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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

WHO DOODLES AND WHY?

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts

Jeremy A. Yocum

College of Performing and Visual Arts School of Art and Design Art Education This Thesis by: Jeremy Yocum Entitled: *Who Doodles and Why?*

has been approved as meeting the requirements for the Degree of Master of Arts in College of Performing and Visual Arts in School of Art and Design, Program of Art Education

eccepted by the Thesis Committee:
onnie Stewart, Ph.D., Chair

Donna Goodwin, Ph.D., Committee Member

ABSTRACT

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This is a mostly qualitative study, which uses a survey methodology, developed to determine who doodles and why. Over one-thousand people were surveyed, via social media, to determine if doodlers have specific characteristics. Do left handed people tend to doodle more than right handed? Does a specific age group tend to doodle more often than another? Do people with ADD/ADHD tendencies have a stronger likelihood to doodle? Along with the specific characteristics of the doodler, the reason for doodling was also researched. Is the doodling taking place out of boredom or is it to help the doodler focus in a meeting or class? Throughout this paper these questions will be examined.

DEDICATION

This thesis is dedicated to all of the teachers that encouraged me to doodle, as well as those that bored me to doodle. Also, to the committee members and professors that helped guide me through this journey, thank you for your kindness, understanding, and encouragement.

I also wish to acknowledge my family for their support and understanding during this process. I thank you more than you know.

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CHAPTER I INTRODUCTION

Rationale

I am a man that wears many hats. I am a working artist (a self-proclaimed jack of all art trades and master of none), a husband, a father of two, and an art teacher of high schoolers and adults for the past 18 years. My interest in art began at a very young age and I can always remember drawing and I still do regularly. My drawing habits have changed over the years and the structured, technical drawings have slowed but a type of drawing that I do daily is doodling. Doodling can be defined as "an unconscious designing while no attention is paid by the person" (Tadayon, 2016, p.1). This is a way to keep my creative juices flowing and my technical skills from becoming stagnant. Doodling was something that I always did, but I began to think more about it as I became a working adult and meetings became a constant obligation in my life. I absolutely could not sit through a meeting and retain anything unless I was doodling. My mind would wander and I would miss a lot of the information. I began to wonder, "Was this just me?" or "Should I have grown out of this by now?" I want to know if doodling is a regular habit of other people. I am sure that I am not alone, but who else doodles? Is it specific to people that have artistic talent? Is drawing or mark making without conscious intent a determent to listening and retaining verbal information? Do some of our students benefit from doodling?

Background

I have been interested in drawing for a very long time. My first clear memory of my art was when I was 5 years old. I was fascinated by a local Phoenix children's show, that aired every weekday morning, called "Wallace and Ladmo". They were famous for the glorious prize of the Ladmo bag. This was not something that one got for simply being an audience member for the show, it had to be won. The bags were sacred to the children of Phoenix. The contents of the brown lunch bag stamped with the words "Ladmo Bag," were a couple of toys, local candy, chips and can of soda. The show consisted of the hosts, Wallace and Ladmo, showing cartoons, being silly and performing skits with a handful of characters, all in front of a live studio audience of kids. They had a drawing contest and my mother suggested that I enter. I had to draw a trolley. Looking back, I have no idea why that was the contest. We didn't have any trolleys in Phoenix, although I assume the contest was probably partnered with the Arizona Department of Transportation or something of the like. So, I spent some time drawing what I thought a perfect trolley should look like. It had many wheels and was very brightly colored. I completed the drawing, gave it to my mother and she mailed it off.

A few weeks later, she told me that I had won third place in the contest and I was going to get to be on the television show. I was excited and nervous. I remember driving into downtown Phoenix in the middle of the summer in my mom's Chevrolet Caprice Classic. It was hot, horribly hot, and I would often get burned from the metal seat belts. We drove for what seemed to be forever through the brazen desert metropolis and arrived at the KPHO Channel 5 studios in downtown Phoenix. There were a couple of really tall men in the lobby of the studio dressed in tank tops and gym shorts. They were Phoenix

Suns players, probably there doing a news spot. I just remember being fascinated by their size. My mom and I were escorted into the audience seating, which consisted of maybe three dozen people, and we were told to sit and enjoy the show until the commercial break before the trolley segment. The moment had come and I, along with the first and second prize winners, who were much older than me, were called to our places on the soundstage set. The show came back from commercial and we were given our Ladmo bags and briefly introduced and interviewed. My part didn't go so well, I was much more interested in the contents of my Ladmo bag sitting at my feet than I was talking about my drawing. The segment came and went and then became cemented as my first real artistic victory.

Throughout my childhood, I continued to draw. I always drew - in my free time, in class, in church, wherever paper and a pencil were available. I began to realize that some people, especially teachers, were bothered when I drew. It had nothing to do with the subject matter, style or skill. It bothered the teachers because I would draw as they lectured. I was beginning to realize that they found it disrespectful and my doodling became somewhat taboo. The longer and slower the lecture became, the more I needed to draw. I would try not to draw in class, but if I was going to survive the 50 - minute block, I simply had to. I need to be clear, that when I say drawing in class, these were not masterpieces, these were simple doodles. The doodles were a collection of little characters, landscapes, and patterns. They were, at best, references for later use, but primarily, mindless little sketches.

