Creating a resource for residence hall directors to advise students on Problematic Internet Use

By

Ian Mackenzie Ringgenberg

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Program of Study Committee:
Jay Newell, Major Professor
Virginia Arthur
Michael Bugeja
Kathleen Waggoner

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Abstract

A resource was created for residence staff at universities to advise students with Problematic Internet Use (PIU). LaRose, Lin, & Eastin’s (2003) study arguing for PIU as deficient self-regulation provided the basis for applying Bandura’s Social Cognitive Theory to an advising resource. Four hall directors were interviewed to evaluate the effectiveness of the resource. The evaluation suggests that the resource is timely and effective in its presentation of a topic of interest to residence staff, but may receive limited application because of the difficulty of identifying students in need and the time commitment required for intervention. A second draft of this resource, and a companion resource for students, was developed based on the information gathered in the evaluation.

Keywords: Problematic Internet Use, residence life, student affairs, self-regulation
Creating a Resource for Residence Hall Directors to Advise Students on Problematic Internet Use

For as long as the Internet has been available to the general public, images of addiction and obsession have followed its spread throughout society. Popular media images from the 1980s on, from Hackers and Tron to TV commercials of lethargic husbands absorbed in online fantasy football, have reinforced the idea that there is something captivating, perhaps even hypnotizing about the online world that causes its users to abandon the analog world they previously occupied. Although early research (Kraut et al., 1998) found Internet users to be more isolated and estranged than non-users, many subsequent studies showed little evidence of a negative relationship between Internet use and social well-being (Kraut, 2002; Hampton & Wellman, 2003; Robinson & Martin, 2010).

Those in positions to observe the modern American college student may agree more with the popular culture account of the Internet than the one provided by the bulk of researchers. With computers in their dorm rooms and laboratories, the laptops they bring to class, and smart-phones in their hands whenever they move between the two, college students’ lives may resemble the sci-fi films of yesteryear more than anyone in the AOL chat rooms of the 1990s would have predicted.

The outcomes of this high exposure to the Internet pose both opportunities and risks to students. Students stand to benefit from greater access to information, communication with family and friends, and access to inexpensive entertainment. On the other hand, the Internet may distract students from homework, encourage nights spent alone at the computer instead of in a public den, and make old friends from high school
more accessible than the new friends they could be making around campus. Additionally heavy users may suffer from reduced trust and understanding among peers because of the disruptions and stresses of their time online (Bugeja, 2005). While most students are capable of using the Internet beneficially without disruption to their lives, others may fail to avoid the potential distractions, interruptions, and isolation from use, or overuse, of the Internet.

Though the phenomena has been discussed in numerous studies, books, and journal articles, defining a distinct concept for the negative outcomes of Internet users has proved elusive. At least six terms have been coined to refer to people who experience negative consequences from Internet use, including “Internet Addiction Disorder,” “Pathological Internet Use,” “Excessive Internet Use,” and “Compulsive Internet Use” (Widyanto & Griffiths, 2006, p. 32). Despite linguistic and operational differences, researchers and writers in this field all focused on use of the Internet “associated with material and psychological consequences” (Widyanto & Griffiths, 2006, p. 38). For the purposes of this paper Problematic Internet Use, abbreviated PIU, is used to refer to this phenomenon. The term Problematic Internet Use is preferred over the other terms because it lacks the clinical associations of words like addiction and pathology, and suggests the possibility of gradation in severity among cases, but with a unifying theme of unwanted outcomes. Students who struggle with negative outcomes from their Internet use (losing time from sleep, friends, or studies to the Internet, a preoccupation with their lives online, or a lack of control over the time they spend online) may be suffering from Problematic Internet Use (PIU).
While the outcomes of Internet use for individuals vary, concerns that excessive use could undermine the community structure and academic environment warrant consideration. Astin (1993) identified media (e.g., television viewing or Internet use) as having an isolating effect between college students and warned that television watching can "take time away from activities that might be more conducive to learning and personal development" (p. 390) as well as being negatively related to multiple academic achievements. Liu & LaRose (2008) found correlation between high expectations of outcomes online and low life-satisfaction. If excessive Internet use on college campuses is not researched and addressed by student affairs staff, students are at risk of missing the social and academic benefits of a college education.

The Student Affairs staffs of universities that are dedicated to the education, development, and well-being of college students must be prepared to assist students with PIU. To do so, they will need an awareness and context of PIU as well as resources to help engage students with Internet use that jeopardizes personal and educational growth in college. This project aims to create a resource for residence hall directors about PIU to increase awareness of issues among their students and provide advice as to how to work with these students toward healthier use habits. It is hoped that through increased resources available to residential staff, students struggling with PIU can find help and understanding as they seek to eliminate negative outcomes of Internet use.

**Literature Review**

To create a useful and informative resource for Hall Directors, this paper reviews relevant research on PIU and its significance in student affair. This literature review begins by exploring the concept of PIU. An account is given of several theoretical
traditions and how they might inform an understanding of PIU, including uses and
gratifications, addictive personality, operant conditioning, and social-cognitive theory,
the latter of which is identified as a theoretical position with greater predictive value and
in line with the approach of this project.

Concern for the Internet’s addictive properties can be attributed as much to the
longstanding debate over media effects as to awe over its potential and diffusion. Early
academic perceptions of effects of the Internet were informed by the ongoing public
debate on television; after all, the Internet’s explosive diffusion through the American
public would happen less than a decade after Kubey and Csikszentmihalyi (1990)
hauntingly described television watchers flocking to their sets to ease the pains of life,
but coming away more miserable than before. New media have often come under
suspicion in American society for their ability to distract, occupy, and perhaps even
addict users, thereby displacing more fulfilling pursuits, whether they are economic,
social, or cultural. Putnam (2000) indicted television as a culprit in the decay of social
capital in America, echoing Kubey and Csikszentmihalyi’s (1990) description of a
medium that, while compelling, is enjoyed at a high opportunity cost to its users.
McIlwraith (1998) expressed some skepticism of true television addiction, stating, “there
are no data to tell us whether television addiction exists as a clinical phenomenon or
whether it is simply a colloquial shorthand expression of ambivalent feelings about the

Reports of PIU appear to be nearly as old as consumer use of the Internet itself.
Griffiths (2000) documented five case studies of possible self-identifying “Internet
Addicts” and Young (1998) adapted the criteria for gambling addiction to screen for this
“new clinical disorder” (p. 237). Interest in PIU has persisted past these early accounts of an unknown medium, and the phenomenon has been framed in a variety of theoretical traditions and approached from numerous perspectives.

**Understandings of Problematic Internet Use**

In its most generic terms, PIU refers to “a multidimensional syndrome consisting of cognitive and behavioral symptoms that result in negative social, academic, and professional consequences” (Caplan, 2007, p. 234). It is use of the Internet that interferes with other aspects of life in a negative way. Problematic usage contrasts with Davis’ (2001) definition of healthy Internet usage as “using the Internet for an expressed purpose in a reasonable amount of time without cognitive or behavioral discomfort” (p. 193). Davis went on to suggest that the line between PIU and healthy use has “no specific time limit, nor is there any behavioral benchmark” although there are certainly degrees of severity (p.193). PIU exists when there are negative behavioral or cognitive outcomes for the user. While criminal activities undertaken online are a problematic outcome, they are not included in the definition of PIU, as their consequences are legal, not behavioral or cognitive (Thatcher, Wretschko, & Fridjhon, 2008, p. 2238).

