

# HIDDEN POTENTIAL

How to cultivate & harness hidden potentials in  
vocational art students to expand their personal agency?

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## INTRODUCTION

Digital Design & Motion is a vocational study in Sintlucas, which teaches practical skills for the labor market. However, it is observed that students' natural abilities and intelligence can deliver more than what is expected of them. This research will go deeper in exploring this Hidden Potential and how to apply it to practice.

### THE STUDENT

The students are teenagers who enjoy immersing themselves in comics, movies, and video games. Surrounded by a world of imagination through different types of traditional to digital media, they are no strangers to entertainment and technology.

Wanting to form a world of their own, they begin their study at the age of 17, hoping to develop skills to a level that would enable them to realize their fantasy world. Thanks to modern technology providing them with abundant resources, these students have even more power and choice to realize their vision. The world is at their fingertips. As students, they are quick to learn what they want and demonstrate abilities that sometimes are faster than what the school offers.

These students are the main subject of this thesis, whom I will conduct my research upon and eventually have a deeper understanding of what keeps them motivated.

### THE SCHOOL

SintLucas is a vocational school (MBO) that offers education in various studies of applied art that are in demand. There is a broad range of artistic expression, from audio-visual, graphic design, photography, ceramics, textile, and more. Each study provides practical lessons in classic concepts and theories while providing a student set of tools specific to that subject. This is also a preparatory study that offers students basic skills to be productive in the labor market. While some might go directly to the workforce, many move to higher education (HBO) to specialize even further.

## FIXED SET OF TOOLS MEANS FIXED POTENTIALS

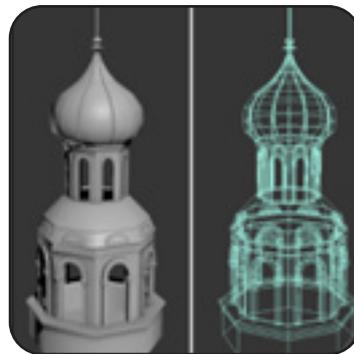
The study of Digital Design & Motion focusing on making designs for the entertainment industry, animation, illustration, and especially video games. The student learns to bring stories to life by creating virtual worlds, characters, and immersive environments. The moment the student chooses this study, a fixed set of Tools is assigned to them to develop their skills. Despite being a creative study, students get to be in a safe and predictable environment to develop their vocational skills. In addition, the student must be able to satisfy a checklist of Intended Learning Outcomes to ensure societal compliance. These outcomes are also valuable for teachers as they give the team a clear overview of education so they can manage. I will go more into this point later in the essay.

### Predictable Environment



Practice Skill  
(Traditional Tools)

Design process is taught to make sure they are capable designers.



Practice Skill  
(Technological Tools)

Students learn to use new techniques & tools to be current with.

### Unpredictable Environment



Group Work

Students teams up to provide a solution to a real client's problem.



Internship

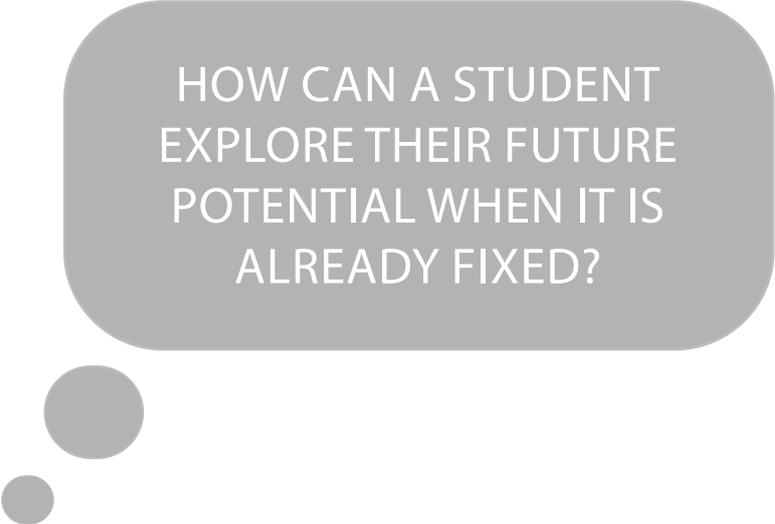
The first experience most student have with a professional creative environment.

Internships are the only moment during the study where the student gets taken out of their predictable environment into one that reflects unpredictable nature of reality. At the end of the study, students are challenged with exams of theoretical situations that put what they've learned to the test.

## WHERE I AM IN THIS RESEARCH

I was once a young student who dreamed of making art for Video Games, as I got to do what I loved for over a decade. I moved to education because I wanted to share my knowledge with students. Now as a teacher, I want to look into what could benefit both students and teachers.

I notice how schools assign a set of Fixed Potentials to a student from the moment they choose a study. This could I leave out many positive potentials in students that could benefit their future.



HOW CAN A STUDENT  
EXPLORE THEIR FUTURE  
POTENTIAL WHEN IT IS  
ALREADY FIXED?

## INTENDED LEARNING OUTCOMES IN OFFICIAL CURRICULUM

While in a smaller classroom, enough resources are available to ensure student reach their fullest potential. However, as the number of students increases, education has to be organized to adapt to much greater demands. Education is structured so that it can be manageable from the top down.

Intended Learning Outcomes are part of the organized education system that allows teachers to manage education on a larger scale. However, creating a lesson for students is hard when 50 points of Learning Outcomes must be achieved. When too much is asked, the teacher falls back onto the most basic classes that would satisfy those straight points, reducing the quality of teaching to only depositing information.

“Education thus becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiques and makes deposits which the students patiently receive, memorize, and repeat. This is the ‘banking’ concept of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits. They do, it is true, have the opportunity to become collectors or cataloguers of the things they store.” (Paulo Freire, 2017, p. 45)

Paulo Freire has described this situation perfectly.

“Building from these unhealthy structures, the student while being in the passive role has no choice but to follow the rigid structure of the lessons, which rewards them for doing so. The institution then measures success through the act of obedience rather than what they’re actually learned...the exemplary honesty of workers who are given a medal after fifty years of good and loyal service..” (Frantz Fanon, 1963, p. 38)

While organized education gives the management positive returns, the student experiences a more negative learning experience. Lesson materials are divided into manageable parts, interrupting the learning flow and making students lose the bigger context of their study. As students feel less connected to the material, they only participate in education passively. Frantz Fanon summarizes well the relationship between respecting structures and its implication for actual learning.

When students lose the context of what they are learning and the teacher are barred from teaching freely, the soul of the classroom disappears. The only thing remains are the unpleasant artifacts of institutional rigidity.

## HOPE IN UNINTENDED LEARNING OUTCOME IN HIDDEN CURRICULUM

During the research, I discovered the “Hidden Curriculum” theory, which aligns with the negative effect of a rigid institutional boundary. According to “Social Education In The Classroom: The Dynamics Of The Hidden Curriculum”, students by nature learn beyond what is dictated, this phenomenon is called Unintended Learning Outcome.

Indeed, the child learns in school.....the child learns that the teacher is the authoritative person in the classroom, but that she is subordinate to the principal. Thus the structure of society can be learned through understanding the hierarchy of power within the structure of the school. Similarly, the working class child learns its role in society. On the side, school impresses students as a whole with their powerlessness since they are without the knowledge required to become citizens and workers. On the other, the hierarchy of occupations and classes is reproduced by the hierarchy of grade levels and track within grades.” (Aronowitz, 1973, p. 75)

Students subconsciously learn about the lurking power structure in society based on their position in an overpowering and rigid classroom environment.

Initially, developers will have to understand the contradictions between the official curriculum, namely the explicit cognitive and affective goals of formal instruction and the “hidden curriculum... namely the unstated norms, values and beliefs that are transmitted to students through the underlying structure of meaning in both the formal content as well as the social relation of school and classroom life. Most importantly, they will have to recognize the function of a hidden curriculum and its capacity for undermining the goal of social education” (Henry A. Giroux and Anthony N. Penna, 1979, p. 21)

While the official curriculum impose Intended Learning Outcomes onto student. Hidden in the curriculum are what student actually learn, the Unintended Learning Outcomes. While these examples of have a negative connotation, it leads me to the following question:

If institutional rigidity stimulate Unintended Learning Outcome that is negative... How can I facilitate an Unintended Learning Outcome that is positive?

## DIALOGUE

As described earlier, the top-down management of education disconnects students from their true engagement. Therefore, the educational materials within the school are decided between teachers without the students' input. I conducted a dialogue with students to investigate further what this hidden aspect of education means to them.

Dialogue is the encounter between men, mediated by the world, in order to name the world. Hence, dialogue cannot occur between those who want to name the world and those who do not wish this naming—between those who deny others the right to speak their word and those whose right to speak has been denied them.” (Paulo Freire, 1970, p. 61)

My teaching background originated not from an academic source, but I relate myself mostly with practical experience based on my journey of being a self-taught artist. It is much easier to communicate with students as we have the same vocabulary of experiences and mindsets. I discuss with students what is on their mind and how we can improve our lesson materials and keep it up to date. The students' voices are heard and eventually implemented in the curriculum.

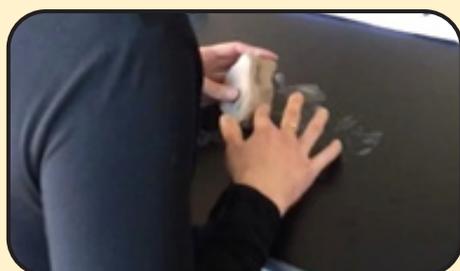
This casual dialogue eventually evolves into a more serious form and is eventually integrated into my research. Therefore, I have developed several games to communicate with peers and students to learn more about who they are so that I can improve the curriculum.

## DIALOGUE THROUGH GAME WITH PEERS

At the beginning of the study, engaging in complex pedagogical dialogue took time due to our different viewpoints and vocabulary capabilities. For this, I have created a game that helps peers connect while acting as a common ground to discuss various educational subjects.

Each participant gets to shape their “clay student” to the best shape so that their student can overcome different challenges. We observe which clay excels and which doesn't. The observation and the talk eventually led to valuable pedagogical discussion.

The dialogue was a resounding success, with participants enjoying playing with high engagement and valuable viewpoints gathered from the discussion.

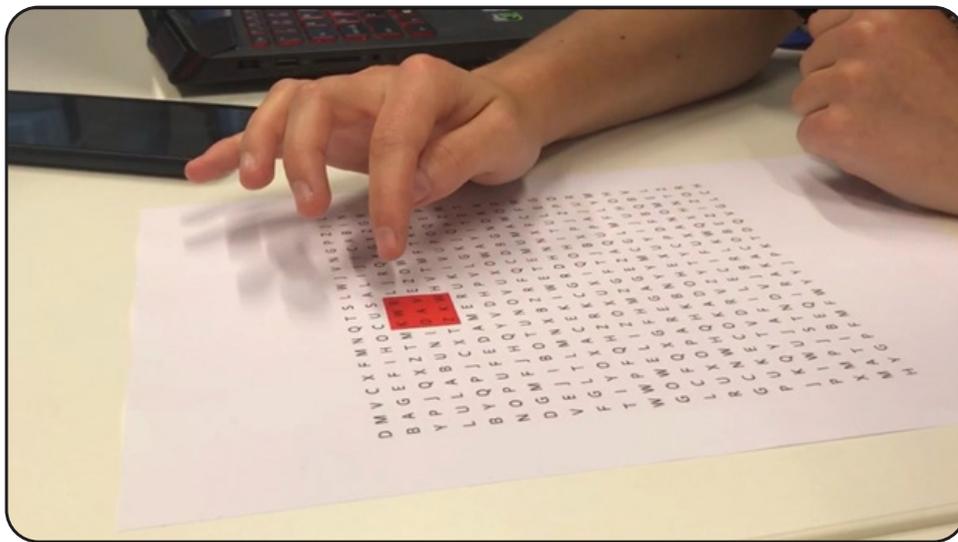


## DIALOGUE THROUGH GAME WITH STUDENT

During the earlier stage of my research, I made a game that teaches students to look beyond the tools they use to create more opportunities for themselves.

The game begins with students picking a vowel as the starting point, representing the tools they possess. They are presented with three boxes of Small, Medium, and Big. The student must come up with all the words within these three boxes. The more letters student has, the more terms they can generate.

The plan is to let people learn through the game without revealing the concept. After the game is completed, they can form the concept in their own words.



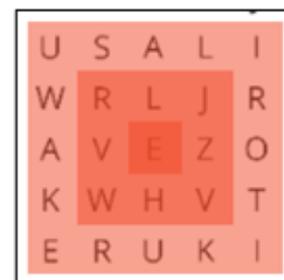
**Pick a vowel letter as a starting point.  
Come up with all possible words in the following boxes**



**Small Box**  
One  
Vowel



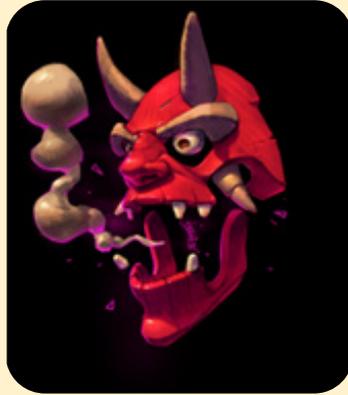
**Medium Box**  
Some  
Consonant & Vowel



**Big Box**  
Many  
Consonant & Vowel

**Discuss your experience and what this might mean in educational context**

The game is being played with different students who share varied but similar outcome. This example is of a 4th year student who have high regards for drawing techniques while at the same time openminded enough to try new possibilities in the creative field. She has her own preference of what she wants, while balance enough to give well rounded and thoughtful answers.



*Sample of student's works throughout the years. Her art is influenced by traditional Eastern cultures and Western fantasy art.*

## RESULT



**Small Box:** Make words from vowels

Student have trouble making words, despite having popular letters in the alphabet.



**Medium Box:** Make words from some consonant and vowels

Students have an easier time made words with more letters. It is enough to be challenging while maintaining fun.



**Big Box:** Make words from more consonant and vowels

Students have a more stressful time with even more letters. It is overwhelming and less fun.

### Discuss your experience and what this might mean in an educational context.

The student sees the three boxes as a sequence of personal growth. She sees how her communication skills have grown over the year. The smallest box is where she starts, the medium box is where she is now, and the big box is her future or where she wants to go, such as becoming big on social media.

She believes that a small step gives you more clarity, making reaching for the bigger goal less chaotic. Artist eventually achieve more significant steps by taking smaller baby steps. She believes that the beauty of small things is that they give us clarity to make fewer mistakes, as big ones give us more chaos that would stunt the natural learning process.

In the educational context, small steps mean you start first with your drawing. Eventually, you want to go to higher education to improve your drawing skill so that you can become good. From there, you will be known by a more significant community. Eventually, you want to be the best, like her favorite artist.

**What happens if you stick to only a small step?**

It is even better for her as it gives her a more fulfilling life. The possibility of the entire alphabet means looking into the future forever, constantly searching while not living in the moment. We enjoyed the moment when we were young, just drawing what we like without thinking about what might come. So, the fact that you are having fun right now is what you already are wanted.

