
Taking Information Systems Distance Learning to the Virtual Level

Melinda Korzaan, PhD
Associate Professor
Computer Information Systems
Middle Tennessee State University

Abstract

Virtual worlds, such as Second Life, are becoming more prevalent as a platform for Information Systems education. However, getting started and designing an educational experience in Second Life may seem like a daunting task and challenge for educators. This paper provides some practical advice for Information Systems instructors who are considering taking their distance education needs to a new level: the virtual level. This paper examines the crucial questions of how to begin facilitating Information Systems class sessions in Second Life by gleaming information from an exploratory experience where graduate-level Information Systems class sessions were conducted in Second Life. This pilot Second Life experience will be shared with readers and interwoven with tips, techniques, and recommendations to help educators take that first step for conducting a class meeting in-world.

Keywords: Virtual Worlds, Second Life, Distance Education, Virtual Education, IS Education

1. INTRODUCTION

“Virtual worlds can be defined as environments created by technology that incorporates virtual representations of various elements found in the real world.” (Kock, 2008, p.1) According to Kock, virtual world applications have been on the increase for multiple purposes from entertainment to practical uses such as business, education, and research. “Second Life, developed by Linden Research (also known as Linden Lab), is a good example of a virtual world that attempts to replicate elements of the real world with practical application in mind.” (Kock, 2008, p.3)

One use of virtual worlds that has been gaining recognition is as an educational and research environment for academia (Dreher, Reiners, Dreher, and Dreher, 2009). Recent literature has emphasized the benefit of immersive 3D environments (such as Second Life) for Information Systems (IS) education, particularly in the areas of learning programming skills, systems development, project management, and

industry/business experience (Dreher et. al., 2009). Initial research indicates that Second Life (SL) activities improve the student learning experience, learning motivation, and performance (Wang and Braman, 2009).

2. VIRTUAL WORLDS AND DISTANCE EDUCATION

Investigating Second Life as an educational environment was motivated by a need to find suitable tools and techniques for transforming a graduate-level Information Systems class from a traditional classroom format to a hybrid course. As mentioned above, Second Life has been identified as useful for IS curriculum in general, but SL may be particularly beneficial to facilitate an immersive experience in online IS education that is not readily attainable with current online tools. Therefore, it seemed reasonable to investigate virtual worlds as a potential tool for delivering the online portion of a graduate-level IS class that will be taught in a hybrid format.

A potential drawback to current online distance education tools is that they do not allow for open-classroom discussion. This may be an especially limiting factor for graduate students. According to a survey of MBA students, the use of open classroom discussion was ranked second in priority out of 17 teaching methods. In the survey, students were asked to rank a list of teaching methods according to their perceptions of teaching method effectiveness (Tootoonchi, Lyons, and Hagen, 2002). It is reasonable to deduct that if MBA students find value and effectiveness in open classroom discussion, then other graduate studies in the College of Business (such as Information Systems) may also benefit in a similar manner from open discussion. The graduate IS course under consideration is entitled: Information Technology Project Risk Assessment and Control. In this course, students are assigned reading material to complete outside of class and then the material is presented and analyzed in an open classroom discussion format with the professor acting as a discussion facilitator. Students are encouraged to share their real world work and life experiences during class discussion as it relates to the reading material. In the process of converting this class to hybrid format, three class sessions in Second Life were designed as an exploratory attempt to simulate face-to-face communication and open classroom interaction. The following is a discourse on these experimental class meetings and the practical tips and lessons gleaned from this experience. The method of investigation is exploratory and follows a common use case study format.

The Virtual Class Meetings

This Second Life adventure began with taking time to learn and become acquainted with the virtual world. I spent a semester learning the technology before introducing it to students. The next step was to begin incorporating virtual class meetings into the existing traditional class. At the beginning of the semester students were introduced to Second Life and were shown examples and illustrations whenever appropriate during the first few weeks of the semester. Other studies have confirmed the importance of introducing students to Second Life before they actually enter the virtual environment (Wang and Braman, 2009). Next, before having a virtual meeting with students in Second Life a learning session was scheduled in a computer lab on campus for one class period. Students completed a brief tutori-

al in Second Life which included basics such as modifying avatar appearance, teleporting, moving, flying, taking a picture, and adding the instructor as a friend. This lab also allowed time for students to have some freedom of expression and exploration. As they explored and interacted with each other, they learned about the virtual environment and how to navigate and communicate in-world. Students were also encouraged to ask each other questions and learn from each other. A venue that seemed to be beneficial for helping students learn from each other was to begin a Second Life discussion board in Desire2Learn. The following two topics were initiated on a discussion board and students were encouraged to post to them:

- Post a tip and/or favorite island location you have discovered in Second Life.
- Post any questions or challenges you are facing while using Second Life.

