Information technology-related specific traits: Linkage with general traits and relative explanatory power

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Abstract

A considerable body of work on technology adoption and use has focused on two information technology-related user traits, i.e., personal innovativeness and computer playfulness. However, there has been little effort to ground this body of work in trait research in psychology and other disciplines. One rationale for the emphasis on domain-specific traits is that they are more explanatory of outcome variables than general traits. However, this assumption has not been extensively examined in the IS empirical literature. Thus, this study seeks to ground the two IT-related traits in the Big Five trait model and empirically assess their relative capabilities in explaining variances in user outcomes. Implications of our findings and contributions are discussed.

Keywords: General trait, domain-specific trait, computer playfulness, personal innovativeness, problematic technology use, Internet addiction

INTRODUCTION

A considerable body of work in the technology adoption and usage literature has focused on two specific traits related to information technology (IT), i.e., personal innovativeness with IT and computer playfulness, and how they lead to various adoption and use outcomes. However, there has been little effort to ground this body of work in trait research in psychology and other disciplines. To avoid "private" IS theories and work toward a cumulative tradition in this area (Keen, 1980), this study looks beyond our disciplinary boundary for research that may ground and inform our understandings of these IT-related specific traits.

One rationale for the emphasis on these domain-specific traits is the assumption that they are more explanatory of outcome variables than general traits. Webster and Martocchio (1992) note that, "Situation-specific individual characteristics…relate more strongly than more general individual characteristics to organizational outcomes. Situation-specific traits are more likely to operate in specific kinds of situations than in all situations…" When conceptualizing the personal innovativeness with IT construct, Agarwal and Prasad (1998) similarly argue that in order to achieve high predictive power, the construct must be domain specific rather than global.

Though the use of domain-specific traits has received support in other fields (e.g., Flynn & Goldsmith, 1993; Goldsmith & Hofacker, 1991; Paunonen & Ashton, 2001), there has been little effort to empirically assess the value of this approach in the IT domain. In other words, while prior IT adoption and use research has taken a context-specific approach and focused primarily on IT-related specific traits, it has not taken the same approach to empirically assess the plausibility of this focus on specific traits in the IT domain. This study conducts an initial test of the relative explanatory power of general vs. IT-related specific traits.

In sum, this research has two objectives: 1) it looks to the trait literature and explores frameworks, such as the Five-Factor Model (or the "Big Five"), for theoretical grounding of the two IT-specific traits: personal innovativeness and computer playfulness, and 2) it empirically assesses the relative explanatory power of the general vs. IT-related specific traits in explaining variances in user criterion variables.

The rest of the paper is organized as follows. We first review research on the two IT-related specific traits in the technology adoption and use literature as well as the user criterion variables. We then identify relevant Big Five general traits and explore their relationships with the IT-specific traits and user criterion variables. We then describe our research methodology and present our empirical findings. The paper concludes with a discussion of implications of the findings and contributions.

THEORETICAL DEVELOPMENT

Individual traits refer to individual attributes that consistently distinguish people from one another in terms of their basic tendencies to think, feel, and act in certain ways (Ones, Viswesvaran & Dilchert, 2005) and are reasonably consistent over time (Buss, 1991). Most trait research in IS has been conducted in the context of technology adoption and use, where the primary focus has been on two IT-specific traits: personal innovativeness and computer playfulness.

Another frequently studied individual-level factor in this area is computer self-efficacy (e.g., Compeau & Higgins, 1995), which refers to an individual's perception (or belief) of his/her own ability to perform the behavior (Bandura, 1977). Because self-efficacy is perceptual in nature

and is not a stable trait, it is not examined in this study. In the following paragraphs, we review the literature on personal innovativeness and computer playfulness.

Personal innovativeness and computer playfulness

There has been a considerable body of research on personal innovativeness with IT and computer playfulness in the technology adoption and use literature. Personal innovativeness with IT is a trait that reflects an intrinsic willingness to try out new technologies (Agarwal & Prasad, 1998). Computer playfulness, as a trait, refers to the degree of cognitive spontaneity in microcomputer interactions (Webster & Martocchio, 1992).

