

## A Study on the Effects of Internet Addiction on College Students' Foreign Language Learning

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### Abstract

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The main objective of this study was to explore the influence of Internet addiction on foreign language learning performance in Taiwanese college students. The questionnaire survey method was employed. The participants of this study were college students from non-English language departments in Taiwan. The Chen Internet Addiction Scale was used to measure the level of Internet addiction of the participants. The SPSS software was used to perform statistical analyses. The main findings of the study included the following: (1) There were statistically significant differences between English proficiency test performance and Internet addiction; (2) There were no statistically significant differences between English proficiency test performance and “Compulsive use of Internet” and “Withdrawal symptom;” (3) the amount of Internet use among students with better English proficiency test performance had an increasing trend; (4) students with good English proficiency test performance had better interpersonal relationships and health than students with poorer performance; (5) students with good English proficiency test performance were less influenced by the Internet when planning their life. The research results were discussed and suggestions for future research were proposed.

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**Keywords:** foreign language learning, Internet addiction disorder, higher education, Chen Internet Additional Scale

### 1. Introduction

With the rise of the Internet, the acquisition of new knowledge via the Internet has become an integral part of student life, which has substantially affected their learning methods and had an impact on educational workers. Many researchers have given a positive appraisal of Internet resource integration in teaching and learning (Lee, 1997). However, the overuse of the Internet causes Internet addiction, which negatively affects studies, work, and social life. This problem has drawn the attention of many scholars. Further research is necessary to explore the effects of Internet addiction on learners belonging to different ethnic groups. This study examined the influence of Internet addiction on foreign language learning in Taiwanese college students. In the modern environment of Internet popularization, foreign language learners differ from past learners in terms of their learning conditions. The results of this study can give educational workers a better understanding of the influence of Internet addiction on foreign language learners. Furthermore, the results provide a reference for the development of foreign language teaching strategies that allow for the effective use of Internet resources, as well as measures for combating Internet addiction among foreign language learners.

Based on the above research motivations, objectives of this study included the following:

1. Explore the influence of Internet addiction on college students' foreign language learning performance.
2. Explore the influence of the Internet addiction factor “Compulsive symptom” on college students' foreign language learning performance.
3. Explore the influence of the Internet addiction factor “Withdrawal symptoms” on college students' foreign language learning performance.
4. Explore the influence of the Internet addiction factor “Tolerance symptoms” on college students' foreign

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language learning performance.

5. Explore the influence of the Internet addiction factor “Interpersonal & Health Problems” on college students’ foreign language learning performance.
6. Explore the influence of the Internet addiction factor “Time Management Problems” on college students’ foreign language learning performance.

## 2. Literature Review

Studies on Internet addiction and the relationship between Internet addiction and learning performance are discussed below.

The term “Internet Addiction Disorder” (IAS) was first proposed by the American physician Goldberg in 1995 (Beato, 2010). The first paper in this field was presented by Kimberly Young during the annual meeting of the American Psychological Association (APA) in Toronto, Canada, in 1996 (Young, 1996). The paper proposed that people can become addicted to the Internet, with Internet addiction symptoms including an obsession with being online and feelings of uneasiness and agitation when trying to reduce the duration of Internet use. Young and Rogers (1998) maintained, “Effective management of psychiatric symptoms may indirectly correct pathological Internet use.” Furthermore, Young (1999) declared Internet addiction to refer to “behaviors and impulse control problems.” However, Griffith (2000) argued that, in many cases, people overuse the Internet not due to Internet addiction but due to their addiction to other things.

With regard to education, many researchers have discussed the influence of Internet addiction on students’ learning and concluded that this influence was negative. For instance, according to C. C. Lin (2004), university and college students are at a higher risk of Internet addiction; on average, students with poorer academic performance and students who were less satisfied with their performance spend more time using the Internet each week (M. P. Lin, 2004). Cheng, Lin, and Tsai (2008) examined the influence of online game addiction on college students and found that online game addiction negatively affected their physical and psychological health and learning attitudes. For many students, social life is the main motivation for Internet use. For example, students use social media to maintain contact with long-distance friends (Hsiao, 2014).

With regard to research on Internet addiction among elementary and junior high school students, scholars have found correlation between the psychological environment in the family and Internet addiction. For example, C. C. Lin (2004) explored problematic Internet use among elementary and junior high school students and found that in addition to personal characteristics, their Internet addiction was affected by parents’ attitudes and students’ information skills. Chang (2009) studied the relationship between parenting attitudes and family’s psychological environment as perceived by junior high school students and their Internet addiction. The results indicated a positive correlation between Internet addiction and parents’ neglect and hostile parent-child relationships. With regard to family’s psychological environment, focus on care and communication in parent-child relationships and low frequency of conflicts were significantly and negatively correlated with students’ Internet addiction. Furthermore, a family’s socio-economic status was also found to be a significant predictor of Internet addiction.