**Do you think there's a risk of sticking to a small box?**

There is a risk of laziness, and nothing comes out of it. Especially if there's no future to look forward to. The big box is a big wave of inspiration; realistically, it's fine to settle with the medium size box. The setting for the middle may be better, not too big, not too small, right in the middle.

Sticking to only a small box is like the artist who only draws the same face. While for the medium box, you can do more things as you allow yourself to go outside of your comfort zone and learn new things. For her, though, new things are dynamic pose, expression, and other technical aspects still within her comfort zone.

**Besides going outside of the comfort zone regarding techniques, what about Interests?**

She shared story of her inspiration source, Boris Vajello, and his journey to go beyond his comfort zone and draw what was usually frowned upon at the time. In those days, if you drew demons or a sword, you were the devil worshipper, but he just did it anyway despite what the norm says.

**To conclude the end of the talk, I revealed to her the idea behind this game relating to how Techniques and Creative together would create more opportunities.**

Before fully explaining to her, she immediately got the game right away. And in her word, saying that practicing skills and tools would be nothing if the student doesn't take inspiration from life, interest, hobbies and what they find enjoyable.

“ Don't be one thing, be many things, but not too much.

I have successfully facilitated an experience that made student learn an important concept in education. She not only understood the lesson that is showed to her but give me much more valuable insights than originally intended. It was so powerful that it also shaped the way I think about what I tried to teach them.



Initially, the Big Box is the ideal range of knowledge that one should pursue. However, based on her reflection made me realize that it can lead to negative consequences in learning.



This game encourages students to be satisfied with a narrow range of knowledge. However, it is crucial to find a comfortable and safe space to develop oneself and form small steps that lead to a bigger goal.



“Don’t be one thing, be many things but not too much”. Finding the balance between the tools you use and the inspiration surrounding you is essential.

This research prove that Games can be an incredibly powerful tool to gather knowledge and wisdom from student in an entertaining way. Therefore, for this research I will dwell deeper into the function of game in education and how to utilize its power to help my research. Many students would like this, as they can stay more open and have an opportunity to discuss their feelings more, compare to a fixed technical approach.

I've successfully encouraged the student to see how surrounding influences can enable more opportunities for the tools they are practicing. I decide to take advantage of their bright mind to help me answer the remaining question.

**If vowels represent the Fixed Potentials in the Official Curriculum.  
What represent Consonant in the Hidden Curriculum?**

U	S	A	L	I
W	R	L	J	R
A	V	E	Z	O
K	W	H	V	T
E	R	U	K	I

**Fixed Potentials (Tools)**

Official Curriculum

U	S	A	L	I
W	R	L	J	R
A	V	E	Z	O
K	W	H	V	T
E	R	U	K	I

?

Hidden Curriculum

## RESULT

**If vowels represent the Fixed Potentials in the Official Curriculum. What represent consonant in the Hidden Curriculum?**

They are inspirations from life. Artists are creative beings who need a lot of inspiration to create. Not seeing enough would make your head fill up and drive you crazy. Therefore, going out there, living, and experiencing the world drives her creation. After being deprived of being outside due to the Covid lockdown, she restored her creativity. Only then she realized the significant value of connecting to the world to what she is doing.

Art reflects a person's life: Who they are as a person & How they live it.

**I've asked several students more specific example from their life that inspire them:**

Friends, Ambition, Dreams, Worry, Job, Career, Boredom, Insecurity, Anxiety, Social Media, Excitement, Competition, Fear, Pets, Personal Feelings, Connections...etc

The vocational educational system emphasizes a student's instrumental abilities for the labor market while limiting their full potential. In the Official Curriculum, Fixed Potentials are assigned to the student to perform so they can produce predictable Intended Learning Outcomes. However, as observed during the dialogue with the student, the unannounced Potentials in the Hidden Curriculum inspire students to take their Fixed Potentials to the next level of Unintended Learning Outcomes.

These hidden factors that give students a new level of potential are called Hidden Potentials.

## RESEARCH QUESTIONS

The unknown definition of Hidden Potential and it's influential power leads me to the research question of:

What is hidden potential



How to stimulate it in Art & Design education



How can students find it themselves



How to create new hidden potentials



How to harness and put it to practice



Which together answers the main research question

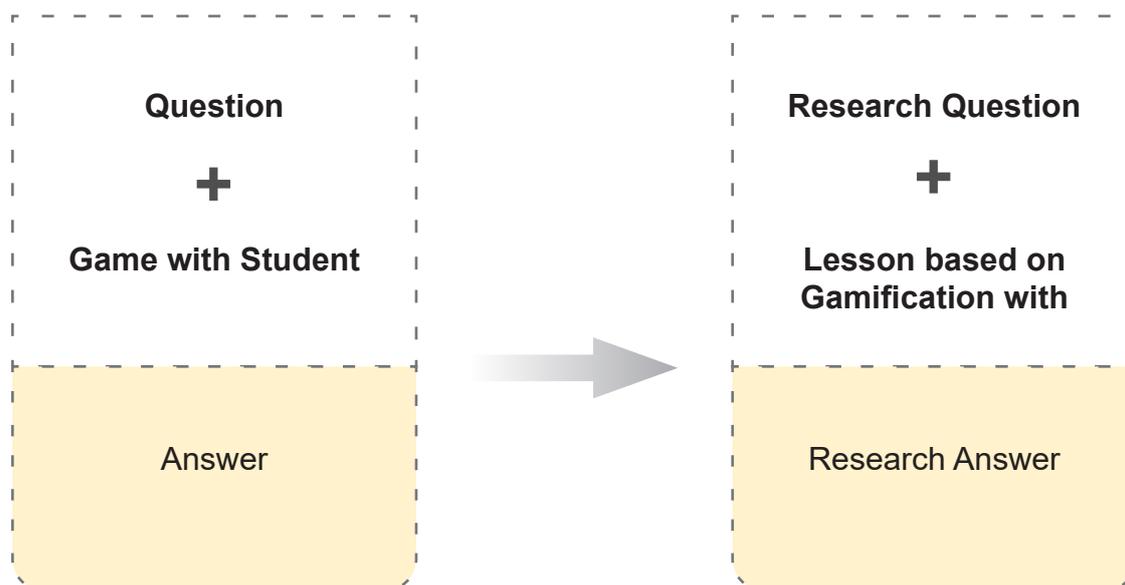
**How to cultivate & harness hidden potentials in vocational art students to expand their personal agency**



## RESEARCH METHODOLOGY

My research is grounded with academic knowledge while at the same time including new concepts to the table. For the education aspect, I based my research on classic educators for their wisdom with recent educators for concerns with contemporary topics.

Having worked in the game industry, which specializes in creating an experience to keep people engaged and motivated. I want to see how this knowledge of entertaining people would help education. Based on the last few successful Games with Peer and Students, I would like to continue this research further with Gamification Theory as the tool to help me with my research.



The search for “What is a Hidden Potential?” was constructed using design techniques borrowed from Gamification, which helps enhance the user’s motivation. These techniques break down the learning environment into 8 “Core Drives” that can facilitate different motivational experiences. The research cycles through each “Core Drive” to see its effect on the students. The result is then analyzed and studied to conclude what a Hidden Potential is.

The first half of the research focuses on creating a positive experience and seeing if Gamification Theory techniques can work well with Educational Theories.

The second part of the research focuses on the function of a negative experience and its consequences

## THEORIES

### GAMIFICATION THEORY

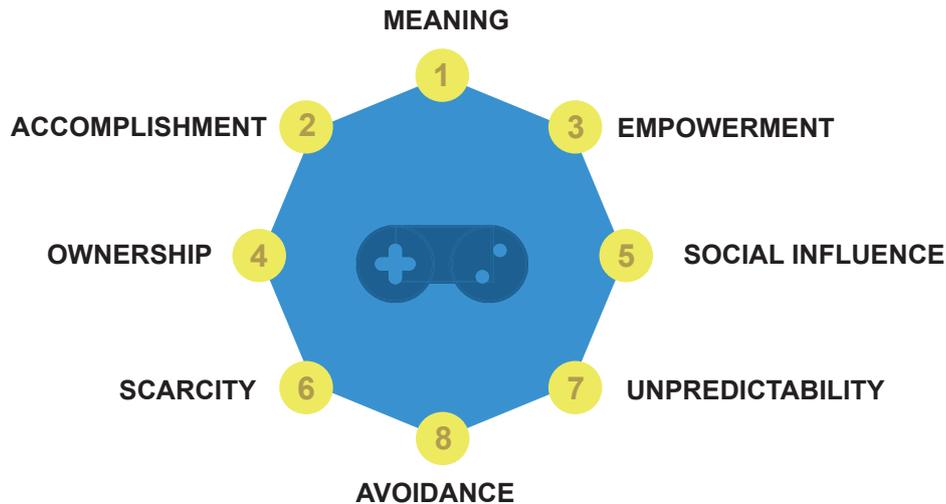
During my research on how to stimulate students' motivation in the classroom, I came across a chapter called "Motivational and Need Satisfaction in Video Games and Virtual Environments"

“Because video games have become ubiquitous and many people spend considerable time and effort engaged in them, often with passion and enthusiasm, games provide an excellent arena in which to study motivation and engagement. For example, researchers can examine how features of games affect in-game satisfactions and frustrations. Games can be simple and easily paced or can be complex, with steep learning curves. They can be solitary or social. They can be competitive or cooperative. Importantly, as with all human contexts, such features (and the actions and interactions they afford) can support or thwart basic psychological needs, often affecting players as strongly as “real world” interactions.” (Richard M. Ryan and Edward L. Deci , 2018, p. 511)

As a veteran of the game industry for the past ten years, I never considered it a source of academic inspiration due to its casual nature. Spotting it in a scientific book allows me to pay attention to it the second time. Video games have mastered the art of keeping people satisfied and motivated, as it is difficult to please people who want to be entertained. Unlike other forms of entertainment, primarily passive and solitary, games allow players to have a creative input and connect with other players and mechanics to keep engaged for a long time. As a result, video game theories have significantly matured and become an excellent academic source to learn from.

A few years back, I came across a book called “Actionable Gamification: Beyond Points, Badges, and Leaderboards” which focuses on applying video game theories to real-life’s activities so that it can be more fun, engaging, and meaningful. This book is a perfect follow-up to the previous book, as it further makes the Gamification framework applicable in practical situations. While “Self Determination Theory” uses their research to map out reasons that would keep people motivated. Octalysis Theory uses their research to create a toolbox for designers to apply it into their work directly.

The toolbox would be consist of these 8 core drives, divided into 2 groups.



## POSITIVE MOTIVATIONAL CORE DRIVES

1

**Meaning** - When the person believes what they are doing serves a purpose that are greater than themselves, and that they are the chosen person to do it.

2

**Accomplishment** - The feeling of making progress by overcoming great obstacles. This is also similar to Competency in Self Determined Theory.

3

**Empowerment of Creativity & Feedback** - The ability to have control of one's action and see its consequent result. This is also similar to Autonomy in Self Determined Theory.

## NEGATIVE MOTIVATIONAL CORE DRIVES

6

**Scarcity & Impatience** - When resources are limited, then it affects the attitude of the person that consumes it in many different ways.

7

**Unpredictability & Curiosity** - Is the main ingredient of keeping people on the edge of their seat and being engaged. They are essential in most forms of entertainment that we consume.

8

**Loss & Avoidance** - Negative and unpleasant feelings can happen, and it can sometimes be a great motivator.

## NEUTRAL CORE DRIVES (LEFT & RIGHT BRAIN)

4

**Ownership & Possession** - The person feels ownership of something, which would enable that person to become more caring and responsible toward it.

5

**Social Influence & Relatedness** - When activities involve other people, it adds a multitude of extra dimensions such as mentorship, social acceptance, communication, companionship, competition and other social dynamics. This is also similar to Relatedness in Self Determined Theory.

## GAMIFICATION & BASIC PSYCHOLOGICAL NEEDS THEORY

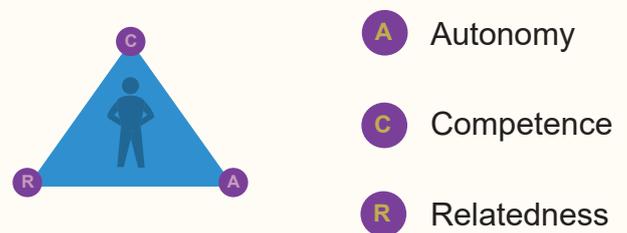
Gamification Theory is a theoretical concept from a branch of knowledge that is non-academic and contemporary. Before implementing it in education, it is crucial to confirm the validity of the theory's with a classical scientific source.

### SIMILARITY

#### Gamification Theory



#### Basic Psychological Needs Theory



“Basic Psychological Needs Theory” in behavioral psychology explains what keeps one motivated optimally. For a human to maintain motivation, engagement, and wellness, they need to satisfy three psychological needs:

There are three basic psychological needs, the satisfaction of which is essential to optimal development, integrity, and well-being. These are the needs for autonomy, competence, and relatedness. Failure to satisfy any of these needs will be manifested in diminished growth, integrity, and wellness. In addition, need frustration, typically due to the thwarting of these basic needs, is associated with greater ill-being and more impoverished functioning.” (Richard M. Ryan and Edward L. Deci , 2018, p. 511)

**2 C Competence / Accomplishment**  
The ability of improving mastery and skills to perform a certain task.

**3 A Autonomy / Empowerment of Creativity & Feedback**  
The ability to have control of what they are doing so that it can make changes into a desired outcome.

**5 R Relatedness / Social Influence**  
Humans are social creatures, therefore the needs for belonging and connecting to others is essential.

To conclude from this, these three psychological qualities are needed as a basis in order for the practice research to be effective. Even though these theories are expressed in different terms, they mean the same while giving the theory more depth.

## DIFFERENCES

The author of the “Gamification Theory” argues that while “Basic Psychological Needs Theory” contains valid ingredients of positive motivations, there needs to be a reason for what drives one to do something. Therefore, having Meaning (1) is essential to give one a goal to give momentum to their motivation. Without a clear direction, the person could fall into the trap of being lost and only be motivated by external factors. The differences raise a question that will be answered during the research:

**1** **Meaning** - How important is it to a student?

## EDUCATIONAL THEORIES

My Practice Research is shaped by solid theoretical background from classic educators who each bring different perspective to keep it well rounded. Frantz Fanon addresses the imposing power of institutional boundaries and its effect on students and teachers. It inspires me to be aware of this rigid structure while trying to improve teaching and learning experiences.

Building from these unhealthy structures, the student while being in the passive role has no choice but to follow the rigid structure of the lessons, which rewards them for doing so. The institution then measures success through the act of obedience rather than what they're actually learned...the exemplary honesty of workers who are given a medal after fifty years of good and loyal service.." (Frantz Fanon, 1963, p. 38)

This imbalance of power also resembles the "Banking Method" by Paulo Freire.