During my first education class in college, I had an awakening. I was told there were different types of learners. Some people learned visually, some hands on, some

auditory, some in interactive environments, some in rows, and the list went on and on. "All of us have the full range of intelligences; that is what makes us human beings, cognitively speaking" (Gardner, 2006, p.23). With that knowledge, I wondered why I had only ever been lectured to sitting in rows. Then the professor said the most mind-blowing statement to the class, "Some people even doodle to listen." My whole world opened up when I heard that. She stated that some people need to occupy their body in order to listen and focus. That was me! I was not being defiant - in all actuality I was being a good listener. Howard Gardner emphasizes this point in his book *Multiple Intelligences*:

An expert is an individual who can think about his or her area of expertise in multiple ways—verbal description, graphic sketches, behavioral embodiment, humorous renditions, and so on. In encountering different representations of the key ideas, and in having the opportunity to think about these ideas in multiple ways, the student partakes of the heady atmosphere of the expert. (Gardner, 2006, p.142)

This idea made me wonder, what kind of learners are there out there? Are there more me like me?

Ouestion

Who doodles and why? Throughout this study, I determined who doodles and why they do it? The study consisted of a group of 1087 adults of varying ages and in varying professions. The survey was distributed through social media, with the idea that it will reach a wide variety of adults. I distributed the survey and gathered the results of who doodles, why they do it, and where they doodle, pertaining to the age, gender, profession, education, Attention Deficit Disorder/Attention Deficit Hyperactivity

Disorder relatability, and artistic interest of the participants. I wanted to know if a particular age group is more prone to doodling. Could it be that Generation Xers and older participants doodle more than Millennials because they are less tech savvy and

more likely to be analog note takers...with the use pen and paper? Do professions with more meetings have a higher concentration of doodlers? Could it be that women doodle more than men or vice versa? Would a person that identifies ADD or ADHD, meaning the person either has or can relate to ADD/ADHD tendencies without ever being diagnosed, be more or less likely to doodle? I also wanted to know what people do with the doodles they create. Do they throw them out, disregard them, or use them for reference later?

Throughout this paper, I made some headway on the many different types of doodlers in the world and find out what makes these people do it. Is it boredom, nervous energy, obsession with art? Hopefully, I can find some definitive answers about the common doodle.

Definition of Terms

Doodle - an aimless or casual scribble, design, or sketch (Merriam-Webster)

ADD – Attention Deficit Disorder

ADHD – Attention Deficit Hyperactivity Disorder

CHAPTER II LITERATURE REVIEW

I want to explore who doodles, when people are most prone to do it, and what is the underlying reason why. Doodling can be defined a couple of different ways. Jackie Andrade from The School of Psychology at the University of Plymouth in the United Kingdom says, "Doodling is a way of passing the time when bored by a lecture or telephone call" (Andrade, 2010, p. 100). Vicky Faye B. Aquino from the College of Art and Design at the University of the Arts states, "Doodling happens when people absentmindedly scribble or draw, when the mind is occupied with something else" (Aquino, 2013, p. iv). Using these definitions as a guideline, I am going to ask who doodles and why they do it.

Focus and Retention

This study asked if doodling has a role in retention and focus. I have always doodled to listen. Whether it is in a lecture class or faculty meeting, doodling allows me to better hear and retain the information. This has been a practice of mine since I was a child. It began as a passion for art and evolved into a listening skill. I see this within the high school that I teach every day. "Doodling decreases the level of autonomous arousal, accompanied by daydreaming and tiredness, and keeps the person conscious by increasing concentration" (Tadayon, 2016, p. 2). A study conducted by Jackie Andrade suggests that there is more mental retention if doodling takes place. Her participants were given information during a phone call and were questioned about it afterward. One group

was encouraged to doodle, while the control group was not.

Participants monitored the message for specific, infrequent information and afterwards attempted a surprise recall test for that information and for incidental information. Performance was measured in terms of monitoring accuracy and memory, which was assumed to reflect the depth of processing of the monitored material. (Andrade, 2010, p. 2)

The information that Andrade supplied was a script at a rate of 227 words per minute. The script provided listed eight names of party guests and four names that could not make it, as well as some names of places and a bit of frivolous information. (Andrade, 2010). With this study, the group that doodled retained more information than the control group that did not. Overall, the doodlers recalled about 30% more than the non-doodling control group (Andrade, 2010). I know that through personal experiences, doodling certainly helps me focus and retain information, but I would like to see if that is the case for the people that I interview and encounter. Andrade believes that doodling can increase arousal due to boredom and in turn reduce daydreaming. Daydreaming can be detrimental to focus (Andrade, 2010).

There are different ways in which people prefer to learn. "It is of the utmost importance that we recognize and nurture all of the varied human intelligences and all of the combinations of intelligences" (Gardner, 2006, p. 49). While Gardner states there are eight intelligences, others have it simplified to three. Some people are more visual learners, while some are auditory or tactile. "Students have different preferred styles of learning, and the three main types are: visual, auditory, and kinesthetic. As explained by Learning Rx (n.d.), 'A well-balanced, intelligent child is able to develop all three types of learning styles" (Aquino, 2013, p. 4). Sunni Brown states, "In order for people to effectively absorb information, they need to engage at least one of those learning styles or

modalities, tied with an emotional experience, and that is what doodling does" (Aquino, 2013, p. 25). Brown also asserts that "doodling ignites multiple learning modalities." Doodling ignites creative problem solving and helps people focus on the task at hand. Doodling can allow the learner to focus more on a task, as the brain is partly occupied by the act of doodling. Megan Simmons also emphasizes this point in her work, *Keep Calm and Doodle On*. Mindless doodling is thought to help retention and focus as well as reduce stress (Simmons, 2014).