These two IT-related specific traits have been linked with a variety of user attitudes, beliefs and intentions related to technology adoption and use (e.g., Agarwal & Prasad, 1998; Hess, Fuller & Mathew, 2006; Leonard-Barton & Deschamps, 1988; Lewis, Agarwal & Sambamurthy, 2003; Limayem & Khalifa, 2000; Srite, Galvin, Ahuja & Karahanna, 2007; Thatcher & Perrewé, 2002; Venkatesh, 2000; Yi, Fiedler & Park, 2006; Webster & Ahuja, 2006; Webster & Martocchio, 1992). One stream of work in this literature has further specified the process through which the two traits lead to various behavioral and affective outcomes by establishing the mediating role of the user's psychological state during technology use, particularly cognitive absorption or engagement (Agarwal & Karahanna, 2000; Webster & Martocchio, 1992), which is discussed next.

Cognitive absorption

Defined as "a psychological state of deep involvement with software" (Agarwal & Karahanna, 2000), cognitive absorption is a state where a user is engaged in a self-motivating, focused, controlled, curiosity-arousing, enjoyable activity such as interaction with a technology (Csikszentmihalyi, 1975; Webster, Trevino & Ryan, 1993). The two IT-specific user traits, along with this user state, can lead to favorable outcomes, such as behavioral intention to use technology (Agarwal & Karahanna, 2000; Webster & Ahuja, 2006), improved learning in software training (Martocchio & Webster, 1992), and increased satisfaction and decision performance (Hess, Fuller & Mathew, 2006).

Complementing this is recent work that found these same user traits and states leading to unfavorable user outcomes, such as problematic technology use (Jia et al., 2007). This study will employ cognitive absorption and problematic technology use as criterion variables in testing the relative explanatory power of general and IT-specific traits. The construct of problematic technology use is introduced in the following paragraphs.

Problematic technology use

Psychology research has documented varying types and degrees of dysfunctional use of technologies (e.g., personal computer, the World Wide Web) during the past two decades and associated them with high cognitive involvement and other psychological states (e.g., Chou, Condron & Belland, 2005; Davis, 2001; Shotton, 1989; Yellowlees & Marks, 2007; Young, 1996). In the context of Internet use, Davis (2001) conceptualized problematic technology use as behaviors and cognitions associated with technology use that result in negative personal nd professional consequences for the user. Davis et al. (2002) theorized the construct as having four dimensions: diminished impulse control (i.e., compulsive technology use), loneliness/depression (i.e., negative affective consequences of not using technology), distraction (i.e., procrastination and avoidance from social and occupational responsibilities through technology use), and social comfort (i.e., perceived social comfort during technology usage). Building on these studies and the

IT literature, recent work used the World Wide Web as the target technology has found empirical support for the model in Figure 1 (Appendix).

Having reviewed the existing research on the IT-specific traits and the two user criterion variables (i.e., cognitive absorption and problematic technology use), we next introduce the literature on general traits and develop hypotheses about their relative explanatory power.

General Traits

Amongst the many different frameworks to study individual trait and personality, the Five-Factor Model, or the "Big Five," including extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience, has been regarded as the most agreed upon personality framework because of its consistency with various psychological theories, validity across age, gender and culture, and links to a biological component (Costa & McCrae, 1992a/b; Goldberg, 1993; Viswesvaran & Ones, 2004; Zweig & Webster, 2004).

This study investigates two of the Big-Five traits, i.e., openness to experience and conscientiousness, along with the two IT-specific traits. As elaborated in the next paragraphs, openness to experience is likely a general trait corresponding to personal innovativeness and computer playfulness, and thus will be used to illustrate its explanatory power in relation to these two IT-specific traits. Conscientiousness was chosen because 1) it is likely associated with one of the user criterion variables (i.e., problematic technology use), and 2) it is relevant to technology adoption and use, but has so far received little attention in this area of research. We next introduce the two Big-Five traits and develop relationships for empirical testing.