Education thus becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues comminiques and makes deposits which the student patiently receives, memorizes, and repeats. This is the "banking" concept of education, in which the scope of action allowed to the students extends only as far as receiving, filling, and storing the deposits" (Paulo Freire, 1970, p. 45)

## STUDENT'S VOICE

As a result of the status quo in education, there is no space for a student's dialogue regarding what is relevant due to the presumption that they are young and immature. Removing space for dialogue disempowers the student, as their input is not considered in the curriculum. Because of this, students become passive, as their potential are ignored.

Paulo Freire's "Dialogical Method" encourages an open dialogue between teachers and students to form a better outcome, resulting in a more realistic picture of what is truly valuable for learning. My pedagogical approach uses Dialogical actions while operating within the traditional constructive style of education.

## IMMATURITY AS THE BASIS FOR GROWTH

Initially, I noticed a lack of engagement stemming from a lack of motivation. How can a lesson be delivered to students so that it can be engaging while at the same time motivating? My initial search for engagement and motivation led to answers that were bigger than what was intended.

John Dewy sees education as simply creating growth in students. The main

prerequisite for growth is not talent, skill, or mastering one's tool; it is immaturity. The term often has a negative connotation of naivety and underdeveloped skills. John Dewey believed that immaturity is a positive quality for a student, as it opens a space for the student to develop further.

“The primary condition of growth is immaturity. This may seem to be a mere truism—saying that a being can develop only in some point in which he is undeveloped. But the prefix “im” of the word immaturity means something positive, not a mere void or lack...Now when we say that immaturity means the possibility of growth, we are not referring to absence of powers which may exist at a later time; we express a force positively present—the ability to develop.” (John Dewey, 2001, p. 46)

I see immaturity as a fertile ground for “Hidden Potentials” to occur. For this research, I will facilitate situations that enable immaturity to be accepted.

## LEARNING AS A TRANSCENDENCE

“Socrate’s way out of the learning paradox is to argue that all learning is a matter of recollection. This is why he can deny that he has anything to teach and is involved in teaching. It is also why he represents his education efforts as entirely maieutic: bringing out what is already there.” (Biesta, 2014, p. 47)

“The argument so far suggests that if learning is to have a meaning beyond the facilitation of learning, if it is essential rather than accidental to learning, then it has to come with a notion of “transcendence.” It has to be understood as something that comes from the outside and bring something radically new” (Biesta, 2014, p. 83)

While school creates momentum that enables students to learn what is visibly immediate, it should also lead them to learn something beyond what they can see. Gert Biesta believes that the goal of teaching should be transcending to the students so that learning does not contain only recollection from previous given knowledge.

Vocational education creates a predictable environment for teachers to transfer Intended Learning Outcomes to students. However, the student should learn beyond themselves and their predictable environment. For my practice research, I will look into the Unintended Learning Outcomes that occur when students learn beyond the comprehension of their previous knowledge.

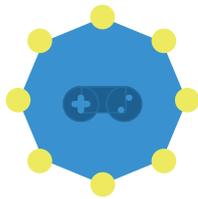
When students experience this transcending moment of learning, their Hidden Potential is realized.

## PRACTICE RESEARCH

My Practice Research is composed of theories from different fields of knowledge; therefore, it is essential to design a coherent workflow that would make all these them work together. Gamification Theory is the chosen structure of the research, in which I will cycle through each Motivation Core Drive. Within each Core Drive, I will conduct various research methods such as assignments, interviews, and observations and investigate their effects on students. Education Theories emphasizing “Student Voice” and “Immaturity” will be implemented to stimulate a greater chance of Hidden Potential.

### Research Question

#### Gamification Theory



+

#### Educational Theories

- Students Voice
- Immaturity as Basis for Growth

+

#### Pratice Research

- Assignment
- Interviews
- Observation

### Result

The initial plan is first to define what are Hidden Potentials. However, the answer has no clear definition other than that it is a positive ability that students exhibit under certain conditions and is of transcendence qualities. Therefore it is more interesting to find out the situation that allows Hidden Potentials to be revealed rather than the definition itself. The first research question I will look into is:

How to stimulate Hidden Potential in Art & Design education



#### Part 1: Positive Motivation

The research cycles through each Positive Motivational Core Drives (1, 2, 3) through methods of observing, or creating a lesson.

- How does Positive Motivation stimulate Hidden Potential in design education?



#### Part 2: Negative Motivation

The research cycles through each Positive Motivational Core Drives (6,7,8)

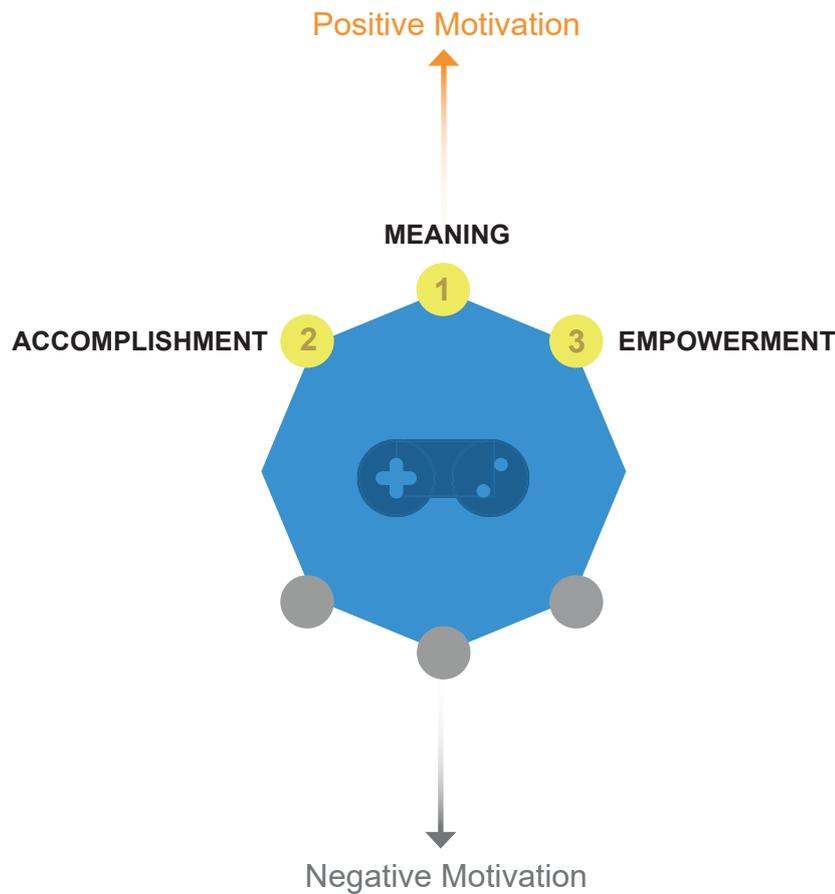
- How does Negative Motivation stimulate Hidden Potential in design education?



#### Neutral Core Drives

Hopefully during the research, more information is revealed about the power of Neutral Cores (4) Ownership and (5) Social Influence.

## PART 1: POSITIVE MOTIVATION CORE DRIVES

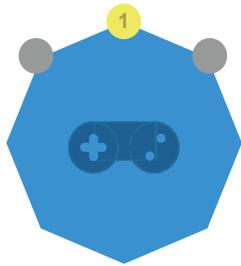


These eight cores can be combined to make almost unlimited combinations that would result in different motivational profiles. However, three main core drives (1. Meaning, 2. Accomplishment, and 3. Empowerment) would bond to form a consistent positive motivational experience. They offer a greater chance of giving participants power, fulfillment, and satisfaction. This will result in players waiting to learn, explore, and eventually use their creativity to help others.

“White Hat Core Drives are motivation elements that make us feel powerful, fulfilled, and satisfied. They make us feel in control of our own lives and actions.” (Yu-kai Chou, 2019, p. 373)

This is officially called the White Hat Core Drives. However, for this research, I call it the Positive Motivation Core drives to align with the motivational theories of my research.

## CORE DRIVE 1: MEANING / PURPOSE



The players will feel more motivated when placed in a significant role that can make a difference in the world. This effect increases when they realize the power are inclusive to them too. This shared drive is enjoyed through media, literature, and other forms of narrative-driven products: A relatable immature character who managed to work his way up to become a hero and overcome life's obstacles.

“Epic Meaning & Calling is the Core Drive where a player believes that he is doing something greater than himself or he was “chosen” to do something. A symptom of this is a player that devotes a lot of his time to maintaining a forum or helping to create things for the entire community (think Wikipedia or Open Source projects). This also comes into play when someone has “Beginner’s Luck” – an effect where people believe they have some type of gift that others don’t or believe they were “lucky” to get that amazing sword at the very beginning of the game.” (Yu-kai Chou, 2019, p. 85)

### PART 1: OBSERVING MEANING

FINAL RESULT

I look into the current role of Meaning and its effect on the student’s mindset. To inspire students, it was common for student and teachers to show art work as a source of inspiration to work toward to.

### RESULT: MEANING ARE EXCLUSIVE TO ONLY A FEW



*Inspiring Work*

The inspiring work are ultra-polished and perfect as they are mostly Final Result. The product do motivate student to a certain extent, however they mostly are intimidating and demotivating for the overall learning experience. The quality of these work are usually so out of reach, that teaches student that making art is an act of Perfectionism, that only is acceptable when the quality is of extremely high standard.

This creates unnecessary pressure to be perfect and diminish students abilities to engage in natural learning. Instead of being inspired, student feel more insecure about themselves and withhold personal development that could show their hidden potentials.

## PART 2: MAKE MEANING INCLUSIVE

### PROCESS



I create more awareness to the “messy” Process that occur before the Final Result to students. By showing experiments, incremental work, and trial and error behind a finished product. Letting student know that behind every Meaning are attainable steps that is inclusive for everyone. Learning is not instant Perfectionism that is exclusive to the gifted.

## RESEARCH RESULT: RELATABLE WORK MAKES STUDENTS FEEL SAFE IN THE CLASSROOM.

The student feels included in the process as it looks less intimidating and more inclusive as it embraces them to be comfortable with what they do. As the Student’s Voice are respected, they feel freer to explore different techniques, make mistakes, experiment, and play with what they have.

Creating this safe space in the classroom allow student to feel more accepted with their Immaturity, which stimulate a fertile ground for their Hidden Potential to be revealed. As demonstrated by the examples below:



*Playful Sketches*

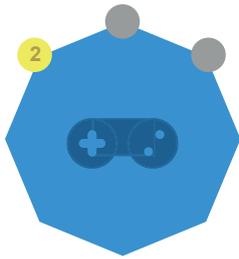


*Experiments with new Medium*

This student is fearless in her playful sketches that show her exploration of different subject ideas. She also learns to experiment with new medium to express her creation out of her own personal curiosity and joy.

More in depth research of these topics can be found in the Appendix.

## CORE DRIVE 2: ACCOMPLISHMENT



Players need to see that they are making a step forward by obtaining points, badges, or in the educational institution, grades. The accomplishment can only be felt when the student overcomes a significant challenge. Without any challenge, the accomplishment feels empty.

Development & Accomplishment is the internal drive of making progress, developing skills, and eventually overcoming challenges. The word ‘challenge’ here is very important, as a badge or trophy without a challenge is not meaningful at all. This is also the core drive that is the easiest to design for and coincidentally is where most of the PBLs: points, badges, leaderboards mostly focus on” (Yu-kai Chou, 2019, p. 26)

It is important to note, however, that often designers think badges and in-game rewards are motivating when sometimes they are not adding to the game” (McKernal et al., 2015; Ronimus, Kujala, Tolvanen, & Lyytinen, 2014)

Although accomplishment is meaningful and motivating to keep it going, it is good to direct the satisfaction toward personal growth rather than a symbolic award. Even though school operates by grades, it should be kept out of the student’s minds as much as possible so that they do not solely use it as the leading indicator of values.

### PART 1: CREATE ACCOMPLISHMENT THROUGH REFLECTION



Within this curriculum, there needed to be more emphasis on reflection in the classroom. Students constantly move in action, from one lesson to another, without a moment to rest. Before this research, there was no moment of reflection in their study.

For this research, 2nd-year students get extra time at the end of every quarter to do a personal reflection. The idea is to bring the feeling of Accomplishment in students through the simple act of reflecting.

### RESEARCH RESULT: STUDENT FEELS ACCOMPLISHED, BUT REMAIN IN COMFORT ZONE AND PERFECTIONISM



Reflecting on past improvement do make student feel Accomplished at what they’ve done. Student feel proud of themselves and is motivated to keep on practicing.

*Old and New*

“ I really liked this assignment. I think I learned a lot from the video tutorials. I think they gave me a better understanding of what happens under the skin that I can use in future designs. I also really liked the final assignment. I made something that wouldn't have been able to make without these classes and I'm very proud of how it turned out.”

Accomplishment is a powerful feeling that keeps students coming back for more. They are motivated to work themselves to reach that rewarding feeling again. This seems positive initially as there is an incentive for students to learn. However, the research shows a series of concerning results that stem from subject of Reflection.

Both 2nd and 4th-year students get to choose between an familiar subject or a new subject for their project. Most student of each year choose to go with comfort zone and go with the familiar subject.

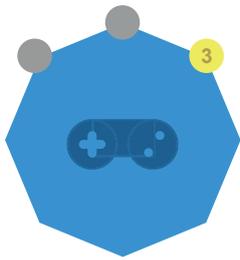
- 2nd year student: Students that pick a familiar subject create no challenge for themselves and lose the motivation in what they do halfway through. They've discovered that Accomplishment lose its value if no challenge exists.
- 4th year student: They've discovered that perfectionism isn't a challenge worthy of Accomplishment. It is tedious labor work that takes away motivation and creativity

Left to Right, art work by the same student, one from when he was 1st year, and one from when he is on the 4th year. The quality of the recent work shows more refinement in its detail but decrease in creativity. Earlier work, the student are more brave in experiment with light, color and personality of the character.



*Old and New*

## CORE DRIVE 3: EMPOWERMENT OF CREATIVITY & FEEDBACK



“Empowerment of Creativity & Feedback is when users are engaged in a creative process where they have to repeatedly figure things out and try different combinations. People not only need ways to express their creativity, but they need to be able to see the results of their creativity, receive feedback, and respond in turn. This is why playing with Legos and painting are fun in-and-of themselves and often become Evergreen Mechanics, where a game-designer no longer needs to continuously add in more content to keep the activity fresh and engaging.” (Yu-kai Chou, 2019, p. 26)

### PART 1: MAKE LEARNING FUN BY MAKING INFORMATION MORE INCLUSIVE

The education materials for teaching need to be more inclusive and mindful of the student in order for the student to have fun in learning. Inspired by modern games like Lego, where it is clear to see the different choices of blocks that can be used to express something greater. My educational theories are created the same way, grouped in blocks, making it easy for students to grasp and apply to their creations.

For this research chapter, I attempt to make learning more fun by reducing unnecessary abstraction / complexity so that students can feel included in the learning process. The 2nd year students will receive their design theory with these new methods.



