

# The Social Networks Development for Establishing Measures for Preventing and Controlling the Negative Impacts and Controlling the Negative Impacts of Online Games Among Children and Youth

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## Abstract

Online games are now the new mainstream of the gaming industry due to their ability to reach a wide range of people, especially children and young people, who may encounter negative impacts from playing online games. Therefore, this study aimed to examine measures to prevent addiction to games and the dangers caused by playing online games among children and youth by using various research and development processes. This research employed a purposive sampling technique with public and private stakeholders. The results showed that measures to prevent game addiction and the dangers caused by playing online games set for schools can be summarized as Prevent - Investigate - Precautionary - Activity creation - Remedy (PIPAR). Implementing the results from research studies emphasizes on driving at all levels concretely. As for the practical level, it should be implemented in an integrated way with routine tasks and operate in a network to promote creative online games and prevent game addiction and the dangers caused by games to youngsters on a continual and sustainable basis.

**Keywords:** Social network, Children and youth, Online games, Game addiction, Measures

## Introduction

Since the COVID-19 outbreak, Thailand has been completely pushed into the Internet world. It was found that between 2019 -2020, internet users increased by more than 13%, from 44.4% to 57% (Statista Research Department, 2022)<sup>b</sup>. In 2020, Thailand was ranked 5th in the world, with people between the ages of 16 and 64 using the Internet daily, spending more than nine hours per day on average (Kemp, 2020). Although it has lower internet access rankings, according to the survey in February 2022, Thailand was ranked 18th in the number of Internet users worldwide (Statista Research Department, 2022)<sup>a</sup>, the number of people accessing the Internet continues to grow. In January 2021, the number of Thai internet users is approximately 48.59 million or 69.5% (Kemp, 2021), and will reach 77.8% in 2022 compared to the same month last year (Kemp, 2022).

Easy access to the Internet is a key factor that increases access to online games in Thailand. Another critical factor is the growth of smartphones. It is well known that the "gaming industry" is growing exponentially, especially in the current COVID-19 crisis causing people worldwide to use this service increasingly (Marketeer, 2021). It is estimated that the value of the global gaming industry was approximately 146 billion US dollars in 2019, which is higher than the value of the music industry and the global box office in 2019, two and three times, respectively. In 2021, there were 2.8 billion gamers, of which more than 2.5 billion people played games via smartphones, and in 2023, the game market will be worth up to 218 billion dollars (Marketeer, 2021). As for Thailand, at the beginning of 2022, the number of gamers reached 32 million, or 47% of all Thai people. It has a market value of over 1.1 billion US dollars, growing over 10% year-on-year (Marketeer, 2022).

If considered only economic impact, it is a good thing. Nevertheless, the impact on other aspects, mainly social and public health, may still be a problem that needs solution and prevention before it becomes a chronic social problem. More importantly, problems occur with children and youth who are vulnerable groups. They need to be protected from the adverse effects of playing online games. According to the Youth Radio and Media Association of Thailand's research, Thai children's game-playing affects behavior and health. For example, violent game content is inappropriate for the age range, or playing games that take too much time. According to the data collection among students in grades 1-6, including vocational colleges and universities, 3,292 students, or more than 85% of the participants, answered that they had played games. It was found that almost one-third played video games daily, and 10% played more than five hours a day. While on weekends, 18.05% of the sample played more than 8 hours a day (Social Communication Work Group, National Health Commission Office, 2021). In a study conducted by Bhatiasavi and Pholpirul (Bhatiasavi, 2020), it was found that more than 79% of children and young people play violent action games. While in many other countries, the age control of game players is taken very seriously, in Thailand, this is not the case, reflecting signs of neglect or a lack of understanding in letting Thai children and young people overly play games. The study also revealed that more than 40% of children who play games accepted that people say that he is addicted to video games and know that the game has gambling. Almost 20% have strong emotions, arguing with family and getting ruder. The most worrisome is that 5.71% of the sample group showed introverted behaviors by not going to school or not talking to anyone if banned from playing the game.

In mid-2019, the World Health Organization (WHO) officially announced that the state of gaming addiction is considered a disease, called a "Gaming Disorder," like drug addiction.

The main symptoms were being obsessed with games, spending more than three hours a day playing, irritability, and anger when told to stop playing or unable to play. The number of Thai children playing the games mentioned above and the number of people who may be addicted to games is relatively high. Classifying gaming addiction as an illness is a signal to prevent adverse effects on children and young people, such as hindering brain development. It is a developmental problem both physically and emotionally. It can also cause other problems, such as social skills and behavior problems. The deviant behaviors include imitating violence in the game, perceiving games as a virtual world, gambling, lack of relationships with people around, or even the delinquency of children and young people, which has often been seen in the news. At the same time, the children and young people who play too many games have poor physical health, academic performance, undesirable behavior, and social relations (Bjatiasevi, 2020).