Davis further divided PIU into two categories: specific PIU and generalized PIU. Specific PIU refers to a dependency on a specific function of the Internet e.g. gambling, pornography, or online shopping. Generalized PIU refers to overuse of the medium itself, regardless of the specific function, and may manifest itself through aimless browsing, chat rooms, and/or a need for online socialization. Generalized PIU is the focus of this project because, as Davis pointed out, “their pathology would likely not even exist in the absence of the Internet” (2001, p. 192).
Usefulness of Understanding PIU in Student Affairs

The transition to college is a tumultuous phase of life for many students. Nathan applied the anthropological concept of a *liminal stage* (2005), a period of struggle between two stages of life, to the changes and transformation students go through as they experience college life. College students in the United States have ubiquitous access to the Internet (Gordon, Juang, & Syed, 2007) and are within an age group likely to maintain their social lives online (Vergeer & Pelzer, 2009). Student affairs professionals have an increased need to be knowledgeable about PIU when working with undergraduate students. Hall and Parsons warned about this combination of Internet saturation and stress in college students:

> Developmental stressors, coupled with free access to Internet services, may contribute to college student’s vulnerability to Internet Behavior Dependence and may compromise their ability to negotiate tasks such as identity formation and building intimate relationships. (2001, p. 316)

Adding to this challenge, one study reported nearly a quarter of students sampled indicated that technology disrupts their schoolwork or sleep and freshmen students spent significantly more time online than their upperclass peers (Gemmill & Peterson, 2006). With high rates of Internet use, reports of technological disruption, and the sensitivity of the college transition, PIU is relevant to the student affairs professionals who seek to assist these students.

At many universities, residence hall directors are the most student-accessible student affairs staff charged with overseeing and providing support for the transition and well-being of students. An awareness of PIU and Internet use resources has been
identified as a valuable asset for these advisors. Gordon et al. wrote “an awareness of Internet use motives could be useful in identifying students who feel the Internet is the only place to turn to for coping with a stressful school situation” (Gordon et al., 2007, p. 685). Additionally, Gemmill and Peterson suggested “it is important for academic advisors, residence hall, and counseling center staff to be informed about the potential relationship between higher levels of technology use, disruptions from technology, and perceived stress because of their role as mentor for students” (2006, p. 293).

It is, therefore, important that hall directors have access to a resource that can raise awareness of PIU and provide advice for engaging with these students. First, a theoretical approach to PIU is selected to explain the phenomenon and provide guidance as to how to assist those affected to lessen negative outcomes. The next section will explore several theoretical approaches to survey current research and inform the selection of a theory for this resource.

Theoretical Approaches to PIU

That there is no dominant theory under which to understand PIU speaks to the complexity of the phenomenon and the partial success with which each applied theory has been met. Widyanto & Griffiths also suggest that “surprisingly few researchers have attempted to propose a theory of the cause of Internet addiction despite the number of studies conducted on the field” (2006, p. 45). Because of this limitation, theoretical approaches used to understand the context within which other media addiction occurs must be considered to provide a framework for understanding PIU. The theories explored here include uses and gratifications (Katz, Blumler, & Gurevitch, 1974; McLeod & Becker, 1981), addictive personality (McLwraith, 1998), operant conditioning
(Marlatt, Baer, Donovan, & Kivlahan, 1988; Kubey & Csikszentmihalyi, 1990) and social cognitive (LaRose et al. 2003, Bandura, 1991). The research done on PIU often shares assumptions with multiple theories or falls between several of them, and the theories borrow ideas and concepts from each other. Each has shown advantages and limitations in research, and some may prove more useful than others for understanding PIU in the context of student life.

**Uses and Gratifications.** Uses and gratifications theory offers an approach to audience research that focuses on what users seek when they use media (Katz et al., 1974). McLeod & Becker warned, “there is, to be sure, no coherent uses and gratifications theoretical perspective” (1981, p. 71). Rather, those doing uses and gratifications research assume an active audience that chooses media according to individual internal need. Uses and gratifications assumes “an individual’s underlying needs drives his/her communication behavior. Therefore, people are not viewed as being equally or uniformly purposive, motivated and active in their use of media to satisfy underlying needs” (Kim & Haridakis, 2009, p. 992).

Kim & Haridakis (2009) studied PIU from a uses and gratifications perspective. Their study compared measures of PIU with use factors including amount of use, motive of use, and personality characteristics. While uses and gratifications may seem an odd choice for a study of an audience appearing out of control, the authors stated this theory “suggests media use can be related to unintended consequences of use such as Internet addiction” (Kim & Haridakis, 2009, p. 995). Their study uncovered three dimensions of PIU including neglect of other activities, escaping reality, and a strong emotional attachment to the Internet.
Song, LaRose, & Eastin further made a case for the involvement of Uses and Gratifications based approaches to PIU, writing:

the problem of Internet addiction may intersect with the domain of normal media consumption where uses and gratifications are the dominant paradigms...media habits were the result of prior decision-making that once engaged active uses and gratifications thought processes that became dormant with repeated media consumption. (2004, p. 385)

Even if uses and gratifications cannot explain use of the Internet that leads to personal harm or in situations where the use appears undirected, it may explain which users are likely to reach the point of addiction, or why some use more than others.

Uses and gratifications research certainly has a role to play in understanding PIU – specifically the characteristics and motives of the most susceptible users. Depending on one’s view of the theory’s limitations, however, it may or may not be able to adequately explain situations in which use is habitual. LaRose, Lin, & Eastin noted “media addictions challenge the prevailing uses and gratifications view of media consumption that emphasizes rational and conscious seeking of media content that gratifies personal needs [e.g., Palmgreen, Wenner, & Rosengren, 1985]” (2003, p. 226).

Whether uses and gratifications research will be tweaked to be responsive to these challenges remains to be seen.

**Addictive personality model.** An addictive personality theory is the least prevalent of the theories discussed. LaRose et al. (2003) presented addictive personality as an alternative position to operant conditioning. Supporters of addictive personality theory suggest that personality traits predict addiction, possibly across media and types of
activities. Therefore, a person addicted to the Internet might also be susceptible to
gambling, television, and potentially to various substance abuses. McIlwraith's (1998)
study of personality among television addicts suggested a possible conceptualization of
how addictive personality theory could apply to PIU. He found television addicts to be
more neurotic, introverted, and easily bored.

Addictive personality theory may lack significant support as an independent
type, but the perspective that PIU may be significantly predicted by user traits is found
across multiple theoretical perspectives. In uses and gratifications, addictive personality
was seen through the specific needs and wants of individual users. Research on operant
conditioning forces can still reveal influences of underlying personal factors. In his
cognitive-behavioral model of PIU Davis (2001) went so far as to say that
"psychopathology must be present or must have occurred in order for the symptoms of
PIU to occur" (p. 190). Additionally, both depression and social anxiety have been
shown to correlate strongly with measures of PIU (Sheperd & Edelmann, 2005; LaRose
et al., 2003). While addictive personality theory may not explain the mechanisms of PIU,
it may, like uses and gratifications, explain commonalities among those who suffer from
it.

Operant conditioning. The operant conditioning theory of PIU follows in a
behaviorist tradition of media research that relies more on habit and influence than
conscious decision-making and needs satisfaction. Much like Pavlov's dog was
conditioned to drool whenever he heard a bell ring, even when food was not present,
media users are conditioned to seek out the gratifications of media, even when they are
no longer fulfilled. Marlatt, Baer, Donovan, & Kivlahan (1988) described a four step
process of addiction that begins with initiation into a behavior, and contains increasingly uncontrolled and habitual behavior as addiction increases. At some point, normal behavior patterns transition to deviant or problematic ones.

Kubey & Csikszentmihalyi (1990) pursued similar behaviorist reasoning in regards to television watching. “In simple operant conditioning terms [Skinner, 1969], when people view they experience an immediate reward in the form of distraction and relaxation within seconds of turning on the set, and come to associate that improvement in emotional state with viewing” (p. 138). This line of thought is set apart from uses and gratifications and other theories discussed in that habit is an often-employed method of structuring experience and behavior. Television viewers were not partaking of the medium because it was fulfilling gratifications, but because it was immediately pleasurable, and a habit formed to watch television when stress is high. PIU could follow a similar path in which the Internet provides a quick relief to users who will be increasingly drawn to it by habit strength.

