

Digital Time Burglars: Using a Distraction as an Avenue for Learning

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A beginning design student has a lot to learn. They need to learn design principles, concepts, and methods taught in the context of lectures and assignments which all combine to produce some type of designed product (the assignment goal). This is not an easy task especially with the distractions of today. Complete access to technology, music, social media, and gaming are pervasive in today's classrooms and are time burglars. As Bernard McCoy wrote in his study of digital distractions in the classroom, "Student usage [of digital devices] had risen to an average of 11.43 times in a typical school day and resulted in 20.9% of students' class time being distracted by a digital device...respondents said fighting boredom in the classroom was a leading reason they used digital devices for non-class activities." (McCoy, 23 & 28)

This paper will discuss some practical methods of leveraging digital distraction as an avenue for learning rather than being a time burglar. Here are three interesting facts: 1.) The Internet was first developed in the 1960's and was available for general use in 1989 2.) The first smart phone, the IBM Simon Personal Communicator, was actually released in 1992 but more readily available in 1995 3.) Most first year, but not all, students are typically 18–20 years old. What do these three facts tell us? That if most students are coming into first year design studies and they are roughly 18 years of age, they have never known a world without these digital devices and the connection to the internet. It also means that students are coming into their beginning design studios with an unprecedented comfort level with technology. That comfort level is not always appropriate for all situations. Headphones come with almost every digital device and some students constantly have those in their ears, especially when they are asking questions or getting feedback from professors. There is also the trend to find some small bit of information on YouTube and take that as having more authority than with the assigned project technique taught by the professor. In addition to those two, there is also social media. Students check social media not once or twice but often...almost continually. A trend has arisen that students are continually checking their social media but do not check their email. These are a few examples of how technology and digital devices are disrupting our studios.

While there is a need for technology and current digital abilities in design education, non-classroom related digital distractions are a challenge for any professor to deal with, or are they? We first have to ask the question, what are digital distractions? Digital distractions are things that pull attention (eyes, ears, and thoughts) away from the class discussion, project work, or professor and are usually referred to as being "connected" through the use of the device. Digital Devices, such as the smart phone, are addicting and provide the opportunity for multiple forms of entertainment but also create the need for the professor to demand student attention to pull them away from those devices. As Mayim Bialik, PhD in Neuroscience, as well as character on a popular TV show, presented in a video an overview of a research study on how people are addicted to their smart phones. She states that how, when research subjects had their phones near, they had a tougher time performing some basic cognitive tasks. She went on to say that subjects with absolutely no access to their smart phones performed the same tasks more successfully. This study dealt with proximity of the phone as an inert object even though it was recognized as something in which to interact. But our smart phones actively demand our attention. Apps, messages, emails, and phone calls, in addition to the entire internet, can give alerts that are physical (vibration), auditory (chime), and/or both. These alerts demand attention and would cause

anxiety if the research subjects were unable to check their phone. This constant interaction with our smart phones, digital devices, and the availability of the internet always at your fingertips, there is no longer the need for the act of going to the library and searching for information in volumes of texts but rather a new form of targeted research for the specific information in which you wish to learn. "Why learn something if you can use your smart phone to Google it?"

Googling is a new term that has arisen because of constant access to smart phones and the Internet. The definition of Googling is to use the search engine, like Google, for information. There are some that say that Googling is actually creating an entirely new situation in our society where people are thought to be less intelligent. This is because there is less need to remember and digest information because it can always be accessed via Google, immediately. Scientific American published an online article, "Does Continual Googling Really Make You Stupid?" In the paper excerpt, the authors reference an article by Journalist Nicholas Carr stating, "...the price of zipping among lots of bits of information is a loss of depth in our thinking." When searching for information, there are two things that need to be considered: 1.) You have access to everything and can "zip" through it quickly and 2.) if you are going quickly through vast amounts of information, targeting of what you specifically wish to locate becomes narrowed and there is the possibility to only see the desired specific information. It is difficult to grasp how large the Internet is and if you are looking for a particular thing, once you find it, then your search can be considered done. However, not everything is true on the Internet and in addition targeting of information can lead to a lack of organic exploration. With the availability of the entire Internet and targeting of information in a search, it is becoming a trend that students use the first bit of information that suits their needs rather than searching for information that can lead to innovation. This is becoming more present in student work and a lack of exploration. Students are taught to use the first thing that suits their needs and to then move on to the next part or stage of a project. Instant gratification is a term that can be used to describe this phenomenon; and can lead to a lack of exploration as well as a need for immediateness in getting to a final project direction. This immediateness is leading to the thought that newer generations have a shorter attention span.

