Exploring First-Year Visual Arts Education Students' Perceptions of Creativity

by

Jean-Marie Willemse

Submitted in fulfilment of the requirements for the degree

MAGISTER EDUCATIONIS

in the Faculty of Education

at the

UNIVERSITY OF PRETORIA

Supervisor: Dr Deléne Human

August 2023

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Declaration

I, Jean-Marie Willemse, student number u13296052, declare that this dissertation, which I hereby submit for the degree Magister Educationis at the University of Pretoria is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Jean-Marie Willemse
20 August 2023

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DEGREE AND PROJECT	MEd Exploring first-year Visual Arts Education Students' perceptions of creativity
INVESTIGATOR	Ms Jean-Marie Willemse
DEPARTMENT	Humanities Education
APPROVAL TO COMMENCE STUDY	07 April 2021
DATE OF CLEARANCE CERTIFICATE	21 November 2022

CHAIRPERSON OF ETHICS COMMITTEE: Prof Funke Omidire

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Mr Simon Jiane
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This Ethics Clearance Certificate should be read in conjunction with the Integrated Declaration Form (D08) which specifies details regarding:

- Compliance with approved research protocol,
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- Informed consent/assent,
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03 February 2021

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Department of Humanities Education
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Dear Miss J Willemse

APPROVAL OF RESEARCH STUDY EDU222/20: EXPLORING FIRST-YEAR VISUAL ARTS EDUCATION STUDENTS' PERCEPTIONS OF CREATIVITY

I have perused the documents provided and approve the proposed research study.

I have no objection to the research team requesting the researchers from the Faculty of Education to participate in this research project, **subject to ethics approval by the Faculty of Education Research Ethics Committee**.

Kind regards

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Faculty of Education

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Dear Ms Willemse

APPROVAL OF RESEARCH STUDY

The UP Survey Coordinating Committee has granted approval for the research study titled "Exploring first-year visual arts education students' perceptions of creativity".

The proposed research study has to strictly adhere to the associated study protocol, as well as the UP Survey Policy and the Ethics Committee of the Faculty of Education instructions.

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Dedication

I dedicate this research to my husband, Christo Koch. Thank you for believing in me, patiently supporting me through it all. I love you.

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To have achieved this milestone in my life, I would like to express my sincere gratitude to the following individuals:

- My heavenly father, who provided me the strength, knowledge and perseverance to complete the study.
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- Language editor Dr Brenda Gouws for the editing of my dissertation and the absolute willingness to assist me in the final process of submitting.

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Abstract

This study explored how first-year Visual Arts education students perceived creativity. The focus was on visual arts in the first semester of the students' first year of study, that is, the Visual Arts practical module JKU 101 at the University of Pretoria. I examined these students' perceptions of creativity by taking influences like family, social background, gender, age, culture, other individuals in the individual's life, and background information gathered through questionnaires into consideration while analysing their first artwork created during their first semester. There have been many studies on creativity and how it exists, but not many of these have discussed how individuals perceive creativity. Generally, the focus has been on the perception that individuals need to be creative to experience creativity but excluded those who do not identify as creative. In my study, to address this gap, I relied on existing studies to guide me while analysing the artwork of selected first-year Visual Arts education students to identify how they perceived creativity. I further relied on the "thinking hats" theory developed by de Bono in 1985 and the triarchic theory of human intelligence developed by Sternberg in 2003 to explore the creativity of those who did not identify as creative. De Bono's lateral thinking method (the "thinking hats" theory) states that all individuals, no matter the influences or their skills, still experiences creativity. My findings showed that all the students in the study, irrespective of their skill set or level of creativity, experienced creativity, and that their ability to experience creativity was based on both internal and external influences. Nonetheless, at times, creativity in some of the individuals went unrecognised because it was identified differently. Consequently, I surmise that creativity and critical thinking are not limited to "special people" or "special occasions", but that all people experience creativity in different ways.

Key Terms:
artwork; creativity; Edward de Bono; first-year Visual Arts education students; Herrmann Brain Dominance Instrument (HBDI); Robert Sternberg; thinking hats; triarchic theory; visual arts; whole brain thinking.