Openness to experience

Openness to experience, or openness, describes the breadth, depth, originality and complexity of an individual's mental and experiential life (John & Srivastava, 1999). Individuals high in openness are described as being imaginative, sensitive, intellectual, curious (McCrae & Costa, 1987) and open-minded (Zhang, 2003). They tend to seek variety and intellectual stimulation, are better at grasping new ideas (Costa & McCrae, 1988; McCrae & Costa, 2003), and have more favorable attitudes toward learning (Barrick & Mount, 1991). In contrast, those low in this trait would be unadventurous, rigid, and use more conventional thinking (McCrae & Costa, 1987).

Relating the above to personal innovativeness (i.e., one's intrinsic willingness to try out new technologies; Agarwal & Prasad, 1998) and computer playfulness (i.e., one's cognitive spontaneity in microcomputer interactions; Webster & Martocchio, 1992), it is hypothesized that openness to experience is a general trait corresponding to these two IT-specific traits. To empirically establish such relationship, openness first needs to be significantly related to the specific traits.

H1a: Openness to experience is positively related to personal innovativeness.

H1b: Openness to experience is positively related to computer playfulness.

If openness is a general trait that corresponds to the two IT-specific traits, then it is also likely to be similarly related to other variables in their nomological network. Since the two specific traits are antecedents of cognitive absorption and problematic technology use (Figure 1), openness

is also expected to be an antecedent trait of these two user criterion variables. However, as a general trait, openness will explain less variance than either IT-specific trait.

H2a: Openness explains significant variance in cognitive absorption with a technology.
H2b: Openness explains less variance in cognitive absorption than personal innovativeness.
H2c: Openness explains less variance in cognitive absorption than computer playfulness.

H3a: Openness explains significant variance in problematic technology use.
H3b: Openness explains less variance in problematic technology use than personal innovativeness.
H3c: Openness explains less variance in problematic technology use than computer playfulness.

The above hypotheses examine the issue of explanatory power in terms of the portions of variance explained (absolute explanatory power), which is relevant when the research goal is to identify the single most explanatory factor. However, for researchers seeking to build comprehensive models and achieve high R^2 values, an equally important aspect of the issue is whether general traits can explain significant *unique* variance that is not accounted for by specific traits (comparative explanatory power). If so, then it may still be useful to study general traits (though less explanatory in absolute terms) in conjunction with specific traits, and a categorical exclusion of general traits would be unwise. Thus, a further test will be to examine whether openness explains incremental variance above and beyond either specific trait.

H4a: Openness does not explain incremental variance in cognitive absorption beyond personal innovativeness.
H4b: Openness does not explain incremental variance in cognitive absorption beyond computer playfulness.

H5a: Openness does not explain incremental variance in problematic technology use beyond personal innovativeness.
H5b: Openness does not explain incremental variance in problematic technology use beyond computer playfulness.

In sum, the above hypotheses first seek to establish openness as a general trait corresponding to the two IT-specific traits, and then evaluate their differential explanatory power, both in absolute and comparative terms. The general trait of conscientiousness is discussed next.

Conscientiousness

Conscientiousness, as a personality trait, describes an individual's socially prescribed impulse control that facilitates task and goal oriented behavior, such as following norms, delaying gratification, organizing, and planning (John & Srivastava, 1999). Individuals with a high level of conscientiousness are described as being careful, thorough, responsible, organized, self-disciplined, and scrupulous (McCrae & Costa, 1987; Zweig & Webster, 2004). They have also been characterized as being purposeful, strong-willed, responsible, and trustworthy (Zhang, 2003). In view of these characteristics, conscientiousness is not likely a general trait that corresponds to personal innovativeness or computer playfulness, nor is it likely to predispose an individual to experience cognitive absorption during technology use.

