

Internet Dependency and Academic Performance

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Abstract

This study investigated the relationship between Internet use (including the use of social media), the level of Internet dependency, and academic performance as measured by self-reported student grade point average (GPA). Results reveal that there is no statistically significant relationship between the level of Internet dependency, the amount of time spent on the Internet, or the amount of time spent on social networking or social networking sites

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and academic performance as measured by GPA. Results did reveal a statistically significant relationship between the amount of time spent on the Internet and Internet dependency.

Over the past few decades the expansion of Internet use has dramatically affected the general population. Now the world is at one's fingertips and one no longer has to spend hours searching through reference books in order to find information. Everything can be found with a click of a button. Due to advancements in technology and access to information, college students also have greater resources available to help broaden their knowledge. Students usually have positive impressions of the Internet and the use of technology with regard to online and blended learning environments (Shaw, 2009). While grades may be improving for some students who use technology and the Internet, other students' grades may be suffering due to excessive use of or dependence on the Internet. In one study, 69% of students and teachers saw an improvement in student grades through use of the Internet (Kubey, Lavin, & Barows, 2001), but there were also strong negative effects of Internet use as almost 80% of students surveyed qualified as Internet dependent based on a modified Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM IV) (4th Ed., DSM-IV, American Psychiatric Association, 1994). In the same study, while not all who used the Internet were classified as Internet dependent, many students showed the potential to be at-risk.

Purpose of the Study

This study focuses on college student dependence on the Internet and how it correlates with academic performance. Past studies have shown that Internet use has had a positive effect on student academics when used in the proper context. One study by Baker and Edwards (2011) showed how online blended learning helped increase students' proper use of social media. Edwards developed virtual office hours in her classes that consisted of an instant message set-up so students could contact her at later hours if needed, in addition to her traditional office hours. The Internet can, however, be overused and many students have become dependent on the Internet, which in turn has led to poor academic performance (Kubey et al., 2001). Further research is needed in order to fully understand if increased Internet use corroborates Kubey et al.'s findings and to determine what association, if any, the use of the Internet has on the academic performance of students. The purpose of this study, then, is to investigate the relation between Internet dependency (based upon the modified DSM IV criteria for gambling) and the academic performance of college students as measured by student grade point average (GPA).

Factors of the Internet

This study will consider eight different ways that time can be spent on the Internet as the researchers are interested in determining where college students spend the majority of their time on the Internet. The first of the eight areas is spending time on professional or academic websites. These websites could include online learning courses, academic research.

Shortly after the release of the DSM V (5th Ed., DSM-V, American Psychiatric Association, 2013) issuing the release of a new diagnosis of Internet Addiction, Griffiths and Szabo (2013) published their research focused on the factors of being addicted to the Internet versus addictions on the Internet. Griffiths and Szabo's research uncovered that the top three areas of popularity were "social networking (85%), e-mail and chat (69%), and videos and movies (35%)" (p.76). The results also showed that 84% of the subjects would still go online if their top activities were not available, while 16% would not go on the Internet at all if their favorite sites were not available. The weekly time spent on the Internet averaging at 21.13 hours per week (p.76). Based upon these results it was concluded that time spent on the Internet is intentional and if the subjects' top sites are not available then time spent online would decrease.

One of the most popular forms of Internet use is finding, maintaining or ending relationships. This form of Internet use can be defined as communicating for personal use through social networking, newsgroups, and sites such as Facebook, Twitter and other newly advancing social media websites (Berry, Gee, & Grubaugh, 2000). Social websites such as these have advanced the communication not only of personal issues throughout the world but also of news issues. Through the use of Twitter and Facebook an event can be broadcasted worldwide with just the click of a button seconds after the event has occurred. Often these messages include personal accounts of the event.

The third way to utilize time on the Internet is to use it for entertainment. Mulvihill (2011) describes entertainment on the Internet as watching videos, renting

DVDs, live streaming music, or viewing online books. Searching for or gathering information was the most used area of Internet use (Berry et al., 2000). Current happenings around the world are very easy to access now due to the ability to immediately update social media and other such “outlet” sites. From the weather to sports scores to natural disasters, all are just a click away on the Internet.

Providing information or expertise is an area of the Internet that has most recently become very popular due to the social media site of Pinterest. Pinterest allows people to post how things around the house can be used for crafts, parties or events allowing the users to share their expertise with others. Providing information is also done by answering blogs such as Yahoo Answers.