Several tips and questions were posted and responded to both by the students and myself.

After the initial introduction and training lab, the next class session was scheduled to congregate on a public island location in Second Life. To make sure students were able to find the correct island they were given an SLurl in a word document that they could click on and be teleported directly to the correct island. An SLurl is a link that will directly teleport an avatar to a location in Second Life (<http://wiki.secondlife.com/wiki/SLURL>). The class session began with all students together for a brief introduction. Students then divided into groups (which had been determined prior to the SL meeting) and each group was given a link to a Google Document containing discussion questions for each group to answer. The discussion questions were over assigned reading material. After allotting time for student teams to discuss and answer the questions the class met back together and a spokesperson from each group presented their questions and answers. As they spoke the remainder of the class was asked to silence their microphones, they were encouraged to text in the chat box if they had any questions or comments. The speaker would then address questions and comments as time permitted. I would finally wrap up the class meeting and clarify required reading material for the next class session.

The remainder of the paper is a summary of practical information, tips, and recommenda-

tions based upon these exploratory class meetings. The paper will present information in the following categories: where to begin your Second Life, recommendations for conducting class meetings in SL, general SL tips and techniques, and advantages and disadvantages.

3. WHERE TO BEGIN YOUR SECOND LIFE

Starting Your Second Life Account

Once a SL account is opened via Second Life's main webpage the avatar is teleported directly to Orientation Island. Some people find this to be an intimidating place because being approached by an unwelcomed avatar is quite likely on Orientation Island. Furthermore, there are some seasoned avatars who hang out on Orientation Island for the purpose of griefing <http://wiki.secondlife.com/wiki/Griever>. "Griefers" are avatars that harass others. Although I did not experience griefing on Orientation Island, I was approached by an avatar that made an inappropriate proposition. Although I simply declined his offer and he graciously accepted the "no", it was still a rather unnerving experience for someone who had never been in a virtual world before. Female avatars are more likely to be approached in an unwelcomed manner than male avatars. It has been recommended that females convert the gender of their avatars to male while on Orientation Island (<http://sl4nowt.wordpress.com/2009/01/30/30-things-every-newbie-should-know-before-starting-second-life/>).

Another solution for avoiding griefers and unwelcomed advances on Orientation Island is to open a Second Life account through NMC (New Media Consortium) <http://sl.nmc.org/create.php>. After opening an account through the NMC site, the avatar will be teleported directly to the NMC Orientation Island which is dedicated for academic purposes. I recommend using this website to open a Second Life account, not just for faculty members but for students as well. If a student or faculty member already has a Second Life account and is interested in a safe alternative to Second Life's Orientation Island then NMC's Orientation Island location may be teleported to from the following SLurl: <http://mapssecondlife.com/secondlife/NMC%20Orientation/129/121/39>. Once on the Island, follow the orange arrows for an orientation tour.

Networking

Second Life educational information and ideas may also be attained by meeting and networking with fellow educators in-world. A key island for educational resources and networking is ISTE island (International Society for Technology in Education) <http://www.iste.org/>. ISTE holds regular networking social events including events specifically designed for newcomers. The following SLurl will teleport directly to ISTE Headquarters <http://maps.secondlife.com/secondlife/ISTE%20Island/91/83/30>. The schedule for upcoming social events is provided on the ISTE Headquarters Island. In addition, the resource room on the island has free avatar starter kits for both men and women. Other avatar freebies are also available in the resource room. Their tour information is found on the web at <http://secondlife.iste.wikispaces.net/SLTours>, and their event calendar is at <http://secondlife.iste.wikispaces.net/events>.

Open University Island found at SLurl <http://maps.secondlife.com/secondlife/Open%20University/90/38/25> is also a key educational resource. Open University Island holds open question and answer sessions for Second Life beginners on Wednesdays and Fridays. Upon arriving on the island one may be pleasantly welcomed by a student volunteering as a greeter for the island. This provides an opportunity to practice interacting with new people in Second Life and also is helpful if one has any questions about the island. Browse through their nOUbie Center and indulge in a free latte from their espresso machine.