LaRose et al. (2003) found evidence of habit forming in the presence of “hot” mechanisms of decision making that contend with the rationality of uses and gratifications. Their findings suggested “habits could build through direct stimulus-response associations between media stimuli and the emotional responses they produce, without the formulation or execution of conscious consumption decisions” (p. 244). LaRose et al. further described the behaviorist model of PIU:

additive media consumption may be prompted by secondary conditioning to internal cues (such as boredom or depression) or external cues (such as
the sight of a computer or the TV remote control) that then trigger the same affective response as the media stimuli themselves did initially (p. 231)

While uses and gratifications may describe the initial motives of media use, perhaps habit and conditioned responses emerge, creating problematic situations in which media use is detached from cognition. When habit strength, not rational decision making, motivates Internet use, a once helpful medium can begin to displace other activities and cause preoccupation.

Not all evidence, however, points to simple conditioning as sufficient to account for PIU. Research conducted by Widyanto & Griffiths (2006) yielded evidence that “behavioural patterns of individuals with problematic Internet use are varied and hard to identify” (p. 38). If PIU was attributable to a small number of common pleasurable experiences like stress relief or distraction, as Kubey & Csikszentmihalyi (1990) suggested for television, then the behavior would likely be less varied. As LaRose et al. (2003) pointed out:

both the personality traits and the classical conditioning processes through which media addictions may be acquired are widely distributed in the population and the media stimuli are readily available in society. So, perhaps it is remarkable that there are so few Internet addicts [estimated by Hall & Parsons, 2001 to be 6% of the online population] rather than so many. (pp. 231-232)

If the theory used to describe a problematic media behavior is too dismissive of an active audience, then an explanation of normal, un-problematic use is difficult. Operant
conditioning, therefore, can have the reverse downfall of Uses and Gratifications. The truth may lie somewhere in between the two poles.

**Social cognitive theory.** The final theory used to explain PIU is social cognitive theory, established by Bandura (1986) and used to explain Internet use by LaRose et al. (2003). Social cognitive theory is “a comprehensive model of human behavior that extends classical learning theory to account for complex human cognitions” (LaRose et al., 2003, p. 232). Social cognitive theory assumes people learn from their environments and then use this information to inform future plans and behaviors (LaRose, Mastro, & Eastin, 2001). Expectations of the consequences of behavior predict the likelihood of that behavior being performed. People also possess a self-regulatory mechanism that allows for “purposive action,” or directed changes in how the individual performs a behavior (LaRose et al., 2001, p. 398; Bandura, 1991). This self-regulatory mechanism is key to the social cognitive understanding of PIU put forth by LaRose et al. (2003).

Self-regulation is comprised of three sub-functions that allow for controlling a certain behavior, be it throwing a ball, studying for a test, or using the Internet (Bandura, 1991). The first sub-function is observation of a given behavior and the conditions under which it occurs. People are cognitively aware of only a handful of the countless decisions they make every day, and to regulate a behavior they must first be aware of it. The second sub-function is the judgmental process, where individuals set a personal standard or adopt social comparisons as to how the action should be performed. This sub-function also includes the value attached to the behavior, and the degree to which the person concludes the behavior to be under his or her control. The final sub-function, self-reaction, encompasses the ways in which individuals incentivize or penalize their
subsequent performance of the behavior, depending on how their performance compares with their desired outcome. Self-regulation takes on a goal based achievement system where subjects motivate themselves to perform better on tasks they value highly by setting new benchmarks for performance. Bandura remarked on the centrality of this system to normal human functioning when he wrote:

Success in goal attainments builds a sense of personal efficacy. Without aspirations and evaluative involvement in activities, people remain unmotivated, bored, uncertain about their capabilities, and dependent upon momentary external stimulation for their satisfactions. Life without any elements of challenge can be rather dull. However, internalization of dysfunctional standards of self-evaluation can serve as a source of chronic misery. (1991, p. 273)

It is this dysfunction of self-evaluation to which LaRose et al. (2003) attributed problematic Internet usage.

LaRose et al. (2003) suggested that what is referred to as PIU is actually a manifestation of deficient self-regulation. The Internet is not so compelling (nor are people commonly so incapable) that it invalidates conscious consideration of its use, nor are the symptoms of PIU easily explained within traditional uses and gratifications theory. Rather, disruptions of individual self-regulatory mechanism can lead to habitual, unconsidered use from what was formerly directed and intentional Internet use. Bandura (1991) suggested that depression is a common reason for deficient self-regulation to occur, which aligns with reports of the correlation between depression and PIU. LaRose et al. noted “deficient self-regulation emerged not as an all-or-nothing phenomenon that
distinguished addicts from non-addicts but as a continuous variable that was systematically related to consumption even among those who fell short of the threshold for a 'diagnosis' of Internet addiction” (2003, p. 241). Here, the theory is able to both apply to those who show signs of PIU and those who enjoy normal Internet use habits. Normal use may be compromised by deficient self-regulation to varying degrees of severity and effect. Other studies have supported this connection, including Lee & Perry’s (2004) study of instant messaging among college students that concluded, “results showed that as a respondent’s self-assessed regulation worsened, intensity of preoccupation increased” (p. 414).

Social cognitive theory provides a way to see both normal and problematic Internet use along one continuum, with users along the scale regulating, or failing to regulate, using the self-regulatory mechanism Bandura proposed. The self-regulation construct has received considerable support in multiple studies as related to habit formation, Internet use, and problems stemming from use of the Internet. This and other advantages of social cognitive theory warrant its use in this project.

**Advantages of Social Cognitive Theory**

In exploring different theoretical approaches to PIU, social cognitive theory provides several advantages over other explanations. First, its constructs when added to uses and gratification research, present significant gains in explaining Internet use. LaRose, Mastro, & Eastin (2001) explained 60% of the variance in Internet usage by adding outcome expectations, self-efficacy, and self-regulatory processes to typical uses and gratifications, as compared to other uses and gratifications research that “typically only account for between 1% and 15% of the variance in use of conventional media.
[Palmgreen et al., 1985]" (p. 396). These gains in accounting for variation may suggest that social cognitive theory is applicable to the context of Internet use because it accounts for mechanisms by which people choose to engage in media use.

Additionally, social cognitive theory is capable of explaining both normal and problematic Internet use. On one hand, this approach avoids the rigidity of rational, goal oriented media use suggested by uses and gratifications theory. Problematic use may exist contrary to the user’s conscious wishes or goals. On the other hand, it does not go so far as to suggest that problematic use is a psychological condition brought about by habituation, outside of the user’s control, and curable only with professional treatment (LaRose et al., 2003). Users exist on a continuum from highly controlled and directed use to problematic use depending on the effectiveness of their self-regulation. This middle ground approach may allow for advising that acknowledges the benefits of the Internet, and the agency of the student, while still addressing problematic use. It accepts both the possibility of a ‘self-cure’ and the possible need for professional assistance in moving students toward better regulation of Internet use and fewer problematic outcomes.

Methodology

To construct an effective resource for student affairs professionals, the social cognitive model of Problematic Internet Use was adapted to a format useful for residence hall directors and designed with the student affairs context in mind. This section begins with a review of the criteria important in the creation of this resource. The criteria are explained in terms of the literature reviewed and Bandura’s social cognitive theory.
Finally, the methods for an evaluation of the resource by student affairs professionals are outlined.

A literature review was conducted to identify research on Internet use applying social cognitive theory, with particular interest in the self-regulation mechanism. The Google Scholar search engine was used to locate articles citing LaRose et al. (2003) and expanding upon or applying their seminal research. Additionally searching for “self-regulation” internet use yielded relevant articles using a self-regulation framework to approach problematic Internet use. Peer-reviewed articles were selected to contribute greater understanding of how the self-regulation mechanism interacts with problematic Internet usage among college students.

**Producing the Resource**

After reviewing the relevant literature on PIU with an emphasis on self-regulation, and their application in student affairs, the needs of residence hall directors needed to be taken into account as to how the resource would be organized. Several initial concerns were taken into account for the format of the resource. First, residence hall directors encounter a myriad of diverse student issues and crises and are often given little time to prepare an intervention. The resource should therefore be brief so that it can be used to prepare for a meeting with a student with little notice. Second, the resource should be unique so that it will be recalled when a hall director encounters a student dealing with PIU. Finally, hall directors must spread their energies across a large number of students whom they oversee. The interventions suggested by the resource therefore must require minimal effort or supervision on the part of the hall director, and long-term
counseling should be referred to appropriate resources on campus. These considerations led to a resource design with five principle elements:

- A brief introduction to the resource highlighting its intent and the problem it is designed to resolve;
- A flowchart to guide discussion and suggest activities for students who exhibit signs of PIU;
- A background section includes a theoretical discussion that allows for greater understanding of the flowchart, and opportunities for independent research;
- A discussion of risk factors that highlights the college population and suggests common correlated factors;
- A section encouraging referral to counseling resources if problematic use perseveres, or is better classified as a specific addiction behavior.

