of past studies on satisfaction in using information technology systems. Three potential groups of determinants of satisfaction among secondary school teachers were identified; user-related characteristics, organisational-related characteristics and the e-learning-system characteristics. Usage is established as a mediating variable between the three potential groups of determinants and satisfaction towards e-learning. Future research could provide a more definitive theoretical statement of e-learning satisfaction and develop an additional proposition which could be derived from a more refined theory. The research yields a theoretical framework that outlines the predictive potential of the three groups of key factors in explaining e-learning satisfaction among secondary school teachers. The factors can be considered when developing future continuous professional development courses and intervention programmes when proposing a new innovation in the curriculum.

Key Words: E-learning, learning management system, satisfaction, usage, secondary school teachers

INTRODUCTION

End-users satisfaction is the extent to which users believe the system meet their information requirements (Lee, Kim & Lee, 1995). However, factors that lead to satisfaction are often difficult to be isolated and recognized, due to their complex inter-relationships (Mahmood, Burn, Gemoets & Jacquez, 2000). Despite that, we still need to examine teachers and the beliefs they hold about teaching, learning and technology. As aptly put by Marcinkiewicz (1994), integration of computers in the educational system will never be possible without reconciliation between teachers and computers. To encourage teachers to use computers, we need to study teachers and what made them use computers. Research into the factors that predicts satisfaction could shed light towards what teacher education and teacher training division need to focus, what aspects matter most to their teachers in order to encourage continuous and increased

participation and usage (Cheok & Wong, 2013). It is assumed that these could then result in an increased acceptance and usage among the teachers as shown in numerous studies (Al-Busaidi & Al-Shihi, 2012; Hayashi, Chen, Ryan & Wu, 2004) that continuous intention to e-learning use is determined by satisfaction. When teachers can see the benefits and are satisfied with its uses, they are more likely to retain or increase their usage of a system. We noted that researchers have looked into the predictors of e-learning satisfaction suggesting what organisations can and should do. However, a more descriptive and predictive social scientific approach to e-learning satisfaction involving usage as a mediating variable which remains under-researched and fragmented, leaves researchers and practitioners with the most fundamental questions, such as "what causes e-learning satisfaction" and "does usage mediates e-learning satisfaction relationships?".

Numerous studies have found that the implementation of e-learning in its various forms can be expensive to an organisation due to the relatively low adoption rate among users (Sawang, Newton & Jamieson, 2013). As mentioned by Tatnall and Davey (2003), this expenditure must be balanced with improved satisfaction. End-users will either experience satisfaction or dissatisfaction when they engage with an e-learning system. Despite the increase in e-learning adoption across learning institutions, e-learning programmes have been found to have higher failure rates when compared with traditional courses (Wu, Tennyson & Hsia, 2010; Zaharias & Polylymenakou, 2009). Answers must be sought to understand why users stop or dislike the system after their initial experience. In past studies, reasons cited often include content, comfort level with technology and availability of technical support (Sawang, Newton & Jamieson, 2012). With the ever increasing adoption, reliance and availability of technology from our modern world to our schools, it is necessary for us to understand factors that could lead us to an increased adoption of e-learning in educational settings. As such, this review hopes to look into pertinent factors which may increase teachers' satisfaction and thus, leads to continued adoption of the system in the future. Satisfaction has been acknowledged as a critical factor in influencing individuals to repeat e-learning usage (DeLone & McLean, 1992, 2003).

This review aims to develop a theoretical framework for measuring e-learning satisfaction among teachers in schools. The significance of this paper can be viewed in terms of its contributions to both theory and practice. Theoretically, the present study offers a refinement and expansion of the updated DeLone and McLean's Information Success model (2002, 2003) which posits that user-related factors, e-learning-related factors and organisation-related factors are related to satisfaction through the mediating effect of usage. In terms of practice, the results of this study add to the body of knowledge on e-learning satisfaction from the education system context and teaching and learning practices in schools specifically. By having a model of LMS satisfaction predictors, we can increase LMS acceptance in the teaching and learning processes through better understanding of the factors that influence and drive teachers to accept and use new innovation. We explored three key factors (i.e. user-related factors, e-learning-related factors and organisation-related factors) that predict e-learning satisfaction among teachers and usage as a mediating variable. Hence, this review provides a predictive framework, whereby scholars and practitioners could examine the

explanatory power of the framework to further explain teachers and their satisfaction towards LMS use. Researchers concluded that teachers who are satisfied with their LMS will continue to use the system extensively. By identifying and examining factors that influence satisfaction in LMS, key stakeholders can be in a better position to understand and develop appropriate policies in order to maintain satisfaction. Other researchers could also study other predictors that may also contribute to satisfaction towards the LMS and not just among secondary school teachers but the educators in general. It would also be of value to the Teacher Education Division who could then plan for more effective and relevant Continuous Professional Development (CPD) courses.