### RESEARCH RESULT: STUDENTS FEELS CONNECTED WITH KNOWLEDGE

Complex design theories are translated into more accessible terms. Students can now have an easier time absorbing knowledge which will give them an easier time to develop themselves. The idea is proven effective as most students recall its educational value and how it affects them

## RESEARCH ACTION: MAKING LEARNING MATERIALS FUN THROUGH REDUCING COMPLEXITY

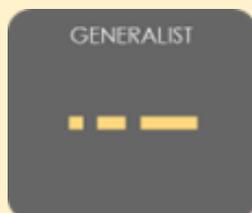
The idea is to reduce abstraction / complexity to increase learning opportunities. As complex education materials get condensed into smaller doses for students, the curriculum has more space to introduce more learning materials. For this research, I have introduced vital design theories into several “Theoretical Blocks” to make it easier for students to identify and manage.



Assignments with different challenges are assigned to students. The idea is to observe how students handle these challenges using Theoretical Blocks.

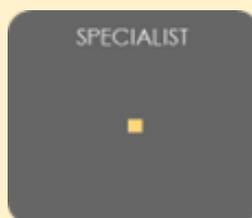
## RESEARCH RESULT: GENERALIST AND PERFECTIONIST

Even though students have different motivational levels, most expressed their enjoyment for this assignment through their written reflection and in the presented works. The results are divided into two types:



### Type One: Generalist

Enjoys a higher number of Theoretical Blocks, these are the ones who are fearless in experimenting with new things. They found the many Blocks enjoyable and were passionate during the process.



### Type Two: Perfectionist

Enjoy a smaller number of Theoretical Blocks. They are the ones that are beginning students or advanced students who are occupied with perfectionism.

More in depth research of these topics can be found in the Appendix.

## CORE DRIVE 4: OWNERSHIP



The original Gamification theory call this the Left Brain core drives, as it is related to logic, calculations, and ownership. To simplify the research, I call this the Neutral Core drives as it falls between Positive and Negative Motivation.



Ownership and Possession, the fourth Core Drive in Octalysis Gamification, is based on the principle that because you own something, you want to improve it, protect it, and get more of it.” (Yu-kai Chou, 2019, p. 97)



People often begin a game by choosing an avatar—a self-representation that will enact their agency within a virtual space..... Such customization is intended to increase the personal relevance and sense of agency (Sundar & Marthe, 2010), and experimental research by Kim et al. (2015) verified that an option for customizing players’ character increased experiences of autonomy relative to a no-customization condition.....Identification with game avatars could enhance autonomy, immersion, effort, and game enjoyment.” (Richard M. Ryan and Edward L. Deci , 2018, p. 515)

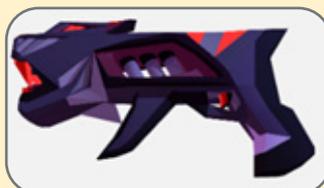
Videogame players dedicate much of their time managing virtual assets, including customizing and taking care of the primary virtual character. Building a connection to the virtual character makes the game more engaging as they search for their meanings. Young students enroll in art study so that they can enjoy its environment and creation process. It is not necessary for a student at this age to have a clear Meaning. Therefore, Ownership is an important subject for student to practice their mastery upon until they find their personal Meaning.

### PART 1: OWNERSHIP IS COMFORT SUBJECT

For this research chapter, I observe the function of Ownership and why it is prevalent in a number of students in the development of their art. Although Core Drive 4: Ownership is not considered the most important in both theories, it is fascinating to see how important it is for students that are afraid of going outside of their comfort zone.

### RESEARCH RESULT: ARTISTIC CONFIDENCE BEGIN AT COMFORT SUBJECT

Complex design theories are translated into more accessible terms. Students can now have an easier time absorbing knowledge which will give them an easier time to develop themself. The idea is proven effective as most students recall its educational value and how it affects them based on their reflection on this assignment.



Student favorite subject is Tiger, where she use it as a visual subject to develop her design skill upon. Throughout the studies, the image of the tiger is diminished and she gain more confident in herself as seen by the final image.

Students find it essential to develop first self-esteem, and security before moving onto something new. This can be found in the work of students of all years, who like to start with their favorite subject as a supporting device, and eventually move onto something completely new once they feel confident enough.

As a person develops skill, the contents of what he or she repeats change. This seems obvious: in sport, in repeating a tennis serve again and again, the player learns to aim the ball different ways” (Richard Sennett, 2018, p. 38)

## PRACTICE RESEARCH: OBSERVING OWNERSHIP IN OLDER STUDENT

Students of the older years who did not have an opportunity to build confidence based on their “Comfort Subject”. What happened to them? The same setup is applied for students of older

### RESULT: ARTISTIC CONFIDENCE IS BUILT FROM PERSONAL ACCOMPLISHMENT

Students that did not have an opportunity to express their “Comfort Subject” during their younger years do it at a later year. When questioned why going back to “Comfort Subject” when they are already at an advanced level. They mention that being able to express “Comfort Subject” is a mark of personal Accomplishment. They want to conquer their personal goal, before moving on.



On the left is the 1st year work, and on the right is the 4th year final graduation work. The project appears to be a realized version of the first sketch she had when starting this study 3 years prior.

More in depth research of these topics can be found in the Appendix.

## 1 HOW IMPORTANT IS HAVING A MEANING TO A STUDENT?

These results show that Basic Psychological Needs Theory is more fitting for students who have already found their Meaning. In comparison, Psychological Needs Theory is more relevant for younger students still searching for those Meanings. Therefore, Alternative Psychological Needs Theory is more applicable for the student of this study, as they focus more on what the young students are searching for as they develop themselves.

“The three variables that people have most frequently argued should be considered basic psychological needs are meaning, self-esteem and security” (Richard M. Ryan and Edward L. Deci , 2018, p. 252)

Basic Psychological Needs	Autonomy	Competence	Relatedness
Alternate Psychological Needs Theory	Meaning	Self-Esteem	Security

## CONCLUSION FOR POSITIVE MOTIVATION CORE DRIVES (1, 2, 3) + NEUTRAL CORE DRIVE (4)

The initial part of the research shows that Gamification Theory is a valuable method to facilitate education. I've successfully applied Educational Theories to the classroom environment through the Gamification's Core Drives. The result are clear and valuable which confirms this framework's validity as a reliable method for designing education.

### How does Positive Motivation stimulate hidden potential in design education?

Positive Motivation create a healthy environment for student express their full creativity, free from the side effect of rigid institutional structures. By making learning fun, and inclusive while respecting their artistic confidence, students would theoretically find it easier to leave their comfort zone and reveal their Hidden Potential. However as seen in Core Drive 2, 3, 4 most students did not choose to leave their comfort zone despite having abundance of Positive Motivation.

## INCLUSIVITY

"In "Core Drives 1: Meaning", we learn that the classroom took inspiration from media. However this might not be productive for education on the long term. Showing perfect art without process makes students feel intimidated and insecure about their learning progress. They will fall either into the Perfectionism mindset or feel excluded for not reaching that standard. Therefore inclusive Processes are needed in every aspect of the classroom so that students feel included. This research action respected their personal voice were while at the same time embracing their "immaturity". As a result, they feel more confident to show their process which stimulate a fertile ground for their Hidden Potential to be revealed.

## MAKING IT FUN

In "Core Drives 3: Empowerment of Creativity & Feedback", lessons were also made more inclusive by reducing complexity in educational terminology. Different design theories, such as Color Theory, Design Process, and Mastery Techniques were modulated in a way that they could match and combine concepts to express their product. As a result, students were enthusiastic about the lessons, and you can see how effectively they retained the final result. Across the board, students clearly show that they've understood the study, compared to the years before when students immediately forgot what was learned. While the lesson became more fun, some students take advantage of that fact and to learn new things. Although most other students chooses to remain in their specific safe space to master their craft.

## ARTISTIC CONFIDENCE

The motivation for creating art comes from a student's desire to express their personal vision. By creating a space in the curriculum to acknowledge this fact,

student feels more comfortable showing their Hidden Potential, as observed in “Core Drives 1: Meaning”.

In “Core Drives 2: Accomplishment” 2nd year students are asked to apply what they have learned to an existing or new art piece. Most students chose to work on improving an existing personal art piece and find it empowering to see how the newly learned theory has drastically enhanced their work. 4th-year students have been given a similar choice; most students would also choose a predictable past subject to improve upon; both of these scenarios show that students prefer improving their artistic confidence. In “Core Drives 4: Ownership” shows that students use a Comfort Subject to build their artistic confidence upon. Once they overcome their personal Accomplishment, they will eventually leave the Comfort Subject and reveal their possible Hidden Potential.

While artistic confidence is the foundation for art students to create for themselves, there is a natural gravitation toward perfectionism. This is an obsession that is also commonly found in unhealthy addictive games that leaves players worn out. This tendency would make the artist remain stuck in their comfort zone and lose a sense of creativity and ability to explore their Hidden Potential.

## ONLY POSITIVE MOTIVATION IS NOT ENOUGH TO REVEAL HIDDEN POTENTIAL

Initially, Positive Motivation works effectively to stimulate the student to bring out hidden potential from within. However, as seen in “Core Drive 2: Accomplishment”, student lose all interest and falls back into their comfort zone. The definition of Accomplishment Core Drives states that:

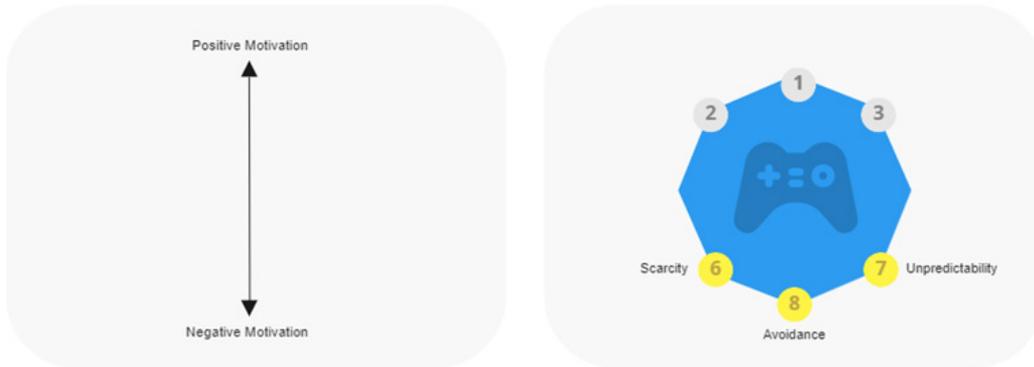
“Development & Accomplishment is the internal drive of making progress, developing skills, and eventually overcoming challenges. The word “challenge” here is very important, as a badge or trophy without a challenge is not meaningful at all.” (Yu-kai Chou, 2019, p. 26)

For players to feel accomplished in their actions, they must overcome challenges and obstacles. By having only a favorable Positive Motivation environment, the feeling of accomplishment will be gone, as there are no incentives to play. Therefore Negative Motivation is required for Core Drives 2: Development & Accomplishment to truly exist.

“It is important to note, however, that often designers think badges and in-game rewards are motivating when sometimes they are not adding to the game” (McKernal et al., 2015; Ronimus, Kujala, Tolvanen, & Lyytinen, 2014)

Awarding them more badges or giving them even more freedom would not improve the situation, but perhaps only worse. In the next chapter, I will investigate the Negative Core Drive and see if it provides students with real Challenge so that more dramatic result of Hidden Potential could be revealed.

## PART 2: NEGATIVE MOTIVATION CORE DRIVES



Positive Motivation makes students more engaged and motivated in what they are doing. However, it is not sustainable in the long run if there is no Negative Motivation. A game with these three Negative Motivation Cores (6. Scarcity, 7. Unpredictability, 8. Avoidance) contains elements that make a game challenging, complex and uncomfortable. Despite their negative tendency, they complement Positive Motivation to form a holistic form of true motivation. However, they must be used with caution to avoid negative outcome.

“Black Hat Core Drives, make us feel obsessed, anxious, and addicted. While they are very strong in motivating our behaviors, in the long run they often leave a bad taste in our mouths because we feel we’ve lost control of our own behaviors.” (Yu-kai Chou, 2019, p. 374)

There is a tendency in most video game developers to create games with an enormous amount of Negative Motivation to force players to perform extreme tasks. This tendency stems from developers’ need for more time or pressure to force players to spend money to pay off Negative Motivations. As a result, the players are still motivated but feel addicted, anxious, obsessed, and stressed; this is also not sustainable in the long run.

The original theory called this the Black Hat core drives. I call this the Negative Motivation Core Drive to make it more aligned with my research that emphasizes motivation.

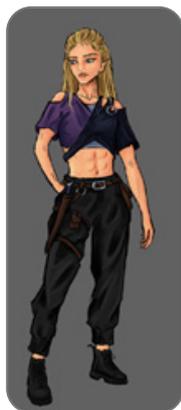
## CORE DRIVES 6: SCARCITY



Scarcity and Impatience is the sixth core drive of the Octalysis Framework, and is the drive that motivates us simply because we are either unable to obtain something immediately, or because there is great difficulty in obtaining it. We have a naturally tendency to want things we can't have. If a bowl of grapes were plainly on the table, you may not care about those grapes; but if they were on a shelf just beyond your reach, you will likely be thinking about the grapes regularly: 'Are they sweet? Can I have them? When I can I have them?' (Yu-kai Chou, 2019, p. 230)

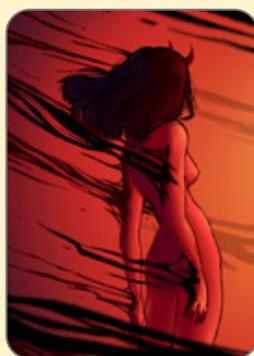
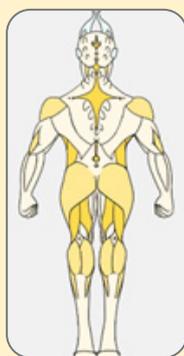
An unusual core drive is Scarcity and Impatience, which is a drive that motivates players because of limited resources. Apparently, this lack of resources effectively changes the ways that a player behaves. This Core is difficult to implement because its function is to not exist at all; therefore, I conduct the practice research by mostly observing.

### PART 1: OBSERVING SCARCITY IN THE CLASSROOM



An event in the classroom that accidentally demonstrates how Scarcity can be a positive trait in education. Students are asked to follow a lesson about human anatomy and, do a free assignment based on what they've learned.

### RESEARCH RESULT: SCARCITY CREATE SPACE FOR CREATIVITY



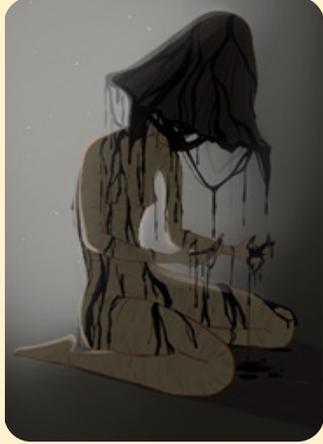
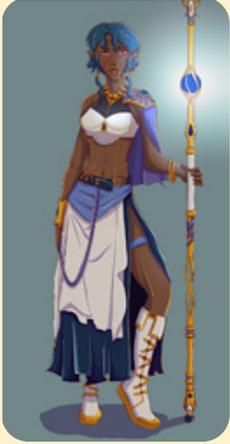
Most student draw the front view of the figure, however, there were a small numbers of students who drew the back. Which raise up my curiosity as why they choose to do so?