Stress Reduction and Relaxation

Some people may use doodling as a type of stress reducer or relaxation device.

This could be the fact that doodling could cancel out external noise or clutter and allow one to focus on what needs to be seen. GD Schott wrote:

In 1938, over 9000 doodles were examined. They discovered that doodles were produced during states of idleness, boredom, leisure, meditation, and 'affective tension'—indecision, concentration, expectation, and impatience. But when an individual doodles, the brain may also be highly creative, generating ideas for new works in literature, art, or design. For some doodlers, therefore, doodling may be crucial for creativity, whereas for those at the other end of the spectrum, doodling seems to be relaxing or simply entertaining. (Schott, 2011, p. 1134)

Schott continues to write about the stress reduction of doodling by the comparison of other subconscious acts.

Doodling is a motor act, and when occurring under conditions such as impatience, boredom, and indecision, it seems to alleviate those conditions. This effect recalls other stress-alleviating motor activities such as fidgeting, scratching, and fiddling with different objects, in the same way that non-motor activities, for example playing background music, can appear calming and sometimes aid concentration and creativity (Schott, 2011).

The familiarity of a doodle may lead to relaxation as well. I tend to doodle the

same type of doodles. These are primarily large eyed cartoons, in a 2/3 frontal view, with a silly look on its face. (Maybe I need to consider what that says about me.) Schott believes that most people tend to doodle the same subject matters, most of the time:

But whatever brain processes are enlisted during doodling must also be well-established, because an individual's doodles usually have a consistent form: those who draw geometrical patterns, or faces, or scenes, often seem to do so habitually, and many doodlers have themselves commented on the stereotyped nature of their drawings made over many years. (Schott, 2011, p. 1134)

Doodling has been studied regarding stress reduction, focusing, retention, but the obvious question of "Who is more prone to doodle?" has not as readily been addressed. Is there a type of person more prone to doodle or is it all circumstantial? The previously mentioned research suggests that doodling generally takes place in meetings or a classroom environment or when a person is listening within a group. This study established what type of person is more of a doodler.

CHAPTER III RESEARCH STRATEGIES, METHODS AND PROCEDURES

This is a mostly qualitative study, which uses a survey methodology, developed to determine who doodles and why. I used data that I collected to help determine some answers to the survey questions. Eisner says the perspective of a qualitative study is through the "use of alternative terms that provide reasonable standards for judging the credibility of qualitative research" (Creswell, 1994, p. 244), Lincoln and Guba agree, seeing it as "the use of alternative terms that apply more to naturalistic axioms" (Creswell, 1998, p. 244). The will be examined, interpreted, and delivered – looking for similarities or common themes within certain groups of participants. Whether it is age, handedness, or profession. As G. D. Schott states in his 2011 article, "The Art of Medicine: Doodling and the default network of the brain", that many doodles are produced during idle and bored states causing the brain to be in a more creative state. I also asked many quantitative questions as well. This will allow me to see if there are similarities in doodlers. Does as certain age or gender tend to doodle more?

Procedure

Data was collected from surveys that I distributed electronically. The timeline for the survey was a two-week period in March 2017. It asked quantitative questions about age, gender and profession. I also asked some qualitative questions about why and where one doodles. I distributed the survey via email and social media. The survey was distributed and shared via Facebook.com and NextDoor.com. This reached a large group of participants.

Participants

The survey was distributed to a large cross-section of adults. It is a cross section of 1000 people ranging from 18-80+. The participants ranged in education from high school graduates to those holding PhDs and in a wide range of careers. The goal was to get information from a wide range of ages and professions with the distribution of the survey. It was distributed through social media and emailed through the offices of varying professions. I asked friends in different professions to share the link as well. Some of these professions were lawyers, teachers, artists, computer programmers, and musicians. With others sharing the survey, I hoped to reach a broader spectrum of person than I would alone, and I did. Through the distribution of the survey, I received over 1000 responses due to the survey being shard 94 times on social media.

Data Collection

A survey was constructed and distributed through Qualtrics.com. In this survey, questions were asked about age, gender, and profession, followed by the questions about doodling. I wanted to know what kind of person is more apt to doodle. Will career or education matter? What about age? Will baby boomers be more likely to doodle than millennials? I am also trying to discover the commonalities among the doodlers. Will handedness matter? I looked to discover links between who doodles, where they doodle and why they doodle. Is the act of doodling more specific to an age group or specific education level? Are lawyers more apt to doodle than mechanics? These are the types of questions that I would like to try to answer. The specific questions are listed in the appendix.

