

Contents lists available at [ScienceDirect](#)

Computers & Education

journal homepage: www.elsevier.com/locate/compedu

School engagement, information technology use, and educational development: An empirical investigation of adolescents



Hamed Qahri-Saremi ^{a, b, *, 1}, Ofir Turel ^{c, d, 1}

^a University of Illinois at Springfield, One University Plaza, MS UHB 4021, Springfield, IL 62703-5407, USA

^b DePaul University, 243 South Wabash Ave, Chicago, IL 60604, USA

^c California State University Fullerton, 800 N. State College Blvd., SGMH-4160, Fullerton, CA 92834, USA

^d College of Economics and Management, South China Agricultural University, Wushan Road 483, Tianhe District, Guangzhou, 510642, Guangdong, PR China

ARTICLE INFO

Article history:

Received 20 April 2016

Received in revised form 15 July 2016

Accepted 19 July 2016

Available online 20 July 2016

Keywords:

Secondary education

Media in education

Improving classroom teaching

Utilitarian information technologies

Hedonic information technologies

ABSTRACT

This study focuses on three objectives. First, it investigates distinctive profiles of adolescents based on combinations of their levels of behavioral, cognitive, and emotional engagement with school. Second, it examines whether adolescents' educational development outcomes (GPA) and extent of use of utilitarian (school-oriented) and hedonic (social media and videogames) information technologies (IT) vary as a function of their school engagement profiles. Third, it probes the mediation effects of adolescents' extent of use of utilitarian and hedonic IT on the relation between the different school engagement dimensions and educational development outcomes. The sample ($n = 6885$) was drawn from a large nationally representative dataset that is part of a series of annual surveys of American adolescents. Latent profile analysis identified five distinctive profiles of adolescents based on the combinations of their levels of three school engagement dimensions. The results of ANCOVA analyses indicated that these profiles differ in the use of utilitarian and hedonic IT as well as GPAs. Moreover, results of structural equation modeling showed that while the extent of use of hedonic IT partially mediated the effect of school engagement dimensions on GPA, the extent of use of utilitarian IT did not. Considering the importance of adolescents' school engagement for their development and the essential role of IT in adolescents' lives, our findings make important contributions to the literature and shed light on promising avenues for future research.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

School engagement is an important antecedent of students' psychological and educational development (Fredricks, Blumenfeld, & Paris, 2004). Several prototypical types of school engagement profiles may exist, including Highly Engaged, Moderately Engaged, Minimally Engaged, Emotionally Disengaged, and Cognitively Disengaged, each of which can drive

* Corresponding author. University of Illinois at Springfield, One University Plaza, MS UHB 4021, Springfield, IL 62703-5407, USA; DePaul University, 243 South Wabash Ave, Chicago, IL 60604, USA.

E-mail addresses: hqahr2@uis.edu (H. Qahri-Saremi), oturel@fullerton.edu (O. Turel).

¹ Both authors have equal contributions.

different behaviors, psychological states, and educational development outcomes (M.-T. Wang & Peck, 2013). Nonetheless, the mediating mechanisms through which different engagement profiles result in different educational development outcomes are still largely unknown. It is important to focus on such mechanisms, because interventions targeting them may improve the relationship between school engagement dimensions and educational development outcomes.

One arguably important set of such mediating mechanisms includes the use of information technologies (IT), both for school (i.e., utilitarian) and pleasure (i.e., hedonic) purposes. IT has become an increasingly important part of life in modern societies, especially among adolescents, who are commonly referred to as “digital natives” (e.g., Thompson, 2013). Discussing IT use as a mediating mechanism is particularly important because IT can *dualistically* facilitate both adolescents' engagement with school work (e.g., asking for help with homework, searching for relevant information, Ensor, 2012; Jacobs, 2012), and their disengagement from school (e.g., through playing non-educational videogames or using social media for socialization and fun, Christakis, Ebee, Rivara, & Zimmerman, 2004; Ong et al., 2011). In essence, IT is a double-edged sword; it is a readily available means for engaging with the school work (e.g., Gross, 2004; Jackson et al., 2006; Madell & Muncer, 2004; Willoughby, 2008), but also for escaping and disengaging from school (e.g., Junco, 2012a; Karpinski, Kirschner, Ozer, Mellott, & Ochwo, 2013; Kirschner & Karpinski, 2010; Turel, 2015; Turel & Bechara, 2016; Turel, Mouttapa, & Donato, 2015; Turel, Romashkin, & Morrison, 2016; Xu, Turel, & Yuan, 2012). For example, some studies have raised concerns regarding the negative effects of hedonic and excessive patterns of IT use, such as the problematic use of videogames and/or social media, on adolescents' performance at school (e.g., Turel, 2015; Turel & Serenko, 2012; Turel, Serenko, & Giles, 2011). In contrast, other studies have argued that IT can help adolescents; they use IT predominantly for accessing information, mostly for educational purposes, which can have positive impacts on adolescents' educational development (e.g., Gross, 2004; Jackson et al., 2006; Madell & Muncer, 2004; Willoughby, 2008).

