Chapter 30
The Effect of Flow Frequency on Internet Addiction to Different Internet Usage Activities

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ABSTRACT

This study investigated the online flow frequency among college students in regard to different internet activities, and analyzed the effect of flow frequency on internet addiction. This study surveyed 525 undergraduate internet users in Taiwan by using convenience sampling to question participants. In this paper, analysis of variance (ANOVA) was performed to examine the differences in usage activity regarding the level of flow frequency. To test the effects of the flow frequency factor on perceived internet addiction, multiple regression analysis was performed for the constructs of internet addiction from different internet usage activities. The analytical results indicate that online gaming by undergraduates in Taiwan reporting higher level of flow frequency than their primary internet activities and their flow frequency of online gaming will predict internet addiction.

INTRODUCTION

The rapid development of information technology has led to the high percentage of internet users all over the world. Recently, an internet usage survey released by the Office for National Statistics of Great Britain in May, 2014, reported that 91% of young adults aged 16 to 24 used the internet more frequently than other age groups do. This age group was most likely to engage in online activities that are perceived as providing enjoyment, such as social networking (91%) and playing games (68%). The survey also reported that in 2014, the use of email was the most common activity undertaken on the internet by adults in Great Britain. According to a survey on broadband usage from the Taiwan Network Information Center, over 99% of college students frequently use the internet, 64.31% of broadband internet users use

internet communities, ranking first, while 51.45% use instant messaging, ranking second, followed by searching and playing games. In Taiwan, free unlimited internet service is provided to college students. Most people agree that technology and internet use by college students allow for a healthy diversification in society (Hampton & Wellman, 2001; Jones, 2008; Kraut et al., 2002). Despite its positive effects, the college student population is especially susceptible to internet use-related problems. Students fall behind in their studies and tend to spend less time with people, resulting in more arguments and increased impatience, and straining relationship due to abusing the internet (Young, 1999). Thus, internet addiction has become an important issue of mental health for college students.

Internet addiction has been cited as characterizing an unhealthy use of the internet, resulting in withdrawal symptoms, tolerance for stimuli, compulsive use, and time management problems (Young, 1999). Over the past decade, researchers and educationists have demonstrated that many college students are addicted to popular internet activities (Davis, 2001; Ko et al., 2009). Recently, (Yang & Tung, 2007) noted that students afflicted with psychological disorders such as dependence, extreme shyness, depression, and low self-esteem had a high tendency to become addicted to the internet.

Studies have shown that increasing numbers of researchers have applied the flow construct to different fields. The popularity of the internet, and its tremendous potential for business and marketing, has made humanity ever more dependent on the internet. In the last decade, flow has been studies in the context of information technologies and computer-mediated environment. More researchers have started to focus on the flow phenomenon in the internet environment, and suggest that internet usage and e-commerce can facilitate the occurrence of flow (S. Chen, Weng, Su, Wu, & Yang, 2003; Novak, Hoffman, & Yung, 2000). Flow has been examined during specific internet activities, such as online game (Chou & Ting, 2003; Hsu & Lu, 2004), in online chat rooms and while browsing specific Web sites (Shoham, 2004). With regard to internet addiction, most published research has mainly centered their investigations on the demographic differences between overall flow experience and internet addiction, such as the impact of gender, education level and the kinds of related internet activities (Carmody, 2012; Novak et al., 2000; Yen, Yen, Chen, Tang, & Ko, 2009). Applying flow experience components and flow frequency to internet addiction is a new line of research and not much has been done, the purpose of this study was to examine internet usage differences in flow frequency and to test whether and how flow frequency may contribute to internet addiction.

LITERATURE AND HYPOTHESIS

Flow was defined as "the holistic sensation that people feel when they act with total involvement. When people are in flow, "they become absorbed in their activity" (Csikszentmihalyi, 1975, p. 72) The mode is characterized by a narrowing of the focus of awareness, loss of self-consciousness, a responsiveness to clear goals and unambiguous feedback, and a sense of control over the environment (Csikszentmihalyi, 1997). Flow experience refers to those optimal, extraordinarily enjoyable experiences when people engage in an activity with total involvement and concentration, (Csikszentmihalyi, 1975), which in recent years has been applied to understand the behavior while using internet by researchers (S. Chen et al., 2003; Hoffman & Novak, 1996; Novak et al., 2000). Following (Csikszentmihalyi, 1975)'s work, (Hoffman & Novak, 1996) develop a theoretical model of flow in a computer mediated environment, and indicate that the antecedents to flow include challenges, skills, focused attention, interactivity, and telepresence. Their model also shows the consequences of flow are increased learning, perceived control, exploratory

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