The literature review demonstrated that the influence of Internet addiction on students’ learning involves multiple aspects. Moreover, Internet addiction behaviors can be affected by various factors. This study explored the effects of Internet addiction on foreign language learning performance in college students.

## 3. Research Methodology

### 3.1 Participants

The participants in this study were students from the non-English language departments of a university in Taiwan, who took a compulsory English language course.

There were 201 participants in this study; the effective sample included 149 participants. None of the participants were able to pass a test equivalent to the 457 or higher score range of the paper-based TOEFL. Furthermore, all the participants were able to use Internet resources.

### 3.2 Research Tools and Methods

This study employed quantitative research methods. The instrument used was the Chen Internet Addiction Scale (CIAS) (Chen, 2003). The factor structure of Internet addiction in CIAS includes “Internet Addition Tendency” and “Internet Addition Core Symptoms.” The factor, “Internet Addition Tendency,” includes “Compulsive symptoms,” “Withdrawal symptoms,” and “Tolerance symptoms.” “Internet Addition Core Symptoms” include “Interpersonal & Health Problems” and “Time Management Problems.” The scale included 26 items, with scores ranging between 26-104 points and higher scores indicating a higher degree of Internet addiction. According to the cut-off point set in CIAS, students with scores equal to or higher than 64 points were considered to be at a high risk of Internet addiction; students with scores equal to or higher than 68 points were suspected to have Internet addiction (Ko, 2009).

This study included the participants’ General English Proficiency Test (GEPT) scores in the analyses. GEPT has been conducted in Taiwan since 2000. The test includes listening, speaking, reading, and writing tasks and consists of five proficiency levels. GEPT can be used by Taiwanese schools and government-run and privately owned institutions to evaluate examinees’ English language proficiency. According to the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR) published by the Language Training & Testing Center (LTTC), GEPT elementary level corresponds to the 390 or higher score range of the paper-based TOEFL, the intermediate level of GEPT corresponds to the 457 or higher score range of the paper-based TOEFL, the upper-intermediate level of GEPT corresponds to the 527 or higher score range of the paper-based TOEFL, and the advanced level of GEPT corresponds to the 560 or higher score range of the paper-based TOEFL (The Language Training & Testing Center, 2017). Statistical analyses of research data were performed using SPSS software and aimed at testing the significance of the differences in CIAS and GEPT scores. ANOVA analyses were conducted to test the effects of “Compulsive symptoms,” “Withdrawal symptoms,” “Tolerance symptoms,” “Interpersonal & Health Problems,” and “Time Management Problems” on foreign language performance.

### 4. Research Findings

The results indicated that the participants’ CIAS score ranged from 27 to 89, with a mean of 54.6 and a standard deviation of 10.8. The alpha value of “Compulsive symptoms” was 0.052, which was greater than 0.05, indicating a non-significant relationship between compulsive symptoms and English proficiency scores. The alpha value of “Withdrawal symptoms” was 0.322, indicating a non-significant relationship between withdrawal symptoms and English proficiency scores. The alpha value of “Tolerance symptoms” was 0.010, which was smaller than 0.01, indicating a highly significant relationship between tolerance symptoms and English proficiency scores. Hence, students with higher English proficiency scores demonstrated an increasing tendency in Internet use. The alpha value of “Interpersonal & Health Problems” was 0.013, which was smaller than 0.05, indicating a significant relationship between interpersonal and health problems and English language performance. Thus, students with higher English proficiency scores had better interpersonal relationships and health than students with poorer performance. The alpha value of “Time Management Problems” was 0.051, which was greater than 0.05, indicating an insignificant relationship between time management problems and English language performance. The ANOVA analysis results related to Internet addiction generated a value of 0.014, which reached the significance level. The average difference for Option 4 (“Definitely matches my experience”) in relation to other three options was 9.212, indicating a greater degree of Internet addiction than in Options 1 (“Does not match my experience at all”), 2 (“Probably does not match my experience”), and 3 (“Probably matches my experience”). The “alpha” value of Option 1 (“Does not match my experience at all”) was 0.01, which was smaller than 0.05, indicating a significant relationship between English language performance and Internet addiction (Table 1).