H6a: Conscientiousness is not significantly related to personal innovativeness.
H6b: Conscientiousness is not significantly related to computer playfulness.
H7: Conscientiousness is not significantly related to cognitive absorption.

However, it is intuitive to conjecture a relationship between conscientiousness and problematic technology use because highly conscientious individuals will be more self-disciplined, and thus are less likely to engage in excessive technology use while ignoring obligations and responsibilities in their work and life. Therefore, conscientiousness is hypothesized as negatively related to problematic technology use. However, as a general trait, it is expected to be less explanatory than either specific trait.

H8a: Conscientiousness is negatively related to problematic technology use.
H8b: Conscientiousness explains less variance in problematic technology use than personal innovativeness.
H8c: Conscientiousness explains less variance in problematic technology use than computer playfulness.

To summarize, the general trait of conscientiousness is hypothesized as unrelated to the two IT-specific traits and cognitive absorption. However, it is expected to explain significant variance in problematic technology use, but to a lesser extent than either specific trait. We next describe the research methodology employed to test these relationships.

METHODOLOGY

This study is part of a larger research project on technology user traits and usage behavior. Two hundred eighty eight students enrolled in a junior-level undergraduate business class at a public university were invited to complete a survey for extra course credit. The survey was anonymous, and students were asked to respond to all items and in the way consistent with their perceptions and experience. The target technology was the World Wide Web, which is readily available on and off campus and is widely and voluntarily used by students. The technology also exemplifies the characteristics of contemporary IT that underscore the importance of notions of cognitive absorption (Agarwal & Karahanna, 2000) and problematic technology use (e.g., Davis, 2001).

Table 1 (Appendix) summarizes the measurement scales used in this study (all seven-point Likert-type scales). Demographic information such as gender and prior Web experience was also collected.

Hierarchical regression was used to test the hypotheses because incremental validity of the independent variables can be tested as they are entered sequentially into the regression model. In other words, the increased proportion of variance explained in the dependent variable (ΔR^2 and p-value) can be examined to assess whether newly entered variables are significant (Hair et al., 1998).

RESULTS

Useable responses consist of 283 students including 185 males (65%) and 97 females (35%), and these individuals have an average of 7.49 years of Web experience (*s.d.* = 1.93). Descriptive statistics, scale reliability and correlation matrix are shown in Table 2 (Appendix).

To rule out the potential threat of multicollinearity, variance inflation factor (VIF) values were examined in all subsequent hierarchical regression equations. With the largest VIF value for independent variables in all equations at 2.07, which is well within the threshold of 10 (Neter et al., 1996), multicollinearity is not likely an issue.

Openness as a corresponding general trait

H1a/b hypothesize that openness is related to the two IT-specific traits. The correlation matrix (Table 2) suggests that openness is significantly correlated with both personal innovativeness ($r = 0.423$, $p < .000$) and computer playfulness ($r = 0.445$, $p < .000$). Thus, H1a/b are supported.

To establish openness as a predictor of cognitive absorption (H2a), a hierarchical regression model is estimated. As shown in Table 3 (Appendix), after controlling for the effects of gender and prior Web experience, openness is a significant predictor of cognitive absorption ($\Delta R^2 = 0.111$, $t = 5.75$, $p < .000$). Thus, H2a is supported.

The above results suggest that openness is significantly related to the two IT-specific traits (H1a/b) and has a similar relationship with the criterion variable of cognitive absorption (H2a). Based on their conceptual linkage explored earlier and these results, it is concluded that openness is a general trait that corresponds to personal innovativeness and computer playfulness.

Openness: relative explanatory power

Two hierarchical regression models were estimated to access the explanatory power of the IT-specific traits (Table 4 in Appendix). Comparing the different portions of variance explained (Tables 3 and 4 in Appendix), openness accounted for less variance in cognitive absorption than the two IT-specific traits ($\Delta R^2_{OPEN} < \Delta R^2_{PI} < \Delta R^2_{CP}$). Thus, H2b and H2c are supported.

