Exploring the Relationship between Personality Traits and Motivational Factors in Utilizing Electronic Library in Taiwan

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Abstract- **This research investigates the association between personality traits and motivations driving the usage of electronic libraries. Employing a questionnaire survey, and data were collected from 303 customers having the experiences of using electronic library. Regression analysis results proved that conscientiousness has a positive relationship with convenience motivation and information motivation respectively. Moreover, there is a positive correlation between openness and motivation for entertainment, while neuroticism displays a positive relationship with motivation for escape.**

Index Terms --- **five-factor model, personality traits, motivations, electronic library.**

I. INTRODUCTION

An electronic library primarily relies on computer systems to carry out a significant portion of its daily operations. These operations encompass tasks such as cataloging, searching and identifying relevant documents, circulating and lending library materials, user registration, managing document orders, acquiring new materials, overseeing serials and collection management, and tracking usage statistics. The term "electronic library" pertains to the management of documents and operations, although the content can also be in printed format. Electronic libraries have gained substantial popularity due to various reasons. Firstly, digital journals can be seamlessly linked with indexing and abstracting databases. Secondly, users can access library resources from the convenience of their homes, offices, or dormitories, regardless of the physical library's operating hours. Thirdly, electronic libraries can obtain usage statistics that are typically unavailable for print collections. Lastly, digital collections offer space-saving benefits and are comparatively easier to maintain (Quadri et al., 2018).

. While several studies have examined the phenomenon of electronic libraries, few have explored the relationship between a user's personality traits and their motivation for using them." Actually, understanding users' motivations helps to understand users' behaviors (Snepenger, King, Marshall & Uysal, 2006). In addition, Teng, Huang, & Tsai (2007) suggested that personality traits are the important predictors of motivations, since personality is regarded as an important factor in many connection. This research explores the relationship between personality traits and motivations for using electronic library. we can clearly understand users'

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behaviors in related activities. However, to our best knowledge, no research has explored this issue. This research seeks to explore the relationship between user's personality traits and motivation for using electronic library.

II. LITERATURE REVIEW AND HYPOTHESES

Personality Traits and Motivations for Using Electronic Library

The primary dimensions underlying personality are neuroticism, extraversion, openness, agreeableness, and conscientiousness, as identified by Digman (1990). Individuals with high levels of Neuroticism exhibit traits such as worrying, fear, guilt, sadness, anger, embarrassment, and disgust (Yamagata et al., 2006.) Conversely, those who score high in Extraversion tend to display sociable, assertive, talkative, and highly active characteristics (Digman, 1990).

Individuals with high levels of openness are often characterized by their curiosity, creativity, and imagination (Digman, 1990). Those who score high on agreeableness tend to exhibit helpfulness, sympathy towards others, a soft-hearted nature, cooperation, and a good-natured disposition. Conscientious individuals, with high scores in this trait, demonstrate purposefulness, determination, reliability, organization, strong willpower, and a propensity for achieving success (Major, Turner, & Fletcher, 2006). The Big Five traits have been associated with a wide range of behaviors, including job performance, leadership and well-being (Judge, Jackson, Shaw, Scott, & Rich, 2007, Singh, 2012). Nevertheless, their relationship with motivations for using electronic library has remained unexamined. To fill the gap, this paper tries to explore the effect of The Big Five traits on users' motivations for using electronic library, and this enables us to increasing our understanding of this growing phenomenon.

Furthermore, electronic library usage has also been proven to have significantly correlation with personality characteristics (Millera et al. 2010). Prior research proposed that there are many motivations for electronic library usage, this study found that information, entertainment, escape and convenience were four motivations for using electronic library related to the 5 personality factors. Information motivation means that users can obtain, read, and share abundant information from the electronic library (Ulusu, 2010). Entertainment motivation is that users regard electronic library as a platform for entertainment (Ulusu, 2010). Escape motivation means that users use electronic library to escape from problems in their daily lives (Sheldon ,

2008). Convenience motivation is that users can easily use electronic library conveniently (Millera et al. 2010).