Considering this wide spectrum of potential impacts of different patterns of IT use on adolescents' educational development, it is important to better comprehend (a) how the patterns of IT use vary among adolescents as a function of their school engagement, and (b) how these patterns can affect adolescents' educational development outcomes. This study makes one of the first strides towards addressing these gaps; it examines how IT use patterns can help translating common school engagement profiles into educational outcomes.

1.1. School engagement

School engagement refers to “energized, directed, and continued action, or the discernible qualities of students' interactions with learning activities or environments” (M.-T. Wang & Peck, 2013, p. 1266). It is a trichotomy of behavioral, cognitive, and emotional engagement dimensions (e.g., Fredricks et al., 2004; M.-T.; Wang & Peck, 2013; Watton, 2014). Behavioral engagement with school refers to the notion of participation in learning activities and physical presence in class and school (Fredricks et al., 2004; M.-T.; Wang & Peck, 2013). Cognitive engagement with school captures preference for hard work, investment in and use of self-regulated approaches to learning, as well as being strategic in planning, monitoring, and evaluating short-term and long-term learning outcomes (Fredricks et al., 2004; Zimmerman, 1989). Emotional engagement with school encompasses affective reactions to the school environment and to the school activities (e.g., Fredricks et al., 2004; Skinner & Belmont, 1993; Voelkl, 1997). The multidimensional conceptualization of school engagement provides a rich lens for understanding how students act, feel, and think toward the school, which can directly and indirectly affect their educational development outcomes (Fredricks et al., 2004; M.-T.; Wang & Peck, 2013).

Students who demonstrate high behavioral engagement with school are more likely to absorb the delivered content, feel they belong, participate in the class, and ultimately succeed academically. In contrast, students who adapt disengaging behaviors, such as truancy, are at a greater risk for educational failure (Appleton, Christenson, Kim, & Reschly, 2006; Simons-Morton & Chen, 2009; M.-T.; Wang, 2009; M. T.; Wang, Selman, Dishion, & Stormshak, 2010). Similarly, cognitive engagement with school is positively associated with educational development; students who are willing to exert the necessary cognitive effort toward studying and learning and develop and use self-regulated strategies for learning, manage to better comprehend and master complex concepts (Miller & Byrnes, 2001; Zimmerman, 1989). Finally, high emotional engagement with school (i.e., having positive feelings and attitude toward the school and enjoying being at school) can foster educational development (Fredricks et al., 2004; M.-T.; Wang & Peck, 2013). In contrast, low emotional engagement with school can lead to a number of developmental problems, such as substance abuse and depression (e.g., Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001; Li & Lerner, 2011; Maddox & Prinz, 2003; M.-T.; Wang & Peck, 2013).

Despite the importance of viewing school engagement as a multidimensional phenomenon, most studies thus far have either focused on a sole dimension of school engagement, usually behavioral engagement, or combined various dimensions of school engagement into a single composite factor (Marks, 2000). Both of these approaches impede the examination of distinctive and simultaneous effects on dimensions of engagement on developmental outcomes (Jimerson, Campos, & Greif, 2003; M.-T.; Wang & Peck, 2013). Accordingly, a recent study has shown that the three dimensions of school engagement can configure differently in adolescents, creating distinct profiles of individuals, who significantly vary in their educational and psychological functioning (M.-T. Wang & Peck, 2013). Following this path, we first attempt to investigate the following question:

Research Question 1: *Are there meaningful distinctive clusters of adolescents based on the configurations of different levels of their behavioral, cognitive, and emotional engagement with school?*

Download English Version:

<https://daneshyari.com/en/article/348145>

Download Persian Version:

<https://daneshyari.com/article/348145>

[Daneshyari.com](https://daneshyari.com)