The impact of excessive gaming seems obvious. The Thai government sector is aware of such concerns and try to prevent and solve game addiction problems among children and youth. Both of issuing some regulations and encouraging every community to have a public space for activities suitable for the residents' lifestyle and the children's needs to make good use of their free time (Department of Children and Youth, Ministry of Social Development and Human Security, 2020). However, such problems show no signs of diminishing, especially during the COVID-19 pandemic, when children and youth can spend more time with computers and smartphones.

In the ever-changing world of technology, online gaming is included as one of the sports. At the 2021 SEA Games in Hanoi, Vietnam, Thailand won a gold medal at the FIFA Games (Ayman, 2022), not to mention the global success that Thai youths were able to bring their teams to compete abroad and win the first prize with over \$107,000 in prize money (Sportskeeda, 2022). Inevitably, it leads to a strong impetus and motivation for children and young people to enter the online gaming industry. Thus, parents need to balance proper support with giving up otherwise young people may lose their futures. It leads to the search for appropriate solutions through the school and in conjunction with the creation of social networks to encourage measures to prevent and control the harmful effects of online games, with the acceptance of the changes that technology has brought. After all, they will grow up with online games.

### **Internet Gaming Disorder (IGD)**

In the past, the Diagnostic and Statistical Manual of Mental Disorders Fifth edition: DSM-5 by the American Psychiatric Association (American Psychiatric Association, 2013) did not officially define gaming addiction as a disease. Nevertheless, it is classified as a category three disease that still needs more research by referring to game addiction under the name "Internet Gaming Disorder – IGD. Over time, the World Health Organization (2018) listed gaming disorder as a mental, behavioral, or neurodevelopmental disorder. It is classified as an addictive behavior in the ICD-11 for Mortality and Morbidity Statistics, playing games for long periods in which players cannot control themselves to play in the specified time despite the adverse effects on themselves (World Health Organization, 2018). These players often play continuously for more than 12 months (Son et al., 2021), or may be shorter than that if showing other severe symptoms that relationship problems with family members arise and become a social problem (Li et al., 2022). The symptoms can be divided into three levels (Young, 2009).

1. The symptom of playing games is caused by oneself or playing with friends. It is a group of friends with the same likes discussing the same game.

2. Infatuation, obsession, fascination, fun, enjoyment, and pride in being able to play games.

3. Being Addicted and preoccupied with games is similar to drug addiction, not eating, not sleeping, not doing tasks that should be done, causing negative effects on oneself and others.

However, based on the observation of children and adolescents addicted to games, their behavior is like substance dependence patients and pathological gambling patients, who want to win more when winning. So, they feel fun and enjoy playing the game and will feel frustrated and restless, neglecting the tasks of their daily lives when they are prevented from playing (Charoenwanit, 2014).

Game addiction can occur in both children and adults. In the case of a child, parents or guardians play the most critical role in supervising the gameplay. The impact of gaming, especially among those who play online games, is enormous. Children have several risk factors that are more susceptible to IGD, including stress, depression, anxiety, and financial problems (Kim et al, 2018). One of them is violence. Parents play an essential role in preventing and solving game addiction. In this study, it was found that the father-child communication style can mediate between aggression and gaming addiction. If the child has open communication with the father, it will reduce the chance of IGD. However, if it is problematic communication, the result will be in the opposite direction.

Online gaming addiction in children and young people can be explained through traditional theories, such as Freud's Psychoanalytic Theory. It considers personality-driven forces to come from physical and mental power, which are mental powers under the subconscious mind that aim to win against each other. It shows the instinct of aggression. Violence tends to be based on emotions rather than affecting expressions. In addition, Freud's ideas address the defense mechanism of displacement, to escape from the real world or from things that are not happy, causing children not to like studying because it is complex, confusing, and complicated. They tend to hide into playing games that make themselves happy. It is the mechanism of the body, an escape from the real world to protect oneself from problems (Koedprang et al., 2020).

Meanwhile, Bandura's Self-Regulation Theory proposes that it becomes a vital pathway for children to switch from playing games for pleasure to becoming addicted to them (Paulau et al., 2018). Because children and youth learn to regulate themselves, they will know how long the game playing is appropriate and not harmful. They would be just a game player for entertainment only.

Childhood is considered the age of imitation. According to a study by Hutarom (2007), the supporting factors for reducing online gaming addiction among youth in the sample group were family factors that could create discipline and be good role models for children. Factors relating to the youth include the ability to control themselves and awareness of the dangers of playing games. The obstacle factors that cause children to have game-addicted behavior are community environments that stimulate children's interest in playing games. Factors related to fun online games persuade children to like, excite, or make children use to replace what is missing in them, making them cling to friends and rely on them instead of good relationships within the family. An important mechanism is an environment that models both good and bad for children.