Individuals can also spend time selling or buying items on the Internet. Berry et al. (2000) described utilizing the marketplace on the Internet to include transacting business, making travel plans, or ordering products. Many individuals are able to start online businesses, work from their homes, and spend more time with their families by effectively using the Internet. Other elements that can be included in this area are online banking, stock trading, or using websites like eBay or Craigslist to buy or sell items much like the traditional “garage sale.”

Finally the last two uses of the Internet are to ask questions or simply browsing to pass the time. There are several different portals that an individual can use to ask questions on the Internet such as finding directions from one place to another, getting medical advice, finding movie times or reviews, reading products or services reviews, or accessing information on genealogical research.

Overall the Internet has many uses and many cate-

gories that can take up a person's time. Some of these options are positive and will help improve students' academic success such as using the Internet for professional or academic use or gathering current happenings. In order to find out how Internet affects education it is important to see which areas of the Internet are being utilized the most. This study will use the categories of Internet use outlined by Berry et al. (2000).

The Internet and Higher Education

The Internet is an extremely valuable tool that has developed over the last several decades bringing a heretofore unheard of quantity and quality of information to the student at the click of a button. It allows students to do fast and effective research as well as provides an outlet for individuals of all ages to gather information and communicate with other people with whom they normally would not have taken the opportunity to do so otherwise. This "social presence" has put the term *social media* into the worlds' current vocabulary and has made Facebook one of most valuable companies in the world (Raice, 2011). Social or electric media is so vast and fast growing that it is often hard to define. Jacobsen and Forste (2011, p.275) describe electronic media as the use of technology for e-mail, instant messaging (IM), social-networking sites (SNSs), playing video or online games, and watching television or movies. Raice's article in the Wall Street Journal predicted that Facebook will be worth \$100 billion in the next year and \$234 billion by 2015. With this dramatic increase in worth and use, will academics fall behind or prosper?

A study conducted by Baker and Edwards (2011) dealing with social presence in online courses discussed

how to create an online social environment between the students and the professors in the academic environment. Their article discusses how virtual office hours, weekly checklists and grading rubrics along with a live Twitter feed, were used in various online courses and how those aspects of technology increased students' feeling of connectedness in the class. Baker and Edwards' study suggests that the effectiveness and benefits of online learning increases when the teacher is able to create a community for the students online. Students often have trouble engaging effectively in an online course due to a lack of understanding of current technology, especially nontraditional students (students who are over the age of 24 and have returned to school after an extended period of time). Baker and Edwards also report that providing online services such as a link to the Help Desk allows students to have a better understanding of the technical components of the online course. While providing a stimulating community for online students seems to be a key factor in creating a healthy online environment, it can be hard to find instructors who know how to create such an environment. While the Internet and social media provide students with great opportunities, there are several possible problems that may be derailing student performance including the overuse of the Internet.

Further research conducted by Jacobsen and Forste (2011) looked at how social media affects college students' academics in a very interesting and effective way. Jacobsen and Forste had participants create what they called a time diary where they recorded everything they did each day and for how long as well as the tasks that they would have been doing if they were not on the com-

puter. From this information, Jacobsen and Forste were able to determine how much time was actually being spent productively online and how much time was inhibiting students' academics. It was concluded that for every hour a student spent using social media his or her average GPA was decreased by 0.05 to 0.07 points; offline interactions had a negative association to GPA with a decrease of 0.02 grade points per hour spent using social media. However, Jacobsen and Forste also found that if the student spent an hour on the Internet using it for academic purposes, his or her GPA had a slight positive correlation with grade point average.

Predictors of Academic Performance

Many people assume that academic performance pertains only to the grades that students make in their classes. While this is one definition, academic performance can also be more broadly defined as a multitude of criteria including the students' overall GPA, success and participation in extra-curricular activities, and class attendance. Kubey et al. (2001) described poor academic performance as academic impairment, which consisted of lower grades and low class attendance. DeBerard, Spielmans and Julka (2004) state that GPA and SAT scores, along with psychological variables such as smoking, drinking, social support and coping, were all found to be reliable predictors of academic performance (or lack thereof).

There are several predictors of future academic performance. These predictors usually consist of high school GPA, standardized test scores such as the Scholastic Aptitude Test (SAT), and participation in extracurricular activities during high school. Predictors of academic per-

formance in the college setting can be class attendance, study group involvement, past grade point average, visits with instructors, and the level of involvement in campus organizations (DeBeraed, Spielmans, & Julka, 2004).