Analyzation

The data was analyzed and then broken down into graphs and charts with parameters that I set using Qualtrics.com and Excel. I was hoping to find out if there is a specific "doodler" – the type of individual that finds it imperative to distract or refocus their thoughts, using a scribble or sketch, to sanely make it through a meeting. There could be other specific doodlers as well. Is it a middle-aged male that is left handed, artistically inclined teacher with ADD tendencies or could it be a right handed female millennial that is an author? Does age, profession, gender, and handedness matter? The types of doodles created could vary as well. Possibly, a subject with ADHD tendencies could have a stippled or quick drawn line type of style. Does gender matter with subject

matter of the doodle? Are women more likely to draw flowers and men more likely to cross-hatch? The data was collected, compiled, and compared from subgroup to look for similarities or differences between larger groups, subject groups, subgroups and styles.

Limitations

This study was conducted online, so I am concerned about honesty of the participants. Due to the anonymity, I will have to trust that the participants are honest with their answers. Although the survey was shared almost 100 times, did it reach a diverse enough group of people? The sharing of the survey started from my social media account, and as much as I'd like to believe that I know many different types of people, many of the respondents were in my age group, and many were artists or educators. Not all respondents were in these professions, but I wonder if the audience could have been a larger cross-section of society. Would responses have averaged out with a larger cross-section? Would there have been a more equal distribution of female and male participants?

CHAPTER IV RESULTS

Through the examination and analysis of the data received from the survey about "who doodles and why", I began to have many thoughts. I was surprised with amount of responses I had received. The survey, that was constructed on Qualtrics.com, ended up being shared 94 times on Facebook.com and that resulted in over 1000 responses. While looking at all the data I was becoming overwhelmed. I was concerned about the data. Will it be contaminated? Is it fair and accurate? I realized that this IS the data I had received.

Results

Of the 1085 people surveyed, 24% identified as male and 76% identified as female; 11% were left handed, while 89% were right handed. Professionally, 20% were involved with education. The sectors arts and design, business and financial, and personal care and service had 8% of the respondents each. Healthcare, management, and student all were represented with 7% apiece. The last 35% were spread throughout 18 job categories, varying from legal positions to computer technology. The education levels were distributed as, 34% with a bachelor's degree, 27% had earned a master's degree and 23% had some college experience. The remainder of the participants ranged from some high school to PhD. Twenty-two percent of the survey takers could relate to ADD/ADHD tendencies, while the majority (78%) could not. Seventy-three percent of the participants said that they doodle, while 27% do not. The question "where do you doodle?" allowed

multiple answers. On the phone, work, and in a meeting, all came in about 60% (62%, 60%, 59%, respectively). School was the next at 33%. When asked, "When did you begin doodling?", the largest response, at 48%, said elementary school, followed by pre-school at 23%. The greatest reason for doodling was distraction (54%), followed by relaxation and focus at 40%. Patterns were doodled most often (81%), followed by scribbles (43%). Artistic talent was split pretty evenly, with 40% saying they did not have any, 33% said they did, and the remaining 27% said they might have some artistic ability. Eighty-seven percent will not use their doodles as reference for later artwork, while 13% will.

Analyzation

The results involving the jobs that doodled were not what I had expected. I assumed that the "creative" jobs, such as arts and design and architecture would be higher in doodlers and jobs that could be described as more "analytical", such as computer and information technology, would have less doodlers. While 86% of the computer and information employees said they doodle and only 82% of arts and design employees doodle (see Figure 1 & Figure 2).

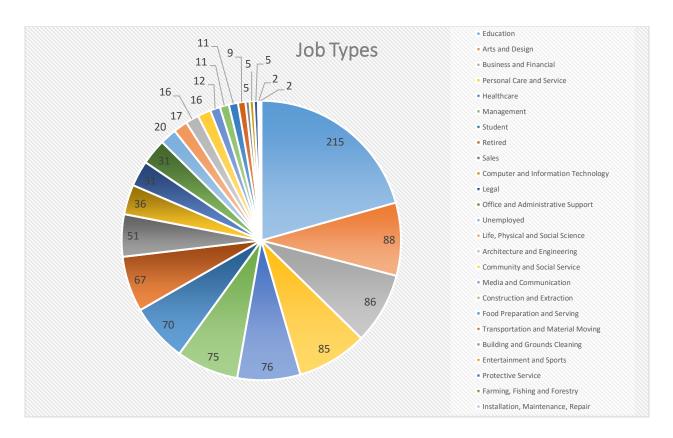


Figure 1. Job Types

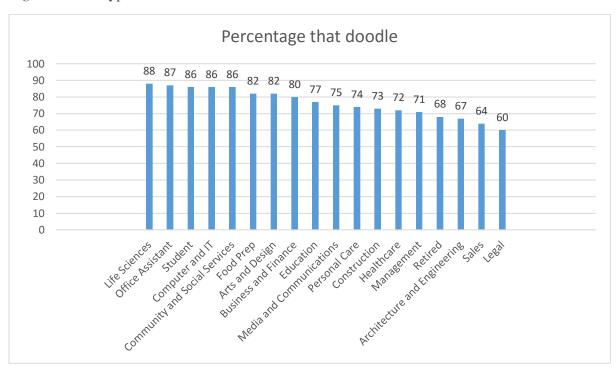


Figure 2. Percentage of each Profession that Doodle

My misconception of "who would doodle most and why" was a surprise to me, due to my own personal interest in doodling. I assumed that most people who doodle are like me. I am a creative, someone who must "get the doodle out". If I want to hear and absorb anything in a meeting, then I need to doodle. If something that I doodled peaks my interest, I will use it for later artwork. Maybe I was wrong? Most people who doodle do it for distraction (see Figure 3). Do analytical type positions, or positions that are maybe more confining, need an escape? Could that be why Information Technology people and office assistants doodle so much?