The environmental factor concept can be explained by Socio-Ecological Models that the behaviors of children and youth are often influenced by the social environment surrounding them. Paulau et al. (2018) stated that external factors that play a role in children's addiction to video games are three essential factors, namely family factors, whose results indicate that families with violence and lack of child supervision are more likely to cause children to develop IGD, a social factor, which manifests itself in interactions between players during online

games. If the interaction is much more robust, game-related factors can be seen that online games are more incentivized for children to play than offline ones. Moreover, modern games are designed to be beautiful with never-ending play and was rewarded with promotion in an environment that lures children into these game traps.

### **Establishing a collaborative network to create measures to reduce the negative impacts of online gaming on children and youth**

A collaborative network means although individuals, groups of people or organizations are much different in terms of operations, culture, social capital, and goals, they can work together to achieve the goals that have been set together by supporting and helping each other (Camarinha-Matos & Afsarmanesh, 2006, p.28). This collaboration brings together the different strengths and weaknesses of the network as well as different abilities and resources to achieve the goals set (Muijs et al., 2010).

Numnam (2012) describes the working network, which consists of two theories. The first is the Exchange Theory; the exchange of benefits between each other is the main reason for making the network happen voluntarily. That is, each party sees the benefits that they will receive from joining the network. This will lead to a willingness to harmonize or join a network. Another theory is the concept of synergy, which the equation can explain  $1 + 1 = 3$  or  $2 + 2 = 5$ , meaning that the synergy of work leads to a multiplicative or stronger result than each organization works alone, with the belief that combining forces will create multiplied values.

The use of collaborative networks to address IGD in children and youth in Thailand has appeared in several cases. Most of them have focused on suggesting that stakeholders with children and youth can take part in solving the problem. These stakeholders usually include parents, entrepreneurs, schools, and communities (Praiwanrat & Jitrasataporn, 2011; Watcharaach & Rukkwamsuk, 2020).

Meanwhile, China has imposed rules on video game playing among those under 18, requiring games to be played between 8 pm and 9 pm on Fridays, weekends, and public holidays to prevent IGD (Plavevski, 2021). However, it is impossible in Thailand to control children by setting such rules. However, coordination between the government, civil society, and the private sector is essential, while schools and family institutions are the ones closest to children and young people. Collaboration with related agencies will be a way to solve the problems of children addicted to games in the long term. It can be explained by Bronfenbrenner's Ecological Systems Theory which describes the outermost layer of the environment. It will result in a connection to the innermost level, which is the child itself (The Psychology Notes Headquarters, 2019).

### **Research Objectives**

1. To study the situation, condition factors, and effects of online game playing among children and youth.
2. To develop collaboration network for setting the measures for preventing online game addiction among children and youth.



## Methodology

This study uses Qualitative Research with the Research and Development methodology with five research steps, as shown in Figure 1. The details of each operation step, together with the study results, are shown as follows.

*Step 1 (R1):* The process aims to analyze and synthesize knowledge related to problem conditions, approaches, or measures used to solve the problem of online game addiction and the needs or proposals for development through the process of;

1. Documentary research by analyzing and synthesizing documents related to research studies, consisting of literature and research, both Thai and foreign, related to the nature and form of online games, problem conditions, conditional factors related to the problem, and the impact of playing online games among children and youth.

2. In-depth interviews with children and youth groups, experts, online game operators to obtain basic information about the problem condition related to conditional factors and the impact of playing online games among children and youth including the need to prevent and control online gaming and current measures or practices. The research tools were semi-structured interviews with key informants, who were willing to participate in the research using purposive random sampling and can be divided into:

- Children and youth in educational institutions from secondary and primary schools in Bangkok and its vicinity, four schools, totaling 18 people. They should have experience playing online games, spending at least three hours a day on the game, selected by teachers based on the aforementioned requirements.

- The family of the above students, totally 3 persons.

- Five educational institution representatives; two administrators from primary education institutions, two administrators from secondary education institutions, and one representative of the Office of the Basic Education Commission, Ministry of Education.

- A group of experts in psychology, psychiatry, sociology, and law enforcement (including representatives from the Technology Crime Suppression Division: TCSD and Cyber Crime Investigation Bureau: CCIB), totaling five people.

- Stakeholders are representatives from various sectors, including the public or civil society, Entrepreneurs involved in the gaming industry, Department of Children and Youth Affairs, Digital Economy Promotion Agency, Ministry of Culture, Film, and Television Review Bureau, and various related sectors, totaling 11 people.

In the data analysis in step 1, a typological analysis was used.

3. Requirements and proposals for the development of measures to prevent and control the negative effects of playing online games among children and young people.