Table 1 (A) Total CIAS score

	Sum of Squares	df	Mean Sum of Squares	F	Significance
Between-group	1218.357	3	406.119		
Within-group	16058.341	145	110.747	3.667	.014*
Total	17276.698	148			

(B) ANOVA analysis results

		Sum of Squares	df	Mean Sum of Squares	F	Significance
Total CIAS score	Between-group	1218.357	3	406.119		3.667.014*
	Within-group	16058.341	145	110.747		
	Total	17276.698	148			
Com	Between-group	48.233	3	16.078		2.635.052
	Within-group	884.801	145	6.102		
	Total	933.034	148			
Wit	Between-group	20.541	3	6.847		1.173.322
	Within-group	846.104	145	5.835		
	Total	866.644	148			
Tol	Between-group	44.170	3	14.723		3.952.010**
	Within-group	540.192	145	3.725		
	Total	584.362	148			
IH	Between-group	124.426	3	41.475		3.701.013*
	Within-group	1624.996	145	11.207		
	Total	1749.423	148			
TM	Between-group	55.346	3	18.449		2.652.051
	Within-group	1008.614	145	6.956		
	Total	1063.960	148			

\*As  $p < 0.05$ , the result is statistically significant.

\*\*As  $p < 0.01$ , the result is statistically highly significant.

\*\*\*As  $p < 0.001$ , the result is statistically extremely significant.

## 5. Discussion and Conclusion

The analysis results indicated a significant relationship between academic performance and Internet addiction. These results differed from previous findings which indicated stronger Internet addiction in students with poorer academic performance (C. C. Lin, 2004). A potential reason for this was a substantial change in the transmission function and popularization of the Internet during the last ten years, which has gradually changed its influence on the educational environment. Participants with higher English proficiency scores were found to have stronger Internet addiction than students with poorer performance. These findings can be explained by the fact that the Internet is a tool widely used by students and those who frequently use the Internet do not necessarily play online games or indulge in social media. The Internet is an important tool for data search and knowledge acquisition. Moreover, some students need to use the Internet on a daily basis due to the nature of their assignments. These students may be at higher risk of Internet addiction.

The Internet addiction factors “Compulsive use of Internet” and “Withdrawal symptoms” were not found to be significantly related to English proficiency performance, which indicated that participants with better performance did not feel an uncontrollable urge to constantly use the Internet and did not suffer when they did not use the Internet. In contrast, those who have Internet addiction may experience anxiety as an Internet withdrawal symptom. It is suggested that participants with better performance used the Internet only to search for reference data or complete assignments. They used the Internet as a tool while avoiding its addictive functions. Therefore, no significant relationship was observed between “Compulsive use of Internet” and “Withdrawal symptoms” and academic performance.

The Internet addiction factor “Tolerance symptoms” was found to be significantly related to English proficiency performance. In psychology, tolerance refers to the need to increase substance use to achieve a poison or desired effect or a substantial decrease in the effect of the original amount of substance use (Chen, 2003). The amount of Internet use among students with good English proficiency performance had an increasing tendency. The Internet is relied upon in almost all aspects of modern life. However, under the current educational system in Taiwan, elementary and junior high school students usually use the Internet to play games or use social media tools, and less so for research pertaining to their schoolwork. As college and university students are required to develop independent thinking and problem-solving skills, they often use the Internet to search for data related to their studies. Students with better performance may spend more time using the Internet for learning.

The Internet addiction factor “Interpersonal & health problems” was found to be significantly related to English proficiency performance. Students with better English proficiency performance had better interpersonal relationships and health than students with poorer performance. Furthermore, students with better performance were better able to control their desire to use the Internet. Despite the increased Internet use, they did not reduce their interpersonal interactions or abandon leisure activities. Although students with poorer English language performance realized that their health problems and interpersonal relationship issues were caused by excessive Internet use, they were not able to control their Internet use.

The Internet addiction factor “Time Management Problems” was not found to be significantly related to English proficiency performance. The results indicated that students with better English proficiency performance were not absent-minded in the daytime due to late-night Internet use and did not eat irregularly due to Internet use. These students were able to stick to their planned schedules and the Internet did not interfere with their life.

In conclusion, this study discussed the relationship between college students’ English language performance and Internet addiction, as well as the factors of Internet addiction, including “Compulsive use of internet,” “Withdrawal symptom,” “Tolerance symptoms,” “Interpersonal & health problems,” and “Time Management Problems.” The results indicated a close link between the effective management of Internet addiction and efficient learning. However, English proficiency performance was included in the analyses as a variable. English proficiency performance can be affected by accumulated learning time and reading habits. Foreign language learning in elementary and high school generally requires learning to happen outside of school at one’s own expense. Therefore, further research is needed to determine whether the educational resources provided in the family environment are one of the influencing factors.

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