Another interesting discovery in this survey was the gender ratio of the participants. According to the 2010 U.S. Census, 49.2% of the population were male and 50.8% were female. Although, more than 75% of the participants were female (see Figure 4). The survey was only distributed through social media. What does this say? Are females more apt to take surveys? Do males overlook surveys?



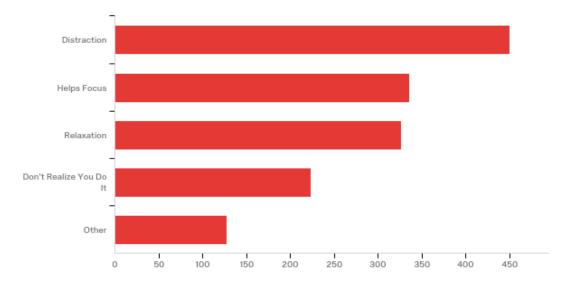


Figure 3. Why do you Doodle?

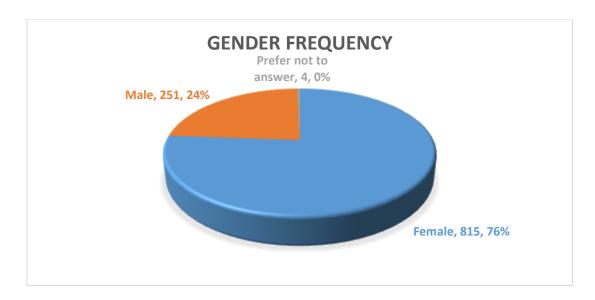


Figure 4. Gender Frequency

The education levels of the participants were higher than I had anticipated (see Figure 5). Thirty-four percent had a Bachelor's degree, 27% had attended some college, and 23% had their Master's degree. According to the 2015 U.S. Census only 12% of the population of 25 years of age had an advanced degree (Master's and beyond). Is this because the data received started from my circle of friends on Facebook? Most of them have college degrees. They shared the survey with fellow friends and acquaintances that also have degrees? Or is it because people with degrees are more likely to answer an online survey?

Highest Level of Education

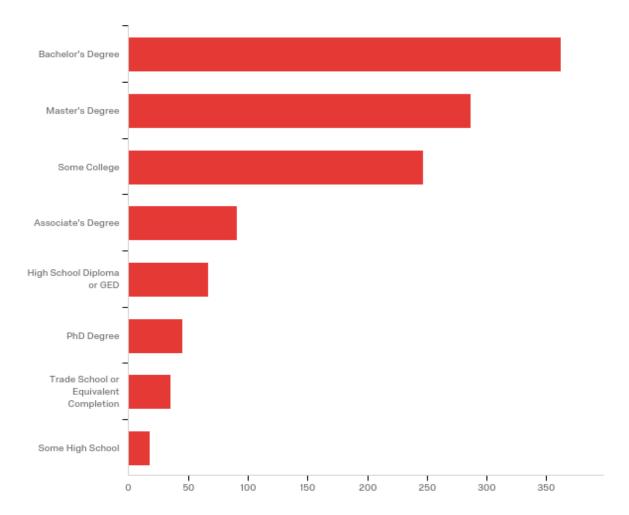


Figure 5. Highest Level of Education

Answering the question, "what is doodled" (see Figure 6), patterns were the overwhelming response. 81% of the participants doodled patterns (see Figure 7), while 43% scribbled (see Figure 8). People (see Figure 9), landscapes (see Figure 10), and animals (see Figure 11) were each identified by 20% of the respondents.

What do you Doodle?

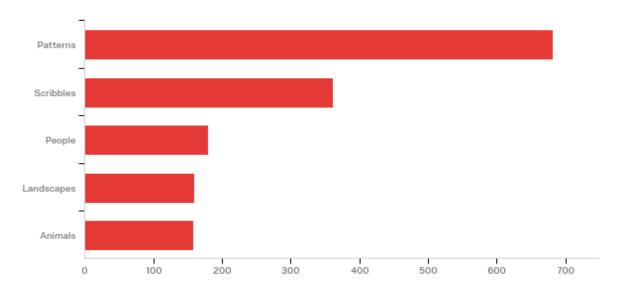


Figure 6. What do you Doodle?

Doodles

Many examples of doodles were collected during the survey. Below are some examples.

