Chapter 10
Explaining the Factors on Process of Academic Wikipedia Users Using Technology Acceptance Model Through the Structural Equation Model

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ABSTRACT
As a teaching tool, Wikipedia is used by an increasing number of professors from many universities around the world. Wikipedia is very influential in allowing students and teachers to learn together and having various skills for students. In this chapter, the influenced main factors of the teaching uses of Wikipedia in higher education are determined and also the relationship between these factors are tried to be explained with the technology acceptance model (TAM) through the structural equation model (SEM). With this aim, teaching use of Wikipedia in all faculty members of the Universitat Oberta de Catalunya are used as data and the data is analyzed by LISREL software package. After the analysis, it is found that sharing attitude and use behaviour factors have important role in the model and there is a direct strong impact of sharing attitude on use behavior.

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INTRODUCTION

Recently, as a result of the development of information technology, people can reach to information fast and easy. For this reason, the use of e-learning, e-books and e-encyclopedia tools has become popular. One of these tools, the world’s largest free online encyclopedia Wikipedia is often used in academic studies, books and conferences. Also, as a teaching tool Wikipedia is used by an increasing number of professors from many universities around the world. Wikipedia is very influential in allowing students and teachers to learn together and having various skills (such as educational projects, brainstorming, learning languages, editing or creating articles, etc.) for students.

The Technology Acceptance Model (TAM), developed to explain and predict individual behavior of technology acceptance and use, is one of the most widely used models for explaining the factors that have the most impact on user acceptance of information systems. The relationship between the perceived usefulness (PU) and perceived ease of use (PEU) which are two important variables of TAM, can be analyzed by the Structural Equation Model (SEM). The Structural Equation Model is a comprehensive statistical method used to explain the relationship between variables in social and behavioral sciences.

In this chapter, the influenced main factors of the teaching uses of Wikipedia in higher education are determined and also the relationship between these factors are tried to be explained with TAM through the SEM. With this aim, teaching use of Wikipedia in all faculty members of the Universitat Oberta de Catalunya are used as data and the data is analyzed by LISREL software package. After the analysis, it is found that sharing attitude and use behaviour factors have important role in the model and there is a direct strong impact of sharing attitude on use behavior.

BACKGROUND

Technology Acceptance Model (TAM)

As an adaptation of Ajzen and Fishbein’s theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), Technology Acceptance Model (TAM) was introduced by Fred D. Davis in 1986 for his doctorate proposal for modeling users’ acceptance of information systems or technologies, in particular the behavior of computer use.

There are two important beliefs to be tested and included in general TAM model: Perceived Usefulness (PU) and Perceived Ease of Use (PEU). According to the TAM, these two beliefs can affect the intent, either directly or indirectly.

Davis (1989) defines perceived usefulness and perceived ease of use as important factors affecting the intentions of individuals in the use of information systems. Davis (1989) describes perceived usefulness as the degree to which an individual believes that using a particular system will improve his or her work performance and describes the perceived ease of use as the degree of belief to which a particular system to be learned easily without effort.

In TAM, the direct effect of belief on an intention of a system use is evidenced by the fact that the user can still use the system to improve his/her performance even though he/she has a negative attitude towards the system. (Davis and Venkatesh, 1996). The belief of the person towards a system may be influenced by other factors referred to as external variables in TAM.