This paper is organised as follows: we begin by reviewing constructs and implications of e-learning satisfaction. Second, we describe Technology Acceptance Model (TAM) and DeLone and McLean's Information Success Theory as the theoretical foundations from which we derived the key predictors and mediator of e-learning satisfaction. Third, we explain the associations between the three groups of key predictors and e-learning satisfaction. Fourth, we propose usage as a mediating variable, and finally, we conclude by formulating a theoretical framework of e-learning satisfaction.

METHOD

This study adopts Webster and Watson's (2002) structured approach to locate and identify materials pertinent to the study. Firstly, several top leading databases available at the university's library such as Cambridge University Press, Emerald, EBSCOHost, Science Direct, Springer, Wiley Online, Proquest, and Sage were used to search for articles. The articles cited were published within the range of 1969-2014. The keywords used to find the articles include "e-learning", "satisfaction", "usage", "secondary schools", "learning management system", "Technology Acceptance Model" and "DeLone and McLean's Information Success Model". Finally, articles were selected for review if they were cited at least once and the titles and abstracts need to reflect content which are related to satisfaction and system usage.

Learning Management System (LMS) Satisfaction

The concept of satisfaction can be measured by the gap between what they experience and their expectations. The rationale is that satisfaction may lead to a variety of important outcomes that are of interest to education administrators, policymakers and instructors (Serenko, 2011). This satisfaction concept in education is based on seminal publications of Feldman and Newcomb (1969) and Pascarella and Terenzini (1991). Success of the computer based systems is generally associated with the user's satisfaction. According to Oliver and Swan (1989), satisfaction can be viewed as an individual's emotional consideration based on experiences and beliefs. It can be viewed as one's happiness index. Teachers' satisfaction should be one of the key measures of education outcome as it enhances quality. Though success of a system will never be able to be measured through a single factor, this paper will only be focusing on satisfaction from the teachers' perceptions of themselves as users, on how supportive their environment is in preparing and supporting them, and their perceptions of the system that they are required to adopt in their classrooms. End-users' satisfaction assessment is

one of the most widely used measures of IS effectiveness due to its high degree of face validity and easier to validate, previous measures have not captured the underlying reasons for the satisfaction or dissatisfaction among the teachers in schools. There are also limited empirical research done to determine the antecedents of website satisfaction beyond e-commerce settings and the classical contexts (Schaupp, 2010).

Reviews have shown that users will use a system and then evaluate it on the basis of being satisfied or dissatisfied. According to the Theory of Reasoned Action (Azjen & Fishbein, 1980), a person's behaviour (usage) is predicted by his or her attitude. Technology Acceptance Model (Davis, 1989) and Information System Success Model (DeLone and McLean, 1992) have highlighted the predictive power of attitude on the adoption and use of information technologies. Subsequent path analysis suggests that satisfaction leads to usage. The positive relationship between user satisfaction and usage has been validated in past empirical studies (Al-Busaidi & Al-Shihi, 2012, Lu, Zhao & Jiang, 2012, Torkzadeh & Doll, 1999; Baroudi, Olson & Ives, 1986). Zhang (2010) found in his study that user satisfaction predicted continued usage. Satisfaction was identified as the variable with the most prominent influence on usage. Thus, the more satisfied one is with a system; the more likely one is to use the system more frequently. Doll and Torkzadeh (1994) defined end-user satisfaction as the affective attitude one has towards a computer application. E-learning satisfaction is operationalised as teachers' affective attitude toward the learning management system.

Theorizing End-User Satisfaction

Technology Acceptance Model (Davis, 1986) and DeLone and McLean's Information Success Model (1992, 2002, 2003, 2004) theories were also used by previous e-learning satisfaction researchers. The following section explains these theories.