There is an underlying trend of belief that the newer generations have a shorter attention span. With constant interruptions from our digital devices and the Internet, who can blame them, but is this really true? In searching for evidence of dwindling attention spans, a myriad of websites populated the search results that supported the statement that, yes, our attention spans are decreasing. Decreasing to the point that we as a people have a shorter attention span (8.25 seconds) than a gold fish...9 seconds. However, upon trying to corroborate that data, an article, appearing fifth in the search and written by Dr. Gemma Briggs, debunked the shorter attention span myth and offered another theory. The theory was that we are not a society that has a shorter attention span but rather a society that has access to many more things (distractions) than ever and thus have developed a habit of multitasking. With digital devices like smart phones, multitasking has allowed us to separate our attention on many tasks at one time.

Whether the short attention span data was fictitious or is completely accurate, what Dr. Gemma Briggs states is that we are training ourselves to separate our attention to many tasks rather than focusing on one at a time and that our attention has become task-dependent. We need to have a focus or an interest in what we are doing and will, therefore, devote greater attention to our current task. Dr. Gemma Briggs states: "The idea of an "average attention span" is pretty meaningless. It's very much task-dependent. How much attention we apply to a task will vary depending on what the task demand is." What does this tell educators? We need to create dependent-tasks in our studios.

Traditional classrooms on a college campus have "x" amount of seats, all with desks that have just enough room to put a notebook or a computer and take notes. Many courses involve lecture

components where students are being spoken to and have to try to mentally and physically record what the professor is saying. There is the potential for a binge and purge with each test and one can ask, how much is actually digested from traditional lecture classes. Design studios are not like other classrooms on campus. One pitch for recruiting students to the major and profession is “Do you want to never take tests and build cool stuff?” It is only partially true that design studios tend not to have the traditional idea of a test, but assigned project components and daily critiques are our more rigorous form of that tradition. By having the daily work and feedback, the “test” becomes less of a large item and more of a daily occurrence and therefore prepares the student to absorb the lessons through doing. Quite often design studios will have space for students to work; potentially each student will have a workspace of their own. Very often there will be in-process work pinned up all over the walls and in-process models and model-making materials on the desks and floors. All design students must work, and work, and use the computer to do more work. The work involves the mastery of two-dimensional and three-dimensional project assignments. Projects teach those design components and build in complexity with each new assignment. Educators need to take a newer multitasking group of students, with many demands on their attention, and assign projects that demand enough attention that the other tasks become less. It is the hope that instructors assign projects and project components that are demanding enough to help students reduce all other distractions and achieve a state of Flow or total immersion in the activity.

With so many things, that populate our lives, which are attention grabbers how can we facilitate students achieving Flow? First we have to understand what is Flow. Flow is a state of consciousness so focused that it amounts to absolute absorption in an activity. It can also be seen as the total immersion in an activity. What Psychologist Mihaly Csikszentmihalyi is referring to is a sense of happiness, enjoyment, or optimal experience in life. This can be translated to student projects too. Csikszentmihalyi states that there are eight major components that people describe when they achieve Flow: 1. We confront tasks we have a chance of completing; 2. We must be able to concentrate on what we are doing; 3. The task has clear goals; 4. The task provides immediate feedback; 5. One acts with deep, but effortless involvement, that removes from awareness the worries and frustrations of everyday life; 6. One exercises a sense of control over their actions; 7. Concern for the self disappears, yet, paradoxically the sense of self emerges stronger after the flow experience is over; and 8. The sense of duration of time is altered. (Csikszentmihalyi)

If smart phones, computers, and the Internet are digital distractors, what are digital non-distractors? Digital non-distractors are smart phones, computers, and the Internet—the same as distractors. How can educators change digital distractors from a negative into a positive? By facilitating a sense of flow. In reviewing Csikszentmihalyi’s 8 major components, four overarching themes arose when the people in his study reflected on their experience with Flow. Those themes can directly apply to a studio classroom and either remove distractions or change them into an avenue for learning.