These considerations lead to an initial draft of the resource presented in Figure 1:
Advising Students on Internet Use in the Residential Setting
A Self-Regulation Approach
Ian M. Ringgenberg

Advising students who struggle with overuse of the Internet presents unique challenges in student affairs. We want to encourage students to go online to find activities on campus, study for classes, and keep in touch with their family to ensure success in college. On the other hand, we want to discourage Internet use that may preoccupy the student and prevent socializing and distract the student from attending class or social functions.

In order to extract the benefits of Internet use without suffering problematic outcomes, students must be able to self-regulate their usage. The flowchart below presents a model for advising students on their Internet use that focuses on identifying the nature of their use and encouraging self-regulation. Begin at the top of the chart and work through the decisions to work on activities to assist students dealing with problematic Internet use.

1. **Student is exhibiting signs of Problematic Internet Usage**
   - Preoccupation with use regardless when away from computer
   - Missing class, social outings, or sleep due to use
   - Often using the Internet without knowing why
   - Has tried to reduce use unsuccessfully
   - Commonly uses the Internet to control moods or relieve stress

2. **Does the student believe their use to be worth monitoring?**
   - **Yes**
   - **No**

3. **Does the student know how much time they spend online?**
   - **Yes**
   - **No**

4. **Make Internet Use Significant**
   - Explain the importance of time management to college success
   - Clarify behaviors that cause you concern
   - Regulate can prevent bad outcomes short of “addiction”

5. **Does the student know why they go online so much?**
   - **Yes**
   - **No**

6. **Daily Use**
   - Use the Internet at work
   - Only work for interfere with school work
   - When ago to online office, record what they are performing
   - What most commonly leads them to go online

7. **Does the student know how much time they spend online?**
   - **Yes**
   - **No**

8. **Key A Time**
   - Keep track:
   - Posting amount of time spent online each day for a week
   - Find average amount of use both on weekdays and weekends
   - Keep a Time

9. **Leverage Time**
   - Cope with use by monitoring and controlling Internet use
   - Keep a Time
   - Encourage use with a list of possible reasons to use Internet
   - Encourage use by the student’s reasonable usage times
Background

This flowchart provides an advising model based on the process of self-regulation. Self-regulation is an important cognitive function that allows us to adjust our thoughts and actions in line with external and internals standards. Whether we are trying to run faster, be more social, or go on a diet, we are constantly setting goals to change ourselves. This model has been applied to problematic Internet use, suggesting that what has often been labeled 'Internet Addiction' may represent deficient self-regulation. As we use the Internet more and more, what was once a conscious action becomes habitual and unconsidered – we lose control of our use.

In line with Albert Bandura’s work on Social Cognitive Theory, successful self-regulation involves three sub-functions: self-observation, judgmental process, and self-reaction. This flowchart attempts to simulate the first two sub-functions by providing the student with observational information about their use, and setting an internal goal for reduced use. If the student has internalized that reduced use is desirable, and set an obtainable goal, the student should begin to regulate their use.

Who is at risk?

All students are at some risk for problematic Internet use. Many students have grown up maintaining social networks online; they are in an environment with ubiquitous Internet access, and are dealing with the added stresses of college. Young people are among the heaviest Internet users and may lack the reinforcement from family and friends that they received in high school. Internet use may be a coping strategy for students who struggle with the transition to college life.

Internet addiction has been found in 8-13% of users, but problematic outcomes may occur even in those who are not fully addicted. Those students who deal with depression or social anxiety are at particular risk for problematic outcomes from Internet use. The anxious may use online socializing as a way to avoid socially stressful situations. Depressed students are at a high risk for overuse resulting from deficient self-regulation due to low self-efficacy and a tendency to discount accomplishments.

Engaging Other Resources

In some cases, problematic Internet use may require clinical intervention to be successfully regulated. Be familiar with the counseling resources on your campus should you need to make a referral. Some students may suffer from addictions to online content unrelated to Internet use. If the student’s use revolves around pornography or gambling, traditional addiction counseling should be recommended. This advising model may prove unsuccessful if one of the intervention steps fails. A student who does not honestly believe that their Internet use is problematic will be unmotivated to reduce time spent online. If your interaction with the student is not producing results and you believe that Internet use is harming the student’s college experience, encourage them to contact a counselor.
**Introduction.** The introductory sentences of the resource highlight the role of the Internet in the student affairs setting both to provide information, connectivity, and entertainment for students, while also posing hazards through distraction and fixation. Self-regulation is proposed as a mechanism by which students can receive the benefits of Internet use, while avoiding negative outcomes, identified as Problematic Internet Use. The flowchart is introduced as a way of modeling this mechanism and assisting students in dealing with PIU.

**Flowchart.** Bandura's (1991) model of the self-regulation mechanism and its three sub-functions (self-observation, judgmental process, and self-reaction) are adapted into the flowchart used on the first page of the resource. The flow chart simulates the process of self-regulation that occurs internally for users without regulation problems. Each step in this model serves to simulate at least one of the sub-functions thereby guiding the hall director and the student through the self-regulatory process.

The first green block titled “Student is exhibiting signs of Problematic Internet Usage” lists symptoms of Problematic Internet Use for the hall director to compare to a particular student’s situation. The first, fourth, and fifth symptoms are adapted from Griffiths’ (2000) descriptions of salience, relapse, and mood control respectively. LaRose et al. (2003) added life consequences, which is represented in the second symptom. The third symptom contrasts Davis’ (2001) description of healthy usage and parallels LaRose et al.’s loss of control dimension. Other symptoms including concealment (LaRose et al., 2003) and tolerance (Griffiths, 2000) were excluded due to difficulty of practical use and the need for brevity.
“Does the student believe their use to be worth monitoring?” assesses whether the student is motivated to attend to his/her behavior through self-observation and if he/she will be motivated to change the behavior in the judgmental process. This step is part of Bandura’s (1991) first self-regulatory sub-function, self-observation, about which he wrote, “depending on people’s values and the functional significance of different activities, they attend selectively to certain aspects of their functioning and ignore those that are of little import to them” (p. 250). Students must see their Internet use as significant if they are going to consciously regulate it. The block titled “Make Internet Use Significant” provides suggested responses to the student if she/he does not find significance in their own use habits. It reflects the concerns of technology disrupting time management in college (Gemmill & Peterson, 2006), importance of social comparison as to their Internet use behavior (Bandura, 1991, p. 254), and the role of self-regulation in fostering healthy use patterns (LaRose et al., 2003).

The third green block “Does the student know how much time they spend online?” also works within the self-observation sub-function, but instead of investigating the significance of the behavior, it asks whether the student closely monitors the behavior. Self-monitoring of behavior, according to Bandura (1991), “provides the information needed for setting realistic goals and for evaluating one’s progress towards them” (p. 250). Therefore, this question tests a prerequisite for effective goal setting toward self-regulation. If a student does not know if he/she spends 40 hours or 80 hours online a week, he/she will not know how many hours a week would be a realistic initial goal of reduced usage. The block titled “Keep a Time Diary” provides a way for the student to gather this information if he/she does not already know it. The time diary
format is chosen because it provides an immediate way to record use amounts without the bias of hindsight. It also aims to be complete, leaving no section of usage undocumented. This activity aims to provide more effective self-observation than may otherwise take place, in line with Bandura’s suggestions:

Self-observation close in time provides continuing information and thus, the best opportunity to bring self-influence to bear on the strategies one is using and on one’s behavior while it is in progress. Focusing on the more distal effects of courses of action cannot correct the past and may provide little guidance for the future. Intermittent self-monitoring, because it is only partially informative, also produces less effective self-regulation than does regular attention to one’s own performances (1991, p. 251)

The suggestion to find average times for both weekdays and weekends is the final step to produce a figure that will be useful for future goal-setting. Weekdays and weekends are treated separately to acknowledge potential differences in these time periods for students, whether weeknights require greater Internet use for homework, or if weekends provide a more problematic time for use when a student’s schedule is not as busy.