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was developed by Davis in 1986. It focuses on predicting and assessing users' tendency to accept technology. He proposed through his model that system use is a response which can be explained or predicted by users' motivation which is directly influenced by a system's specific features and capabilities. It provides a mean for stakeholders to identify barriers and enablers to the adoption of any new technologies. The origins of TAM came from prior work of Fishbein and Azjen's (1975) Theory of Reasoned Action (TRA). However, TAM is less general than TRA, and it is not much universal as it mainly focuses on the context of user's acceptance of technology in explaining computer usage behavior (Davis, 1989). It was further explained that users' motivation can be explained through perceived usefulness, perceived ease of use and attitude towards a system. Attitude that users formed toward a system, will actually determine if the users will use or reject a system. This attitude in turn, is influenced by two beliefs' variables namely; PU and PEOU. PEOU is also believed to have a direct impact on PU. These two beliefs are directly influenced by external variables.

In 1996, Davis, Bagozzi and Warshaw modified the original TAM. The two changes made are that TAM does not have subjective norm as a variable, instead it relied on two

variables; perceived usefulness and perceived ease of use to predict attitude instead of beliefs and evaluations. The model suggests that perceived usefulness defined as the degree to which an individual believes that using a particular system would enhance his or her productivity and perceived ease of use defined as the degree to which an individual believes that using a particular system would be free of effort, are key determinants of the actual usage of a particular system (Davis, 1989). They believed that behavioural intention fully mediates the effects of other variables in TAM on system use. Findings from their studies include amongst others, users' computer usage could be predicted by their intentions, perceived usefulness acted as a major determinant of intentions to use computers and perceived ease of use was considered an important secondary determinant of intentions to use computers. Thus, the modified TAM was introduced as a theory that specifies two key beliefs. The first belief is perceived usefulness and perceived ease of use while the second belief is on users' attitudes, intentions and actual system usage.

DeLone and McLean's Information Success Model

Information System (IS) Success Model by DeLone and McLean (1992) is one of the most widely cited models in examining various IS contexts including knowledge management (Kulkarni, Ravindran & Freeze, 2007). It is one of the most established and frequently used theories that facilitate the examination of success and user satisfaction (DeLone & McLean, 1992, 2002, 2003, 2004). This model provides a scheme to classify the various IS success factors and suggests causal relationships between categories. Many previous studies have utilised this model to examine users, user satisfaction and the success of systems. Recent studies that have used this model include Lee and Chung (2009), Wang and Liao (2008), and Lin (2007). However, many studies have pointed out that this model is incomplete. Inclusion of more dimensions or amendments to the model is needed (Seddon, 1997; Seddon & Kiew, 1994; Rai, Lang & Welker, 2002). Since the purpose of this study is to examine satisfaction of users who have already adopted the LMS use, this model is deemed most appropriate. All constructs except service quality and net benefit construct were removed but user quality construct is added to the model in order to examine factors that affect user satisfaction as a result of the LMS use. The addition of user quality is the primary refinement of this model. Since the paper aimed at user satisfaction, the net benefit construct was removed. In accordance with D&M IS Success Model (DeLone & McLean, 2002, 2003), the proposed model for the paper was partly constructed based on this theory and review of the literature. The proposed model claims that user-related qualities, e-learning-related qualities and organisation-related qualities will influence satisfaction through the three constructs and the mediating effect of usage.

Based on previous discussions, we derived three sets of factors that contribute to e-learning satisfaction. The factors are user-related characteristics, organisational-related characteristics and the e-learning-related characteristics. Use was also included as a mediating variable in the research framework.

Predictors of E-learning Satisfaction

The selection of key constructs and variables reflected the boundaries that this study places in limiting the scope. The constructs and the variables pertinent to this study were deduced from theoretical and empirical evidences. The framework was based on the three groups of variables, i.e. user-related factors which include anxiety, attitude and self-efficacy. The organisational-related factors comprise of training, technical and management support. The system-related factors involve perceived ease of use, perceived usefulness, accuracy and interaction.

User-Related Factors

A number of empirical studies have shown that user characteristics are likely to have an impact on e-learning satisfaction. There are various user-related factors that are relevant for predicting e-learning satisfaction. However, this study limited its focus to three user-related characteristics; anxiety, attitude and self-efficacy.