Recommendations of key informants from educational agencies, law enforcement agencies, relevant agencies, and civil society about the prevention of game addiction and the dangers are as follows: 1) promoting knowledge and understanding to build immunity for students, teachers, and parents; 2) Educate parents on how to teach their children disciplines in playing games to their children; 3) Develop teachers to know how to teach in the course and develop learning materials about online games; 4) Use parental networks to communicate advice and suggestion; 5) Assessment, screening, and monitoring of online gaming behavior of children and youth; 6) Promote the organization of a variety of activities to divert attention from playing games; 7) Strengthen family relationships and networks to better take care of children and youth; 8) Build pride among children and youth in order to create valuable identity in the real world; 9) Educational institutions and network partners jointly organize activities to

enhance life skills; and 10) Correct and cure children and young people's online game addiction behavior.

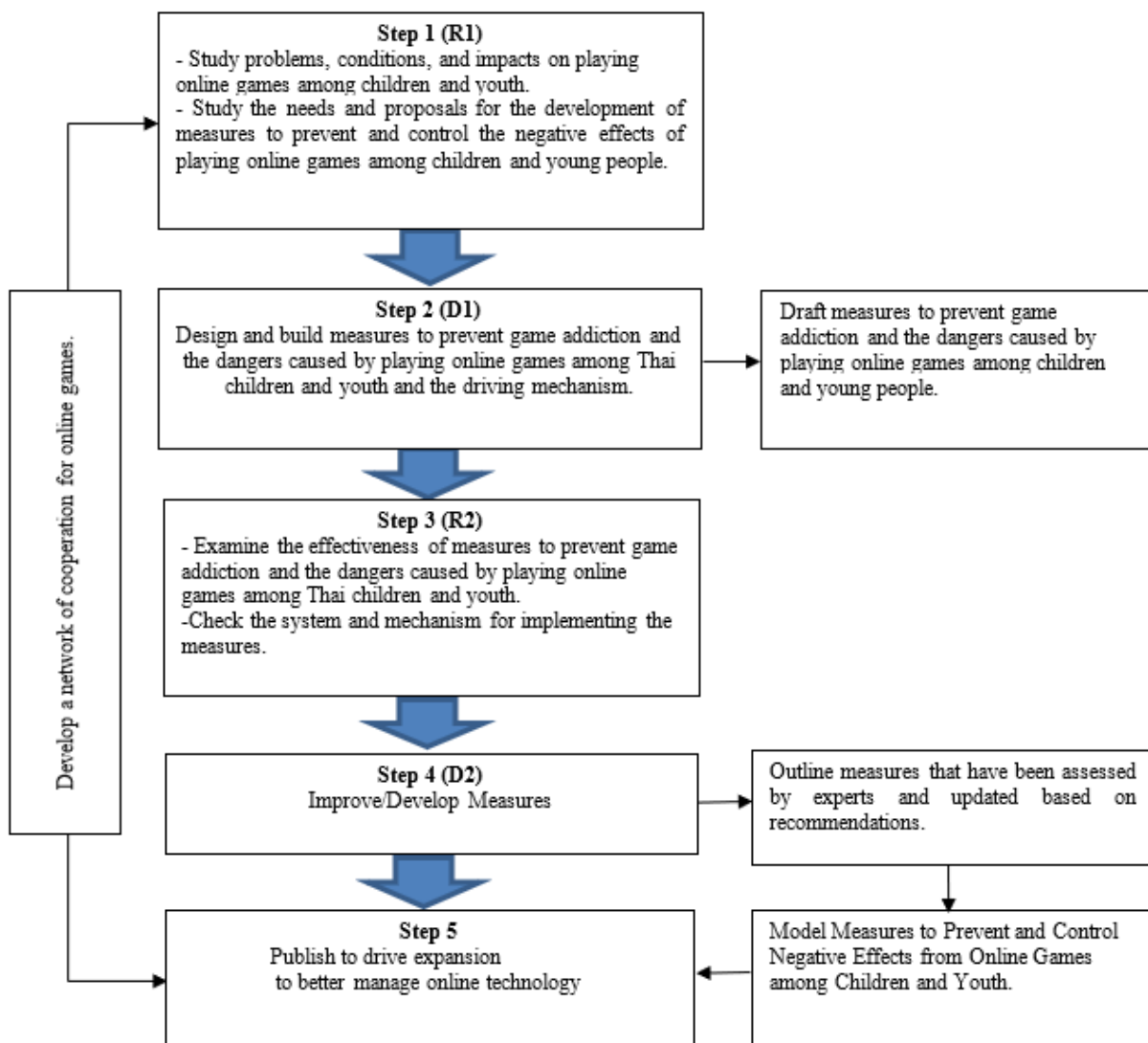
*Step 2 (D1)* is a step in designing and building a framework for preventing game addiction and the dangers caused by playing online games among Thai youth and evaluating the systems and mechanisms for implementing measures. A total of six small discussion groups were held by the research team together with related experts, totaling nine people.