While it may be fairly easy to predict academic performance based on these typical criteria, the issue of how the Internet, used as a tool or as a distraction, impacts academic performance is at question in this research.

The Impact of the Internet on Academic Performance

In an article on Internet use and academic performance (2001), Kubey et al. stated that, “69% of students, and 69% of teachers, said that they have personally seen students’ grades improve through use of the Internet” (p.1). While this is a good example of how Internet can benefit society, they discovered that excessive Internet use could be damaging to students’ academic performance. Kubey et al. used a survey that dealt with technology use among college students, the main focus being on Internet use, television use, sleep, online shopping, and web browsing. Kubey et al. (2001) defined Internet dependent as a person who spends roughly 11.18 hours per week on the Internet, while an individual who is not dependent is said to spend roughly 3.84 hours on the Internet in a week. Based upon the results from 576 college students, Kubey et al. found that 9% reported to being psychologically dependent on the Internet. They also found that among students who were psychologically dependent on the Internet “20% reported that they had occasionally, frequently, or very frequently missed class because of their Internet use” (p. 374). Additionally, Kubey et al. reported that 50% of students who experienced academic failure stated that

the use of Internet played a large part in the reason they failed.

Kubey et al. (2001) discussed how individuals who were Internet dependent displayed many of the same characteristics researchers associate with gambling addiction. Kubey et al. states that if the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM IV) criteria for gambling addictions was used and the word “gambling” was substituted with “Internet,” individuals displaying Internet dependency display many of the same characteristics used to diagnose the serious psychological addiction of gambling. Internet Gaming Disorder, using items similar to those proposed by Kubey et al. was added to the current DSM V manual (APA, 2013). Overall Kubey et al.’s research provides a strong foundation for the study of Internet dependence of college students and how it may affect their academic performance.

A study by Asdaque, Khan and Rizvi (2010) found that teachers’ and students’ major motivation for using the Internet was convenience (82.91%); usefulness (80.05%); and free access to information and software (71.4%). The article focused on how students and teachers use books and the Internet when dealing with research for academics. In addition, teachers found that the use of Internet allowed them to better tailor their teachings to each student. However, the researchers also discovered that increased Internet usage was linked with a lowered GPA when the content search on the Internet was not for scholarly purposes (p.22-25).

A study by the American College Health Association reports that 15.1% of students stated that their academic performance was impaired by use of the Internet

(Englander, Terregrossa, & Wang, 2010). Englander et al. conducted their own study consisting of an undergraduate introductory micro-economics class. Data were based off of three test scores the students produced and the number of hours per week spent on the Internet. Calculations by these researches indicated that “a negative and statistically significant relationship between a student’s hours per week of Internet use and the student’s exam performance” (2010, p.93). Englander et al. concluded that while the Internet is home to a wide variety of valuable information, it can also serve as an outlet for social communication that can distract students and keep them off task. Englander’s conclusions were that increased Internet use by students resulted in lower grades.

In summary, the purpose of this study is to determine the association between academic performance and use of the Internet by college students. Past reports have shown that males are predominately affected by Internet dependence more so than females (Kubey et al., 2001) and an increase feeling of loneliness occurs when Internet dependence takes place (p.6). It has also been shown that an increase in Internet dependence can result in lower grades and less class attendance and participation (Kubey et al., 2001). The current researchers expect to see this trend continue and hope to more accurately quantify the relationship between academic performance, as indicated by student GPA, and the use of the Internet.

Gambling Addiction vs. Internet Addiction

While the use of the Internet is in high demand as a tool for students focused on earning an academic degree, the Internet is also in high demand socially in order for

students to maintain and promote a personal and professional network of their colleagues and friends. When is the use of the Internet considered too much? When is the use of the Internet such that it becomes an addiction or a dependency? Merriam-Webster Dictionary define addiction as the “compulsive need for and use of a habit-forming substance characterized by tolerance and by well-defined physiological symptoms upon withdrawal; a persistent compulsive use of a substance known by the user to be harmful” (Merriam-Webster, 2004, p.14). The same source defines dependence as “the quality or state of being dependent; the quality or state of being influenced or determined by or subject to another” (p.334).