The final green block “Does the student know why they go online so much?” explores the self-diagnostic function of the self-monitoring sub-function. This step is intended to challenge the student to diagnose the context and significance of their Internet use. Bandura (1991) cited this function of self-monitoring as the capability of directing individuals toward behavioral change once they understand the environment in which their behavior takes place. For both student and advisor, the information obtained in this
step may lead to a clearer understanding of the context of the student’s Problematic Internet Use and contributing factors that could also be addressed.

If the student lacks an explanation or understanding for his/her use, then the red block entitled “Vary Usage” is designed to help the student explore the context of the use. Bandura identified personal experimentation as a way to gain information about the causes of behavior. The task recommended in this stage evokes Bandura’s suggestion that, “by altering their habitual thought patterns and observing the accompanying effects, people can gain understanding of how their thinking affects their emotional states, level of motivation, and performance” (1991, pp. 250-251). The student is to avoid using the Internet for one day, while recording his/her thoughts and feelings, and exploring at what times he/she is most tempted to go online. The advisor is warned to ensure that this activity does not interfere with academic requirements. By monitoring his/her emotional state, the student may gain insight into what motivates his/her Internet use.

The final two blue blocks on the flowchart guide the student and advisor through the judgmental and self-reaction sub-functions. The “Create Goal of Reduced Use” block emulates the judgmental sub-function by creating a target for reduced Internet use in line with personal and social standards. While the previous steps have encouraged students to explore the significance, causes, and extent of their Internet use, this stage applies their knowledge to the task of defining goals. By setting personal standards through self-observation and social feedback (in part from the residence advisor), Bandura’s model predicts students will “respond with self-satisfaction and self-approval when they fulfill their personal standards but negatively when they fall short of, or violate, their standards” (1991, p. 254). The usage goal for the first week should be realistic to provide the
student with a sense of accomplishment and a feeling of self-efficacy toward their Internet use amount. The final suggestion in this block begins the self-reaction sub-function, encouraging the student to motivate goal attainment with a tangible reward. Bandura noted that people who reward their goal attainment accomplish more toward their target behavior than those who do not. Even some small token such as going to a movie or buying a pizza may provide increased motivation for the student to reduce Internet use.

The final block entitled “Continue Regulation” prescribes long-term monitoring and goal setting, while refocusing the intervention back on the causes of concern. It is neither desirable nor feasible that the student continues reducing Internet use toward none at all. Rather, they simply need to regulate their usage until the problematic outcomes have disappeared and their time spent on the Internet no longer interferes with academic and social activities. With that in mind, the student is encouraged to continue decreasing their target usage amount in subsequent weeks to reign in Problematic Internet Use outcomes. This process of sub-goals (time each week) underlying a primary goal (regulation of Problematic Internet Use) falls under the Hierarchical Structure of Goal Systems described by Bandura & Schunk (1981). Setting small, attainable goals provides motivation in situations where the primary goal may seem far off or unattainable (Bandura & Schunk, 1981). The rest of the block suggests an environment for future regulation. Preoccupation and overuse are evoked as a reminder to both student and advisor that the intervention should be focused on the reduction of problematic use, in favor of regulated, directed Internet use. Peer comparison may also suggest when a student may discontinue explicit goal setting for more subtle forms of self-regulation.
Finally, the student should remain conscious of his/her reasons for Internet use to avoid future problematic use and maintain observation of the behavior.

**Background.** The “Background” section, intended to provide a brief theoretical framing for the flow chart, explains self-regulation through Bandura (1991) and introducing its application to Problematic Internet Use proposed in LaRose et al. (2003). Bandura’s social cognitive theory serves as the theoretical base for the resource, giving hall directors the opportunity to do their own research on the subject. The second paragraph names the three sub-functions of self-regulation, and relates the first two to the goals of the flowchart. Finally, the intended process of self-regulation is summarized as a combination of an internalized desire for reduced use and an attainable goal, ultimately leading to greater regulation of Internet use.

**Who is at risk?** The “Who is at risk?” section highlights three issues relevant to an advisors understanding of Problematic Internet Use among their students. The first paragraph describes the particular concerns for college students related to PIU: maintaining social networks online (Vergeer & Pelzer, 2009), ubiquitous access to the Internet (Gordon et al., 2007), and college stressers (Hall & Parsons, 2001). Additionally, the use of the Internet as a social coping mechanism, based on Gordon et al. (2007), is highlighted. Next, a statistic is provided for the prevalence of Problematic Internet Use among college students (Lee & Perry, 2004, p. 413), with a counter argument from LaRose et al. (2003) that problematic symptoms fall along a continuum and may not need to be diagnosed as a condition for disruptions to occur. Finally, contributing psychological conditions are briefly discussed as a contributor to the risk of Problematic Internet Use. Caplan (2007) related social anxiety to a preference for online
social interaction, which in turn may lead to PIU. Bandura (1991) cited depression as a factor likely to undermine self-efficacy and discourage goal attainment, and LaRose et al. (2003) referenced depression as a predictor of deficient self-regulation.

**Engaging other resources.** "Engaging Other Resources" frames this particular resource as part of an intervention that may require the help of other campus personnel. Clinical intervention is suggested in cases where intervention focusing on self-regulation fails, or where the Internet use focuses on materials with addictive properties (e.g. pornography, gambling) better handled by counseling psychologists. Because this resource was designed using media theory rather than clinical psychology, it is important to reinforce to the hall director that it should not take the place of trained therapists and routine procedure at the university. It is hoped that the resource can provide a useful tool for hall directors to supplement, but it is not intended to replace traditional resources. The distinction between generalized and specific Problematic Internet Use provided by Davis (2001) is invoked to discourage use of the resource on students who are simply using the Internet as a gateway to an addictive material. Finally, counseling is recommended as an alternative in the event that the resource's recommendations prove frustrating or fail to produce results.

**Evaluating the Resource**

To assess the value of this resource to its primary audience of residence hall directors, a qualitative evaluation was performed. Residence hall directors at Iowa State University were sought out for their input on the resource to determine its usefulness as well as its effectiveness and to gain the information needed to create a second draft of the resource. A convenience sample was gathered through an email sent to the 15 hall
directors at Iowa State University. Volunteering hall directors participated in in-person interviews in which they were provided with an opportunity to review the resource, ask clarification questions, and respond to five questions. The open-ended questions asked of each volunteer were as follows:

1. Is the information presented in this resource useful to you as a hall director?
2. What additional information could make this resource more useful?
3. How does the format of this resource contribute or detract from its usefulness?
4. What changes to the format of this resource would make it more useful?
5. Would you be likely to use this resource in your profession?

Additional probing questions were asked to gather more information as well as to encourage further explanation of responses. The interviews, intended to last 15 minutes, were digitally recorded and transcribed without identifying the interviewees by name. Common themes across interviews were identified and these became the basis for evaluation and revision of the resource. The identified themes were visual elements, trend in higher education, usefulness for training, social media, time constraints, frequency of use, need for diagnosis, student resource, and additional resources.

Results

Of 15 hall directors contacted by email, four volunteered to participate. Interviews were conducted between December 2010 and February 2011. Together, these four hall directors are responsible for supervising approximately 1,800 co-ed undergraduate residents located in 8 halls. Each interview took between five and 15 minutes to complete. Nine themes were found in common between at least two interviews: three themes reflected positively on the resource, three provided limitations
on the approach taken by this resource, and three themes provided guidance on revising
the first draft in order to increase its usefulness for hall directors. While responses from
four of the hall directors at a single university cannot be considered a representative
sample, it is hoped that the commonalities which emerged during the interviews will
provide an evaluation that reflects at least some of the concerns and realities of the
profession. Moreover, it is hoped that the results of this pilot study serve to provide a
direction for future efforts to engage student affairs professionals on Problematic Internet
Use.