NDE Island is another academic island worth investigating. This island is owned and managed by the Nebraska Department of Education <http://maps.secondlife.com/secondlife/NDE%20Island/150/123/21>. NDE Island has a model of Maslow's Hierarchy that may be toured and a model of the revised Bloom's taxonomy for learning, teaching, and assessing. Other academic islands of interest include Ohio University at the following SLurl: <http://maps.secondlife.com/secondlife/Ohio%20University/54/57/26>, Vassar College at <http://maps.secondlife.com/secondlife/Vassar/50/50/29> (tour the castle and Sistine chapel while visiting are here), and Bowling Green State University <http://maps.secondlife.com/secondlife/BGSU%20Community/1/8/33>.

A web resource for Second Life educational information and resources is EDUCAUSE <http://www.educause.edu/>. Consider joining

the Second Life Educators list (the SLED List) at <https://lists.secondlife.com/cgi-bin/mailman/listinfo/educators>. This is a list of educators who are either currently using Second Life in education or interested in Second Life for academic applications. I also recommend attending a Virtual Worlds Education Roundtable (VWER) meeting. The VWER meeting schedule is located at <http://www.vwer.org/?p=35>. The roundtable meetings are held in-world at Montclair State University's amphitheater; to teleport there directly use the following SLurl: <http://maps.secondlife.com/secondlife/Montclair%20State%20CHSSouth/127/154/21>.

Based upon personal experience, once one begins interacting with other avatars the more comfortable virtual expression and communication becomes, whether interacting via text chat or voice. Attending virtual roundtable meetings is where I first found myself becoming more comfortable interacting with other avatars.

Tutorials

Video and/or document tutorials are online resources that are available to assist one in learning how to use Second Life. Based upon personal experience, I found Torley Linden's videos helpful. The videos are to the point and easy to follow. A listing of Torley's videos is located at: <http://www.youtube.com/secondlife#g/c/D237D0E11AC1F341>. Another resource for SL Viewer 2 can be found at the Second Life wiki. The wiki contains both text and video tutorial information http://wiki.secondlife.com/wiki/Viewer_2_Video_Tutorials. If a tutorial document is preferred over a video then one may find at Graham Davies' blog <http://niflar.ning.com/profiles/blogs/tutorial-materials-for-second>.

Avatar Appearance

While perhaps not necessary to spend an inordinate amount of time perfecting one's avatar appearance, it is still worthwhile to set aside some time to adjust the avatar's appearance to reflect individual taste and personality. In general, faculty members may want to consider creating a believable representation of an authority figure. In real life I usually teach in either business or business casual attire. I found myself feeling self-conscious and uncomfortable teaching in-world in the casual default avatar attire. While future research is necessary to conclude the exact relationship between avatar appearance and effectiveness in

the classroom, there have been a few research studies that have identified correlations between avatar appearance and behavior. The phenomenon where users make "inferences about their expected dispositions from their avatar's appearance and then conform to the expected attitudes and behavior" (Yee, Bailenson, and Ducheneaut, 2009, pp. 293-294) is known as the Proteus effect. According to Yee et. al. (2009) taller and more attractive avatars performed better in an online game, and taller avatars were found to negotiate more aggressively than shorter avatars.

4. RECOMMENDATIONS FOR CONDUCTING YOUR CLASS MEETING

Start Simple

If a faculty member is interested in taking an introductory approach to Second Life education and reducing risk, then an appropriate approach may be to take a traditional class and conduct a few class sessions in Second Life as a way of incrementally moving into a virtual environment.

Guidelines and Code of Conduct

A recommendation is to clearly communicate to students the behavioral expectations in a virtual classroom. Based on the exploratory classes conducted in Second Life, I did observe that even the most mature and professional graduate students initially regressed back to their childhood momentarily and found the need to play somewhat irresistible. However, as they explored and played they were also learning how to navigate their avatars, how to do gestures, how to have private and public chat sessions, and how to interact with their environment. Therefore, they were allowed the first class meeting as a learning session (this initial meeting was conducted with all students physically in a computer lab on campus), and I did not attempt to stifle the creativity unless it became offensive or insensitive to other students.