It is further shown in Table 5 (Appendix) that, after controlling for openness, significant amounts of incremental variance in cognitive absorption were explained by personal innovativeness ($\Delta R^2 = 0.108$, $t = 6.02$, $p < .000$) and computer playfulness ($\Delta R^2 = 0.273$, $t = 10.85$, $p < .000$).

Openness has also been hypothesized as related to problematic Internet use (H3a). Because the correlation matrix (Table 2 in Appendix) suggests that the two variables are not significantly correlated ($r = 0.050$, *n.s.*), H3a is not supported.

H3b and H3c hypothesize that openness explains less variance in problematic Internet use than the two IT-specific traits. Because it has been shown that openness is not a significant predictor problematic Internet use (H3a) while the two specific traits are (Table 6 in Appendix), it can be concluded that both specific traits are more explanatory of problematic Internet use. Thus, H3b and H3c are supported.

Results from this set of tests suggest that while openness accounts for significant variance in a proximal criterion variable (i.e., cognitive absorption), it is not sufficiently specific to explain significant variance in a more distal criterion variable (i.e., problematic Internet use) as its explanatory power attenuates quickly down the causal chain. In contrast, the two IT-specific traits explained larger amounts of variance in both criterion variables, proximal and distal. So far, data have supported the superior explanatory power of specific traits.

Having shown that openness is less explanatory than either IT-specific trait, we now examine whether openness explains unique variance in cognitive absorption not accounted for by either specific trait (H4a/b). As shown in Table 7 (Appendix), openness explained a small, but significant amount of incremental variance in cognitive absorption beyond personal innovativeness ($\Delta R^2 = 0.023$, $t = 2.76$, $p = .006$). Since personal innovativeness is a frequently studied user trait in the IT literature, this result suggests that it may be useful to incorporate openness in future research of this area. H4a is not supported.

In contrast, after controlling for computer playfulness, openness is no longer a significant predictor of cognitive absorption ($t = .84$, *n.s.*). Thus, openness does not explain incremental variance beyond computer playfulness. H4b is supported.

H5a/b hypothesized that openness will not explain incremental variance in problematic Internet use above and beyond either IT-specific trait. Because earlier tests showed that openness is not significantly related to problematic Internet use (H3) and that both specific traits are (Table 6 in Appendix), H5a/b are supported without requiring further tests.

Conscientiousness

The correlation matrix (Table 2 in Appendix) shows that conscientiousness is not significantly correlated with personal innovativeness ($r = .013$, *n.s.*), computer playfulness ($r = -.052$, *n.s.*), or cognitive absorption ($r = -.007$, *n.s.*). Therefore, conscientiousness is not a general trait that corresponds to the two specific traits, nor is it an antecedent of cognitive absorption. Thus, H6a/b and H7 are supported.

Since conscientiousness is significantly related to problematic Internet use ($r = -.398$, $p < .000$), further hierarchical regression analysis was necessary. As shown in Table 8 (step 2) (Appendix), conscientiousness explained a large amount of variance in problematic Internet use ($\Delta R^2 = 0.13$, $t = -6.13$, $p < .000$), thus providing support for H8a. When comparing the portions of variance explained, conscientiousness turns out to be more explanatory than personal innovativeness ($\Delta R^2 = 0.054$), but less so than computer playfulness ($\Delta R^2 = 0.292$). Thus, H8b is not supported, while H8c is.

It is noteworthy that a general trait turned out to be more explanatory than a domain-specific trait. Though one may argue that conscientiousness is actually quite specific to the phenomenon of problematic technology use, the implication of this finding is that there is perhaps not a fine line between general and specific traits, and that the same trait can be general in one context but quite specific in another. Thus, the "general" vs. "specific" labels could be misleading, and a categorical exclusion of general traits from domain-specific inquiries, such as IT adoption and use, would be unwise.

The construct of problematic technology use is still relatively new to IT research. The model tested in Figure 1 accounted for 41% of its variance. The addition of conscientiousness as an antecedent trait increases the portion of variance explained to over 55% (Table 8 Step 3 in Appendix), contributing to a deeper understanding of the phenomenon.