*Step 3 (R2)* is the step to verify the effectiveness of measures from the previous step. This step employs the method of Connoisseurship to examine the effectiveness of measures to prevent game addiction and the dangers of playing online games and to examine the system and mechanism for implementing the measures. The research participants consisted of experts in psychology, psychiatry, sociology, social work, education, media and information technology, including representatives from the Division of Children and Youth Affairs, Ministry of Education, Department of Mental Health, and other related sectors, totaling ten people.

*Step 4 (D2)* is the step to improve and develop measures to make them suitable and useable as a prototype. A workshop/small group meeting was held three times by the research team together with experts, totaling eight people. The first draft of the measures for the prevention of game addiction and the dangers caused by playing online games among Thai children and youth and evaluating the systems and mechanisms for implementing measures have developed as a product of this step.

*Step 5 (Final step)*: It is the dissemination process to drive and expand the measures to prevent game addiction and the dangers caused by playing online games among Thai children and youth by organizing dialogues with representatives of essential agencies and those involved in implementing and driving measures in practice, totaling 15 people.

In analyzing the data in steps 2-5, content analysis was used.



**Figure 1:** Research procedures with R & D research model to create a network and set measures to prevent and control the negative effects of playing online games among children and youth. (Source: Researcher, 2023)



## Results

### Result of the study in step 1:

Condition of the problem conditional factors and the negative effects of online games among children and youth in Thailand.

The current problems of online games among children and youth in Thailand reveal significant growth in the number of gamers. The number of video game addiction cases in children and adolescents is increasing yearly, together with deviant behavior problems. An interesting situation related to playing games for Thai children and youth is the growth rate of the game industry increasing. Most online game makers are foreign manufacturers. As a result, it is not easy to supervise game content. Currently, Thailand has declared e-sports to be a professional sport. However, there still needs to be a law directly controlling online games. Moreover, Thai parents rarely have time for their children; as a result, children are more likely to go online to play games.

### Results from steps 2 – 5:

#### 1. Model Measures to Prevent and Control Negative Effects of Online Games among Children and Youth

Based on suggestions from the above cooperation networks, preventive measures for game addiction and the dangers caused by playing online games for children and youth which has been given suggestions from stakeholders. It can be categorized into five sub-measures, which mainly focus on the mechanisms driven by educational institutions. Because it is an institution that is very close to the students with a focus on coordinating with the student's family. Measures can be summarized as "PIPAR"; Prevent - Investigate - Precautionary - Activities creation – Remedy. The main responsible body is the school committee and the parent network committee with supportive networks and/or agencies including the Ministry of Education, Office of the Basic Education Commission (OBEC), Educational Service Area Office, psychologist at the Office of Educational Service Area, Department of Children and Youth Affairs, the Coordinating Center for the Promotion and Protection of Children and Youth in Online Media Use (COPAT), Department of Mental Health, Department of Women's Affairs and Family Development, and hospitals or nursing homes in the study area. Details of each measure are shown in Table 1.

**Table 1** ‘PIPAR’ Measures and Implementation Guidelines

Measures	Implementation
<b>1. Prevent: Raise awareness and understanding among students, teachers, parents, and the community.</b>	<ul style="list-style-type: none"> <li>Focusing on educational institutions to play the role of knowledge providers and promoters of the understanding of online gaming addiction preventive care, troubleshooting, and remedies, including raise awareness of direct and indirect dangers and dangers arising from playing online games and E-Sports to teachers, parents, students, and communities. It also trains teachers to apply knowledge about the proper use of online games in their teaching as well as knowing how to use the game addicted child test as well.</li> <li>Establishing or using parental networks to communicate information about online gaming addiction among young people and practice observing their children, including emphasizing on creating joint activities between families and students to build good family relationships.</li> </ul>
<b>2. Investigate: search, assess, and screen online game addiction behavior</b>	Emphasis on support for educational institutions to establish a school operating committee which is responsible for assessing, screening, categorizing risk groups based on online game addiction behavior among students in order to be able to monitor the risk group students appropriately.
<b>3. Precautionary: Supervise and monitor online gaming behavior</b>	Focus on educational institutions track online gaming behavior, gambling on online games, and playing E-Sport of students through the observation of the advisor. This may be a home visit or an online meeting with the student's parents.
<b>4. Activities creation: Promote a variety of activities to create choices for students.</b>	<ul style="list-style-type: none"> <li>Emphasis is placed on educational institutions to cooperate with external agencies in recreational activities, life skills enhancement activities, career activities, creative activities or other activities suitable for the age of students as well as the socioeconomic of family and local culture.</li> <li>The acceptance of organizing e-sports game competitions in educational institutions along with educating about the discipline of a sportsman. Encouraging educational institutions to focus on honoring students in various abilities, not focusing only on academics for children to be proud of themselves.</li> <li></li> </ul>
<b>5. Remedy: Fixing and treating youth's addicted online gaming behavior</b>	<ul style="list-style-type: none"> <li>Focus on educational institutions to coordinate with relevant agencies together with the implementation committee on the second measure to be able to classify students according to the level of severity of online game addiction behavior by assigning at-risk students with a mild to moderate level of severity or begin to have problems playing the game.</li> <li>Class teachers, guidance counselors, and/or health teachers, and/or psychologists in educational areas are required to follow up, take care of, correct, and prevent recurring behavior problems. If the behavior does not improve, the educational institution shall follow the doctor's advice and coordinate with parents to refer students for public health treatment on a case-by-case basis or contact the MOE Safety Center* to solve problems urgently.</li> </ul>

