

ภาวะการติดอินเทอร์เน็ตหลังโควิด: จากการสำรวจแนวโน้มพฤติกรรมของ  
นักศึกษา ณ มหาวิทยาลัยแห่งหนึ่งในประเทศไทย

The Rise of Internet Addiction Post-COVID: Exploring Trends in  
Online Behavior at a Thai University

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บทคัดย่อ

การใช้งานอินเทอร์เน็ตมากขึ้นไปเหมือนจะเป็นกระแสที่พบบ่อยระหว่างและหลังการระบาดของ  
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อินเทอร์เน็ต พร้อมทั้งเสนอแนะมาตรการป้องกันสำหรับปัญหาในยุคหลังโควิด ข้อมูลถูกรวบรวมจากนักศึกษา  
คณะครุศาสตร์ จำนวน 244 คน จากมหาวิทยาลัยแห่งหนึ่งในภาคตะวันออกเฉียงเหนือของประเทศไทย โดยใช้  
แบบทดสอบการติดอินเทอร์เน็ต และการสะท้อนความเห็นรายบุคคล มีการวิเคราะห์การสะท้อนคิดโดยใช้  
ความถี่ของคำ ผ่านโปรแกรมคลังคำทางภาษาศาสตร์ AntConc ซึ่งเป็นฟรีแวร์สำหรับชุดเครื่องมือวิเคราะห์  
คลังข้อมูลเอกสารประสมค์ ผลลัพธ์เชิงปริมาณพบว่านักศึกษาจำนวน 133 คน (54.5%) ถูกระบุว่าติด  
อินเทอร์เน็ตในระดับปานกลาง ในขณะที่นักศึกษาจำนวน 4 คน (1.8%) มีการพึ่งพาอินเทอร์เน็ตอย่างรุนแรง  
นักศึกษาจำนวน 92 คน (37.5%) มีการติดอินเทอร์เน็ตในระดับเล็กน้อย และนักศึกษา จำนวน 16 คน (6.3%)  
เท่านั้นที่ถูกกำหนดให้เป็นการใช้อินเทอร์เน็ตในระดับปกติ ประเด็นหลักจากความถี่ของคำที่ AntConc เผยให้  
เห็นว่าการป้องกันที่เป็นไปได้คือ ครอบครัว เพื่อน และกีฬา การรักษาที่เป็นไปได้เหล่านี้ที่รายงานโดยนักศึกษา  
ใหม่นั้นสอดคล้องกับโมเดล CBT (Cognitive Behavioral Therapy) ที่ใช้ในการรักษาผู้ที่ติดอินเทอร์เน็ต ข้อ  
ค้นพบจากการศึกษาครั้งนี้มีประโยชน์สำหรับคณาจารย์ของมหาวิทยาลัยที่ต้องการจะลดการติดอินเทอร์เน็ต  
ของนักศึกษาในมหาวิทยาลัย คณาจารย์สามารถใช้ข้อค้นพบเหล่านี้ เพื่อสร้างโปรแกรมการรักษาและการเรียน

การสอนที่เน้นประเด็นปัญหาเฉพาะและตัวกระตุ้นที่เกี่ยวข้องกับการใช้อินเทอร์เน็ตมากเกินไปของนักศึกษา  
กลยุทธ์เชิงรุกนี้สนับสนุนความสำเร็จทางวิชาการและการสร้างสภาพแวดล้อมออนไลน์ที่ดีขึ้น

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ภาวะหลังโควิด

## ABSTRACT

The excessive use of the Internet seems to be a common trend during and after the COVID-19 pandemic as everything has to be done online. This situation has made students engage in varied virtual world activities, such as, learning, communication and entertainment leading to Internet Addiction (IA). The study aims at raising students' awareness of the possibility of becoming an Internet addict, as well as suggesting preventive measures to the problem in post-COVID era. Data were collected from 244 First year student teachers in a Northeastern university in Thailand using Internet Addiction Test, and individual written reflections. Word frequency corpus-based analysis was employed using AntConc, a freeware used for multi-purpose corpus analysis toolkit, for the quantitative data and thematic analysis was used for analyzing the written reflections. The quantitative results revealed that 133 participants (54.5%) were identified as having moderate level of internet addiction while 4 participants (1.8%) have had severe dependence upon the Internet. Accordingly, 92 participants (37.5%) had mild level of Internet addiction while only 16 students (6.3%) were defined as normal level of Internet usage. Salient themes, codes generated from word frequency provided by AntConc, revealed possible treatment were family, friends, and sports. This possible treatment reported by the First year student teachers is in line with the CBT (Cognitive Behavioral Therapy) model that is used in treating people with Internet addiction. The findings of this study can be useful for University's teachers in Reducing state of Internet addiction among students on campus. All teachers can use these findings to create treatments and instructional programs that focusing the unique issues and triggers which related to students' excessive internet use. This method supports academic success and general well-being in addition to creating a better online environment for students.