Linden Labs has their own terms of service and community standards. Students need to be aware of these terms of service which are available online at <http://secondlife.com/corporate/tos.php/> and the community standards which are available online at <http://secondlife.com/corporate/cs.php>. Chat sessions are recorded by Linden Labs; therefore, it is recommended that students be made aware that their conversations are being recorded. If the

faculty member is recording class sessions, then it is recommended to inform students about this as well (class sessions may be recorded with screen capture software and chat text may be automatically saved to the professor's hard drive). Clear communication to students is recommended to inform them that there is no real privacy once their voice/chat communication goes out over the internet in Second Life. If on a public island there is also a possibility that other avatars are there taking video and/or pictures.

Appropriate behavior and conduct for class attendance and participation are also considerations for a faculty member contemplating taking their classroom in-world. Existing policies are available from other institutions as examples and may be viable examples to be used as each faculty member develops policies to meet individual instructor and classroom needs. Institutions that have existing guidelines include Open University and the University of Wisconsin, Madison. At Open University Island a note card with their guidelines and policies will be automatically given to each visitor upon their arrival to the island. Some universities also have students read and sign a policy before going in-world. The University of Wisconsin, Madison has such a policy which is available online at http://comets.wisc.edu/sims_games/virtualworld/SLguidelines.pdf.

Just as accommodations for students with disabilities are needed in the traditional classroom, accommodations also may need to be made in the virtual classroom. The official Wiki for accessibility issues in SL is located at <http://wiki.secondlife.com/wiki/Accessibility>.

Planning a Place to Meet

There are three types of meeting places in Second Life: congregate at a location on a public island, purchase an island space, or rent island space. I met with students on a public island. There are both benefits and drawbacks to this approach. A key benefit being that it is free; a drawback is the lack of control over the environment, which has a tendency to lead to unexpected distractions and interruptions. If your educational institution does not own an island, and taking the risk of not being in control of the environment does not sound appealing, then renting may be the best viable option. A reference for those considering rental space is the Second Life Wiki at http://wiki.secondlife.com/wiki/Help:Land_renting_advice_for_new_Residents. It is also rec-

ommended to ask other educators specifically about their experiences with renting island space and gather references for reputable landlords. ISTE [http://secondlife.iste.wikispaces.net/file/view/ISTE+Island+ Rental+ Information+Packet+Final.pdf](http://secondlife.iste.wikispaces.net/file/view/ISTE+Island+Rental+Information+Packet+Final.pdf) and NMC [http:// virtualworlds.nmc.org/services/](http://virtualworlds.nmc.org/services/) both provide island rental spaces. It may be worth investigating their services in more detail because they are already established as educational islands.

Although my class sessions met in public areas, we did stay on educational islands and for the most part were not bothered by intruders. Sometimes the avatars passing by were educators themselves and conversations would ensue with these educators that allowed for beneficial, spontaneous learning. Only once did an uninvited avatar showed up at class adorned only in his avatar underwear. Students reacted quickly and effectively by giving the unwelcomed avatar free clothing and recommended a freebie island for him to visit. He teleported to the freebie island and did not return during the remainder of the class session. Before our official class meeting in Second Life students were given a Word document with SL island Slurls along with a protocol to follow so that if there were serious problems with uninvited guests then the class would teleport to the next location.

Have a Backup Plan

Even in the best circumstances technology can be unpredictable. If the internet goes down, Second Life becomes temporarily unavailable, or other technical difficulties occur then a backup plan may need to be executed. Examples of backup plans may include an assignment or another activity used to replace the Second Life class meeting in case of such an emergency.

5. GENERAL SL TIPS AND TECHNIQUES

The following paragraphs offer some general tips, techniques, and recommendations that educators who are just beginning their Second Life journey may find beneficial. It is acknowledged that the following tips are generated based upon personal experience and therefore may not generalize to the population of educational experiences in Second Life at large.

One recommendation is to set SL preferences to automatically save text chat to the hard drive. This will provide a transcript for instructors and/or the class to review at a later time.

To set this preference, choose the following menu sequence: Me -> Preferences -> Privacy. Then, check the following items: "Save nearby chat logs on my computer", "Save IM logs on my computer", and "Add timestamp". Changing the location of the log files to a folder on the hard drive where it will be easy to access is also recommended. If the folder location for storing chat logs is not customized then SL will automatically save the logs to a hidden folder on the hard drive.