Self-Efficacy and E-Learning Satisfaction

Unless teachers believe that they are capable of implementing the innovation in the classroom, that innovation will remain intact and unused. According to Bandura (1977), self-efficacy reflects one's beliefs about the ability to perform certain tasks successfully. It is a belief that one has towards one's own capabilities in performing a particular task (Marakas, Yi & Johnson, 1998; Compeau and Higgins, 1995). Learners' success in technology has been found to depend on their ability to cope with technical difficulty and a validation of their confidence in using technology to engage in learning (Gunawardena, Linder-VanBerschot, LaPointe & Rao, 2010). Based on the aforementioned literature, we proposed the following hypothesis:

H_1 There is a significant relationship between self-efficacy and e-learning satisfaction among secondary school teachers.

Attitude and E-Learning Satisfaction

Technology-push approaches must consider users' individual differences, personal characteristics, opinions and learning styles (Celik, & Yesilyurt, 2013). The attitude that end-users bring when dealing with the e-learning environment is an important factor (Albirini, 2006; Arbaugh & Duray, 2002; Arbaugh, 2002). Those who have positive attitudes toward technology are more comfortable in using it and thus, prepared to overcome any challenges (Albirini, 2006). Significance of attitudes was derived from the proposition of attitude theorists (Fishbein & Azjen, 1975). Attitude represents beliefs and feelings that one has towards something and in this context, the more positive one is toward the LMS, where one is not afraid of the challenges and complexity of using the system, the more satisfied one will be with the LMS (Piccoli, Ahmad & Ives, 2001). Based on the aforementioned literature, we proposed the following hypothesis:

H_2 There is a significant relationship between attitude and e-learning satisfaction among secondary school teachers.

Anxiety and e-learning satisfaction

Anxiety or fear of computers is described as a powerful and widespread psychological phenomenon (Igbaria & Parasuraman, 1989). Computer-related anxiety remains an important issue as the number of online courses increased over the past few years (Saade & Kira, 2007). Fear and panic inflicted whenever one has to deal with the system will naturally hamper one's satisfaction level. According to Barbeite and Weiss (2004), anxiety is an emotional fear of potential negative outcomes. The higher the anxiety is, the lower the level of satisfaction. Researchers have repeatedly shown that the relationship between computer anxiety and its effects on computer use and computer acceptance cannot be underestimated (Ball & Levy, 2008; Van Raaij & Schepers, 2008). Based on the aforementioned literature, we proposed the following hypothesis:

H_3 There is a significant relationship between anxiety and e-learning satisfaction among secondary school teachers.

ORGANISATIONAL –RELATED FACTORS

Training and E-Learning Satisfaction

End-users come replete with ingrained habits of feelings, thoughts and actions (Nelson & Cheney, 1987). For end-users to change through training, their normal habits have to be questioned first. Introduce other methods which allow users to experiment with new ways of behaving. Thus, if they find the new way is more useful, chances are they will continue with it. Therefore, trainings designed for end-users must consider their specific job performance's needs and their job satisfaction. A large amount of training and support for users are needed to help them to be comfortable with the new system (Cheok & Wong, 2014). Thus, it will improve teachers' adoption of the LMS. Based on the aforementioned literature, we proposed the following hypothesis:

H_4 There is a significant relationship between training and e-learning satisfaction among secondary school teachers.

Management and E-Learning Satisfaction

As educators are the most important resource in the battle to provide every child with a quality education, management in schools must create conditions in which educators can continue to grow and learn as professionals. Their open approval, and clear identification of how LMS aligned with the school's vision, is just some of the examples of how management encourages adoption. A number of past studies have revealed significant relationship between supportive learning environment and satisfaction (Joo, Joung & Son, 2014; Aggelidis & Chatzoglou, 2012; Al-Busaidi & Al-Shihi, 2012; Roszkowski & Soven, 2010; Teo, 2009). Based on the aforementioned literature, we proposed the following hypothesis:

H_5 There is a significant relationship between management and e-learning satisfaction among secondary school teachers.