**Keywords:** First year student teachers; Internet addiction; self-reflections; Post-COVID

## Introduction

Over the past few decades, the number of Internet users worldwide has drastically increased with an estimated number of Internet users in the world in January 2021 at 4.66 billion. Chia et.al (2020) reported that Asia is recognized as one of the highest internet societies in the world since 2007. Statistic shows that 49.7% of internet users resides in Asia. In Southeast Asia, the Internet Penetration Rate (IPR), defined as the percentage of the total population who use the Internet, was the highest for Brunei (94.9%) as of June 2019, followed by Singapore (84.5%) and Thailand (82.2%). By observing these numbers, it can be seen that the Internet can be a very alluring virtual place. Online games, social media platforms, entertainment videos, engrossing web series, and interesting Youtube channels can keep an individual hooked up for hours. People, especially teenagers and young adults, use the Internet to beat loneliness and tedium and end up attached to it unknowingly. According to Gracia and Herrero's (2009) study in

Europe found that 68% of people between the ages of 16 and 24 use the Internet as opposed to 27% of people over the age of 54 and only 10% over the age of 65.

Using of heavy internet can be pathological and addictive and that is labelled under ‘technological addiction’ which possibly reinforce addictive tendencies (Griffiths, 1995). The term “Internet Addiction” or IA has appeared in the psychiatric lexicon that identifies problematic Internet use associated with significant social, psychological, and occupational impairment (Brenner, 1996). Internet addiction was first studied by Young (1996), who also highlighted how it affected relationships, especially with youth. In addition, it based on revisions to the DSM-IV criteria, telephone surveys showed that problems with relationships, work performance, and studying resulted from 38 hours per week spent online for leisure. The biopsychosocial addiction paradigm (Griffiths, 2005) is supported by this. For this reason, the Internet addiction is seen as one of the global issues since it is perceived as a behavioral addiction that affects individuals’ live (Griffiths, Miller, Gillespie & Sparrow, 1999) and (Kuss, Kristensen & Lopez-Fernandez, 2020).

## Literature Review

### Internet Addiction in Thai context

Research on IA in Thailand has mainly focused on adolescents and adults in varied social contexts. Studies have been conducted in different regions of Thailand over the past decade in order to observe detrimental impacts resulting from the heavy use of the Internet. For example, Dangkrueang et al. (2013) investigated the relationship between social skills and loneliness among teens in the northern area of Thailand and internet addiction. They discovered that 14.75% of participants were internet addicts and that there was a connection between loneliness and addiction. Further research on internet addiction among freshmen student teachers in Northeastern Thailand during COVID-19 was warranted for future prevention initiatives. Mph (2015) investigated Facebook addiction among Thai teens, noting that 41.8% were addicted.

### The Current Study

There were 244 First year student teachers participating in this study. All of the students are studying in the Faculty of Education in a university in the Northeast region of Thailand. They are from different majors, such as, General Science, Thai, Primary Education and English. The total number of First year student teachers in the Academic year 2023 was 600. The sample size of this research was 240 as calculated using Yamane (1973) formula with 95% confidence level. Therefore, the 244 participants are considered as representative of this group of First year student teachers in this university.

## Objective

1) To determine the probability that incoming student teachers after COVID will develop an addiction to the internet.

2) To provide possible solutions for internet addiction in order to improve academic achievement from the viewpoints of first-year students.

## Methodology

### Research Instruments:

#### Phase One: Internet Addiction Survey

Internet Addiction Test (Young, 1998)

1) A 20-item scale measuring the presence and severity of Internet dependency.

2) Utilizes a 5-degree Likert type scale to assess involvement in online activities.

3) Criteria include loss of control, neglect of everyday life, relationships and alternative recreation activities, behavioral and cognitive salience, negative consequences, escapism/mood modification, and deception.

#### Phase Two: Individual Written Reflections

1) Participants wrote about their experiences of excessive Internet use and how it could affect their lives.