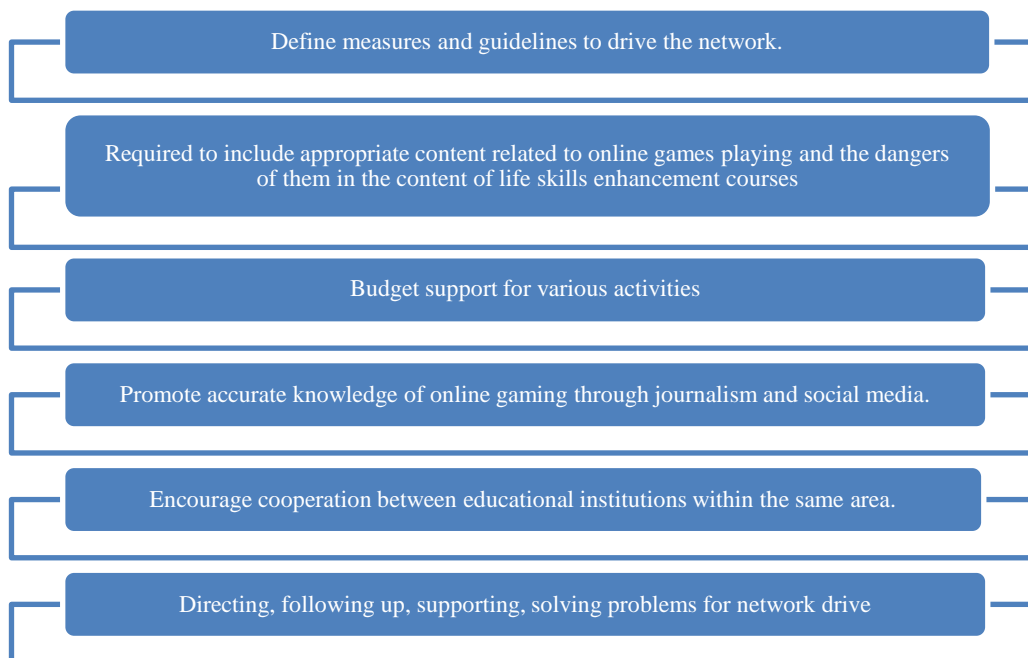
\* A standard system developed by the Ministry of Education, Thailand, for helping students to have quality learning with happiness and mind and body protection. Students, teachers, and the general public can contact directly to MOE Safety Center through digital platforms, in case of feel unsafe.

2. The mechanism for driving the prevention network for game addiction and the dangers caused by playing online games among children and youth at the policy level in Thailand.

To implement the measures developed to be efficient and effective, there should be co-driven action from schools and various departments through the formulation of key policies by the ministry in charge of basic education, and coordinate policies with relevant agencies through key policy steps as shown in Figure 2.

3. Cooperation network developing for setting and implementing the measures for preventing online game addiction among children and youth.

This study has collected information from networks directly and indirectly involved in the prevention of online gaming addiction. The discussion meetings were held to create possible preventive measures in steps 2-5 in the above research process. However, these measures were not successful without the cooperation of the important networks. The major parties and their duty in the corporation network are shown in table 2.