To investigate further to see why the back was chosen by a small number of student. It turned out that the back view was omitted out by accident in the lesson about human anatomy.

By not revealing this, it brings curiosity for the students to discover it themself. In education, we try to explain every detail of matters, which creates no space for students to exercise their creativity. This incident allow us to leave room for students to share their side of knowledge. "Scarcity" in education can create more learning than it implies, giving space for students to express their imagination and fill in the empty space themself.

## RESEARCH RESULT: SCARCITY ALLOWS ARTISTIC CONFIDENCE TO THRIVE

As students feel satisfied with their art skill and find that internal drive to push their vision further. It is essential to create an empty space for students to experiment on their own or minimal instructions so they can figure things out by themselves. With this, their Hidden Potentials can be revealed.



After student successfully reaching her personal accomplishment through her “Safe Subject”, she feel creatively confident enough to start something new with the free time that was made available. Revealing new original work that are her Hidden Potential.

Left:Safe Subject Right:Hidden Potential

## PART 2: OBSERVING SCARCITY DURING INTERNSHIP

For the second part of this research, I look at how students handle the scarcity of instructions during their internship. And why this is the ultimate mark of creativity and independence.

This assignment takes place within the students’ internship during its final year. It is to be taken seriously as it is a particular exam judged by the internship supervisor and the teacher. Students that made it to the 4th year are more competent and can handle “Scarcity” better.

## RESEARCH RESULT: SCARCITY CREATE SPACE FOR CREATIVITY

- Case 1: Student was initially confronted with a non-motivating beginning to her internship as there was no purpose given to her. She only had 80 days and had to come up with it herself. Somehow, she managed to be productive and start to make her product, and she became dependable within the company, and her creation added value to the company.
- Case 2: Student accomplished what she needed to do during the internship. Even though the company had nothing left for her to do, she identified a new hidden potential that she could do to benefit the company. The product was great as it introduced a new product line to the company, and as a result, she became a dependable person the company could rely on.

The ability to handle scarcity to create something out of nothing is the ultimate benchmark for a student’s success—the ability to create Hidden Potentials without any stimulations except from one inner self.

More in depth research of these topics can be found in the Appendix.

## CORE DRIVES 7: UNPREDICTABILITY



Unpredictability is the most effective Core Drive to keep people engaged, as they do not know what's next. Beyond just games, this is a standard drive enjoyed through media, literature, and other narrative-driven products. A series of unpredictable events unravel as the story progresses, keeping the viewer on edge. However, the moment it gets predictable, then the engagement disappears.

However, It can also be possible to create addictive environments that are not valuable for personal development, such as gambling, lottery, or other games that follow the same methods. Negative Motivation such as this should be used accordingly to get the optimal positive experience.

### PART 1: OBSERVE UNPREDICTABILITY INSIDE SCHOOL.

An exam stimulate a professional work situation that has unpredictable real life factors and It is up to the student to solve it.

### RESULT: SCHOOL CREATES HARD SKILL

The student did not react well to the unpredictable nature of the assignment since they are not used to unpredictable situation in vocational education. They are trained to be good technically, with the ability to handle different kinds of tools that would expand their producing abilities. They are defined generally as “Hard Skills”, which is being used as the main indicator of a student’s performance in their study.

Hard Skill is a technical skill connected to a specific task that requires repetitive practice to achieve mastery. It is an instrumental skill that defines what one can do. These tasks are generally job-specific and are already dictated by the organization.

The vocational nature of this education makes students’ assignments simple so that students can dedicate their time to developing technical competencies rather than solving problems creatively. This is similar to games that focus heavily on developing competencies and reducing complexity so players can have the mental space to master their skills. These game are meant for mass consumption, that offer no depth or creativity in the way it’s being played.

## PART 2: OBSERVE UNPREDICTABILITY DURING INTERNSHIP

Students participated in a real work environment full-time for five months. Once the internship ends, they make a report and interview about their experience. Reading Internship Reports helps me understand the relationship between students and unpredictable factors outside the school environment.

### RESULT: REAL LIFE CREATE SOFT SKILLS

During school, students are expected to be transparent with learning goals and challenges they have to solve. Also, school labels students with a clear role and function of what they do. However, the demands of the real world are different, and they have to learn to give themselves their own label. As a result, they learn to adapt to new skills, tools, workflows, and other processes to adapt to the new environment.

During the Internship, students who demonstrated a natural ability for “Soft Skills” performed exceptionally well and were greatly valued. Soft Skill is a set of skills that include interpersonal, communication, time management, empathy, and other intuitive actions. It is a creative skill that defines how one functions. Although not visible and overlooked in vocational education, these skills are valuable in life as they are valuable for just about every job. In vocational education, more emphasis is made on Hard Skills while Soft Skills are neglected. Focusing on practical skills would result in an individualist way of working, which leads to diminishing creativity and create obsessive behavior.

Therefore, “Soft Skill” is consider to be the Hidden Potential that arise during unpredictable circumstances.

More in depth research of these topics can be found in the Appendix.

## CORE DRIVES 8: LOSS & AVOIDANCE



Maintaining good grades and meeting deadlines are typical motivational drive that keeps students performing. Fear is the most effective control mode, as it can be found in many educational institutions. They can be an obvious or subtle presence in the classroom environment. Being overly controlling negatively impacts creativity and students' state of mind. A student who has always been harshly criticized and punished by his own doing can no longer trust his own vision. Every decision he makes needs to have the approval of a supervisor. This worsens over the year as the questions become more frequent, and he becomes even less confident.

“ This core drive is based upon the avoidance of something negative happening. On a small scale, it could be to avoid losing previous work. On a larger scale, it could be to avoid admitting that everything you did up to this point was useless because you are now quitting. Also, opportunities that are fading away have a strong utilization of this Core Drive, because people feel like if they didn't act immediately, they would lose the opportunity to act forever.” (Yu-kai Chou, 2019, p. 28)

“ Teachers exhibited a controlling philosophy—they endorsed the use of rewards, punishment, and controlling language to ensure that the students behave as expected.... In classroom of teachers who were more controlling were lower in intrinsic motivation, perceived competence, and self-worth” (Richard M. Ryan and Edward L. Deci, 2018, p. 355)

As an educator who believes in Positive Motivation, this situation should be minimized as much as possible in order to function well.

### PART 1: REMOVING LOSS & AVOIDANCE FROM THE CLASSROOM

What happens when you remove a significant part of Negative Motivation from a learning experience? This practice research tries to minimize curriculum pressure on the students. This means reducing the demands on what a student does and reducing the presence of deadlines.

#### RESULT: LOSS & AVOIDANCE IS INNATE

The lessons began well, as students initially experienced a more relaxed learning pace. They felt at ease as the assignments were not demanding of them to do uncomfortable things, and the deadline was more than enough to be considered a negative motivation. However, students eventually start to seek out other deadlines to satisfied. Therefore Loss & Avoidance are not possible to be avoided from life.

## PART 2: OBSERVING LOSS & AVOIDANCE

Students had three months to finish several projects; however, many students didn't use these periods well. They were given a last chance to finish everything they'd missed or faced heavy consequences.

### RESULT: LOSS & AVOIDANCE ACTIVATES STUDENT

Students were not performing well due to the overly generous amount of time that is given to them. Students were easily distracted and losing motivation to work. As a result, there were a large number of students who did not finish the assignment on time.

Students were given a last chance to make amends, they have to finish everything within a short period of 1 week or face grave consequences.

Surprisingly, the students feel at ease by having a clear deadline with a real serious consequence. The focus and determination of the students were intense as they rushed to finish the assignment. Techniques and competence that were unused are now fully being used effectively, and every feedback was taken well. Eventually most students passed what seemed to be an impossible deadline. They have achieved and learned everything that was asked of them for a period of 3 months in 1 week.

Perhaps, the student already have this amazing learning abilities in them, but it was the Loss & Avoidance effect of the deadline activated the Hidden Potential in students.

More in depth research of these topics can be found in the Appendix.

## CORE DRIVES 5: SOCIAL INFLUENCE



The original Gamification theory call this the Right Brain core drives, as it is related to creativity, self-expression, and social factors. To simplify the research, I call this the Neutral Core drives as it falls between Positive and Negative Motivation.

“Social Influence and Relatedness is the fifth core drive within Octalysis Gamification and involves activities inspired by what other people think, do, or say. This Core Drive is the engine behind many themes such as mentorship, competition, envy, group quests, social treasure, and companionship.” (Yu-kai Chou, 2019, 195)

“Multiplayer games can offer a rich and textured social world—one in which players actually have things to do together. They provide activities in which there are possibilities for cooperation, helping, and sharing, and this allows for relationship experience that can feel deeply edifying.” (Richard M. Ryan and Edward L. Deci , 2018, 517)

Video games are single-player activities that one engages in without the interference of other people. With the development of communication technology that allows people to connect, multiplayer games have dominated in popularity. The number of single-player games has disappeared, showing that humans have the natural urge to communicate with others. This satisfies the third factor in psychological need (autonomy, competence, and relatedness).

“Recall that basic psychological need theory (BPNT; Chapter 10) specifies that the impact of any activity on people’s wellbeing is a function of satisfactions of the autonomy, competence, and relatedness needs. Although many might find it implausible that non serious activity such as playing a video game can increase well-being, these authors suggested instead that insofar as a virtual environment affords or supports experiences of volition, effectiveness, and social connection, it should yield enhancements in a player’s well-being.” (Richard M. Ryan and Edward L. Deci , 2018, 512)

Sitting between Positive and Negative motivational core is “Core Drives 5: Social Influence”, which surprisingly plays a significant role in students’ well-being. For this research, there are several opportunities where I can conduct and observe what Social Influence does to a student’s learning experience.

### PART 1: OBSERVING 2ND YEAR STUDENT WORKING IN GROUP

Based on the pattern from the older students, working together is a great challenge. Therefore, I made an assignment to create the student of the 2nd year to get familiar with team work so that they will have an easier time in the future.

## RESULT: SOCIAL INFLUENCE IS INNATE

The result turn out to be surprisingly positive, as student have no problem working in a group. They were natural at this process and didn't seem to think that it was a challenge like it initially made out to be.

## PART 2: OBSERVING INTERNSHIP

This is the first opportunity for the student to enter the real world to experience who they are. Students participated in a natural work environment full-time for five months. Once the internship ended, they made a report and interviewed about their experience.

## RESULT: SOCIAL INFLUENCE GIVES STUDENT TRUE SELF REFLECTION

When the Student steps momentarily out of school into the natural environment, the topics of Feedback come up a lot during the conversation. Students have a particular perception of how they would fit into the internship; however its the Feedback give them the most clear perception of themself.

As mentioned earlier, students emphasize developing their artistic confidence and creating internal pressure based on personal self-improvement. However, doing this alone can set unrealistic expectations for themself, which further misguide them from the truth. Experiencing internship feedback made students aware of what matters and what does not in real-life situations. Having better clarity of who they mean more realistic ambitions to direct their focus.

## PART 3: OBSERVING GROUP WORK

I have observed two groups of 4th year students forming together to work on an assignment based on a real life scenario. The student have to make a complex project for a client who has a lot of demand.

## RESULT: SOCIAL INFLUENCE MADE IT POSSIBLE TO WORK WITH ONLY NEGATIVE MOTIVATION

This was a challenging experience that contained all the Negative Core Drives, while lacking any Positive Core Drives. The group bonded with each other for support in morale and problem-solving. It is noticed that when students help others, they feel the same satisfaction

that can be found in some Positive Core Drives, such as Accomplishment and Meaning. Ultimately, Negative Motivation was diminished as pressure was relieved among the group. Their Positive Motivation increased as their support for each other became more meaningful and rewarding. This demonstrated that with group work, student can bond together to form the equivalent of a Positive Motivation Core Drive.

More in depth research of these topics can be found in the Appendix.

## CONCLUSION FOR NEGATIVE MOTIVATION CORE DRIVES (6, 7, 8) + NEUTRAL CORE DRIVE (5)

Positive Motivation is a nurturing foundation to bring out Hidden Potential in students. However, this did not encourage the student to experience transcending learning. The research demonstrated that it is Negative Motivation that dramatically reveal the Hidden Potentials in student. Bringing out Unintended Learning Outcomes that were not seen from their previous knowledge.

## HOW DOES NEGATIVE MOTIVATION STIMULATE HIDDEN POTENTIAL IN DESIGN EDUCATION?

### **Scarcity**

Scarcity occurs in all parts of life, such as free time, blank piece of paper or lack of instruction. While seemingly has no value, this research shows that when used properly, they can be the perfect canvas for students to apply their Hidden Potential.

In “Core Drive 6: Scarcity” Students developed a curiosity for portions of lesson that were accidentally omitted, making space them to seek the answer out for themselves. Some other student find the joy in using the given free time to exercise their Artistic confidence further and deliver work beyond their regular norm. Experienced 4th-year student faced a Scarcity during their internship that offered no goal or purpose to work toward. Instead, they manage to take matters into their hand and create their ambition and motivation to get fulfilled. As demonstrated, students have a natural intelligence to make the best of the Scarcity.

### **Unpredictability**

In “Core Drive 7: Unpredictability”, it is evident that schools do not prepare students well for unpredictable challenges. Vocational education emphasizes “hard skill”, which is instrumental in simple situations. However, life problems are more complex and require abilities only found in Soft Skills.

Soft skills are revealed when students are in an environment outside of school. The unpredictable nature of life enables students to uncover these hidden abilities that they didn’t know they were capable of.

### **Limitation is a necessity**

Negative pressure, such as consequences of own actions, deadlines, and grades in theory, does not bring out the Hidden Potential in students. “Core Drive 8: Loss & Avoidance” shows that many troubled students did not use their freedom best. However, the same student demonstrates impressive Hidden Potential the moment they feel the external pressure of a deadline and its bearing consequences. While this method is effective, it needs to be regulated as some students use it to the extreme, leading to unhealthy behavior. A normal student tend to depend on external pressure while disciplined students operate on the internal pressure they have created for themselves.

## RESEARCH CONCLUSION

While traditional education knowledge is valuable for its wisdom, taking inspiration from fields outside the pedagogical sphere widens the perspective and adds value to existing knowledge, eventually benefiting both students and teachers.

Gamification Theory demystified the complexity of the pedagogical environment into two simple groups, Positive and Negative motivation. With a more straightforward overview, teachers can quickly analyze their learning environment and strategically design lessons. If game designers can facilitate an ideal experience that gets the most out of their players, with the same knowledge teachers can do the same to get the most out of their students.

While Hard Skill <sup>1</sup> is visible and can be objectively taught in school, Hidden Potential is harder to define as they are invisible and subjective. To find the answer, Gamification Core Drives were used to examine students' behavior and surroundings. The result shows that while Positive Motivation created a nurtured and motivating environment for the students, it did not yield results that would be deemed significant. However, when students were confronted with Negative Motivation, Hidden Potential began to reveal itself.