2) Invited to brainstorm possible reasons for becoming Internet addicts and discuss potential cures if they showed symptoms of Internet addiction.

### Data collection

There were two phases in the data collection process. First, the quantitative data was collected by Internet Addiction Test and second, the qualitative data was obtained through individual written reflections As following.

#### Phase One: Internet Addiction survey

The questionnaire was distributed to participants in their classes to meet for about 30 minutes at an agreed day/time. The questionnaires were anonymous and self-administered. Teachers left the classrooms during the 30-minute period to avoid any possible information bias. The questionnaire contained 3 parts: 1) The Internet Addiction Test, 2) Summary of scores, and 3) Short answers on whether they were surprised by their scores or not.

#### Internet addiction test

For easy accessibility, Google Form survey was used to reach the anticipated participants. The Internet Addiction Test (Young, 1998) is a 20-item scale that measures the presence and severity of Internet dependency. The test measures the degree of involvement in online activities using responses on the 5-degree Likert type scale. The criteria include loss of control, neglecting everyday life, relationships and alternative recreation activities, behavioral and cognitive salience, negative consequences, escapism/mood modification, and deception.

#### Phase Two: Individual written reflections

After each participant had known their results from the survey. The researcher acted as moderator in leading group discussion to all participants. Brainstorming possible reasons for becoming Internet addicts were expressed by the participants. At this stage, the participants were invited to talk about their experiences of excessive use of the Internet and how that habit could affect their lives, so they could write their reflections about their internet usage and possible cure if they have the symptom of internet addiction.

### Data Analysis

#### Phase One: Survey data

The score of the total scale ranges from 20 to 100. Each item is rated on a 5-point scale ranging from 0 to 5. The maximum score is 100 points. It means the higher the score, the higher the severity of participants' problem. Total scores ranging from 0 to 30 points are considered to reflect a normal level of Internet usage; scores of 31 to 49 indicate the presence of a mild level of Internet addiction; 50 to 79 reflect the presence of a moderate level; and scores of 80 to 100 indicate a severe dependence on the Internet.

#### Phase Two: Thematic analysis

The study examined written reflections on treating internet addiction, utilizing thematic analysis. Initial analysis was conducted using AntConc software, sorting words

into themes to identify codes related to treatment (Anthony, 2004). In order to get the general idea of what was said in the written reflections about possible treatment for Internet addiction from the participants, the data, 26,969 words, was first converted into text file and were put in the corpus analysis using the program called 'Antconc'. As "word frequency count can be used to help generate codes" (Pojanapunya and Watson Todd, 2011), word list was obtained and words were grouped according their relevant to the concept of 'treatment for Internet addiction'.

After all the data were coded into categories according to the word frequency from AntConc, the data were collated to see which types of treatment were reported by the participants.

## Results

### Phase One: Survey results

Of the 244 students, 133 (54.5%) were identified as having moderate level of internet addiction while 4 of them (1.8%) have had severe dependence upon the Internet. 92 students (37.5%) had mild level of Internet addiction. Only 16 students (6.3%) were defined as normal level of Internet usage. None of them was surprised by the results since they realized that they tended to have extensive use of Internet during online learning. The results presented that nearly 93% of the participants were having symptoms of Internet addictions at different degree.

### Phase Two: Thematic analysis results

In this section, words derived from AntConc's frequency analysis revealed salient themes related to treatment of excessive use of Internet such as activities, family, friend, and sports. All of these themes are further discussed, alongside written excerpts from the participants. Word frequency from AntConc analysis were selected by focusing on nouns since this type of lexical category presents the clear idea of what the participants see as vital concept for Internet addiction. Goldin-Meadow, Butcher, Mylander and Dodge (1994, p. 259) also confirmed that a noun has a crucial language function as "it also appears to be central to the structure and function of language". For this reason, 7 most frequent nouns appeared in AntConc' word lists were presented.

Table 1

*Word frequency from written suggestion*

Rank	Word	Frequency
1	Internet	777
2	Time	239
3	Way	257
4	Activities	198
5	Family	141
6	Friends	138
7	Sports	126

There were five categories derived from the word list; *Internet* (e.g. reduce, cure, disorder, prevent, time, way), *activities* (e.g. enjoy, outdoor, doing, various), *family* (e.g. therapy, fun, warmth), *friend* (e.g. meeting, catch up, going out), and *sports* (e.g. playing, indoor, outdoor).