**Figure 2** Policy mechanisms to drive the network for the prevention of gaming addiction and threats by playing online games children and youth in Thailand. (Source: Researcher, 2023)

**Table 2** Scope of duties of each party in the cooperation network

<b>Party</b>	<b>Scope of duty</b>
<b>Family</b>	Reach out and create understanding with children or young people in their parents about the negative effects and potential dangers of playing online games. Engage children in determining appropriate online games.
<b>Educational institutes</b>	Corporate with parents for preventing and solving the negative impacts of online game. Encourage students to play creative and safe online games and instill gaming discipline in children and young people.
<b>Ministry of Culture</b>	The major player who plays a direct role in controlling online game content, especially in online game rating, together with related parties.
<b>Ministry of Digital Economy and Society</b>	Focus on promoting the production and development of creative and safe games for young people. Take into account the promotion of the economy along with encouraging entrepreneurs to have social responsibility as well.
<b>law enforcement agencies</b>	Receiving reports and prosecuting in case of hidden threats associated with illegal online games.
<b>Thai Media Fund</b>	Supporting grants to support and encourage studies, research or creative innovation, including the production of creative online games.
<b>Department of Children and Youth Affairs</b>	There is a legal role to directly supervise the use of online media among children and youth.
<b>Entrepreneurs in online game industry</b>	Emphasize the balance of promoting the game industry, showing social responsibility in protecting, and keeping children and young people safe from playing online games.
<b>Civil society</b>	It is an important social force to collectively monitor or observe online games that are not creative and safe for children and young people, and be a voice for the people.

## Discussions

The development of a social cooperation network to jointly create measures to prevent game addiction and the dangers caused by playing online games among children and youth. The focus is on all social elements from the level closest to the child, namely family, community, and school, to the expansion of the network that connects the public and private sectors involved in the management of online games in all of Thailand. When considering the school as a center for preventing problems from game addiction, cooperation between sectors needs to be achieved. For the school, the parent agency that directly oversees is the Ministry of Education which responded to the efforts to drive networking and collaboration from affiliated schools as reflected in this research. This is a good sign for putting this research into practice. As for the cooperation model, there is also a need for strong support from the parents'

association and the surrounding community. Although studies on online gaming addiction are increasing in academic circles around the world, there is a void in specifying roles and responsibilities as well as very few concrete policies for different departments (Vondráčková & Gabrhelík, 2016). Even in Europe, few studies have identified specific policies to deal with the problem (Lopez-Fernandez & Kuss, 2020).

One may wonder why law enforcement is not applied instead of school-driven measures. Carras et. al. (2021) noted that although there are examples of legislative-based measures to tackle childhood online gaming addiction, such as the draconian policy of game time limits of China, these measures may not be the right way to solve the problem because of being deprived of playing games may lead to frustration and other inappropriate behaviors. Therefore, there may be better paths than using the law.

According to this research and development process, which has mobilized opinions from all digital media curation networks in Thailand, it was found that these networks see the problems arising from excessive online gaming among youth and the public. The same is true of the benefits found in playing online games. It is just that awareness has different levels depending on the level of exposure to the problem, which, of course, appeared with those under the Ministry of Public Health and under the Ministry of Education the most, because they are close to youth and who are exposed to aggressive behavior, poor grades, or poor health. The conclusions that go through the process of debate, discussion, and review during the development of such measures, give a clear picture of the concepts involved in educating and checking a prevent correction to reflect the importance of a knowledge-based educational approach. The idea is that education is more sustainable in solving problems. However, this concept requires much time (Kwon, 2011). Not only providing academic information but understanding the behavior of the audience that knowledge should be provided through a variety of activities and through media that is up-to-date and relevant to their interests and should also be given to those directly involved with youth education is one of the most important methods used to solve problems (Lopez-Fernandez & Kuss, 2020). In this regard, knowledge about health behavior to the adolescent population should be in the form of other entertainment activities which is an alternative for online game players as well as skills to control emotions in different ways including providing knowledge about the symptoms of online game addiction, so that young people can check themselves.

Why is it necessary to offer an alternative to enhancing happiness in addition to online gaming? This is because telling young people to give up something without a substitute organizing alternative activities is challenging. Schools should help young people engage with their school peers and enhance life skills. If an E- sport competition is held in the school, it can accurately disseminate the rules and facts of being a professional athlete. At the same time, it also honors students in aspects other than just academic achievements. The study found that many students addicted to games because they were not academically good and were considered as incompetent. Such a hopeless feeling of worthlessness inevitably drives him to escape from a world he is not accepted to another world, where he may become the king of the world of online gaming. It is therefore not surprising that they turn to a world that acknowledges their existence. This mental reward is very important at this age. It can be explained by Baumeister's escape from the self-theory concept (Kwon, 2011).

Making schools the foundation for preventing game addiction and the dangers of online gaming among children and young people is supported by Gaiha et al. (2021). At the secondary level using the school as a base, it can help reduce the risk of developing various addictions. The school alone would not be able to achieve the goal. Cooperating among the community, family, siblings, and friends as those monitoring the risk of online gaming addiction is essential.

To have such an effect, it is necessary to educate the community to blame for the dangers of gaming addiction, which not only affects the health of individuals but can also result in financial problems, which is one of the key variables in local crime. Otherwise, the community may not participate in solving the problem.