Technical Support and E-Learning Satisfaction

Technical support is deemed essential in the use of learning management system (Sanchez & Hueros, 2010; Zhao & Bryant, 2006)). Without technical support or knowledge, it may lead to problems and frustrations among the users. Troubleshooting skills are important if ICT is to be used as a reliable tool. Technology support has been found to have great impact on educators' use of technology as it can boost technology usage, thus increase likelihood of ICT integration in the teaching and learning processes (Moses, Khambari, & Wong, 2008). Based on the aforementioned literature, we proposed the following hypothesis:

H_6 There is a significant relationship between technical support and e-learning satisfaction among secondary school teachers.

E-LEARNING-RELATED FACTORS

Perceived Usefulness and E-Learning Satisfaction

Perceived usefulness is defined as the degree of improvement after adoption of a system. When users perceive e-learning to be useful in acquiring the desired skills and knowledge, they are more likely to use the system. Previous studies have shown that perceived usefulness has a positive usefulness on users' intention to use a particular system (Luan & Teo, 2009; Teo, Lee, Chai & Wong, 2009). It has also been shown to have a direct impact on satisfaction (Hsieh & Wang, 2007; Hong, Thong & Tam, 2006). Based on the aforementioned literature, we proposed the following hypothesis:

H_7 There is a significant relationship between perceived usefulness and e-learning satisfaction among secondary school teachers.

Perceived Ease of Use and E-Learning Satisfaction

Perceived ease of use refers to the degree to which an individual believes that using a particular system would be free from physical and mental effort (Davis, 1989). It is often considered as a predictor of satisfaction (Aggelidis & Chatzoglou, 2012; Yeh and Li, 2009; Hong, Thong & Tam, 2006). Many studies have shown that the complexity of an information system will hinder acceptance of a system. Perceived ease of use is understood as users' perception of the ease in adopting a system. The more they think that a system is easy to use, the more positive their attitude will be, thus improve their satisfaction and increase their chances of re-using the system (De Smet, Bourgonjon, De Wever, Schellens, & Valcke, 2012). Based on the aforementioned literature, we proposed the following hypothesis:

H_8 There is a significant relationship between perceived ease of use and e-learning satisfaction among secondary school teachers.

Flexibility and E-Learning Satisfaction

Flexibility is also crucial in promoting satisfaction as it gives students that anytime anywhere access to course content (Selim, 2003; Arbaugh, 2002; Salmon, 2002). Flexibility is defined as learners' perception of the efficiency and effects of adopting e-learning towards their work, learning process and the travelling hours involved. Flexibility has been shown in many studies to have an effect on users' satisfaction when they are using an e-learning system (Arbaugh, 2002; Arbaugh & Duray, 2002; Sun et al., 2008). With no restriction in time and space in e-learning, students can communicate with their fellow peers and teachers instantaneously with availability of resources at their fingertips. Based on the aforementioned literature, we proposed the following hypothesis:

H_9 There is a significant relationship between flexibility and e-learning satisfaction among secondary school teachers.

Interaction and E-Learning Satisfaction

Interaction is the key to the continued use of an e-learning system (Kuo, Walker, Schroder & Belland, 2014, Mathews & Bhanugopan, 2014). They claimed that interaction helped in creating a sense of community which is an important aspect for the teachers especially when having to learn and use a new innovation in their classrooms. Collaboration resulted from interaction between students and fellow instructors through emails; bulletin board and chat room on the LMS have been found to increase satisfaction (Lonn & Teasley, 2009; Malikowski, Thompson & Theis, 2006; Bolliger & Martindale, 2004). Based on the aforementioned literature, we proposed the following hypothesis:

H_{10} There is a significant relationship between interaction and e-learning satisfaction among secondary school teachers.

USAGE AS A MEDIATING VARIABLE

System usage (used interchangeably with the term 'use') has been studied by a number of researchers. Urbach and Muller (2011) described it as the degree and manner in which an information system is employed. Through the use of the system, it will influence the individual user in the conduct of their work. This collectively, in turn, will produce an organisational impact (DeLone & McLean, 1992, 2003). System usage is often operationalized using self-reported measures of actual usage. Five indicators were found in several studies on IS usage and they include perceived daily use, perceived frequency of use, the number of applications used, perceived usage level and sophistication level of applications used. The first four indicators are included in this present study. The relationship between usage and satisfaction has been studied (Baroudi et al., 1986; Doll & Torkzadeh, 1991; DeLone & McLean, 1992; Torkzadeh & Dwyer, 1994; Chiu, Chiu & Chang, 2007) and these empirical studies have found support for DeLone and McLean's (2003, 2004) argument, as they showed significant positive relationship between use and user satisfaction. Thus, it is proposed in this study

that the use of a system has a significant influence on users' satisfaction. Based on the aforementioned literature, we proposed the following hypothesis:

H_{11} Usage mediates the relationship between user-related factors (attitude, anxiety and self-efficacy), organisational-related factors (training, management and technical support) and e-learning-related factors and e-learning satisfaction among secondary school teachers.