Kubey et al. (2001) addressed the different between addiction and dependence in his article when he stated, “some commentators and researchers apply the DSM criteria to the Internet and replace the word “gambling” with the word “Internet,” reaching a conclusion of “addiction” instead of “dependency,” which is the operative DSM term” (p.368). For the purpose of this study Internet dependence will be used due to the lack of need to diagnose the individuals with a psychological disorder and addiction.

Kubey et al. (2001) reports that the section of the DSM IV dealing with gambling addiction might be used to assess Internet addiction by replacing the word “gambling” with “Internet” and, as such, those requirements would begin to set the stage for diagnosing Internet addiction. The DSM 5 lists a diagnosis for Internet Gaming Disorder consistent with Kubey et al. (2001). It has been predicted, however, that the DSM V will add Internet addition (Man’dee Mason – personal communication). When looking

at the gambling diagnosis of the DSM IV, a person must meet five of the ten possible symptoms. Of the ten symptoms, roughly eight can be translated directly to relating with an Internet addiction disorder (Young, 1996). They are as follows:

Do you feel preoccupied with the Internet (think about previous on-line activity or anticipate next on-line session)?

Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?

Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?

Do you feel restless, moody, depressed or irritable when attempting to cut down or stop Internet use?

Do you stay on-line longer than originally intended?

Have you jeopardized or risked the loss of significant relationship, job, and educational or career opportunity because of the Internet?

Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet?

Do you use the Internet as a way of escaping from problems or of relieving a dysphonic mood (e.g., feelings of helplessness, guilt, anxiety, depression)? (American Psychological Association, 1994, p.618).

Based upon the adjusted criteria for diagnosis it is possible to analyze today's students and have a better grasp of how the Internet is affecting student performance.

While many students “go online” strictly for academic purposes or to maintain their social network in brief “time chunks,” many students today have moved their entire world online. Therein lays the problem: if a student has no reason to leave their home for their studies, do they risk overusing the same tool that facilitates learning to an unhealthy level as gauged by their academic performance? If this is true, then what role might the instructor and the academic institution play in preventing, reducing, or rehabilitating those who are dependent on the Internet?

Methodology

The population for this study was approximately 11,000 undergraduate and graduate students enrolled at moderately sized, state-supported post-secondary institution in the Southwest U.S.

For the purpose of this study dependence was defined as the reliance on, influence of or being subject to another person or activity outside the individual. Young described an addiction as “an impulse-control disorder which does not involve an intoxicant” (1996, p.2). In this study the researchers focused on dependence an individual has on the Internet and how that affects his or her academic performance and not a diagnosis of addiction; the modified version of the DSM IV criteria for gambling was only under consideration by the American Psychological Association at the time of the study (Man’dee Mason, personal communication, DATE).

Time spent on the Internet was one of the main measured variables and was defined as any allotted time an individual spends online whether it was for academics, social media, e-mail, or personal communication. A subset

of Internet use was also evaluated, which consisted of the use of social media. Social media were defined collectively as any online networking site that connects and individual with another individual and examples include Twitter, Facebook, instant messaging, chat rooms, Pinterest, etc.

A survey was used to gather data that included a modified set of the DSM IV criteria for gambling addiction to determine Internet dependency as well as an array of demographic inputs including self-reported GPA. The survey was administered to students in 10 face-to-face classes during the spring 2012 semester yielding 278 valid responses. Although the survey did ask about the use of the Internet for academic purposes, subjects were not asked specifically about whether or not they were currently in an online class or how many online classes they had taken, or were, taking. Following the survey administration, findings and results were analyzed to test the following null hypotheses:

Ho1n: There is no statistically significant relationship between the level of Internet dependency and academic performance as measured by GPA.

Ho2n: There is no statistically significant relationship between the amount of time spent on the Internet and academic performance as measure by GPA.

Ho3n: There is no statistically significant relationship between the amount of time spent on social networking or social networking sites and academic performance as measured by GPA.

Ho4n: There is no statistically significant relationship between the amount of time spent on the Internet and the level of Internet dependency.

Results

One aspect the researchers were interested in assessing was just how much time today's college student spends on the Internet and how they spend that time. Table 1 shows that a majority of the students surveyed stayed online longer than intended (64%). There was a close split of percentage (45% yes and 55% no) of students who felt preoccupied with the Internet, thinking about previous sessions, or anticipating the next online-session.