IMPLICATIONS

This study had two objectives. One was to seek theoretical grounding of the trait research in the IT adoption and use literature in the broader trait research in reference disciplines. Openness to experience from the Big Five model has been established as a general trait corresponding to the two frequently studied IT-specific traits: personal innovativeness and computer playfulness. Such

linkage to our reference disciplines provides grounding for trait research in IT and contributes to a cumulative tradition in this area.

The other objective was to conduct an initial test of the superior explanatory power of domain-specific traits, which was assumed to be applicable to the IT domain but not empirically assessed. Data provided confirming evidence that openness explained less variance in the two user criterion variables than either IT-specific trait. However, openness also explained a small, but significant, amount of unique variance in one criterion variable (i.e., cognitive absorption) not accounted for by personal innovativeness. Since personal innovativeness is a frequently studied trait in IT, it may be useful to incorporate openness in future research in this area. It is important to note that the above test of their relative explanatory power was based on two user criterion variables. Though it is not possible to include all possible criterion variables in one single study, results from this research do need to be replicated using different criterion variables in future research.

This is one of the first IT studies that investigated the Big Five trait of conscientiousness. It was established as an additional antecedent trait of problematic technology use and explained a larger amount of variance than personal innovativeness. As discussed earlier, if a trait is general in one context but specific in another, then there is perhaps not a fine line between general and specific traits. Therefore, labels like "general" or "specific" should be used with caution, and our belief in the explanatory power of specific traits should be somewhat qualified. Future adoption research should consider a broad range of user traits.

Establishing conscientiousness as an antecedent of problematic technology use also contributes to a deeper understanding of the phenomenon, which is a fairly new construct in IT research. Conscientiousness may also be relevant to many other IT topics, such as IT ethics (Banerjee, Cronan & Jones, 1998) and use of pirated software (Moores & Chang, 2005).

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APPENDIX

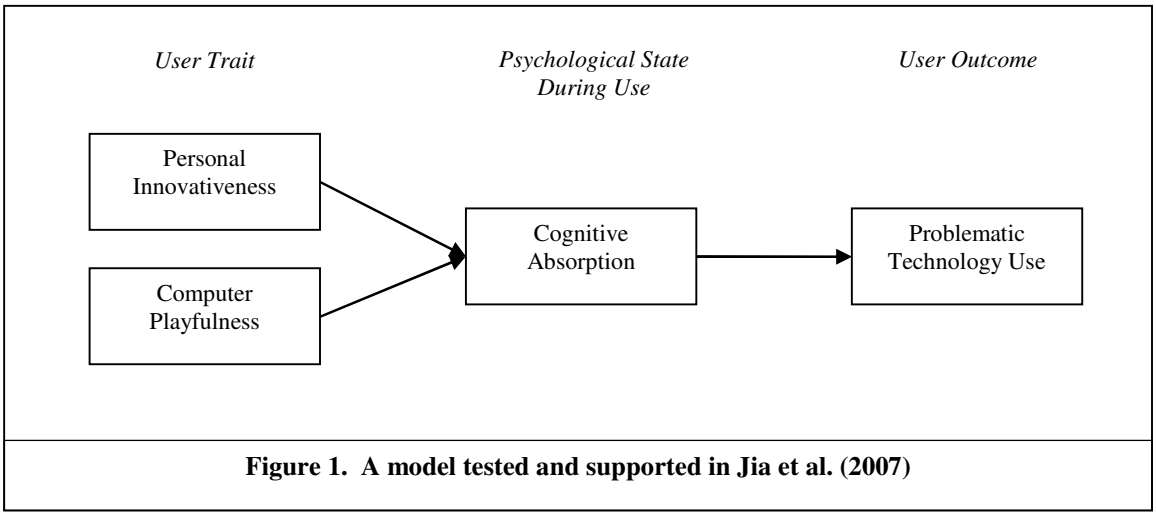

Figure 1. A model tested and supported in Jia et al. (2007)