**Responses from Hall Directors**

**Visual elements.** Three participants identified the visual elements surrounding
the flowchart, particularly the color-coding of the steps, as a strength of the resource.
One participant responded that he really liked how it was set up noting that the color-
coding was “really really nice, because you see that there are obviously different
directions going.” This same participant commented that the use of both textual elements
and the visual flowchart could help engage readers who have different learning styles.
Another remarked on the effectiveness of using a single color to identify the tasks to use
with students to explore Internet use. Two participants suggested alterations to the
flowchart format, including moving the goal setting task into its own section, and
creating multiple flowcharts, one for each stage of an intervention. Despite these
recommendations, none of which appeared consistent across interviews, the colors used
in the were well received.
**Trend in higher education.** Two participants suggested the resource was timely and in line with current trends in higher education and student affairs. One participant found social media to be a particularly challenging topic in student affairs, noting:

> Currently we are just now starting to see a rise of students really using social media and things like that, and so I think having a model in place when we deal with what people perceive as overuse of Facebook or whatever, social media, would be a direction that student affairs is going to have to go anyways.

Another participant referred to recent university initiatives on social media, such as the online presence of the athletic department, as evidence that Internet use will have continued relevance for higher education professionals. From computer gaming to the newest user driven social media sites, hall directors are aware of the powerful presence of the Internet in student’s lives. They sense the profession will increasingly need tools to tackle these issues.

**Usefulness for training.** The potential for the resource to be used during training sessions for hall directors and student staff was the final positive theme to emerge from the interviews. One hall director commented the resource was effective in creating awareness of PIU, but questioned whether the information would be utilized on a voluntary basis:

> I could see it being something that could be provided during a summer training session as a resource that’s available, but then, as with a lot of things like this, there needs to be follow-up, there needs to be the way to
insert it into daily or weekly practice, otherwise it’s something that gets put on the shelf.

Another participant identified the social cognitive model used as potentially useful for training student community advisors. In addition to Internet use, the participant wondered if the self-regulation focused activities could extend to other problematic behaviors. These three themes suggest the resource is addressing an issue of concern to hall directors, has an effective format for doing so, and may have some usefulness for training residential staff.

Limitations of Resource

Social media. To reiterate, the use, and overuse, of social media among students is a growing concern for hall directors. Services that allow students to discuss campus life online may be particularly problematic. One participant shared his concern over the website likealittle.com that encourages users to flirt anonymously (likealittle.com, 2011) by describing persons of romantic interest they have seen on campus and encouraging them to flirt back. Aside from the potential awkwardness of finding oneself propositioned on a website, the hall director expressed concern over the effects such services may have on academic performance:

There are posts every single minute and the majority of them are coming from things like the library, and typically the library is a place where you’re supposed to be studying, and so you wonder how much of that is actually being done.

Another participant associated a greater focus among student affairs professionals on Internet issues with the increased use of social media among students. Whether hall
directors are concluding that social media issues are sufficiently addressed by the resource is unclear, however, their interest in the growth of social media websites, and the failure of the resource to directly address this phenomenon, is addressed in the revisions and discussion section of this document.

**Time constraints.** Two hall directors shared their concerns that the intervention outlined in the flowchart portion of the resource was too time consuming to be carried out with any consistency. One participant suggested that while hall directors are capable of carrying out an intervention, time constraints might cause them to direct troubled students to other resources:

> Many of the hall directors do have backgrounds in counseling and so we could easily perform the counseling, you know, on a basic level ourselves. [But,] One: we’re not licensed, and so that gets into some issues, but two we also don’t have the time to do that.

Another participant suggested that the intervention would be more useful if the resource could be targeted directly at the student, relieving the hall director of the need to oversee the tasks intended to help the student understand and regulate Internet use. Concerns about the time and effort required for the intervention could present a serious limitation on the usefulness of the resource. No matter how effective hall directors suspect the theory and information presented might be in helping students with PIU, the resource will not be useful if the action required cannot be performed within the parameters of the hall directors’ position descriptions.

**Frequency of use.** The final limitation addressed in the interviews came as a caution that the resource, while useful, was unlikely to be used frequently. One hall
director was inclined toward using the resource to increase awareness and initiate a
starting point for student advising, but unlikely to revisit the materials when a problem
arose:

I don’t know that I’d necessarily pull it out on a regular basis, but I think
it’s more something that I would take and that I would internalize after
reading it so I’m more mindful of this as a scenario that students may be
experiencing.

Another hall director suggested that it would not be used often, but nonetheless, it would
be a good reference when issues did emerge:

I think it’s a resource that would be good to have on hand, you know, like
I said it’s not going to be something we use every day, and it’s not even
going to be something that we refer to all the time, but when we do come
across those situations we always try and go to something that’s best fit
for what we’re working with

The expectation of infrequent use, time constraints under which hall directors are
currently functioning, as well as ongoing concerns about the excessive use of social
media all suggest limited usefulness of the PIU resource for those seeking to counsel
students with Internet use troubles. The next section explores three themes that provide
guidance on increasing the usefulness of a second draft of the resource.

**Suggested Changes**

**Need for diagnosis.** The most common complaint regarding the resource and the
proposed intervention was that a diagnosis or recognition of Problematic Internet Use
could be very difficult without constant supervision of the student. One participant
contrasted identification of PIU with the other issues confronting those in student affairs, saying:

I want to know how to best identify these students, because currently the issues that I deal with are very obvious that this is not the direction we want the student to be going in, but this is a little harder for me to identify.

This participant also noted that merely observing a student in front of a computer should not unequivocally lead to a suspicion of PIU. The number of academic and pro-social activities they could be engaging in online are numerous and include completing class work, researching campus activities, and accessing electronic library resources. Another hall director echoed this concern saying, “unless somebody basically says my roommate may have an Internet problem, there is no way of us really finding out, even if the RA [residential advisor] is present.” While the difficulty of identifying students with PIU may be a limitation of the social cognitive application to media use and the information available to hall directors, a more robust diagnosis section of the resource might provide additional information and provide staff with at least some confidence in applying the resource to students who report symptoms of PIU.

**Student resource.** Two hall directors voiced a desire to have a companion resource for students. One focused on the desire to give students a document to inform them of available campus resources if they are struggling with PIU, and to provide a physical reminder of the need to perhaps monitor their use habits. The Hall Director explained the benefits of a student resource as follows:
I think giving them access to some physical means of having that information as well would be important just because, ... if they get in trouble in the future, or they think about that, they'll be like, 'oh that's right, that hall director that one time gave me this handout and I threw it in my top-right desk drawer' and then they can go back and refer to that.

The other participant to suggest a student resource focused on helping students identify PIU between themselves and peers. It might be prudent to develop a strategy for reduced use without a hall director's supervision. Both participants who favored a student resource recommended a shorter, less technical, and more attention-grabbing document to target excessive Internet users.

The participants suggested two approaches for refining the student resource. This new information was integrated into the second draft of the resource, complete with a companion resource for students that is designed to raise awareness of PIU, provide information for diagnosis, identify resources that students can turn to on campus, and a strategy for reducing excessive Internet use. This document is constructed in line with suggestions provided by participating hall directors who have concluded that the resource will be most effective for students if it is brief and attention grabbing.

**Additional resources.** The final recommendation for revisions to emerge from the interviews was to expand the element of the resource labeled engaging other resources by including campus academic resources and providing further readings on the topic. One participant commented that her graduate school experiences caused her to look for additional readings to directly adapt the resource to a student's needs. Another
suggested focusing not only on psychological support resources for the student, but academic resources as well.

The results of the four hall director interviews suggest that the Problematic Internet Use resource can be improved by an expansion of the section focusing on engaging other resources, which is presented as an independent section to help with PIU identification, and the creation of a companion resource for students. These changes are reflected in the second draft of the resource.