Table 1
Percentage Responses for Internet Addiction Items

	% Yes	% No
Do you feel preoccupied with the Internet (do you think about previous on-line activity or anticipate the next on-line session)?	45	55
Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?	27	73
Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?	14	86
Do you feel restless, moody, depressed or irritable when attempting to cut down or stop Internet use?	6	94
Do you stay on-line longer than originally intended?	64	36
Have you jeopardized or risked the loss of significant relationship, job, and educational or career opportunity because of the Internet?	6	94
Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet?	7	93
Do you use the Internet as a way of escaping from problems or of relieving a dysphonic mood (e.g., feelings of helplessness, guilt, anxiety, depression)?	22	78

The results also show that the majority of students do not have to have increasing amounts of time on the Internet to be “satisfied” with their experience. Students overall do not use the Internet to escape from problems nor have students reported that the Internet caused any significant losses of relationships, jobs, or educational opportunities.

Table 2 shows the breakdown of student classification with how many hours they spend on the Internet in the specific areas. Results show that, overall, students spend almost 23 hours per week on the Internet. Freshmen showed the highest number of hours per week spent in the area of Relationships and Social Media (7.4) followed by juniors (5.6), seniors (4.9), graduate students (4.7) and sophomores (4.2). Use of the Internet for Academic activities shows that graduate students spent the

Table 2
Hours/Week for Each Form of Internet Use by
Academic Classification

	Fr	So	Jr	Sr	Grad	Ave.	%
n	8	53	90	100	4		
Academic	6.4	5.2	7.1	6.7	11.0	6.6	29
Relationship and Social Media	7.4	4.2	5.6	4.9	4.7	5.0	22
Entertainment ¹	3.4	3.3	4.6	3.6	3.5	3.9	17
Getting News	1.3	1.4	2.3	1.9	2.8	1.9	8
Giving Info	.9	1.1	1.2	.9	1.6	1.1	5
Marketplace ¹	.3	1.0	1.8	1.2	.7	1.3	6
Asking Questions	1.5	1.0	1.2	.9	.5	1.0	4
No Reason	1.4	2.9	2.8	1.8	.9	2.2	9
Total	22.5	26.6	21.8	21.8	25.7	22.9	100

¹Considered to have “addictive” qualities (Hur, 2012)

Table 3
Correlation Coefficients (r) for Hypothesis by
Academic Classification

	Fr	So	Jr	Sr	Grad	All
n	8	54	78	94	4	239
Internet Dependence and GPA	-.241	.002	.037	.144	-.847	.047
Time on the Internet and GPA	.339	-.052	-.124	.091	.590	-.024
Time spent on Social Media and GPA	-.387	-.236	-.191	.065	.843	-.088
Time on the Internet and Internet Dependence	-.016	.420*	.288*	.325*	-.929	.303*

*Statistically Significant at $p < .05$

most number of hours per week (11.0) followed by juniors at 7.1 and the lowest number of hours per week spent in online academics was sophomores at 5.2. These areas are the two highest percentages overall for students spending time on the Internet followed by Entertainment, Getting News, Marketplace, Giving Information, and Asking Questions.

Based on these results, practitioners and administrators in higher education should recognize that students are making Internet use an everyday aspect of their life. Students are continuing to seek information from the Internet both socially and academically. Use of the Internet will continue to grow as more and more technology and applications support the students areas of interest including LinkedIn, various Learning Management Systems

(LMS), E-textbooks, publisher companion sites, and an increasing number of online and hybrid classrooms.

Each hypothesis was tested and the results are tabulated in Table 3. Null hypothesis 1 was supported as the researchers found no statistically significant correlation between Internet dependency and academic performance as measured by GPA. Similarly, both null hypothesis 2 and null hypotheses 3 were supported as there was no statistically significant correlations found between the time spent on the Internet in total, or time spent specifically engaged in social media, and GPA.

Null hypothesis 4 was not supported as the results show a statistically significant relationship exists between the amount of time spent on the Internet and the level of Internet dependency ($r = .303, p < .05$). In basic terms, the data shows that the more hours per week a student spends on the Internet, the more likely he or she is to be or become Internet dependent and possibly addicted to the Internet.

To bore into the data with regard to null hypothesis 4, the researchers looked at the data based on academic classification and found that data for freshmen and graduate students did not show a statistically significant relationship. The researchers posit that freshmen may not have had enough time in academics nor credit hours accumulated to meet the required $p < .05$ level. Graduate students did not show any significant relationship because the sample size for this group was too small to show statistical significance ($n = 4$).