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List of Abbreviations

HBDI	Herrmann Brain Dominance Instrument
IQ	Intelligence quotient
PPC	Posterior parietal cortex
STEM	Science, technology, engineering, and mathematics
STEAM	Science, technology, engineering, arts, and mathematics

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CHAPTER 1: THE EMERGENCE OF UNDERSTANDING

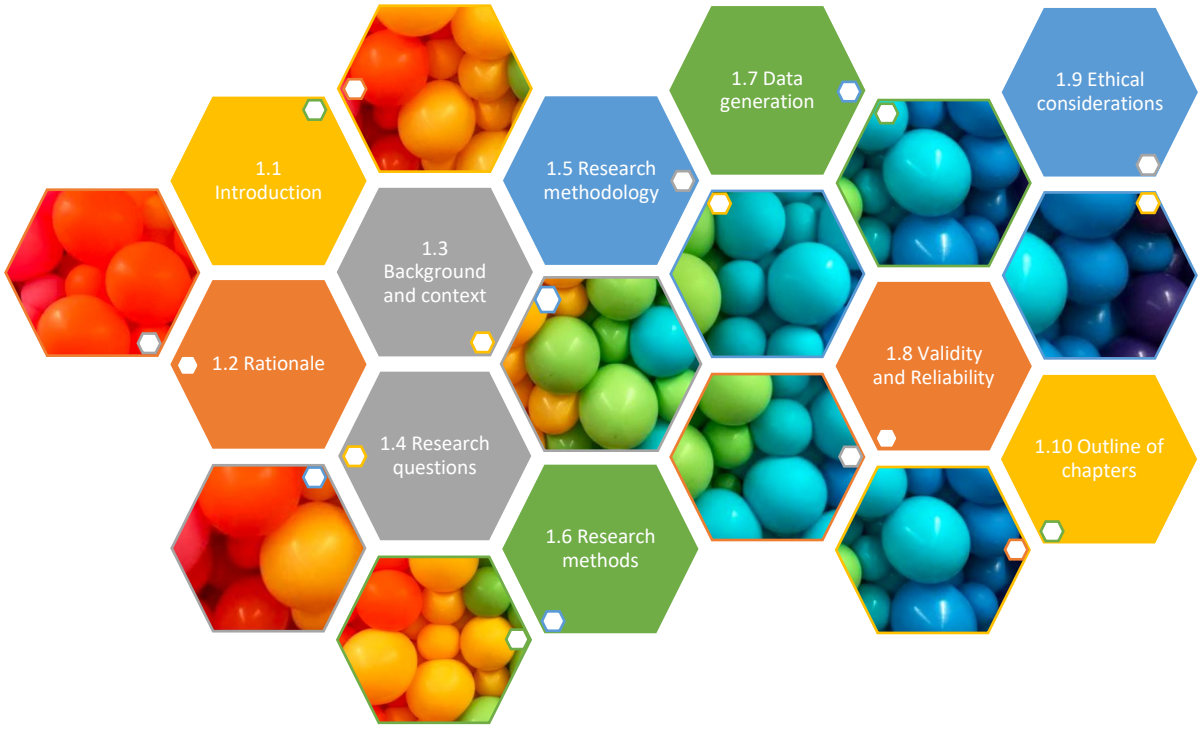

Figure 1. 1: Main items discussed in Chapter 1.

1.1 Introduction

Creativity is defined as the act of turning “new and imaginative ideas into reality” (Popova, 2013:1). It is characterised by the ability to perceive the world in new, critical, and creative ways to find hidden patterns, make connections between seemingly unrelated phenomena, and generate solutions. Creative thinking is a skill that every thinker should possess. Creative and critical thinking are not limited to special people or special occasions.

The creative arts comprise music, drama, dance, and visual arts. Visual arts require the use of imagination and original ideas in the production of any artistic work (NDFAuthors, 2016). In this study, the focus was on visual arts as a university subject for first-year education students who chose the Visual Arts practical module (JKU 101) as an elective in their first semester at the University of Pretoria. The aim of the study was to explore first-year Visual Arts education students’ perceptions of creativity.

