

## Chapter 39

# A Panel Study on the Effects of Social Media Use and Internet Connectedness on Academic Performance and Social Support

**Louis Leung**

*The Chinese University of Hong Kong, Hong Kong*

### ABSTRACT

*Using a longitudinal panel study approach, this research examined the effects of social media use and internet connectedness on academic performance and on perceived social support. Results showed that, after controlling demographics and overall grades at Time 1, individual-level change in overall grades over the year that followed was attributable to Facebook, blogs, and online game use but not to internet connectedness. Results suggest that heavy Facebook use has a positive effect on overall grades, while heavy use of blogs and online games leads to grade impairment. In the case of academic competence and perceived social support, individual-level change over the year that followed was only attributable to Facebook use. Implications, limitations, and directions for future research are discussed.*

### 1. INTRODUCTION

Social media is a group of internet-based applications that build on the technological foundations of Web 2.0, allowing the creation and exchange of user-generated content. Social media takes on many different forms, involving both web-based and mobile technologies, including internet forums, instant messaging (IM), social networking services (SNS), and microblogs, to name but a few. According to the Pew Internet Project, 95% of teens aged 12 to 17 in the U.S. are online, of which 76% use SNS and 77% have cell phones (Madden, 2011). By 2013, there were approximately 1.11 billion unique visitors on Facebook worldwide (Smith, 2013). In China, the Internet population has reached 564 million in 2013, of which 24 percent were between the age of 10 and 19 (China Internet Network Information Center, 2013).

DOI: 10.4018/978-1-5225-2584-4.ch039

Today, new applications in social media (such as Facebook, IM, blogs, Twitter, YouTube, and online games) are well-accepted as the preferred tools for communication among students. However, despite internet researchers have investigated diverse issues such as internet addiction, cyber bullying, sexting, and internet risks and safety on children and adolescents (Leung & Lee, 2012; Livingstone, Haddon, Görzig, & Ólafsson, 2011; Young, 1998), effects of social media on school performance and social relationships have been underexplored. Chen, Shen, & Ma (2012) found that players prefer SNS games to other types of games; Lee, Hsu, & Chang (2013) reported that sociability was the best design strategy for designing educational massively multiplayer online role-playing game (MMORPGs); and Ellison, Steinfield, & Lampe (2007) examined the benefits of Facebook on social capital among college students. Previous research also suggested that some college students' academic performance might be impaired by heavier use of the internet (Jackson, Eye, Witt, Zhao, & Fitzgerald, 2011; Kubey, Lavin, & Barrows, 2001) and impaired academic performance was associated with greater use of synchronous communication applications such as chat rooms and multi-user dungeons (MUDs), as opposed to asynchronous applications such as email and newsgroups. To fill the gap in this line of research, this study examines the impacts of four commonly used social media platforms among adolescents and children (namely Facebook, blogs, IM, and online games) and the degree to which adolescents are connected to the internet on academic performance and social support.

To date, one limitation in this area of research is the lack of longitudinal methods to help establish causal relationships and strengthen the findings of existing cross-sectional reports. This study goes beyond examining the level of social media use and tries to assess the dimensions in internet connectedness (such as years connected, broadband/WiFi access, scope, intensity, goal, and dependency on internet use) that adolescents experienced and the impacts of these dimensions on academic performance and perceived social support. Knowledge of these findings can help parents and educators detect and assess impact of social media among children and adolescents in order to intervene appropriately at an early stage if detrimental use of social media is found.

## **2. LITERATURE REVIEW**

### **2.1. Internet Connectedness**

To fully capture the many contexts in play, Jung, Qiu, & Kim (2001) devised a multidimensional construct called the internet connectedness index (ICI) based on media system dependency theory (Loges & Jung, 2001). The ICI is a multilevel and contextual approach for assessing the overall relationship between a person and the internet, and it encompasses a number of conventional measures such as time, history, and contexts, and it goes beyond these to capture the scope, goal, intensity, and centrality of the internet in one's life (Jung et al., 2001). As a measure using multiple items, ICI has a greater likelihood of providing deeper contextual meaning than conventional single-item measures with regard to the extent to which we are dependent on, or connected to the internet. The ICI is originally composed of nine factors: *Internet use history*; *Task scope* (reflecting the breadth of tasks in internet use); *Site scope* (involving the types and numbers of places where a person connects to the internet); *Goal scope* (involving six media-system dependency goals by Ball-Rokeach (1985) which include social understanding,

14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/a-panel-study-on-the-effects-of-social-media-use-and-internet-connectedness-on-academic-performance-and-social-support/183540](http://www.igi-global.com/chapter/a-panel-study-on-the-effects-of-social-media-use-and-internet-connectedness-on-academic-performance-and-social-support/183540)

## Related Content

---

### Response to Education Setback in Kenya Through Indigenous African Teaching Approaches and Resources: A Tale Told From Two Perspectives – Western and Kenyan

Florence Kisirko and Michelle D. Cude (2022). *Handbook of Research on Transformative and Innovative Pedagogies in Education* (pp. 293-312).

[www.irma-international.org/chapter/response-to-education-setback-in-kenya-through-indigenous-african-teaching-approaches-and-resources/297603](http://www.irma-international.org/chapter/response-to-education-setback-in-kenya-through-indigenous-african-teaching-approaches-and-resources/297603)

### A Cost-Effective Work-Based Interprofessional Collaboration Program for Healthcare Professionals

Karli Brittz, Montlennyane Madisa, Lizemari Hugo-Van Dyk, Celia Filmalter and Tanya Heyns (2023). *International Journal of Online Pedagogy and Course Design* (pp. 1-16).

[www.irma-international.org/article/a-cost-effective-work-based-interprofessional-collaboration-program-for-healthcare-professionals/315589](http://www.irma-international.org/article/a-cost-effective-work-based-interprofessional-collaboration-program-for-healthcare-professionals/315589)

### Use of the Wiki for Cross-Institutional Collaborations

Carolyn Fuchs (2015). *International Journal of Online Pedagogy and Course Design* (pp. 1-19).

[www.irma-international.org/article/use-of-the-wiki-for-cross-institutional-collaborations/120661](http://www.irma-international.org/article/use-of-the-wiki-for-cross-institutional-collaborations/120661)

### Pictorial Pedagogy

Philip Barker (2011). *International Journal of Online Pedagogy and Course Design* (pp. 1-11).

[www.irma-international.org/article/pictorial-pedagogy/51376](http://www.irma-international.org/article/pictorial-pedagogy/51376)

### Does Online Outshine?: Online vs. Campus-Based Degree Withdrawal and Completion Rates within an MBA Program

Belinda Patterson, William Mallett and Cheryl McFadden (2012). *International Journal of Online Pedagogy and Course Design* (pp. 53-64).

[www.irma-international.org/article/does-online-outshine/61400](http://www.irma-international.org/article/does-online-outshine/61400)