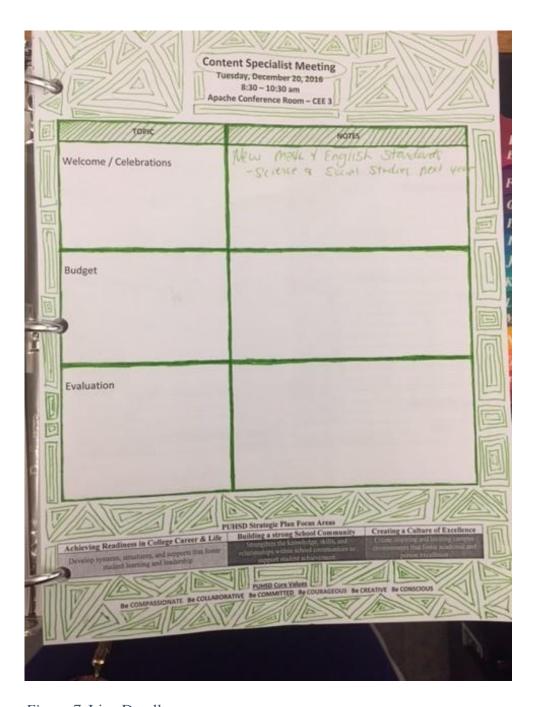


Figure 7. Line Doodle

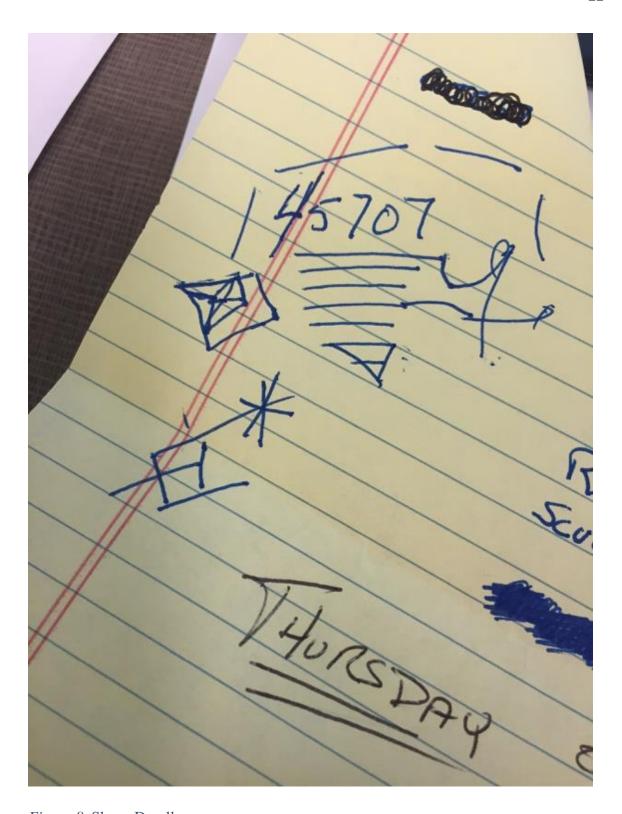


Figure 8. Shape Doodle



Figure 9. Figurative Doodle

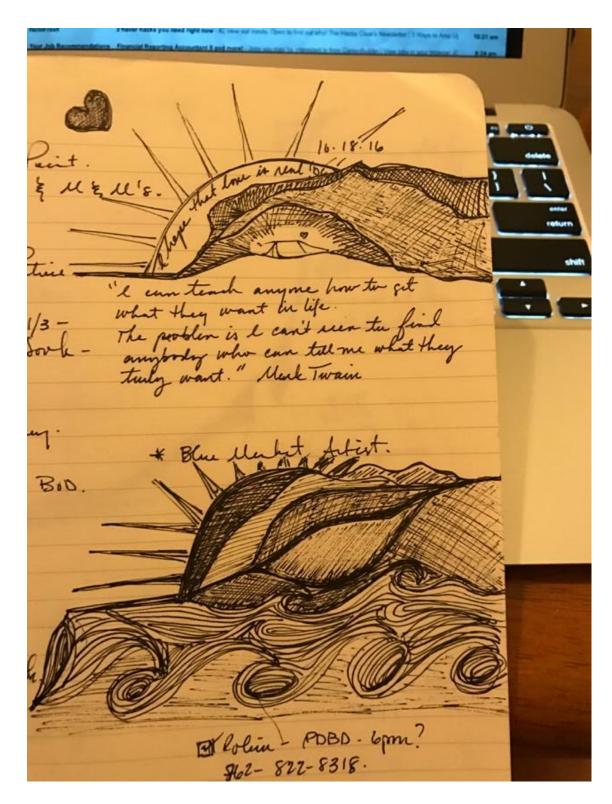


Figure 10. Landscape Doodle

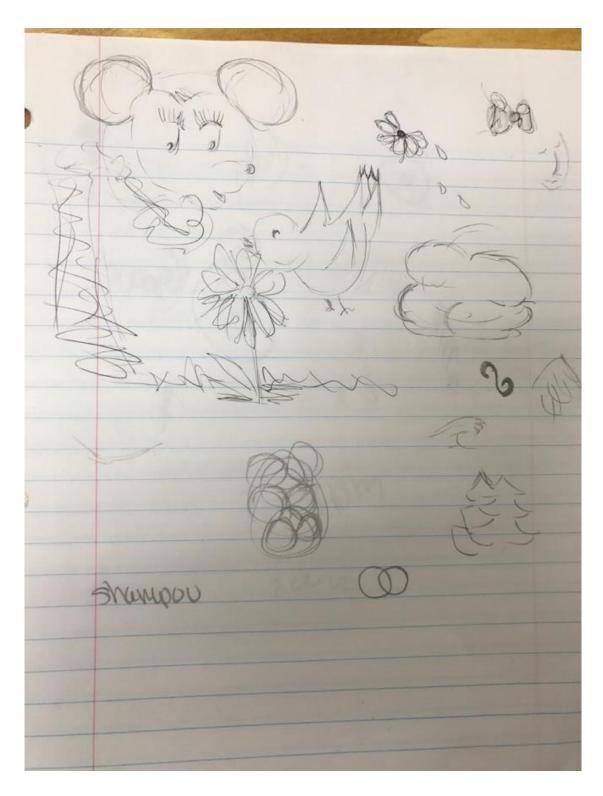


Figure 11. Animal Doodle

My analysis of the data showed that doodling is not unique. It is not unique to a gender, a job type, an age, or education level. It is just typically not done the way that I do it (see Figure 12). I have always thought of doodles as being "little sketches", "jumping off points", and consisting of a distinct subject matter possibly for later use. Also, it is used for me to focus. What I know now is that most people doodle. They do it for a distraction, which could mean less focus. It could also mean the distraction could be occupying thoughts during boredom in order to focus on information of importance that might come later. Most people create a motion with their hand and a writing instrument to create mindless images — decipherable or not. I guess I said it in the beginning, according to Merriam-Webster, a doodle is an aimless or casual scribble, design, or sketch. In my mind, I was focused on the sketch, maybe a little on the design, and ignoring the scribble all together. One does not have to be a creative, an artist, or a designer to doodle. A doodler can be anyone.



Figure 12. My Doodle

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECCOMENDATIONS

During this study, I realized a handful of situations that I would have approached differently. While the results are accurately represented from the data gathered, I believe that some follow up and more direct questions could be asked. Some interviews could have helped shape and evolve this data. For example, it would be informative to interview bosses, managers, and other leaders that head meetings and see what they notice. Do they see a specific type of person doodle in their place of employment? Do these workers perform better or worse than the non-doodlers?

Some of the specific survey questions could have been worded differently and some of the response options could have been changed. For example, I was notified that there was not a non-gender specific option for the gender question. Also, there was not a Ed.D. or law degree option in the education level choices. Also, a participant found it offensive that I asked about ADD and ADHD tendencies instead of more accurate diagnoses. My justification for that was, that anyone over 30 years old probably has never been clinically examined for the tendencies but may still identify with them.

I feel that the biggest takeaway from this study, regarding doodling, is that it is not specific to one type of anything. According to the respondents in this survey, most people doodle. It is not drastically specific to a dominant hand, job type, or gender. I was surprised that the strongest answer for why one doodles was distraction, though. I always

assumed that it was primarily to focus. While a lot people agreed, that was not the number one response.