Revision and Discussion

Based on the feedback from the four hall directors interviewed, a second draft of the resource was created, presented in Figure 2. This draft includes an independent section titled Identifying the Problem, which focuses on the identification and diagnosis of Problematic Internet Use. An expanded section on engaging other resources includes recommendations for on-campus resources, as well as relevant further readings on PIU. A student centered companion resource, presented in Figure 3, was designed to help alert students with PIU to the availability of help, and to provide the social cognitive activities originally presented in the flowchart. In addition, several typographical and grammatical corrections are made to improve readability and correctness.
Advising Students on Internet Use in the Residential Setting
A Self-Regulation Approach
Ian M. Ringgenberg

Advising students who struggle with overuse of the Internet presents unique challenges in student affairs. We want to encourage students to go online to find activities on campus, study for classes, and keep in touch with their families to ensure success in college. On the other hand, we want to discourage Internet use that may preoccupy students and prevent socializing and distract students from attending classes or social functions.

In order to extract the benefits of Internet use without suffering problematic outcomes, students must be able to self-regulate their usage. The flowchart below presents a model for advising students on their Internet use that focuses on identifying the nature of their use and encouraging self-regulation. Begin at the top of the chart and work through the decisions to work on activities to assist students dealing with problematic Internet use.

Identifying the Problem
Identifying Problematic Internet Use among students can be a difficult task. There is no single symptom or amount of use that separates healthy, normal users from struggling ones. Rather than targeting students with high levels of Internet use and searching for negative consequences, it may be helpful to work with students struggling academically, emotionally, or socially, and try to determine what role Internet use has in their challenges. The following questions may help identify problematic use:

- Do you go online to relieve stress or avoid unpleasant moods?
- Do you often find yourself using the Internet without knowing why?
- Have you missed classes, social events, or sleep in favor of using the Internet?
- Do you think about going online or experience anxiety when you're away from the Internet?
- Have you tried to reduce the amount of time you've spent online unsuccessfully?

[Flowchart: Advising Students on Internet Use in the Residential Setting]

No

Open the student know how much time he/she spends online?

Yes

Does the student go online so much?

No

Does the Internet use have negative outcomes? (e.g., academic, social, emotional)

Yes

Yes

Yes
Background

The flowchart provides an advising model based on the process of self-regulation. Self-regulation is an important cognitive function that allows us to adjust our thoughts and actions in line with external and internal standards. Whether we are trying to run faster, be more social, or go on a diet, we are constantly setting goals to change ourselves. This model has been applied to problematic Internet use, suggesting that what has often been labeled Internet addiction may represent deficient self-regulation. As we use the Internet more and more, what was once a conscious action becomes habitual and unconsidered— we lose control of our use.

In line with Albert Bandura's work on social cognitive theory, successful self-regulation involves three sub-functions: self-observation, judgmental process, and self-reaction. This flowchart attempts to simulate the first two sub-functions by providing the student with observational information about their use, and setting an internal goal for reduced use. If students internalize that reduced use is desirable, and set obtainable goals, then students should begin regulating their time online.

Who is at risk?

All students are at some risk for problematic Internet use. Many students have grown up maintaining social networks online; they are in an environment with ubiquitous Internet access, and are dealing with the added stresses of college. Young people are among the heaviest Internet users and may lack the reinforcement from family and friends that they received in high school. Internet use may be a coping strategy for students who struggle with the transition to college life.

Internet addiction has been found in 8-13% of users, but problematic outcomes may occur even in those who are not severely affected. Those students who deal with depression or social anxiety are at particular risk for problematic outcomes from Internet use. The anxious may use online socializing as a way to avoid socially stressful situations. Depressed students are at a high risk for overuse resulting from deficient self-regulation due to a perceived inability to change their behavior and a tendency to discount progress toward the goals they set.

Engaging Other Resources

In some cases, problematic Internet use may require clinical intervention to be successfully regulated. Be familiar with the counseling resources on your campus should you need to make a referral. If a student’s Internet use is jeopardizing their academic success, tutoring or academic support may help the student develop study skills and manage their time more appropriately. Psychological counseling resources may help students using the Internet to cope with social or emotional struggles. Some students may suffer from addictions to online content unrelated to Internet use. If the student’s use revolves around pornography or gambling, traditional addiction counseling should be recommended.

This advising model may prove unsuccessful if one of the intervention steps fails. A student who does not honestly believe that his/her Internet use is problematic will be unmotivated to reduce time spent online. If your interaction with the student is not producing results and you believe that Internet use is harming the student’s college experience, encourage him/her to contact a counselor. Finally, the following readings can provide more insight into Problematic Internet Use and the research on which this resource is based:


The Internet is great for games, research and keeping in touch, but it can’t replace the education, friends, and fun you will find around your campus.

**THE BEST THINGS ABOUT COLLEGE AREN’T ONLINE**

If you or someone you know is struggling with spending more time online than with friends, in class, or pursuing their hobbies, there is help.

Follow these steps:

- **Step 1:** Find out how much time you spend online each week by keeping a notebook next to your computer to record your use.
- **Step 2:** Set a goal each week to be online less than the week before.
- **Step 3:** Reward yourself when you succeed at your goal: visit a friend, order a pizza, or explore the town.
- **Step 4:** Find others who can help you reach your goals. The resources below can help you regain control of your time spent online and make sure you experience the best things about college.

**Residence Hall Director:**

**Academic Advisor:**

**Academic Support Center:**

**Student Counseling Center:**
Explanation of Changes

Identifying the problem. In response to the reported difficulty of identifying students with Problematic Internet Use, the diagnostic information originally included in the first box of the flowchart was moved and expanded into an Identifying the Problem section. An introductory section acknowledges the difficulty of identifying PIU and encourages hall directors to look for signs of PIU among students with known academic and social trouble rather than trying to identify negative outcomes among heavy users. In line with the social cognitive model of Internet use presented by LaRose et al. (2003), those experiencing deficient self-regulation should not be viewed as hopeless addicts to be diagnosed, but as users who may experience problematic outcomes if their self-regulation is not improved, whether by internal or external pressures. Next the signs of PIU which are listed in the first draft of the resource are modified so that they now appear as full questions included to stimulate conversation with the students and suggest likely negative outcomes.

Engaging other resources. The section titled Engaging Other Resources on the second page of the resource was expanded to reflect the results of the interviews. Academic support resources are referenced as an additional form of support for the student. It is possible that students’ study skills and time management skills could be improved by academic resource, which could, by extension, help reduce the problematic outcomes of PIU. Young (1999) includes several possible strategies for addressing PIU that resemble study skills which would include the creation of a time schedule and strict limits on leisure time activities.
Further readings are also provided to encourage interested hall directors to cultivate a deeper understanding of PIU or seek additional resources to help students. Citations to Bandura (1991) and LaRose et al. (2003) provide a foundation for the resource as well as for the possibility of an intervention. Widyanto & Griffiths (2006) provide a literature review of Internet addiction that could connect the hall director to research on specific topics as well as providing a broad base of knowledge. Young (1999) provides a number of alternative therapy strategies that could provide activities for hall directors looking for a different approach to counseling a student on PIU including making time management schedules and focusing students on other interests.

**Student resource.** The third change to be made to the resource is the addition of a companion resource for students. In line with suggestions offered by the hall directors interviewed, this resource was created as a useful handout to students who have already been identified as struggling with PIU. This handout could also be distributed to students or clearly posted either online or on a bulletin board so that it may more generally increase awareness of PIU and encourage students to seek help. The student resource was created to be brief, attention grabbing, and memorable, while still providing critical information to assist them as they begin the process of either self-regulation or seeking help from available campus resources.

To attract attention and provide a central message for the page, an image with a Creative Commons license was selected from flickr.com depicting a college aged student using a computer. This image was manipulated to create an ominous feeling, to emphasize the face of the students and glare of the monitors, and to allow for black and white printing. Both the text at the top and that imposed over the image of a student
suggest that while some Internet use is healthy and desirable, that students should be cautious and not allow excessive Internet use to eclipse the overall college experience. The bottom half of the page presents a four step approach to creating goals designed to reduced use. It is similar to those goals presented in the bottom two boxes of the flowchart in the hall director resource. Finally, a short list of campus resources is provided at the bottom of the page with a space for a hall director to write in contact information. This area was left blank so the resource will be useful and the information can be tailored to a diverse student population.