When the data was read and checked manually, words on the word list that did not directly relate to the research focus would be reconsidered. For example, the words Internet did not really convey the meaning of how the prevention and treatment. That was why the top three-word frequencies were collapsed into the same theme since the



participants mentioned their general symptoms on Internet addiction. The three words (Internet, time and way) were used by the participants to reflect their own situations of excessive Internet use and how it could affect their lives. Thus, the data was read again until the salient point was found and grouped into four possible treatments suggested by the participants.

From the thematic analysis, there were four themes that led to the possible treatment. Therefore, two salient themes were found as follows;

### ***Self-reflection on excessive use of the Internet***

The terms "internet," "time," and "way" were often used by participants to characterize their online usage habits. Findings from the survey took some by surprise, pointing to possible problems including depression and familiarity with academics. These excerpts showed the usage of three words, internet, time and way, appeared frequently on the word list generated by AntConc.

*"I think nowadays people spend more than 8 hours a day on their mobile phones. Checking social media, reading news, working online all the time is part of life. Many people forget to do other activities. And become addicted to mobile behavior. Using social media and mobile phones is not wrong. But overuse is bad for us"* (participant no.20)

*"The Internet is quite addictive because it makes us connect to people. However, being addicted can waste time and affect health. Some people may spend the whole night on the internet and do not get enough sleep. So, the internet should be used with limit. In this way, the time to use the internet should be set, so we do not spend all day with it and end up doing nothing else."* (participant no.216)

From these responses, it can be seen that most of the participants realized the effect of becoming Internet addicts but they have never had a chance to do any proper test to see if their Internet consumption exceeds the normal level or not. During the group discussion, one of the participants expressed her surprise that she nearly got full score from the test and realized for the first time that she needed to withdraw from using her phone.

### ***Possible Activities for Treating Internet Addictions***

Activities were shown on AntConc's word list as the first word containing ideas about how to deal with Internet addiction. The frequently also pointed out at high level, and the content seemed to be explaining their "activities" online and the prevention or possible cure. Therefore, this word often occurred with other nouns to indicate a clearer way for treatment such as "activities with family", "do activities with friends" or "doing outdoor activities". For this reason, the word 'activities' would be used as the umbrella word for suggested activities which include family, friends and sports.

### ***Family***

Family has become the first thing that Thai First year student teachers think of as observed by the word frequency in the text. Thai culture focuses heavily on strong family bond, like most Asian cultures, Thais young teenagers are closer to their families compared to any other age range. Therefore, when the First year student teachers realize that they have had a problem about excessive use of the Internet, they often think of their families as the first sources of cure. This cultural bound aspect shows in every aspect of their lives, from communications to solving problems, Thai teens still value their families as the first choice to seek for advice. The following excerpts from the participants presented their opinions about how family could be helpful for treating Internet Addiction.

*"In my opinion, there are a lot of things, for example doing things with family, cooking, exercising, or hanging out with friends. But during this time, most of what I can do is cooking and being with my family. It is an activity that, in addition to reducing Internet addiction symptoms" (participant no.28).*

*"Moreover, we will have more time for our family. We have a lot of time to talk with each other so it makes us happy. Therefore, this is the reason why I think staying with our family and doing activities together is the best way to help people decrease their use of the internet" (participant no.119).*

Some of the participants expressed their ideas that they became aware that the Internet was taking a huge amount of their time from their families. It is therefore hoped that the participants will spend their time developing their interpersonal relationship with their family members instead of chatting with others online. This is in line with Şenormancı et al., (2014) who observed that comprehensive treatment approaches including other family members may make important contributions to treatment success for Internet addicts.

### **Friends**

Sometimes, it can be hard to talk to family members about IA problems. A lot of the participants in this study reported that their family members complained about their use of mobile phones from time to time. For them, it was a bit hard to tell their family that they were prone to the problem of becoming Internet addicts. That is why it is important to have healthy friendships to turn to in times of need especially when friends also share similar situation and try to overcome the same problem. Friends can be that ear to talk to, shoulder to lean on and the non-judgmental attitude that teenagers need. They can also help increase a sense of belonging, improve self-confidence and help reduce stress and anxiety caused by the overuse of the Internet. The excerpts showed represented the participants' self-treatment by building relationship with friends.

*"To relieve stress, I have time to meet more people outside and talk about things with friends as well as a good way to build relationships between friends" (participant no.113).*

*"Sometimes I clean my room because my friends always come to my room to playing card. When my friends come to visit me, we spent time more than 3 hours to playing card. That's make my happy when I meet them" (participant no.129).*

The interesting point gained from the written reflection from the participant no.129 was that she played card game with her friends to avoid using Internet. This might lead to a problem of gambling if they are not warned in advance. Healthy and close friendships encourage positive mental health and well-being, so healthy activities should be promoted.