Another interesting takeaway from this survey is the diversity. Is it as diverse as I had hoped? There was a higher level of education than I had anticipated with more than a quarter of the participants having a Master's degree. That is significantly higher than the national average. Also, the gender breakdown is not consistent with the national average, with 76% of the participants being female.

As for further research, I would like to study the stigma of the doodle. How is doodling perceived? Do doodlers try to doodle inconspicuously in meetings or classes? Do workplaces or classrooms that encourage doodling get better performance?

As a teacher, doodling is encouraged in my classroom. Any adaptation that I consider helps the student focus and learn is implemented. Along with doodling, brain breaks and walks are also encouraged in my classroom. As a teacher, my principal allows and even encourages doodling at our faculty meetings. There are baskets with half sheets of white paper and many different colored pens sitting at the conference table. I use this every time we meet.

According to Merriam-Webster, a doodle is an aimless or casual scribble, design, or sketch. It is something that helps people focus, retain information, or even escape. Doodling has gained popularity in the past few years through projects like Zen doodling. Zen doodling is the idea of filling in shapes with lines and patterns. This can lead to relaxation or stress reduction the same way adult coloring books seem to. Doodling is not uncommon, just maybe unspoken. Doodling is something that I have always done. It is a norm for me. I feel antsy and restrained when I cannot. Will the stigma dissipate as time

goes on? We will have to wait and see. As for now, I hope that those who doodle continue to doodle on!

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APPENDIX

Who Doodles and Why Do They Do It?

Jeremy Yocum

A. Purpose

The purpose of the research is to ask, "Who doodles and why do they do it?" I have been a lifetime doodler and I want to know if a specific age group, gender, personality type, or profession doodles more than others. I also want to discover the reasons doodlers provide when asked why they doodle. The study will be conducted with a group of 100+ adults of varying ages and in varying professions. I will distribute a survey and gather results of who doodles, why they do it, and where they doodle, pertaining to the age, gender, profession, education, ADD/ADHD relatability, and artistic interest of the participants. I will be following an established educational research format of survey research. Francis Thurber states in Eisner's Handbook of Research policy, "Survey research poses questions rather than hypothesis" but "Information from survey research can lead to possibly significant hypothesis if a researcher builds that capability onto a research design" (Pg 490). I want to know if a particular age group is more prone to doodling. Do professions with more meetings have a higher concentration of doodlers? Could it be that women doodle more than men or vice versa? Would a person that identifies with ADD or ADHD be more or less likely to doodle? I also want to know what people do with the doodles they create. Do they throw them out, disregard them, or use them for reference later?

