



PRESS RELEASE

HKU Digital Citizenship Study reveals digital competence as a protective factor against gaming addiction in children and adolescents

Researchers at the University of Hong Kong (HKU) conducted a comprehensive study which reveals that digital competence is protective against the risk of gaming addiction and cyberbullying among children and adolescents. This study is one of the first to demonstrate the importance of digital competence in children and adolescents, showing its potential to protect against the adverse effects of digital device use and to promote digital wellness in the younger generation. The full research article is now online in *The Lancet Regional Health – Western Pacific* [[link to the publication](#)].

Research findings and recommendations

690 primary and 1,266 secondary school students in Hong Kong were assessed on their digital competence and surveyed on their mental health status, use of digital devices, and cyberbullying experiences. Digital Competence is “the confident, critical, and creative use of information and communication technologies to achieve goals related to work, employability, learning, leisure, inclusion, and/or participation in society”. Analyses showed that children and adolescents with better digital competence were less likely to develop gaming addiction and experience cyberbullying as perpetrators or as victims. Good digital competence was also found to mitigate the potentially harmful effect of using digital devices on gaming addiction.

Key Findings

1. Excessive digital device usage was associated with significantly worse mental health: Primary and secondary students who used digital devices for more than three hours per day had a significantly higher prevalence of gaming addiction.
2. Low digital competence was associated with more gaming addiction and cyberbullying experiences, and gaming addiction was associated with more cyberbullying experiences.
3. Good digital competence might mitigate the harmful effects of excessive digital device usage while enhancing its positive effects on children’s mental development, particularly in young school children. For example, digital competence could protect children from cyberbullying behaviours, especially when highly addicted to internet gaming.

Recommendations

1. Parents, educators, and healthcare professionals should equip future generations with better digital competence and emphasise the importance of time limits for digital devices. Limiting media use to three hours or less per day is recommended to reduce the adverse effects on mental health and wellbeing.
2. Education ministries need to provide clear execution guidance for schools on internet/gaming addiction and cyberbullying. Schools should develop explicit guidelines on using digital devices during schooltime and implement strategies to address cyberbullying. In addition, digital competence should be made part of the core curriculum and integrated at all levels of schooling.
3. Assistance to parents should be offered, especially those with limited digital competence, to raise their awareness of the detrimental social and health effects of prolonged exposure to digital devices.

“Our findings highlight the importance of empowering children and adolescents through digital competence to encourage appropriate and safe media use and reduce the risk of addictive and risky online behaviours,” remarked Dr Frank Reichert, Assistant Professor of the Faculty of Education, HKU.

Dr Winnie Tso, Clinical Assistant Professor of the LKS Faculty of Medicine, HKU (HKUMed) said that the study shows the benefit of educating young children on digital competence as a means to enhance their mental wellbeing. Dr Patrick Ip, Clinical Associate Professor of HKUMed added, “digital competence is essential for the appropriate use of digital media. Educating our future young children with good digital competence could be a relatively easy way to prevent the adverse effects on mental health and wellbeing in children and adolescents.”

About the researchers

Dr Winnie W.Y. Tso, Clinical Assistant Professor, Department of Paediatrics and Adolescent Medicine, HKUMed, and Dr Frank Reichert, Assistant Professor of the Faculty of Education, HKU, were co-first authors. Dr Patrick Ip, Clinical Associate Professor of the Department of Paediatrics and Adolescent Medicine, HKUMed is the corresponding author. Other collaborators contributing to the research include Professor Nancy W.Y. Law, Professor Jimmy de la Torre, and Professor Nirmala Rao, Faculty of Education, HKU; Professor King-wa Fu, Journalism and Media Studies Centre, HKU; Dr Wilfred H.S. Wong, HKUMed, with assistance from Mr Lok-kan Leung and Mr Yuliang Wang from HKUMed.

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Media enquiries

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Table 1. Primary and secondary students who used digital devices for more than 3 hours per day had a significantly higher prevalence of gaming addiction

Time Using Digital Devices for Leisure	Prevalence of gaming addiction		
	Secondary school student	Primary School student	Total
Less than 1 hour per day	6.9%	5.7%	6.3%
1-2 hours per day	4%	8.4%	5.6%
2-3 hours per day	4.2%	9.0%	5.3%
More than 3 hours per day	11.7%**	16.4%**	12.4%**

** Chi-square test showed a significantly higher prevalence of gaming addiction.

Figure 2. Low digital competence was associated with more gaming addiction and cyberbullying experiences

Figure 2a. Good digital competence might mitigate the harmful effects of excessive digital device usage, e.g. gaming addiction, particularly in primary school children.

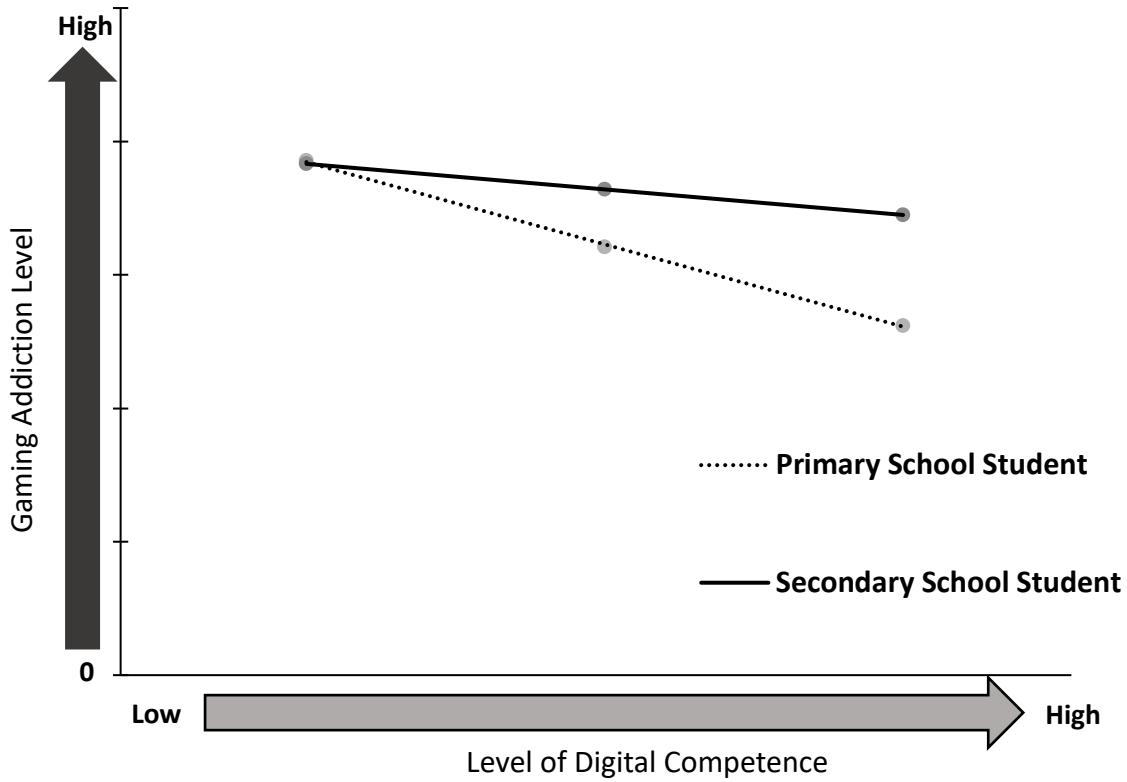


Figure 2b. Gaming addiction was associated with more cyberbullying experiences. Digital competence could protect children from cyberbullying behaviours, especially when highly addicted to internet gaming.