## What is Hidden Potential?



Hidden Potentials is an ability to adapt to changing circumstances using art and creativity. The result of Practice Research showed that assignments, group work, and internships have enabled students to demonstrate their adaptive skills to diverse challenges. While adaptability is commonly understood as a Soft Skill<sup>2</sup>, this research provides a more thorough definition of what it means in the context of Art & Design education.

### **Adaptable to everything and nothing**

Students are living in a time of abundance in resources and unlimited possibilities. This would also mean more complexity and demands in what they do. The ability to thrive in this rich and challenging environment is a valuable skill, especially in the modern time when there's only more of everything. On the other end of the spectrum, students are often confronted with nothingness, from creating ideas to filling up a blank canvas. Nothingness also means a state of uncertainty and unpredictability. The skill of expressing creativity from nothing while simultaneously facing the unknown is the ultimate adaptability.

### **Adaptive is proactive**

While surrounding circumstances are external challenges, this research also shows internal challenges that students have to deal with in their minds. These are the many artistic biases they face during learning and creating. The ability of students to adapt themselves to deal with these biases is crucial for their well-being in the long term. The definition of adaptability often means a reactive state of adjusting and keeping up with circumstances. When confronted with low confidence in one's artistic confidence, students proactively create personal goals, plan, and accumulate past knowledge to push that confidence forward. When faced with nothingness, the student allows themselves to open new possibilities that will enable them to create. Students learn to resist tendencies that stunt learning while embracing new possibilities that open doors to new opportunities.

### **Adaptive to maintain control**

Students will not fall into the trap of being perfectionists with only subjects they feel safe with, leading to crafting addiction that interferes with their learning progress. They will not become reliant on technological conveniences, which could remove their control over their creation and vision. The ability to work with the tools and not become the tools is needed to maintain personal control of the bigger purpose. They have developed the ability to zoom out and understand the context of their actions without being held back by artistic bias or tools. Maintaining personal control while adapting against the many unproductive tendencies is a powerful Hidden Potential a student can have for themselves.

- 
1. Hard skill is a technical skill connected to a specific job that requires repetitive practice to achieve mastery. It is an instrumental skill that defines what one can do.
  2. Soft skill is a set of skills that include interpersonal, communication, time management, empathy, and other intuitive actions. It is a creative skill that defines how one functions.

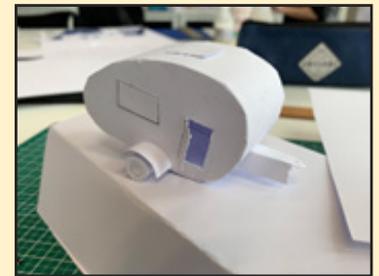
## How to stimulate it in Art & Design education



This research shows that the Hidden Potential of adaptability cannot be taught but only comes out when students face an adversary. Based on this reaction, facilitating different combinations of Negative Motivation Core Drives would help to stimulate adaptability in the classroom. But first, Positive Motivation is needed to make it comfortable for students to express their unique ways of adapting. But if there are not enough resources to facilitate Positive Motivation, group work can also be used as a substitute.

### STUDENTS WITH HIDDEN POTENTIAL

This student has a unique way of expressing creativity through physical art forms that deviate from the digital curriculum. Students feel neglected as the school does not recognize what he is doing and almost drops out of his study. With the help of Positive Motivation, which acknowledged his way of working, he regained his artistic confidence and got back on track.



As a challenge for the final exam, students are asked to create a product that helps teachers teach children about different cultures. While most students adapt to these challenges with a safe approach that creates expected results, this student used his unique ways to make an actual working product that is both original and usable.

*Left: Physical products of a traveling suitcase containing cultural props for teachers to share with students from different school.*

## How to create new hidden potentials



The ability to adapt comes from what students find challenging, and if it is to be repeated, the challenge loses its value and students will stagnate. Therefore the facilitation of new challenges is required to enable new ways to adapt from student.

To do this, different combinations of Core Drives can be utilized to generate various scenarios that are always different for the students. Additionally, what is considered challenging depends on the student's skills and their relevancy. Therefore dialogical methods are needed to understand students better so challenges can be facilitated for students more effectively.

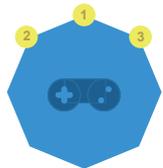
## How can students find it themselves



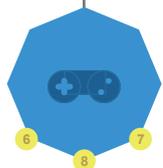
Students can find Hidden Potential themselves by proactively looking for new challenges they have yet to become familiar with. However, as they develop themselves, there is a tendency for students to focus on their artistic confidence. Without guidance, there could be a risk that enables students to remain at this stage which inhibits them from moving forward to explore new challenges. Therefore, students must consider external influences to stimulate new challenges that open possibilities to Hidden Potential. External influences could mean group work or feedback from teachers.

## CLOSING WORDS

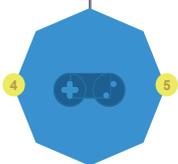
### How to cultivate & harness hidden potentials in vocational art students to expand their personal agency



Hidden Potentials are revealed as the ability to adapt to challenges using art and creativity. Strategically, Positive Motivation is needed to cultivate artistic confidence before introducing Negative Motivation. Feeling confidently grounded is vital before exploring new and unpredictable challenges to expand their agency. Positive Motivation, Meaning & Purpose act as a catalyst to this learning journey. Students will learn the skills and tools they need to be Empowered. After every successful milestone, students must take their time to affirm their personal Accomplishments so that their artistic confidence gets fully embodied.



As artistic confidence is established, Negative Motivation can be introduced as challenges that ensure students remain in their comfort zone. Scarcity creates an empty space that allows the student to express their creativity. Loss & Avoidance create negative pressure; while unhealthy but necessary, it ensures students to not stagnate. Last is Unpredictability, which takes students to uncertain situations which rely on how they use their learned skills and tools to provide a favorable outcome. Negative Motivation Core Drives should gradually be introduced to harness students' adaptable skills at a comfortable pace. The final most challenging test of adaptive ability occurs when students confront all Negative Motivation Cores while having little or no Positive Motivation to support them. If they can overcome this, they can reach the highest point of learning: autonomy, the ability to become the author of their own making.



While not the main component of the Gamification Theory, Neutral Core Drives are essential to support the student in both Positive and Negative Motivation. Ownership is a temporary substitute for many students who have yet to find their Meaning & Purpose. While Social Influence provides the student with external feedback to ensure they are not stuck in their comfort zone and provides moral support when Negative Motivations are overpowering.

Based on the concluding outcome of the research, the goal for vocational Art & Design education has become much more evident for both students and teachers. For the student, they join art school to be in an environment that would teach them what they want, which are the skills and tools they need to reach their vision, while being in an inspiring environment with like-minded people. At the same time, teachers cultivate their artistic confidence and create meaningful challenges that they need to harness their Hidden Potential. At the end of the study, students are proficient at handling a broad range of difficult challenges while developing a proactive attitude that allows them to take control of their personal agency.

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3. Positive Core Drives: Meaning & Purpose (1), Accomplishment (2), Empowerment (3)
  4. Negative Core Drives: Scarcity (6), Unpredictability (7), Loss & Avoidance (8)
  5. Neutral Core Drives: Ownership (4), Social Influence (5)

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I would like to thank all the staff of Meia (Master Education in Arts) who made the study possible during the difficult time of the global Covid epidemic. And special thanks to my tutors, Sjoerd and Thijs, for the countless sharp and concise feedback which help to materialize the research thesis. Additionally, I would like to thank the class of 2020-2022 for being there for each other as support during this learning journey.

## APPENDIX

Here are more in-depth results from the Practice Research.

## CORE DRIVE 1: MEANING

### PART 1: OBSERVING MEANING

According to the Gamification theory mentioned previously, the student will feel more motivated when placed in a significant role that can make a difference in the world. This effect increases when they realize the power is within their reach.

#### OBSERVING MEANING

Below, I observe the current position of Meaning and its impact on the student's mindset.

#### RESULT: UNREALISTIC MEANING ARE RAMPANT



*Artwork showing final work of high standard.*

Students and teachers gather their inspiration from mainstream media for a source of inspiration. Art shown in the mainstream media sets a high benchmark of what one can do and what the industry standard should be. Even the process image also looks perfect. There's also a notion that if you make it to the "Showcase" frontpage with your finished work, you made it as an artist.



On the surface, artwork in the media is impressive work that is supposed to motivate students; however, it turns out to be intimidating and demotivating. Unfortunately, these unrealistic Meanings demotivate students as they don't see personal development are worthy of value to make a difference.

Students feel the need to be perfect, which stifles creativity as they spend more time refining their technique than exploring new possibilities in art. As a result, the student is ashamed of showing their process work, as they learned that the final result determines everything. This "showcase" attitude makes students feel insecure about

themselves and their personal development.

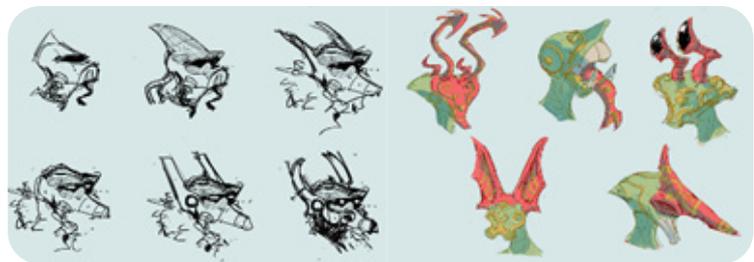
## PART 2: MAKE MEANING INCLUSIVE

I created changes to Meanings to enable better learning attitude in student. In response to the lack of true meanings due to absent of process, I made some changes to make students feel more at ease in their learning growth so that they can see themselves as the significant role to creating the path of their own success.

### RESEARCH ACTION: MAKE MEANING INCLUSIVE BY INTRODUCING PROCESS

While “Unrealistic Meaning” creates the pressure to be perfect, it is understandable that it is a valid motivating goal to make one work toward to. Therefore, the idea of perfection cannot be removed, but it is essential to let students know the process beforehand. By introducing earlier sketches of the final product, it demonstrates that there are attainable steps before reaching perfection.

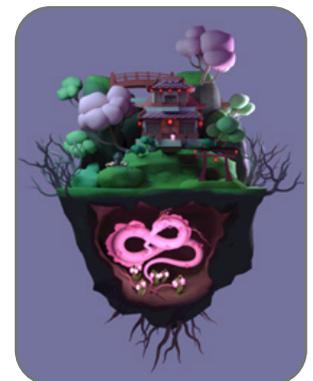
The goal is to show that sketches are meant for ideas exploration, studies, trial and errors. Despite their “imperfect” nature, they play a powerful role in determining the final outcome.



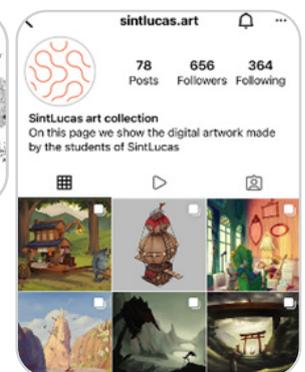
*Left: Sketches, Right: Realization*



3D Modelling is a popular method of creative expression that enables students to create perfectly polished art that is rendered by computer. This relatively new art form is very attractive due to its immediate result. While it is a powerful tool, this technique removes students even further from the natural design process. Students are shown sketches that take place before the final 3D product. They need to know that even with the help of technology that helps render out perfection, it still begins with human planning.



More emphasis on students' process is being displayed on the school's social media. This also communicates to the student what they should expect from this study, which makes them prepare for the “messy” process that will take place in their learning environment.



Not only exceptional work from graduate students is displayed this year, but there is also an extra emphasis on early work done by 2nd-year students. Having this in the hall of the school creates a comfortable and true atmosphere for the learning environment.

*Left: One of the featured work from 2nd year students in school's hall.*

## RESEARCH RESULT: RELATABLE WORK MAKES STUDENTS FEEL SAFE IN THE CLASSROOM

The emphasis on the “messy” process implies that the learning environment is a safe space for them to make mistakes, making them feel more confident to be vulnerable. The student sees their work as a reflection of what they have learned instead of a hostile judgmental environment.



Playful Sketches

Experiments with new Medium

Inclusivity is needed as a foundation for Hidden Potential. Creating this space in the education system brings out the hidden potential and makes us not feel ashamed to show it. As a result of creating an atmosphere of realistic expectation that emphasizes process, students feel more comfortable in what they do and show. The result indicates that the student feels confident enough to experiment with different techniques, materials, and process.

## CORE DRIVE 2: ACCOMPLISHMENT

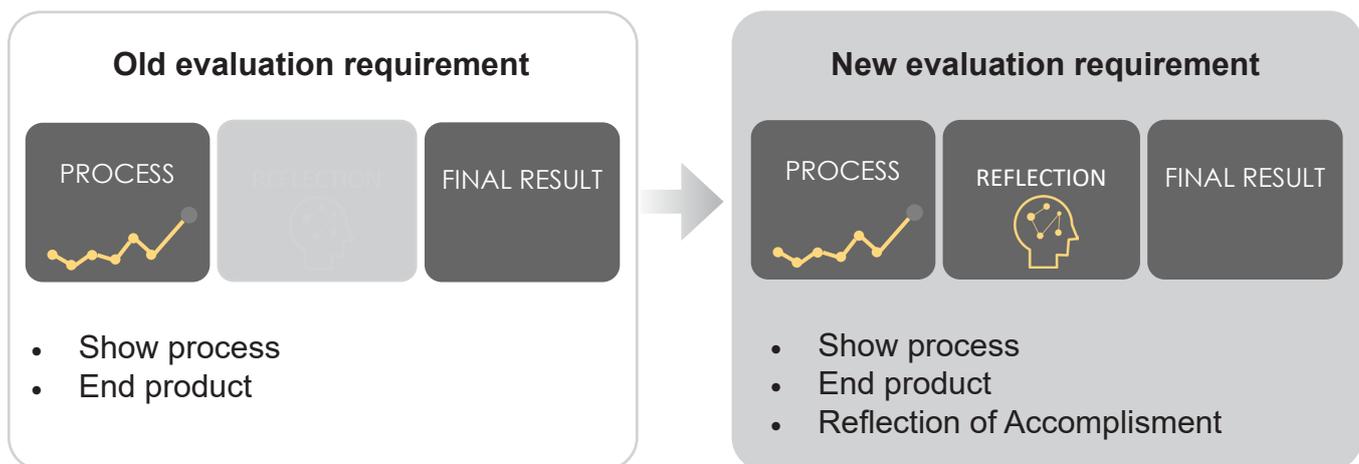
### Practice Research: Create Accomplishment through Reflection

Within this curriculum, there needed to be more emphasis on reflection in the classroom so student can acknowledge the success in their progress. During the curriculum, student move from one lesson to another without a break moment. By adding in reflection, students have a moment to stop and reflect on what they've accomplished.