I will apply information gained from the survey to a broader hypothesis concerning how people learn. Varieties of techniques from different fields of art (e.g. drawing, music, theatre) can improve learning (Eisner 1998).

- Do they need to be occupied to learn, listen or focus? With this research, educators, managers, and leaders could find ways to change their teaching, managing or leading practices to achieve a higher retention rate with their audience.
- 2. The subjects are adults. The research will present no more than minimal risk to human participants and will only involve the use of transcriptions of on-line surveys and audio-recorded answers to interview questions. The research will be conducted solely with adults, with Jeremy Yocum as teacher/researcher. This application is for an Exempt Review Procedure

B. Methods

 The participants in this study will be adults of different gender, ages, and professions. The participants will not be that of a vulnerable population. I aim to include 100 participants in my study. These participants will be contacted online via a survey.

2. Data Collection Procedures

The participants will be given an online survey to complete. The following questions will be asked:

- a. What is your age?
- b. What is your gender?
- c. What is your profession?
- d. Can you identify will ADD or ADHD tendencies?
- e. Do you doodle?
- f. Where do you doodle?
- g. When did you start doodling?
- h. Why do you doodle?
- i. Do you consider yourself an artist?
- j. Are your doodles used later for artwork?
- k. Please provide a sample of a doodle.

The participants will be told about the nature of the study, to figure out who doodles and why. I will use photographs of their doodles if they supply them.

3. Data Analysis Procedures

I will collect, categorize and catalog the survey results to discern information about age groups, professions, ethnicities to determine general categories of people who doodle more than other groups. The survey answers will also allow me to see where and why people doodle. The research question will include asking if different groups are possibly better learners with or without doodling.

4. Data Handling Procedures

The data will be stored on my personal computer in a secure place. It will be locked in a cabinet in my classroom. I will be the only person who will have access to this data. The participants will be anonymous. There will not be a place in the online survey that will ask for the participants' names and I will not know their email address because of how the survey will be distributed and collected. It is completely anonymous. Everyone participated in this survey will be stable, healthy adults.

C. Risks, Discomforts and Benefits

There are no foreseeable risks with this research. There will be no more discomfort than an adult opening an email and responding. The participants may benefit from the survey by thinking more about their creative output as a result of doodling.

D. Costs and Compensations

There will not be any costs or compensations with this study.

E. Grant Information (if applicable)

There will not be a grant for this research.



CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH UNIVERSITY OF NORTHERN COLORADO

Project Title: Who Doodles and Why?

Researcher: Jeremy Yocum

Phone Number: (480) 861-6030 e-mail: yocu3655@bears.unco.edu

With the help of several adults, I am trying to discover who doodles and why they do it. As a participant in this research, you will be asked to take an online survey. This survey will consist of questions about doodling and the participants' demographics.

For the survey, you will not provide your name, but will be asked to provide your demographics. Therefore, your responses will be anonymous. Only the researcher will examine individual responses. All original paperwork will be kept in locked cabinets in my personal office.

Risks to you are minimal. Participation is voluntary. Having read the above and having had an opportunity to ask any questions, please complete the survey if you would like to participate in this research. By completing the survey, you will give me permission for your participation. You may keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Sherry May, IRB Administrator, Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.



Institutional Review Board

DATE: December 5, 2016

TO: Jeremy Yocum

FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [977806-3] Who Doodles and Why?

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVAL/VERIFICATION OF EXEMPT STATUS

DECISION DATE: December 4, 2016
EXPIRATION DATE: December 4, 2020

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or <u>Sherry.May@unco.edu</u>. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

Doodle Survey

0 0 0 0 0	What is your age? 18-29 (1) 30-39 (2) 40-49 (3) 50-59 (4) 60-69 (5) 70-79 (6) 80+ (7)
O	What gender do you identify with? Male (1) Female (2)
O O	What is your main handedness? Left (1) Right (2)
Q5	What is your profession? What is you highest level of education? Some High School (1) High School Diploma or GED (2) Some College (3) Associate's Degree (4) Bachelor's Degree (5) Master's Degree (6) PhD Degree (7) Trade School or Equivalent Completion (8)
Q 7	Do you identify with ADD or ADHD tendencies? Yes (1) No (2) Do you doodle? Yes (1) No (2)

	Where do you doodle? (check all that apply) School (1) Work (2) Church (3) Meeting (4) On the Phone (5) Other (6)
	When did you begin doodling? Pre-School (1) Elementary School (2) Middle School (3) High School (4) College (5) 20-29 (6) 30-39 (7) 40-49 (8) 50-59 (9) 60-69 (10) 70-79 (11) 80+ (12)
	0 Why do you doodle? (check all that apply) Relaxation (1) Distraction (2) Helps Focus (3) Don't Realize You Do It (4) Other (5)
	1 What do you doodle? (check all that apply) Patterns (1) People (2) Scribbles (3) Animals (4) Landscapes (5) Other (6)
O O	2 Do you have any artistic talent? Yes (1) Maybe (2) No (3)

- Q13 Are your doodles used for later artwork? O Yes (1)
- O No (2)
- Q14 Please provide a sample of one of your doodles (if available).