Having a well-thought out plan for class meetings, while still remaining flexible is a goal I adopted for class in Second Life. Sometimes spontaneous discussion was beneficial in the classroom. Based on my experience, students wanted to interact as possible. Therefore, instead of traditional lecture faculty may want to be creative and think of new ways to engage the students in the virtual environment while they are learning the course material. Engagement may be more important in virtual worlds than in a tradition classroom because while students' avatars are visually present their real life selves could be busy doing something else such as surfing the web, watching TV, working on homework for other classes, or talking to other people in real life. I allowed frequent opportunities for students to chat and/or speak in class by including discussion questions. I also allow students to comment with the text chat even while there was a speaker on voice chat. Often, student comments in the text chat led to interesting discussions about the course topic.

A consideration at the beginning of the class session is to determine if everyone can hear the instructor speaking on voice chat. In case there is a technical glitch with voice chat, having key points ready in a Word or text document to copy and paste into the chat box is recommended. In my experience teaching in SL, everyone was able to hear me, but not everyone had microphones so there was some limitation on students speaking themselves. This proved to be a minor inconvenience and was easily addressed by encouraging students without microphones to text their questions and comments.

There is an element of uncertainty of how and who to interact with in Second Life. This uncertainty may lead to some anxiety. Especially while on public islands there is no way to control who may approach the faculty or student avatars. Etiquette for being polite or friendly

in a virtual world is not established and may prove to be significantly different from social etiquette in real life. Based upon my experience in Second Life, I found that if an avatar approached my avatar and I was not comfortable engaging in conversation I teleported away without acknowledging the other avatar. If one would like to teleport away quickly to another island just click on the "Go back to previous location" button located in the upper left corner of the Second Life window. Another source of intimidation may come from the initial awkwardness of learning how to navigate and interact in the virtual environment. A recommendation is to allow some time for students to learn how to use the SL interface. However, it is equally important not to spend too much time figuring out all the details of the SL environment before beginning to interact in a class session. There is a balance to be maintained. It may become tempting to spend too much time learning all the features and functionality of SL. A general recommendation is to take just enough time up front to get a firm grasp of the basics (such as texting, voice chat, flying, walking, sitting, teleporting, and working with inventory) and then remain flexible during each class session to allow SL learning experiences to flow alongside the learning experience of the material and activities covered in the class.

With the new Second Life viewer 2.0 media can now be shared on a prim. A prim (or primitive) is a single object in Second Life (<http://wiki.secondlife.com/wiki/Prim>). Torley Linden explains how to view web pages on prims in the following video tutorial <http://www.youtube.com/watch?v=Wv20U7rJuwU> . This new feature opens up the doors of opportunity for incorporating Web 2.0 technologies within the Second Life environment. For example, students can now collaborate with Google documents while remaining within the Second Life environment. They can also view You Tube Videos and access other web pages while remaining inside Second Life.

Designing an activity that is appropriate for class may prove to be challenging for educators beginning a Second Life endeavor. Overall, it is recommended that the activity be well thought out, planned, and documented with clear instructions so that the students know what will be expected of them during the virtual class session (Wang and Braman, 2009). Some activities to consider are: problem solving (such as a business problem in an analysis

and design class or a logic problem in a programming class), research project, tours and field trips to other islands, guest speakers, scripting (for computer programming classes), or designing a project simulation for project management classes. Group activities and dialogue based upon discussion questions are also possibilities. The goal is develop activities that are appropriate for the course subject matter and for the activities to be planned and documented so that students have a good understanding of what will be required of them in class. Because discussion was a key learning element in the graduate course I was teaching in-world, discussion questions and open communication regarding reading materials was the focus of each class meeting.

The following items are quick tips that are being included because I wish I had been aware of them before beginning my adventure in Second Life.

- Show the start location on the login screen by going to Me -> Preferences -> General. Then under Start Location, check the option "Show on login". If this option is selected then one can control the island their avatar will rez onto upon first logging in.
- Test out voice chat by going to Echo Island. This island will allow one to test the volume and sound of the microphone. Echo Island SLurl: <http://maps.secondlife.com/secondlife/Voice%20Echo%20Canyon/52/61/30> .
- Upon arrival at an island, if it is dark, the time of day may be changed by choosing the following menu sequence World -> Sun -> Midday. Midday shows the most sunlight.
- If a nearby avatar is talking too much, right click on the avatar and select "mute".
- Dudeney Ge's Educator Freebie Shop has free educational supplies and tools at <http://maps.secondlife.com/secondlife/EduNation%20II/142/224/25> .