A. Hypotheses

Conscientious people are apt to be self-disciplined and prepared for the future (Digman, 1990). In other words, responsible person have unique planning capabilities, and they emphasize efficiency (Major et al., 2006). Users can easily use Facebook as a TV station. In addition, those who are conscientious can easily get abundant information, this enables them to save time and efforts. The following are the presuppose hypothesis:

Hypothesis 1: Conscientiousness will have a positive correlation with convenience motivation for using electronic library.

Hypothesis 2: Conscientiousness will have a positive correlation with information motivation for using electronic library.

People with high openness tend to be open to new experiences and curious about new activities (Digman, 1990). This trait has been shown to be related to exploratory behavior (Digman, 1990). Therefore, we hypothesize that people with high openness are likely to use Facebook as a TV station for entertainment. Based on the above arguments, this study proposed the following hypothesis:

Hypothesis 3: Openness will have a positive correlation with entertainment motivation for using electronic library.

Larsen & Ketelaar (1991) fond that people who are neurotic tend to emphasize negative emotions, they are more negative than those who are low in neuroticism. In other words, they tend to worry about any affairs around them (Emmons, Diener, & Larsen, 1985). People with high neuroticism may use electronic libraries to escape the practical problems of everyday life. Based on the above arguments, this study proposed the following hypothesis:

Hypothesis 4: Neuroticism will have a positive correlation with escape motivation for using electronic library.

III. METHODOLOGY

The participants in this study were individuals with prior experience in utilizing electronic libraries. Convenient sampling was employed, and questionnaires were randomly distributed to 400 users in Taiwan. Out of the 312 questionnaires that were returned, nine were incomplete. The analysis focused on the remaining 303 complete questionnaires, resulting in an effective response rate of 75.75%. Among the 303 participants, 172 (56.76%) were male, while 131 (43.24%) were female.

3.1 Materials

Personality Traits

This variable was assessed by a 30-item scale developed by Gosling, Rentfrow, and Swann (2003). Respondents rated themselves on a scale from 1 = very disagreeable to 5 = very agreeable. The alpha coefficient of the measures was 0.92.

Motivation for Using electronic library

The measurement motivation in the research model is based on prior studies and has been adapted to suit the specific circumstances of utilizing an electronic library. The questionnaire items used in the research were sourced from Błachnio, Przepiórka, & Rudnicka's (2013) questionnaire. Each item demonstrates internal consistency surpassing the threshold of Cronbach's α of 0.7, indicating that the scale utilized in this research exhibits satisfactory reliability (Nunnally & Bernstein, 1994).

IV. RESULTS

This study constructed a 95% confidence interval for the mean weight, and the findings of regression analysis suggested that all of the hypothesis were fully supported. Conscientiousness has a positive effect on convenience motivation ($\beta = .32$, $p = .04 < .05$) and information motivation ($\beta = .31$, $p = .04 < .05$) respectively, hence Hypothesis 1 and 2 are support. Openness is positively associated with entertainment motivation ($\beta = .33$, $p = .04 < .05$), hence H3 was supported. Finally, neuroticism has a positive relationship with escape motivation ($\beta = .31$, $p = .04 < .05$), hence H4 was also supported. Furthermore, to avoid multicollinearity, this study found that the variance inflation factors in this study ranged from 1.02 to 1.12, revealing that it was suitable to use regression analysis in this research. The mentioned above proved that personality traits are important predictors of motivations for using electronic library.

V. DISCUSSION AND CONCLUSION

To further understand the phenomenon of using electronic library, this research was the first to explore the relationship between user's personality traits and motivation for using electronic library. The findings suggest that conscientiousness has a positive effect on convenience motivation and information motivation respectively. In addition, openness is positively related to entertainment motivation, and neuroticism is positively associated with escape motivation.

This study supplies some contributions. First, we plan to extend the issue to explore the motivations for using electronic library and users' behaviors. Therefore, we can have a clear picture about users' motivation and behavior in electronic library context. Second, The Big Five traits are often used in organizational behaviors context (Judge, Jackson, Shaw, Scott, & Rich, 2007, Singh, 2012), we further prove the important role of personality traits in motivations for using electronic library. Future study could further discuss this relationship in other country. In addition, the empirical findings contribute to practical guidelines. Electronic library manageres could emphasize the advantages of electronic library platform (e.g., supply of information) to attract conscientiousness users.

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