Next, when exploring the time on the Internet in each category and Internet dependence, moderate to strong correlations ($p < .01$) were found between Internet

dependency and Relationships and Social Media ($r = .301$), Entertainment ($r = .369$), Getting News ($r = .228$), Giving Information ($r = .164$), using the Marketplace ($r = .166$), and for No Reason ($r = .293$).

To further explore null hypothesis 4, the researchers analyzed the eight symptoms used in the survey that relate to Internet addiction disorder (Young, 1996) and found the following statistically significant correlations with regard to Internet dependency:

Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use? ($r = .380$, $p < .01$).

Do you feel restless, moody, depressed or irritable when attempting to cut down or stop Internet use? ($r = .282$, $p < .01$).

Have you jeopardized or risked the loss of significant relationship, job, and educational or career opportunity because of the Internet? ($r = .337$, $p < .01$).

Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet? ($r = .334$, $p < .01$).

Discussion

Results from this study show that students spend about 23 hours per week in front of a computer. Based upon the data collected, it was found that students spent the majority of the time on their academic or work assignments (6.6 hours/week) and relationships or social media (5 hours/ week). Students also use the Internet to engage in entertainment, to get news, use the marketplace to buy and sell, ask questions, and some use the Internet for no

reason other than to occupy time.

This study addressed the relationship between students' use of the Internet and the effect of such use on academic performance and found no statistically significant correlation. These findings are similar to those of Pasek, More, and Hargittai (2009) although other studies have indicated that such a correlation does exist (Kubey et al., 2001; Jacobsen and Forste, 2011). This study also investigated correlations between student use of the Internet and Internet dependence. In this case, statistically significant correlations were found that further support the conclusion that the more time on the Internet, the more likely a student is to become dependent on the Internet. Results show that only 14% of students made unsuccessful attempts to cut back from Internet usage, 6% of students felt restless or moody when trying to cut back on Internet use, 6% experienced jeopardizing a job or relationship due to Internet usage, and 7% lied or concealed how much time they were spending on the Internet. While these percentages are low, these areas also have a strong correlation to Internet dependence and are consistent with finding of a study conducted by Heo, Oh, Subramanian, Kim, and Kawachi (2014) focusing on the time high school and middle school students spent on the Internet. Heo et al. concluded that males have a higher likelihood of being addicted to the Internet than females, due to the percentages of the top online activity for males being online gaming (67%) and the top online activity for females being blogging (23%) (p.4).

Findings of the current study show that students spend the majority of their time online doing research or on work related tasks (29%) or maintaining relationships

(22%). Because a student population was used in this study, it was predictable that a large portion of time on the Internet would be on academic endeavors and that students would use the Internet as both an academic outlet and a social outlet. Future studies might look at a traditional labor force to see if their time spent on the Internet for professional or occupationally-related activities is equally as high.

Is over-use of the Internet a problem? Many colleges and universities suspend students if their GPA falls below a 2.0 (on a 4.0 scale) for a semester, but if the student is facing an Internet dependence problem would this really help the student? The answer is most likely no. Students whose grades fall due to Internet use would not likely benefit from suspension because the student would then be provided with more time to use the Internet! The authors suggest that students with academic problems associated with the (mis)use of the Internet might be more successful in their studies in a smaller classroom setting where the student can receive more direct one-on-one help from an instructor or teaching assistant (Mattox, 2012).

The largest single issue or limitation with this study is that of students self-reporting their grade point average, problematic in other studies noted by Junco (2015). Many students do not know their exact GPA so they may have guessed based on what they remembered from their most recent grade reports. They may also have wanted to “impress” the researchers, so they may have rated their academic performance higher than actual performance.

Selected demographic variables were also be corre-

lated with the use of the Internet, social media sites, and GPA to gain a greater understanding of those characteristics as they are related to the population. Hur (2012) stated that out of 207 studies published in Korean academic journals, only 27.5% focused on what makes a website addictive. Hur concluded that academic websites are not considered to have “addictive” qualities while online shopping and gaming sites do have addictive qualities. This study concluded that 23% of the time was spent on sites that are “addictive” (see Table 2). Future research considerations would be to examine each of the dependency traits of “addictive” websites to see if there is an impact on student grades.

Certainly a replication study outside of academia is called for. Continued research could also include more specific assessments in the area of relationships and social media by evaluating specific social media sites (LinkedIn, Match.com, Facebook, Twitter, Pinterest, etc.) to determine any relationships on GPA based on the nature or content of those specific sites.

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