The previous discussion leads to the derivation of the theoretical framework for measuring e-learning satisfaction among teachers in schools (see Figure 1).
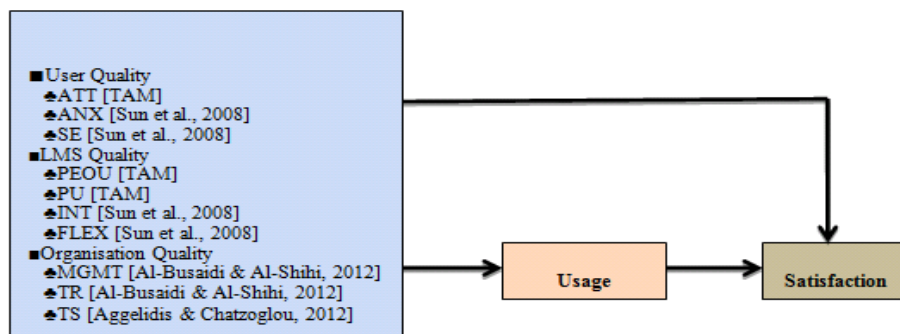

Figure 1: A theoretical framework for measuring e-learning satisfaction among school teachers

Teacher Education Agenda in Increasing E-Learning Satisfaction

Understanding teachers' satisfaction is particularly important because a high level of end-user satisfaction is associated with several key outcomes; system continued usage, realisation of system's success and improved user performance (DeLone & McLean, 1992; DeLone & McLean, 2003; Bhattacherjee, 2001). However, many previous models failed to identify clearly the antecedent factors that lead to satisfaction upon using a new system. The proposed measurement of end-users information system satisfaction provides an evaluation framework, which is firmly grounded on established theories for researchers to investigate the extent to which satisfaction can be predicted by studying characteristics of end-users, the learning management system itself and the organisation involved. The relationship among the three dimensions may provide a better understanding of the IS environment

CONCLUSION

Always at the receiving end, teachers' voices often go unheard, when the fact remains that they are the key to classroom-level innovation (Cuban, 1986). This study hopes to give teachers the opportunity to state what matters to them in having to utilise a system. It is a known fact that an efficient system alone will not change the workings of a classroom. The best fit of technology is what is the most appropriate for a specific

situation and culture (Yee, Luan, Ayob & Mahmud, 2009). Local resources should be utilised for a successful intervention. This review shows that the teacher's characteristics; attitude, anxiety, and self-efficacy to a large extent will influence whether the system is taken up effectively. Besides, teachers also need support in order to change their pedagogical practices. Organisation support in terms of; training, technical and management, are all important factors necessary in initiating teachers into adopting new innovation. The e-learning system is also critical in ensuring teachers are satisfied after using it. Aspects like flexibility, interaction, perceived usefulness and perceived ease of use must be considered. Together; the system, the teacher and the organisation, need to work hand-in-hand in order to make the LMS in schools a success. The amalgamation of the three sets of factors will be able to guide stakeholders in understanding some of the factors that lead to satisfaction.

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Turkish Abstract

Öğretmenlerin E-Öğrenme Memnuniyetlerinin Yordayıcıları: Bir Literatür Taraması

Bu çalışma, orta okul öğretmenlerinin e-öğrenme memnuniyet yordayıcılarının teorik bir modelini geliştirmeyi amaçlamaktadır. Çalışma bilgi teknolojileri kullanımımda memnuniyetle ilgili geçmiş çalışmaların eleştirel değerlendirilmesine dayandırılmıştır. Orta okul öğretmenlerinin memnuniyetlerinin üç potansiyel yordayıcısı belirlenmiştir: kullanıcıyla ilgili özellikler, organizasyonla ilgili özellikler ve e-öğrenme sistem özellikleri. Kullanım üç yordayıcı ve e-