6. ADVANTAGES AND DISADVANTAGES

Although formal outcome measures and assessments were not solicited from students on their experience in the Second Life class meetings, informal feedback was gathered and discussed. In general, the students' overall reactions were very positive. One student mentioned that meeting in Second Life was more fun than a rock climbing class he had taken.

The following list of advantages is based on a combination of what was experienced in the class meetings and from literature sources.

- Many students who felt too intimidated to speak and participate in a traditional classroom setting commented that they were more comfortable speaking up and participating in class while in Second Life.
- Students commented that it was an enjoyable experience and they also could see the potential benefit of using Second Life or other virtual world technologies for meetings in the business world.
- Second Life provides an environment for online education without the limitations of time/space (Wang and Braman, 2009).
- Second Life affords real time communication, collaboration, and interaction for students in an online environment. (Wang and Braman, 2009).

Likewise, the following list of disadvantages is based on a combination of experience from the class meetings and from literature sources.

- The largest drawback appeared to be the technology, especially from slow internet response time and older graphics cards. Some students were not able to get the microphones to work so they were only able to participate via chat. Other sources have identified technology as a primary challenge for using Second Life in educational settings (Wang and Braman, 2009).
- If meetings are held in a public area expect distractions and unanticipated visitors. However, there is a monetary cost associated with renting or owning island space.
- It is difficult to tell when students are actually paying attention. Participation can be evaluated by voice and text chat contributions to classroom discussion, but if the class session is a lecture it would be very difficult to tell who is paying attention.
- Avatar identity may also be complicated. Students should email their avatar names to the professor as soon as they create their Second Life accounts. However, in-world, unless the professor can hear the voice of the

avatar, then there is no guarantee someone else other than the student is controlling the avatar.

- Distractions outside of Second Life are also an issue. While students are at home they may be interrupted by the activities of family and/or roommates while they are in-world during class.

7. CONCLUSION

"The continued growth of Web 2.0 and virtual worlds will likely force educational institutions to move with the technology" (Dreher, et. al., 2009, p.221). This paper presents a class meeting experience in SL and is interwoven with issues and information to help other educators make that first move into virtual world education. This paper summarizes the observations, experience and lessons learned from a pioneering and exploratory venture of conducting graduate-level Information Systems class meetings in Second Life. The advice and recommendations presented here are preliminary observations based on exploratory experiences. Confirmatory studies and future research is needed to provide academic rigor and develop theoretical models for Information Systems education in virtual worlds.

8. REFERENCES

- Davies, G. (2010). Tutorial Materials for Second Life Viewer 2. *Graham Davies Blog*. Retrieved August 8, 2010 from <http://niflar.ning.com/profiles/blogs/tutorial-materials-for-second>.
- Dreher, C., Reiners, T., Dreher, N., and Dreher, H. (2009). Virtual Worlds as a context suited for Information Systems education: Discussion of pedagogical experience and curriculum design with reference to Second Life. *Journal of Information Systems Education*, 20(2), pp. 211-224.
- Kock, N. (2008). E-collaboration and E-commerce in virtual worlds: The potential of Second Life and World of Warcraft. *International Journal of e-Collaboration*, 4(3), 1-13.
- Second Life Wiki. <http://wiki.secondlife.com/>
- SL for Nowt (2009) 30 (and more) things every newbie should know before starting Second Life. Retrieved August 3, 2010 from <http://sl4nowt.wordpress.com/2009/01/30/>.
- Tootoonchi, A., Lyons, P., and Hagen, A. (2002). MBA students' perceptions of effective teaching methodologies and instructor characteristics. *International Journal of Commerce and Management*, 12(10), 79-93.
- Wang, Y, and Braman, J. (2009). Extending the classroom through Second Life. *Journal of Information systems Education*, 20(2), pp. 235-247.
- Yee, N., Bailenson, J., Ducheneaut, N. (2009). The Proteus Effect: Implications of transformed digital self-representation on online and offline behavior. *Communication Research*, 36(2), 285-312.