### **Sports**

The word "sports" also appeared frequently in the participants' written reflection as the form of treatment for avoiding screen addiction. They, however, realize that team sport might not be the plausible choice at the moment since social distancing is strictly applied. The participants echoed their future desires to engage in different kinds of sports in the near future since they had hoped that the situation might get better before the end of their semester, so they can possibly continue their physical activities as described in these excerpts.

*"I think the best way to stop using the Internet is to play sports. Playing sports can relax the brain, reduce the stress of internet addiction, can make*

*us have a healthy body, have active movements, help to strengthen emotional skills and have a clear mind. For example, playing volleyball, playing football, playing badminton, running or playing team sports" (participant no.13).*

*"I think the best way to stop using the internet is to play sports, exercise, because it's fun and enjoyable. Not stress and also makes us feel relaxed as well. It also makes us feel more active and want to play sports and exercise more" (participant no.224).*

The use of sports and physical exercise to cure Internet addiction is in line with what Park et al. (2016) reported that sports can be combined with clinical strategies or pharmacological to treat Internet addiction. Especially for adolescents, physical activities can be used to prevent and lessen Internet addiction by modifying and adopting self-control pursuit.

## Discussion

The results of this study indicated the pivotal role of self-awareness in addressing Internet addiction, serving as a foundation for learning and progress. Through recognizing their challenges via the Internet addiction test, participants embark on a journey of understanding and improvement. This process not only highlights the need for intervention but also fosters a conducive environment for learning and personal growth. One of the overarching problems with the Internet is that there is often no accountability and no limits especially in the time of the pandemic when nearly all activities have to be done online. Studies have shown that self-corrective behavior can be a useful treatment for Internet addicts since they need to withdraw themselves from the virtual world of their own will. Corrective behaviors include software that controls the Internet use and types of activities to reduce the heavy use of the Internet. This seems possible with the help of family, friends and doing activities such as sports as described earlier in the results section.

This study has presented interesting results on the current status of university students' Internet usage after the pandemic in a university in Northeastern Thailand. There has been limited literature touch upon this issue since most of the studies in educational field now tend to focus on academic aspect such as the students' experiences of learning online and how to better their technological knowledge to assist them with learning. However, exploring the inevitable situation of excessive use of the Internet can possibly be a starting point for psychological support needed. The results have practical implications to the faculty in proposing to them possible treatment for students IA in order to ensure students' balanced mental health in the long term. The findings can also help teachers who are teaching online during the pandemic to identify students who may have concentration issues due to excessive internet use. Apart from promoting students' academic development, considering their well-being as a person is also vital to prevent problems arising from the excessive use of the Internet. Students should be reminded to monitor their use of the Internet such as, watch a lot of YouTube videos, shop online frequently, or upload their short entertaining clips on TikTok. The trouble may come when these activities start to interfere with their daily life. It should also be acknowledged that most commonly identified categories of Internet Addiction include gaming, social networking, email, blogging, online shopping, and inappropriate Internet pornography use. In conclusion, the riskiness of Internet use can be just as important as the amount of time spent because teenagers tend to delve themselves into the very deep end of the virtual world except, they are warned. Further studies might consider possible risk factors of



Internet Addiction Disorder in university students such as physical impairments, social and functional impairments, emotional impairments, etc. Therefore, systematic prevention and treatment can be established on campus.

## Conclusion

In summary, the study highlights the significant role of self-awareness in tackling Internet addiction among university students. Participants' acknowledgment of their challenges through an Internet addiction test initiates a journey of understanding and personal development. This process underscores the need for intervention and creates a conducive environment for growth. The study identifies the lack of accountability and boundaries on the Internet, especially during the pandemic, as a major challenge. However, it suggests that self-regulatory behavior, such as using software to manage Internet usage and engaging in alternative activities like sports, can be effective in addressing Internet addiction. The findings have practical implications for educators, emphasizing the importance of addressing students' well-being alongside their academic progress, particularly during online learning. Moreover, promoting awareness among students about the potential risks of excessive Internet use is essential to prevent interference with daily life. Looking ahead, future research could explore additional risk factors for Internet Addiction Disorder among university students, leading to systematic prevention and treatment measures on campus.

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