## RESEARCH ACTION: CREATE ACCOMPLISHMENT THROUGH REFLECTION

There were no time in the curriculum for a student to truly reflect. For this research, they are given a big portion of their time to reflect on what they were occupied with and how it affected their knowledge. For the total assessment, a written reflection has the same value as the art work itself.

Both 2nd and 4th-year students get to choose between an familiar subject or a new subject for their project. For 2nd year student, it's an exercise, and for the 4th year student is an exam. As a result, most student of both year choose to go with the old subject.



## RESEARCH RESULT: STUDENT FEELS ACCOMPLISHED, BUT WANTS TO KEEP DOING THE SAME

By allowing students to look back at their progress, student have an opportunity to witness the tangible development that is happening within themselves. As shown from these examples, clear improvement is seen in many aspects such as composition, ideas, light and poses. This moment of reflection gives students a chance to acknowledge their achievement that boosts their artistic confidence.

*“It was hard to draw at first but by the end I felt more at ease and started enjoying the proces a lot more. I learned a lot more about the body and muscles from these lesssons and also think more about how it would work in the body when drawing certain poses...”*

*I am pretty happy with how my drawing turned out although I do think it could have been improved in a matter of ways such as better shading or line art for instance. but over all it definitely isn't bad and I am proud of myself regardless*

*I also really liked the final assignment. I made something that would't have been able to make without these classes and I'm very proud of how it turned out"*



*Old & New*

The reflection of the 2nd year turned out to be successful, as they witnessed what was accomplished over a short period. Seeing how much they have learned quickly keeps them motivated and happy. The result were positive, however students begin to lose motivation through out the later half of the year despite the given freedom:

*...This stuff is actually really interesting! Although I found myself a little bored throughout, I can't help but be fascinated by all manners of art theory, and this particular knowledge is going to be really helpful! I might practice it in my free time..."*

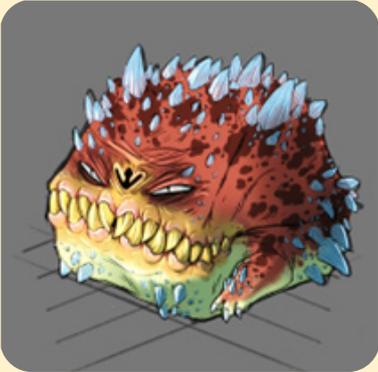
Looking the students work above, most choose to remain in their comfort zone and pick the same familiar subjects to improve upon. Naturally this means excitement decrease for students after a prolong period of remaining in comfort zone.



*Old & New*

## RESEARCH RESULT: DOING THE SAME LEADS TO BURN OUT

These are the artwork by a student who has enjoyed creating creatures since the beginning of his study. For the final project, he wants to take what he loves and make it on a grander scale, with much more detailed definitions.



*Old & New*

This is a personal challenge that would make him feel Accomplished. Take what he loves and make it perfect. However, it turned out that the work of perfectionism is tedious and less rewarding than he'd imagined. By the time it was completed, he was worn out from the subject that he once used to love.

This example represent a common narrative for many 4th-year students, who pick a predictable subject as the main challenge for their Accomplishments. They only realize later that perfectionism is not a rewarding challenge, even when that goal is reached.

## RESEARCH RESULT: DOING THE SAME REDUCE CREATIVITY



*Old & New*

These are works by the same student, one from when he was 1st year and one from when he was in his 4th year. The quality of the recent work shows more refinement in its detail but decrease in creativity. In earlier work, the student is braver in experimenting with the character's light, color, and personality.

The student's earlier work also has diverse range of subjects, but his vision get narrower over the years. This example also represents a common narrative for students who associate Accomplishment with Perfectionism. End up losing the original creativity and flexibility they once have with art.

# CORE DRIVE 3: EMPOWERMENT OF CREATIVITY & FEEDBACK

## Part 1: Make learning fun by making it Inclusive

The educational materials that teach students need to be more transparent, organized, and present. With this, they need a foundation to be engaged and motivated in their learning.

Inspired by modern games like Minecraft, where it is clear to see the different choices of blocks that can be used to express something greater. My educational theories are created the same way, grouped in blocks, making it easy for students to grasp and apply to their creations.

## RESEARCH ACTION: MAKE LEARNING FUN BY MAKING IT INCLUSIVE

On the top is an illustrated example of text excerpts of theories often found in academic sources. While the content is valuable, it is overwhelming for young students who are visual creators and learners. Therefore, theories get converted into visual diagrams that make it easier for the student to understand, so they can spend more time applying them.

Design theory is essential to the process of design as it help concept artist communicate thoughtful and clear design for the viewer. For example, if you want to have a design that has strong emphasis on agility and speed, then you might want to have emphasis in long and small elongated details that create the feeling that you want to achieve.

Contrast takes place when concept designer use two design styles and put next to each other to enhance their differences. Using this technique can bring out the differences in both design with act as a balance to the overall picture. The designer can place emphasis on a specific portions of the design by putting more emphasis on the heavier design, while being next to a lighter design. This will make the viewer more biased toward the heavier design. The concept of large image next to small images is a useful technique that can be seen in many product that you see on screen today.

Academic Language



Inclusive Language

<p>Big Medium Small</p> <p>An aesthetical pleasing design is made up of these shapes.</p>	<p>No matter the details. Proportion of Size &amp; Quantity is 1:3:9</p>	<p>It is pleasing because it create a visual contrast. In this case, contrast between shapes</p>
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## RESEARCH RESULT: STUDENTS FEELS CONNECTED WITH INSTITUTIONAL MEANINGS

The results turn out to be very successful, as students find this theory fascinating as it changes how they see their work. This valuable lesson has always been always there, hidden in the curriculum. However, it was the voice of the student that brought it out of the academic jargon to make it effective.

Complex design theories are translated into more accessible terms. Students can now have an easier time absorbing knowledge which will give them an easier time to develop themselves. The idea is proven effective as most students recall its educational value and how it affects them based on their reflection on this assignment. Here is a small sample that best represents the majority of the students.

“After experiencing these assignments and looking back at what I learned and how I applied it, I cannot get it out of my head whenever I draw something. I keep thinking about balancing the big, medium and small shapes and making sure it looks clear if it were a silhouette. Before getting to know this theory, I never thought about all these things and just went with it, but I am glad I got to learn from this and apply it to my following projects from now on.”

“I really learned a lot of this assignment, I'm way more aware now of how much an impact Big Medium Small has on your designs, and I notice myself looking at my own and other people's art and just see the big medium small they used, I also implement it in my own work a lot more.”

Can students learn while having fun? There is a risk of reducing complexity in education, which could make students unable to think for themselves. However, the clarity of the theories makes students enjoy the lesson more while allowing them to find the more significant meanings of their simplified materials.

“One thing I learned about myself as an artist is that I feel like, as an artist, I've been conditioned into thinking that technical skill and end results are what it's mainly about. For a while I've known the importance of process now, but I don't feel like I fully understood why it's so important and how to properly portray and explain my process. I'm still learning that. And sure, technical skill is definitely important to learn in order to grow as an artist and take your art to a next level, but I've learned that art doesn't solely rely on execution. It's the idea behind it and the design of it that can make it even more interesting than your art being technically skillful and good. A good design or idea can truly capture and engage an audience; it's recognizable and has certain qualities, including the ones we've learned about this period; big-medium-small shapes, silhouettes, why something looks a certain way (like why does this character have this accessory for example), basically it can tell a story. I'd certainly like to practice documenting my process more, and how I get to certain ideas or designs, so I can back it up. I'd also like to practice design more.”

“A good design or idea can truly capture and engage an audience; it's recognizable and has certain qualities, including the ones we've learned about this period; big-medium-small shapes, silhouettes, why something looks a certain way (like why does this character have this accessory for example), basically it can tell a story.”

# RESEARCH ACTION: MAKING LEARNING FUN BY REDUCING COMPLEXITY

The idea is to reduce abstraction / complexity to increase learning opportunities. As complex education materials get condensed into smaller doses for students, the curriculum has more space to introduce more learning materials. For this research, I have introduced vital design theories into several "Theoretical Blocks" to make it easier for students to identify and manage.

**Assignment**

Assignments with different challenges are assigned to students.



**Theoretical Blocks**

## RESULT: GENERALIST AND PERFECTIONIST

Most expressed their enjoyment for this assignment through their written reflection and in the presented works. As observed, the results are divided into two types.

### Type One: Generalist

Enjoys a higher number of Theoretical Blocks, these are the ones who enjoy experimenting with new things. They found the many Blocks enjoyable and were passionate during the process.

**Assignment**

Draw randomly assigned subject in 3 stages of evolution.

Assigned Subject:  
"Hawaiian Cow"



**Theoretical Blocks**

...I liked the assignments we did this period and I learned a lot from them.

From working with the silhouettes I learned how to make a character stand out more. I also learned a new way to draw characters without line work. From the evolution exercise I learned that you shouldn't be afraid to exaggerate and make your evolution extreme.

From the research assignment I learned that its useful to highlight specifically what you want to use on a reference board. Highlighting is useful because if you stop drawing and come back the next day you wil still know what parts you wanted to use.

In conclusion I learned a lot of new thing and am happy with the work I've made this period..."



Result

**Type Two: Perfectionist**

Enjoy a smaller number of Theoretical Blocks. They are the ones that are beginning students or advanced students who are occupied with perfectionism.

**Assignment**

Draw randomly assigned subject in 3 stages of evolution.

Assigned Subject:  
"Monster Viking Cake"



*Result*

+

**Theoretical Blocks**

...despite greyscale definitively not being my best skill. i wanted to give it a try. i took inspiration from childrens books with very creepy and messy drawings in them. this would give the unsettling in your face look i wanted it to give.



i started thinking of how i could do this. and after a while i had some idea's. I did some research on vikings. and it turned out that vikings told stories about monsters disguised as the enemy. i wanted to play with this and create a cake made from all the flesh from the monsters they had defeated in battle.

I did need a good moodboard for this. i felt like for my previous evolution. i couldnt really choose and apply many parts since a monster cake can be anything."

## CORE DRIVE 4: OWNERSHIP

### Practice Research: Replace Meaning with Ownership.

In art & design education, many students are still very young to develop a clear sense of meaning & purpose in their life. This makes it difficult for them to engage in the curriculum entirely, as they need to find a reason to learn.

## PRACTICE RESEARCH: OBSERVING OWNERSHIP

Positive Core Drive (1, 2, 3) are the ingredients that give students a powerful mindset to be motivated in what they do. While this spiritual motivation keeps students going, they need to be grounded by a tangible Ownership of something. While searching for their meaning and purpose, students find connections with “Comfort Subjects” that keep them calm. These might be their favorite animals, fantasy characters, or a gothic or fairytale setting. These subjects function similarly to the Ownership core drives, as students dedicate their time maintaining their avatar.

Through an assignment, students have the choice to apply the learned material to:

- An comfort subject
- A new subject

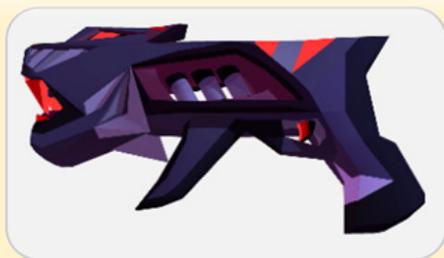
## RESEARCH RESULT: ARTISTIC CONFIDENCE START FROM COMFORT SUBJECT

Most would choose the safe path and pick their old work to make an incremental improvement upon. They want to gain enough confidence and safety. Some students developed enough confidence and moved on to new subjects. “Comfort Subject” is a familiar canvas for students to build their artistic confidence while not yet having a Meaning & Purpose.

This is a case study of a student fascinated with animals, especially tigers, that can be seen on her online avatars and, naturally, her artwork. This is an example of many students who have a personal attachment to a specific subject that is very prevalent.



Artwork from 1st year as students is asked to make free illustrations of their favorite subject. This is the most straightforward stage to spot the student’s favorite subjects, in this case, it is obvious.



In 2nd year, students have to design a video game weapon in 3d, a technique uncomfortable to many at the time. This student made a complex design with the influence of tiger imagery despite being a beginner at 3D.



In 3rd year, students must make a landscape picture incorporating 2D and 3D techniques. This combination is a complex technique, and landscape imagery differs from her specialty. In the image are photos of a dragon that sleeps peacefully in the landscape; the result was great for someone who just started with this imagery.



After that, she made another landscape picture that improved drastically. Besides the advanced skills in such a short time, this picture has even less animal symbolism.



In the 4th year, students must design a zeppelin influenced by Roman architecture. The result turned out to be great, with, for the first time, no imagery of animals.

As observed, the student's "Comfort Subject" was prominent as students got the hang of software and techniques in their study environment. As she becomes more confident, the "Comfort Subject" imagery gets diminish.

## PRACTICE RESEARCH: OBSERVING OWNERSHIP

Students of the older years who did not have an opportunity to build confidence based on their "Comfort Subject". What happened to them? The same setup is applied for students of older years who still need to have an opportunity to express their Personal Voice.

## RESULT: ARTISTIC CONFIDENCE IS BUILT FROM PERSONAL ACCOMPLISHMENT

Students of the older years who did not have an opportunity to build confidence based on their "Comfort Subject". What happened to them? The same setup is applied for students of older years who still need to have an opportunity to express their Personal Voice.



On the left is the 1st year work, and on the right is the 4th year final graduation work. The project appears to be a realized version of the first sketch she had when starting this study 3 years prior.

“Basic Psychological Needs Theory” says that three basic psychological needs are Autonomy, Competence, and Relatedness. This appears to work well for individuals already confident with a clear purpose. The students in this study mostly struggle with their artistic confidence as they search for meanings. Therefore the alternative Self Determination Theory fits better for younger students.

“The three variables that people have most frequently argued should be considered basic psychological needs are meaning, self-esteem and security” (Richard M. Ryan and Edward L. Deci , 2018, 252)

Basic Psychological Needs	Autonomy	Competence	Relatedness
Alternate Psychological Needs Theory	Meaning	Self-Esteem	Security

## CORE DRIVES 5: SOCIAL INFLUENCE

### MY RESEARCH ACTION: YOUNG STUDENTS ARE ASKED TO WORK IN GROUP TO FORM A FINAL PRODUCT

Based on the pattern from the older students, working together is a great challenge. Therefore, I made an assignment to create the student of the 2nd year to get familiar with team work so that they will have an easier time in the future.

### RESULT: COMMUNICATION IS ALREADY NATURAL

The result turn out to be surprisingly positive, as student have no problem working in group. They were natural at this process and didn't seem to think that it was a challenge like it initially made out to be.

I have great expectations for this lesson, designed to encourage students to work together to form a product. Based on the pattern from the older years, working together is a challenge; therefore, it must mean that 2nd year would have the most trouble. The initial announcement of the assignment was an excellent surprise for the teachers and the students. However, students so far are okay with working in pairs, as they are already socializing with each other. The result was the opposite; they were natural at this process and didn't seem to think that it was a challenge like it initially made out to be.