A Challenging Activity that Requires Skills

Design practice does not come easy and nothing done happens the first time or with a single iteration, our design skillset requires development over time, building in complexity with each project and studio class. This skillset is not easy to build and students who put in the time and energy tend to perform better in their classes as well as after school. If students tend to quickly focus on a single idea, assign them to develop three or fifty. One skill that is necessary as well as difficult to develop is visualization or sketching. Often students believe they are either good or bad at sketching. This is not true, visualization is a learned skill and everyone, with effort, can achieve success through practice. This practice requires paper and pencil OR the use of a tablet and stylus and the ability to focus on the task at hand. Sketching can be a very personal experience and one that students do not wish to share with others; this is where the use of digital devices (headphones and phones or music devices) can help

provide an environment where they feel comfortable. In addition, many times, students will do the minimum in terms of visualization. A dependent task for this situation is a high number of assigned sketches, then refined sketches, and final sketches. Each time the sketching goes to the next round, the amount assigned reduces but that is because it is being selected from the previous round. This does two things: 1.) It pushes the student to develop ideas further than they typically would and 2.) When done, the student pins up the sketches and can see how much they have accomplished.

Merging of Action and Awareness

this is where action meets preparedness and understanding. As the Roman philosopher Seneca said, "Luck is what happens when preparedness meets opportunity." This quote paints a picture of a combining of an action and an opportunity. The action is the building of a design skillset and the opportunity is the project itself OR anything that arises from recognition from documenting the project. Since students want to be on their smart phones in studio, allow them and encourage them to use those phones to take process pictures. Part of the project is to document process. Process is a chronological or iterative way to show how projects, problems, and assignments are tackled and successfully completed. Employers wish to hire persons can think and can contribute to the company, not a person who cannot. Future employers want a person who can tackle projects with fervor and show how, why, and what they did.

Clear Goals and Feedback

providing a clear objective or plan for the project is so much less scary than the infinite of everything to design. By providing the objective but not to constrict all aspects of the project allows for enough freedom that beginning the project becomes less overwhelmed. In times when students get overwhelmed, they go for the easiest route, not the innovative one. Detailed assignments and the project intent in Project Briefs allow the student to see where the project will go as well as the meaning behind what is being assigned. With the new beginning design student being such a multitasker, a trend has arisen where they wish to know what is coming next. The schedule of the assignments (due dates) as well as lectures and demonstrations with the new beginning design student being such a multitasker, a trend has arisen where they wish to know what is coming next. Students wish to know exactly what the schedule will be as well as what their grades are per project. It has become a practice in my studios to present the student with the entire semester schedule on the first day. Now, this schedule is considered "in-process" and usually is updated based on class performance, bad weather, or any reason it would need to change. The student sees every assignment and knows what is coming next. Also, the project is developed so the student will be able to "wrap" their head around the concept, do some preliminary secondary research, ideate concepts, refine those concepts, model, and produce the final. With each of these assignments, there is a clear goal, the assignment submission. Each student receives a checklist with every assignment as its point value, to track progress. With each assignment, the student knows what is expected, receives the feedback, and can move onto the next assignment (task).

Concentration on Task at Hand

When the previous three themes are met, then students can completely immerse themselves in the project. They can focus because the fear or worry or anxiety has been removed and they can design with only the current task in which to focus.

The four themes show how to "deal" with digital distractors but in researching this subject, one thing was not there but should be is a fifth theme; **Utilize the Tools that are most Familiar.** Since students

are coming into college and design studios with a high comfort level with technology as well as many high schools providing the opportunity for basic rapid prototyping, why not encourage students to use what they are comfortable with. Studio classes have times where students can work on their projects, if a student can wear headphones while working on projects, they can create their own environment similar to what they normally work in. Encourage students to pick up their cell phones, document their work, and post it on social media. By doing this, it allows the student to get solicited feedback from an audience as well as spread the knowledge of what projects are being worked on. In addition, students can spread information on assignments, techniques, and other bits of information that class could utilize. If students are constantly getting online and not doing their work, educators can assign project parts and components that rely more on the physical act of building rather than the contemplative. Educators can also provide their own online materials so students can access at their own time. In that way, educators can flip the classroom and spend more time in discussion or working rather than lecturing. By doing all of these things, we succeed turning a distraction into an opportunity for learning.

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