öğrenmeye karşı tutum arasında aracı değişken olarak belirlenmiştir. Gelecek çalışmalar e-öğrenme memnuniyetinin daha açıklayıcı bir teorik tanımını verecek ve daha düzgün tanımlanmış bir teoriden çıkarılabilecek ek öneriler sağlayabilecektir. Bu çalışma orta okul öğretmenlerinin e-öğrenme memnuniyetlerini açıklamada önemli üç grup muhtemel yordayıcının ana hatlarını çizen teorik bir çerçeve sunmuştur. Bu faktörler gelecekte profesyonel gelişim kursları ve müdahale programları geliştirirken, müfredat içinde yenilik taşıyan bir durum sunulacağında dikkate alınabilir.

Anahtar Kelimeler: E-öğrenme, Öğrenme yönetim sistemi, Memnuniyet, Kullanım, Orta okul öğretmenleri

French Abstract

Les prophètes de Satisfaction d'Apprentissage en ligne dans Enseignement et Apprentissage pour Professeurs Scolaires : une Revue de Littérature

Ce papier développe un modèle théorique des déterminants de satisfaction d'apprentissage en ligne dans l'enseignement et l'apprentissage parmi des enseignants du secondaire. Il est basé sur les revues d'études passées sur la satisfaction dans l'utilisation de systèmes d'information. Trois groupes potentiels de déterminants de satisfaction parmi des enseignants du secondaire ont été identifiés; caractéristiques concernant l'utilisateur, caractéristiques organisationnelles-concernant et les caractéristiques d'apprentissage-en-ligne-système. L'utilisation est établie comme une variable servante d'intermédiaire entre les trois groupes potentiels de déterminants et la satisfaction vers l'apprentissage en ligne. La recherche future pourrait fournir une déclaration théorique plus définitive de satisfaction d'apprentissage en ligne et développer une proposition supplémentaire qui pourrait être tirée d'une théorie plus raffinée. La recherche rapporte un cadre théorique qui décrit le potentiel prophétique des trois groupes de facteurs clés dans l'explication de la satisfaction d'apprentissage en ligne parmi des enseignants du secondaire. On peut considérer les facteurs en développant des cours de développement professionnels continus futurs et des programmes d'intervention en proposant une nouvelle innovation dans le programme d'études.

Mots-clés: Apprentissage en ligne, Apprenant Système de Gestion, Satisfaction, Utilisation, enseignants du secondaire

Arabic Abstract

العنوان: المتنبئين بكفاءة التعلم عن بعد في التعليم و التعلم بالنسبة لمعلمي المدارس: الدراسات السابقة.

تطور هذه الدراسة نموذجا نظريا من المعايير المتعلقة بكفاءة التعلم عن بعد في التعليم و التعلم بين مدرسي المرحلة الثانوية في المدارس. تعتمد هذه الورقة على إستعراض للدراسات السابقة حول الكفاءة في إستخدام نظام تكنولوجيا المعلومات. تم تحديد ثلاثة مجموعات محتملة من معايير الكفاءة بين مدرسي المرحلة الثانوية : خصائص المستخدم,خصائص المنظمة,وخصائص نظام التعلم عن بعد. تم تأكيد الإستخدام كمتغير وسيط بين الثلاث مجموعات المحتملة من المعايير و الكفاءة نحو التعلم عن بعد. يمكن للابحاث المستقبلية أن تزود بيانا نظريا أكثر وضوحا في كفاءة التعلم عن بعد و تطور إقتراحا إضافيا والذي يمكن أن ينبثق من نظرية أفضل. يخضع هذا البحث لإطار نظري والذي يحدد إمكانية التنبؤ في الثلاثة مجموعات من حيث العوامل الرئيسية في تزضيح كفاءة التعلم عن بعد بين مدرسي المرحلة الثانوية في المدارس. يمكن أخذ العوامل بعين الإعتبار عند تطوير المواد المستقبلية المهنية و البرامج المتداخلة عند إقتراح غبتكار جديد في الخطة الدراسية.

كلمات مهمة: التعليم عن بعد, نظام إدارة التعلم,القناعة,الإستخدام,مدرسي المرحلة الثانوية.