Working in a team like this was really fun. We all got enthusiastic when we were brainstorming ideas about the game and when someone else added their idea it was well thought of and most of the times we all agreed on adding their idea in the game. Also in the planning we made sure everyone did an equal amount of work and we were all taking initiatives. The collaboration, my team mates, the positive energy and the project were very good and that's one of the main factors which made me enjoy this project, probably most of all the other collaboration projects I did in the past.

This 2D assignment was the most fun for me, as I got to work in a group with hardworking and enthusiastic people while also learning and seeing for ourselves what the making of concept art holds. Everything went well, from brainstorming to working on the final concept art, because we managed to share the work equally and communicate about every step through discord. We all did tasks that matched with our different likings and qualities so everyone had the chance to show themselves with this assignment. I am really happy with our concept and how it all came together!



I really liked this assignment! Everyone in our group was really enthusiastic during the brainstorming process and everyone had great ideas and designs. The communication went well and everyone regularly asked for feedback. The tasks were divided equally and everyone delivered their work on time. Sadly, I got ill while working on this project so I couldn't deliver with the quality I wished I could but I'm still really happy with my work and how the concept worked out in the end.

I actually really liked this small assignment. Everyone in my group had wonderful ideas and were all evenly enthusiastic. We gave everyone an equal amount of work and everyone gave their end result on time. Furthermore the communication went well and we helped each other where it was necessary. Overall this was a great project which I enjoyed a lot!

## MY RESEARCH ACTION: OBSERVING INTERNSHIP

This is the first opportunity for the student to enter the real world to experience who they are. Students participated in a natural work environment full-time for five months. Once the internship ended, they made a report and interviewed about their experience together to imagine a game that consisted of essential art assets so that they could make concept art.

## RESULT: FEEDBACK

The most commonly discussed subjects regarding the internship are Teamwork, Communication & Feedback. However, these subjects are not surprising, but upon a closer look, it is interesting to see the positive effects it has on students.

When the Student steps momentarily out of school into the natural environment, the topics of Feedback come up a lot during the conversation. Students have a particular perception of how they would fit into the internship; the many Feedback and experiences give them a clearer perception of themselves.

## MY RESEARCH ACTION: ASKING STUDENTS TO WORK IN GROUPS TO SOLVE A PROBLEM.

During the internship, students are in a junior position and are supervised by the company's senior, who has already figured out what the client wants. For the group assignment, the student's responsibility becomes bigger as the role of a senior is removed. They have to work directly with the clients and figure out among themselves how to deal with it.

The assigned client presented problematic tendencies that are commonly found in the field of Art & Design. The situation contains factors that would be considered "Negative Motivation." As this is the first time they are confronted with direct responsibility, the students feel a slight dip in motivation. However, they managed to handle it well in the end and provided the following key point that made it work under this challenging and demotivating situation.

### RESULT: SOCIAL INFLUENCE MADE IT POSSIBLE TO WORK WITH ONLY NEGATIVE MOTIVATION

Despite being classmates, they were not initially close friends, so the group was slightly distant. However, dealing with such demanding clients with shared responsibilities, they have learned to bond with each other. Similar to the world of multiplayer games, where participants from across the world from different backgrounds manage to bond together to accomplish a common enemy.

A disparate literature hypothesizes what can broadly be described as the common-enemy effect: the fact that the interaction with a common enemy (formed by Nature, an individual, or a group) increases cooperation. This review identifies the multidisciplinary antecedents of this effect, and then distinguishes between several strands of literature applying noncooperative game theory to account for it. A first strand argues that the threat posed by a common enemy makes each player's cooperative effort more critical. In a second strand a behavioral common-enemy effect caused by group interaction is studied experimentally." (Kris De Jaegher, 2020, 3)

Based on this bonding, the students supported each other through communication while making the group stronger.

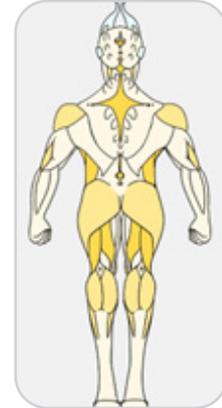
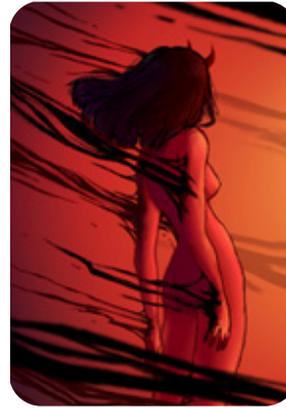
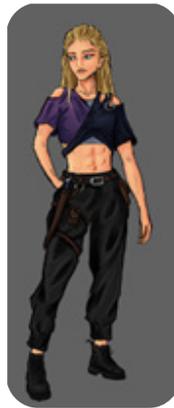
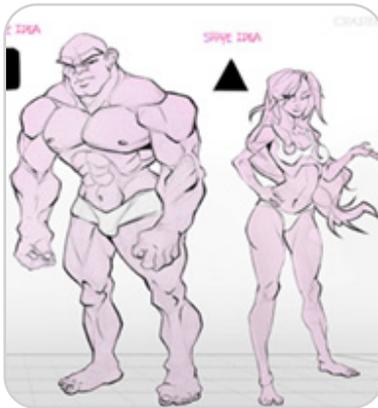
Participants in this study were asked to spend about 3 hours studying relatively complex material on neuropsychology. Half were told they would have an opportunity to put the material to active use by teaching it to others, whereas the other half were told they should study because they would be tested on their learning....Results revealed that participants who studied in order to use the material to teach others evidenced significantly greater intrinsic motivation and demonstrated significantly better conceptual understanding than participants who learned in order to take an exam" (Richard M. Ryan and Edward L. Deci , 2018, 174)

And while supporting each other could mean that it's energy-draining, the opposite is true. When students help others, they feel personally accomplished by themselves without having to reach any external goal.

## CORE DRIVES 6: SCARCITY

### PART 1: OBSERVING SCARCITY IN THE CLASSROOM

Students choose to draw a front view of the figure, a “Comfort Subject” as the most common choice. However, several students drew the back of the figure; this caught my attention as to why they chose such a view.



### RESULT: SCARCITY CREATE SPACE FOR CREATIVITY

I decided to investigate further why they chose to draw the back. By reviewing the teaching materials, it turned out that the back view was omitted by accident. By accidentally not revealing this, it brings curiosity for the students to discover it themselves.

“...I think it would also be very interesting to learn a bit about the anatomy of the back of a human because there are also a lot of muscles going on there...”

In education, we try to explain every detail of matters, which creates no space for students to exercise their creativity. By not showing this, we accidentally leave room for students to share their side of knowledge. This situation is similar to the topic of Education and Emancipation:

“After all ‘what stultifies the common people is not the lack of instruction, but the belief in the inferiority of their intelligence’. The only thing that is needed is to remind people that they can see and think for themselves and are not dependent upon others who see and think for them.” (Biesta, 2014, p. 83)

The realization of “Scarcity” in education can create more learning than it implies, giving space for students to express their imagination and fill in the empty gap themselves.

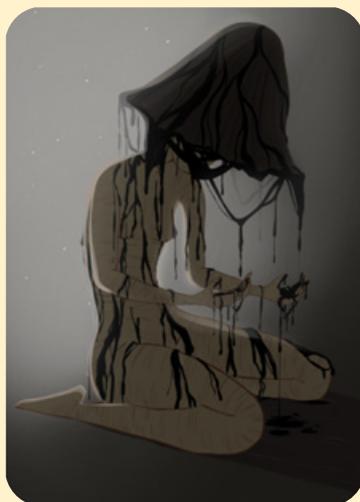
## FREE TIME AND ARTISTIC CONFIDENCE

Students followed “Safe Subject” to improve their artistic confidence, similar to Core Drives 4: Ownership. However, students who are no longer challenged by Safe Subject spend their free time creating work that turns out to be the new hidden potentials they’ve discovered themselves. It is essential to create a space for students to rise beyond the “Safe Subject” by giving them more time to experiment on their own or limiting instructions so they can figure things out by themselves. With this, their Hidden Potentials can be revealed.

### RESEARCH RESULT: SCARCITY ALLOWS ARTISTIC CONFIDENCE TO THRIVE



After the student realized her first sketch four years later, she felt confident enough to start something new with the small gap of free time that was available. A new original piece is made that is different from the “Comfort Subject” that she usually draws.



As her artistic confidence is at its peak, she does even more original work free time is allowed.

## CORE DRIVES 7: UNPREDICTABILITY

### PART 1: OBSERVE UNPREDICTABILITY INSIDE SCHOOL.

This exam takes the student to a school's simulation of a professional environment that simulates situations that occur outside of school. The challenge of the exam is its unpredictable factor as the goal is unclear, and it is up to them to solve it.

### RESULT: SCHOOL CREATES HARD SKILL

The student could have done better on the open nature of the assignment. However, upon further investigation from the previous year, most of the works were safe and predictable due to the vocational nature of this education. This structure is created with a clear goal so students can dedicate their time to developing technical competencies rather than their ability to solve problems creatively.

Feeling of competence come about when people have opportunities to apply skills and effort to task that are moderately difficult, allowing them to experience efficacy and success and thus to derive feelings of mastery and competence. Most every video game builds in elements that saliently support feeling of competence” (Richard M. Ryan and Edward L. Deci , 2018, 513)

Another element in games that support competence is the clarity of goals. Rarely in games that there is ambiguity about what is required to get ahead. Whether it is scoring more, completing more quests, or killing more enemies, for example it is usually spelled out clearly. Again, we can contrast this with everyday realities, in which the path to success for many people are much less clear along which feedback or reward can feel quite distant or delayed.” (Richard M. Ryan and Edward L. Deci , 2018, 514)

This is also common in video games when developers want to satisfy players' competence needs, which is one of the three main factors in psychological needs (autonomy, competence, and relatedness). For example, games need to be precise and moderately predictable so that

## PART 2: OBSERVE UNPREDICTABILITY DURING INTERNSHIP

Students participated in a real work environment full-time for five months. Once the internship ends, they make a report and interview about their experience. Reading Internship Reports helps me understand more profoundly the relationship between students and unpredictable factors outside the school environment. After all, this is where they will eventually be after graduation.

### RESULT: REAL LIFE CREATE SOFT SKILLS

Upon reading deeper into the internship reports, more critical patterns have emerged regarding the external factors (their internship). They can be summarized into the following qualities.

- Abstract
- Variations
- Unpredictability
- Uncertainty / Open / Vague / Gray
- Context / Situational
- Limitation
- Time
- Feedback

During the previous year, it was commonly accepted to reveal the entire study period to students with clear challenges they had to solve. However, during the internship, the challenges are more unpredictable as they have to figure out for themselves how to find what is relevant.

Another unexpected factor is that the school labels students with a clear role and function of what they do. However, the demands of the real world are different, and they have to learn to give themselves their own label. As a result, they learn to adapt to new skills, tools, workflows, and other processes to fit in the new environment.

The characteristic of vocational education is the act of developing competence in art productions. This would mean training students to be good technically, with the ability to handle different kinds of tools that would expand their production abilities. They are defined generally as “Hard Skills.”

“Soft Skills” involve communication skills and the ability to perform well in teams. These are skills that is overlooked because it is not visible. Many students prefer “Hard Skill” as it is a tangible product they can show and be graded for. Therefore it is understandable that during the internship conversation, there is a lot of emphasis on “Hard Skills”. Upon further questioning what else they find valuable, the idea of “Soft Skills” reveals.

Communication(Soft Skills) is not new. But for many, it is the realization of a unique ability. As students talk about the technical stuff that they learn, they eventually realize the end that communication is important and that it can make a difference in the effectiveness of their “Hard Skill”

#### Case example:

- Students are busy working on a product for a client with a need for more communication between the two parties. The result was improved when the student was aware that a product cannot be produced in one go without mutual feedback.
- Technical tools can bring many questions that cannot be resolved alone, or if it does, it will take a long time. However, with support from others, the problem can be solved immediately, giving students the time to go further with their goals.
- Students always work in solitary and would only see functional purpose in the technological tools they use. After the internship, he realized that communication is also a powerful function.

Students who demonstrated a natural ability for “Soft Skills” perform exceptionally well in their internship and learning in general. Students who lack “Soft Skills” usually perform well (or even significantly) during the practice and competence lessons but would have a lot of trouble working with others.

#### Case Example

- Talented students with excellent technical skills focus on learning and producing art without the help of others. The student is now struggling with significant personal difficulty due to an extremely negative self-image.
- Students always keep it to themselves while making great original art. However, during the internship, the student has trouble connecting with colleagues, creating significant conflicts.

A struggling student with technical skills but with great “Soft Skill” manage to do well in the end. Due to this student’s great communication skills, she called for help and support to help her achieve her goal. During her internship, she is greatly valued due to her clear communication and excellent management skills, as she likes to work with people. Due to the shortage of “Soft Skill” characteristics in a production-based environment, she is greatly valued.

## CORE DRIVES 8: LOSS & AVOIDANCE

### PART 1: REMOVING LOSS & AVOIDANCE FROM THE CLASSROOM

This practice research tries to minimize curriculum pressure on the students. This means reducing the demands on what a student does and reducing the presence of deadlines. The idea is to create a comfortable, stress-free atmosphere so that students can have room to

#### RESULT: AVOIDANCE IS UNAVOIDABLE

The lessons went well initially, as students experienced a more relaxed learning pace for the first time. They felt at ease as the assignments were not demanding of them to do uncomfortable things, and the deadline was more than enough to be considered a negative motivation.

Stage 1: Students enjoyed removing curriculum pressure and dedicated this time to improve their work, which is their primary concern.

Stage 2: Students have already spent enough time to improve their work and start diverting to other lessons they are falling behind on. In other words, students will seek out pressure from other classes.

### PART 2: OBSERVING LOSS & AVOIDANCE

Students had three months to finish several projects; however, many students didn't use these periods well. Instead, they were given a last chance to finish everything they'd missed or faced heavy consequences. I was the observer of this lesson and not the facilitator.

#### RESULT: AVOIDANCE IS NECESSARY

Stage 1: A period of 3 months seems to be a generous amount of time; students are too relaxed and only start working intensively when they feel the consequences of the approaching deadlines. As a result, there were a large number of students who still needed to finish all the assignments.

Stage 2: As a consequence of not finishing all the assignments, they are given a "Recovery Week" to complete what was missed. This opportunity is created anyway to provide the student with the last chance to prove themselves.

Based on their earlier performance, accomplishing this would be very difficult. However, students accepted the deadline and felt relieved that they were given a chance to make amends.

When the recovery week began, the focus and determination of the students were intense as they rushed to finish the assignment. Techniques and competence that were unused are now fully being used effectively, and every feedback was taken well.

Surprisingly, the atmosphere of the class was not stressful despite the intense workload. Instead, the students feel at ease due to the clarity and goal that they have with the pressure that they are working to erase. In the end, most students passed what seemed to be an impossible deadline. They have achieved and learned everything that was asked of them for a period of 3 months in 1 week. Perhaps they already have it in them, but the urgency of the deadline activated this hidden potential.