**Evaluation of Resource Effectiveness**

Determining the effectiveness of the resource is difficult in large part because the feedback received from interviews with the hall directors is itself limited and contradictory. The interviews reveal a resource that addresses a critical issue for hall directors, one with which there is little guidance for successful resolution. On the other hand, the resource may suggest an intervention that is too time consuming and staff intensive to consistently help students in need. Both of these possibilities are explored as significant factors in considering the effectiveness of this resource. A third possibility, that the social cognitive model of PIU fails to capture key phenomena of interest to hall directors, is also discussed.

**A timely and critical issue.** The findings of the interviews reinforced the available evidence that Internet use among students is a significant concern among student affairs professionals. No hall director interviewed failed to see the relevance or usefulness of the issues presented in the resource. Many were eager to discuss the availability of online applications, from social networking to video games that they
consider a hazard for the intellectual development of the students under their watch. Several identified research on Internet use among college students as a highly debated issue in student affairs, and certainly one in need of resources.

The social cognitive model presented in the resource provided a starting point for discussion, albeit not an ideal ending point. Participants seemed optimistic that the resource would increase awareness of Problematic Internet Use, and that the model provided could be easily understood. In this way, the resource showed itself to be effective: it was created to raise awareness and provide advice to hall directors who needed advice on how to support students suffering problematic outcomes from Internet use. On both of these accounts it was successful in that the resource model increased awareness and hall directors did not express confusion about the materials. To the contrary, hall directors felt the model provided them with a direction for helping students with PIU. On the other hand, feedback that identifies barriers to conducting an intervention with students suffering from PIU suggests that the resource may be applied rarely.

**Difficulty of intervention.** The hall directors reviewing the resource identified several obstacles to its application, related both to PIU and the resource. The perceived difficulties support a skeptical position toward the effect the resource will have on students affected by PIU. The first difficulty is identifying students who are in need of help with Internet use. Several hall directors pointed out that PIU, unlike most of the issues with which they deal on a regular basis, is unlikely to be a clear violation of any University policy and it may not be possible to uncover it in brief encounters. Rather, students would need to self-identify the issue and approach the hall director for help. The
solution proposed by the revised resource is to identify Internet use difficulties when dealing with students who appear to be having trouble in other aspects of their lives, whether this involves poor grades or inadequate socialization skills (Cotten, 2008). Any change, particularly in the short run, is unlikely to improve the resource for students whose problematic outcomes are not severe enough to be noticed in grade reports or hall meetings or who downplay the effect the Internet has on their academic and social success.

The intervention proposed by the resource may simply be too intensive to be regularly executed with students. If hall directors find themselves unable or unwilling to devote the time necessary to walk the student through the flowchart proposed, then however effective the model is, it won’t produce results. Only two of the four hall directors interviewed suggested that the model was too time consuming, but the criticism should be taken seriously. Either the hall director’s role may need to be minimized in the intervention, or other campus staff may be more appropriately targeted for long term monitoring and advisement of the student’s Internet use.

**Alternate direction.** A limitation of the social cognitive approach to Internet use may come from its failure to account for different types of online activity. Several hall directors associated problematic use not with overuse or unconsidered use of the Internet, but with specific online content. Participants identified both video games and social media as potentially problematic media for students, and shared concerns about its widespread use. The example of likealittle.com suggests that in some cases, even controlled use of social media could result in problematic outcomes in the form of social disruption or alienation of peers. While the social cognitive model used for this resource
may help students who spend time on social media sites to the exclusion of other activities, it does not provide advice for the student affairs professionals who need resources to deal with the issues resulting from increasingly invasive and constantly changing social media services.

There is overlap between the issues of PIU and the growing social media phenomenon among those students who struggle to constrain their time and preoccupation with social media, but the concerns expressed by the hall directors likely reflect campus-wide issues associated with specific social media platforms, including facebook and likealittle.com. These concerns are not likely to be adequately dealt with through a social cognitive approach to Problematic Internet Use, and the hall directors will need other resources and theories available to deal with the issues that emerge from excessive use of social media. While hall directors may be keenly interested in increasing their access to appropriate resources dealing with Internet use, their interests may be more in the specifics of social media platforms and the hazards they present to the community at large than in the potential overuse of the medium by specific students. This may account for why participants received the subject of the resource warmly, but seemed apprehensive toward the actual application.

**Limitations**

The Problematic Internet Use resource and the resulting evaluation have several limitations. First, while the resource is designed to raise awareness of Internet use among advisors and provide advice for their interactions with struggling students, it is not grounded in counseling psychology and is not intended to be a replacement for therapy. Rather, its intent is to provide sensible activities for hall directors to work with students
on understanding and reducing PIU. While these activities are adapted from social
cognitive theory to emulate the compromised self-regulation mechanism present in many
cases of PIU, they are not known to be effective. It is hoped that the resource can provide
an intermediary support to students largely because they are, directly as well as
indirectly, connected to trained counseling resources. The resource may also be designed
to provide assistance in cases where student’s troubles are minimal yet present and in
need of being addressed so that the problem does not worsen.

The second limitation is in the evaluation of the resource conducted with four hall
directors. While they represent nearly a third of the 15 available staff members at Iowa
State University, they are a convenience sample not representative of the institution or of
residence staff nationwide. Additionally, while in-person interviews allowed for follow-
up questions and useful qualitative data, this alone may have biased hall directors against
criticism when they knew they were speaking to the creator directly rather than giving
anonymous feedback in a survey. While the transcription and coding process should
have reduced feedback bias by focusing on common themes across interviews, the
possibility remains that hall directors refrained from giving critical feedback to avoid
disparaging the interviewer.

Conclusion

Beyond the scope of this project lies the question of how higher education will
adapt to deal with the new technological environment of our students. How can
universities create an environment of academic, social, and personal growth for students
who are increasingly connected more to gadgetry and information networks than to their
neighbors and family. While PIU is a malady affecting relatively few students in a
negative way, the broader landscape of student life is likely threatened by less obvious forms of technological subversion. Though this resource was designed to serve as a starting point for discussions about balancing technology use with college life, that discussion must be widened to go beyond struggling students and to the core of university institutions. How will we maintain residence hall communities if no students desire to meet together in dens and dining halls? How will we justify campus activism to a generation of students that vote in online polls but not for city council members? What use will we have for gathering places when they are utilized only for available wireless Internet and power outlets?

Student affairs must reach beyond the disruptions created by technology and advocate its mission among students. If student affairs departments are to adapt to students in a new technological paradigm, those with both normal and abnormal use habits, we should start with Ellul’s (1989) sobering advice on the changes technology is enforcing on humanity:

What is at issue here is evaluating the danger of what might happen to our humanity in the present half-century, and distinguishing between what we want to keep and what we are ready to lose, between what we can welcome as legitimate human development and what we should reject with our last ounce of strength as dehumanization. (p.140)

It is hoped that this project may be one small piece of a larger effort to engage students in campus life and academic inquiry, and away from the glare of the computer screen.
Directions for Future Research

Future research related to this resource could build upon the initial pilot study conducted here by conducting an assessment of the effects of the resource. While the pilot study sought the input of hall directors on how to create a useful research, future studies could focus on the student experience in the proposed intervention. Such research would serve not only to better understand the effectiveness of this resource, but also provide information for those hall directors who are considering this resource for use with students.

Further evaluations are needed to determine whether exposure to the resource will result in hall directors talking with students about Internet use, or considering PIU when working with struggling students. While the evaluation performed elicited positive responses from hall directors, a longitudinal study tracking hall directors encountering students overusing the Internet would better determine if the resource has effectively raised awareness.

Additionally, future work on this resource could focus on adding a self-reflective element to lead students to think critically about the role of Internet use in their life. While this intervention focuses on behavior and goal-setting, long term solutions will likely require introspection and increased understanding on the part of the students. By adding a self-reflective element to the current resource, students can contrast weeks of reduced use from goal setting with previous weeks of unregulated use and observe first hands the benefits of self-regulation.
References