Table 1: Measurement Scales and Sources	
Measure	Source
Computer Playfulness (CP)	Webster & Martochhio, 1992
Personal Innovativeness (PI)	Agarwal & Prasad, 1998
Cognitive Absorption (CA)	Agarwal & Karahanna, 2000
Problematic Internet Use (PIU)	Davis et al., 2002
Openness to Experience (OPEN)	John & Srivastava, 1999
Conscientiousness (CONS)	John & Srivastava, 1999

Table 2. Descriptive Statistics, Scale Reliability and Correlation Matrix

	Mean	σ	α	OPEN	CONS	PI	CP	CA
OPEN	4.70	.78	.74					
CONS	4.92	.90	.78	.259(*)				
PI	4.26	1.19	.78	.423(*)	.013			
CP	4.02	.97	.82	.445(*)	-.052	.530(*)		
CA	4.48	.76	.80	.339(*)	-.007	.475(*)	.636(*)	
PIU	3.27	.87	.89	.050	-.398(*)	.304(*)	.580(*)	.553(*)

* Correlation is significant at the 0.01 level (1-tailed).

Table 3. Openness as an Antecedent of Cognitive Absorption (H2a)						
	Variables Added	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2
1	(Controls)				.032	.032
2	(Controls)					
	OPEN	.320	5.750	.000	.111	.143

Note: The small difference in the ΔR^2 and *Total* R^2 values for the control variables between this and the subsequent tables is a result of listwise deletions of missing data. If missing data are replaced with mean scores, they become equal.)

Table 4. IT-specific Traits as Antecedents of Cognitive Absorption (H2b and H2c)												
	Variables Added	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2	*Variables Added*	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2
1	(Controls)				.036	.036	(Controls)				.033	.033
2	(Controls)						(Controls)					
	PI	.302	8.026	.000	.195	.231	CP	.519	12.899	.000	.382	.415

Table 5. Incremental Variance in Cognitive Absorption Explained by IT-specific Traits												
	Variables Added	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2	*Variables Added*	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2
1	(Controls)						(Controls)					
	OPEN	.320	5.720	.000	.111	.146	Open	.320	5.715	.000	.111	.143
2	(Controls)						(Controls)					
	OPEN	.162	2.761	.006			Open	.044	.839	.402		
	PI	.250	6.015	.000	.108	.254	CP	.500	10.850	.000	.273	.416

Table 6. IT-specific Traits and Problematic Internet Use (H3b and H3c)												
	Variables Added	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2	*Variables Added*	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2
1	(Controls)				.045	.045	(Controls)				.041	.041
2	(Controls)						(Controls)					
	PI	.181	3.816	.000	.054	.099	CP	.518	10.314	.000	.292	.333
3	(Controls)						(Controls)					
	PI	-.006	-.122	.903			CP	.328	5.364	.000		
	CA	.619	8.845	.000	.221	.320	CA	.370	5.010	.000	.063	.396

Table 7. Incremental Variance in Cognitive Absorption Explained by Openness (H4a,b)												
	Variables Added	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2	*Variables Added*	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2
1	(Controls)						(Controls)					
	PI	.302	8.010	.000	.196	.231	CP	.519	12.843	.000	.382	.414
2	(Controls)						(Controls)					
	PI	.250	6.015	.000			CP	.500	10.850	.000		
	OPEN	.162	2.761	.006	.023	.254	Open	.044	.839	.402	.002	.416

Table 8. Conscientiousness and Problematic Internet Use (H8a)						
	Variables Added	*b*	*t*	*Sig.*	ΔR^2	*Total* R^2
1	(Controls)				.042	.042
2	(Controls)					
	CONS	-.355	-6.133	.000	.130	.172
3	(Controls)					
	CONS	-.380	-8.868	.000		
	PI	-.062	-1.544	.124		
	CP	.401	7.034	.000		
	CA	.372	5.632	.000	.059	.558