Education takes time to raise awareness. Nevertheless, the problem of online game addiction is still ongoing. Searching, evaluating, and screening youth who are likely or have symptoms of online game addiction together with supervision leading to a remedy is another proposed measure to jointly solve problems parallel to prevention and awareness raising. In other studies about addiction found the important of parent monitoring for undesirable behavior, because of communication, loving, supervision, and monitoring behavior of parents emerged as the most effective factor in reducing risky behaviors (Fang & Schinke, 2013; Kalinina et al. (2017). Kalinina et al. (2017) propose that it is not just the students and their families but also teachers and experts who is the heart of any unwanted behavior prevention program. At the same time, the implementation requires cooperation between the creative social networks of educational institutions to make such operations successful (Kwon, 2011). In this study, both operational guidelines were proposed, network drive mechanism and networks that are essential to all operations to strengthen the measures that have been developed.

As for the mechanism in driving the prevention network for game addiction and the dangers caused by playing online games among children and youth at the policy level in Thailand in this study, the focus is driven by the Office of the Basic Education Commission, Ministry of Education as the superintendent of basic education. This mechanism covers the implementation of measures and guidelines based on the results of this study. It is required to include appropriate content related to online play and the dangers of playing online games as part of the subjects related to life skills enhancement. The necessary budget has been allocated. It is a central agency that creates cooperation between schools in each educational area as well as being a part of publicizing information, knowledge about the dangers, and the proper use of online games through various available media as well as supervising the implementation of this measure in practice. A counseling process is established in case students are found to be at risk of being addicted to games. The researcher used a research process that brought representatives from all sectors and received excellent advice from representatives of the Office of the Basic Education Commission, who participated in every step of the research. When this research was completed, the researchers had to submit the study results to this agency for further implementation.

However, there is one unsettling realization: a collaborative network on online gaming issues. There are so many stakeholders in Thailand due to the legal scope that divides the responsibilities and administration into many national divisions, counting more than seven ministries, let alone the private sector involved in the online gaming business legally in Thailand and operators in the grey market. Although, throughout the research, representatives from the Ministry have always participated in developing measures and mechanisms based on this research, in practice, it still requires serious cooperation. This measures that issues related to online gaming among children and young people must also be brought to the government's attention. However, there still seems to be some light for practical action. When it was found that a bill was considered to regulate the game and the game business for the protection of children and youth is currently in the drafting process.



## Conclusion and suggestions

The recent massive COVID-19 virus outbreak resulted in lockdowns and the emergence of online education instead of education in the original school area. The significant impact is not only on the decline in learners' ability to study. Instead, it creates a more conducive environment for children and young people to become more addicted to online gaming. As a result, the trend of online game addiction among youth in Thailand has increased so significantly that it is impossible to ignore this crisis. Measures to prevent game addiction and the dangers caused by playing online games for children and young people have therefore been developed through R&D research which focus on preventing and solving problems with no limitations on the growth of Thailand's online game industry as well as understand the new generation of children and young people growing up with the digital world. We cannot hinder or prohibit them from engaging in online games, just as we cannot hinder the advancement of technology. Therefore, this research proposes five measures that occur under the main concept, namely, Prevent – Investigate – Precautionary - Activities creation - Remedy, by setting the school as an important base to drive such measures. School is a very intimate environment for young people. However, pushing for such measures requires the cooperation of many stakeholders. Starting from surrounding communities Parents-Teachers Association and the authority governing schools in Thailand, the Office of the Basic Education Commission, Ministry of Education. The next circle are collaborations from complex agencies and sectors. Due to the laws of Thailand that define the roles and responsibilities of each agency responsible for a variety of online games, it sometimes results in confusion and overlapping of authority. Bringing measures from research results to the practical level, it is necessary to rely on policy-level agencies at the ministry level, such as the Ministry of Education, Ministry of Culture, and the Ministry of Digital Economy and Society. A system and mechanism for implementing measures must be established including a systematic follow-up of the results. In particular, the policy is communicated to operational units for a thorough acknowledgment to drive measures in the same direction and operate in a unified manner. However, this issue is still another concern in driving this measure to be effective in the future.

## New knowledge and the effects on society and communities

Although there have been many studies on online gaming addiction in Thailand over the past decade, they have provided knowledge on the antecedent and consequence factors of inappropriate online game behavior among children and youth. But because of the pandemic of Covid-19, game addiction among young Thai people has never become as serious as it is present. Studying action research can provide opportunities for solving this problem by researching with the practitioners. This study proposes the measures created by asking the practitioners and responsible parties for the probability of success of these measures. So, the results of this study are ready to be applicable by approval from the relevant parties related to game addiction disorder among children and youth. The measures presented in this study should be trialed by the appropriate parties stated in the article in an actual situation as the final step for solving the problem of online game addiction before late.

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