Before exploring the focus and purpose of this study further, it is important to understand the definition of creativity in the context of this study. De Bono (1995) believes that the logic of perception demands the ability to think creatively. He is also of the opinion that creative

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thinking is not something that anyone is born with, but rather that it is a learnt skill that develops over time due to influences such as family and environment (De Bono, 1995). Creativity generally involves two processes: thinking and producing (Naiman, 2016). If one understands how an individual perceives creativity, one will comprehend the individual's actions or choices better. Although there are undoubtedly other understandings of the concept of creativity, this study explores how first-year Visual Arts education students perceived creativity in order to better understand their individual actions, choices, and cognitive development.

In this chapter 5 *Enhancing People's Creativity,* pages 88-104*,* of the book *The Cambridge Handbook of Creativity*, edited by Kaufman and Sternberg (2019), Sternberg explains that creativity is associated with mental and behavioural characteristics that include the application of multiple perspectives like curiosity, flexibility of thought and action, rapid generation of different multiple, qualitative solutions, and answers to problems and questions (Sternberg, Kaufman (eds) 2010). Creativity has various definitions because it plays a multifaceted role in technical innovation, teaching, business, the arts, and many other fields. Individuals are creative in their daily routines and associate creativity with their past experiences, assumptions, and routines to cope, adapt, and solve problems (Runco, 2014). These experiences, assumptions, and routines do not exist because of creativity, but, rather, they function better because of creativity. Creativity can be influenced by internal or external settings (Runco, 2014). Although not conclusively proved, it is believed that individuals who lead turbulent lives or suffer from mental disorders tend to be more creative in their problem-solving. They show higher levels of creativity in problem-solving that, for example, can lead to successful business ideas (Sternberg, Kaufman (eds) 2019). In this study, I set out to show how creativity is perceived and influenced by taking into consideration how creative intelligence works in conjunction with analytical intelligence and practical intelligence. These three factors in the triarchic theory of human intelligence, as suggested by Sternberg (2010) and elaborated on in the next chapter, cannot work without each component playing an active part. For this reason, it is important to know what students' perceptions regarding creativity are to understand how all three components play a role in the development of the individual. With these findings, the existing gap in understanding how creativity plays a role in the development of the individual is addressed.

Nussbaum (2011) states in her book *Creating Capabilities: The Human Development Approach* that all individual's capabilities are linked to creativity. These capabilities include an individual's ability to use their senses and imagination, think creatively, find solutions, reason, and state and substantiate their opinions. Creativity is essential in acquiring new knowledge as it enables individuals to think creatively when connecting new to previous knowledge. It

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also helps in finding creative solutions to social, emotional, and cognitive challenges that individuals might face. This became evident during the 2020–2021 COVID-19 pandemic when students and learners were expected to take responsibility for their own learning through online platforms such as e-classrooms while working from home. Similarly, educators had to become inventive and use their creativity to keep their learners engaged in lessons that were presented online.

Creativity enables individuals to formulate imaginative solutions by using the skills that they have gained through critical thinking and problem-solving (Bentley, 2003). The notion of continuous development can be indirectly connected to students and learners who are required to study online. Teachers must constantly adjust their teaching and communication to teach successfully and ensure that learners understand the content and work discussed.[1] Creativity, therefore, plays a significant role in helping educators to find new ways to explain work or communicate differently with individual learners. This was also true for the university students who were studying to become teachers of the visual arts. They needed to develop creative thinking skills for their own future classrooms. This correlates with the triarchic theory of human intelligence which is discussed in greater detail in the literature review in Chapter 2. One of the three factors of this theory is analytical intelligence or the ability to solve problems, which enables students (prospective teachers) to solve future challenges in their classrooms. The COVID-19 pandemic influenced not only educators, but also artists and students of visual arts education, who were expected to “create” from home with whatever resources and limited assistance were available.

During the worldwide COVID-19 pandemic in 2020, school learners, especially matriculation learners, were compelled to use their creativity to perform critical thinking activities and tasks and to communicate with educators during online or e-classroom learning and teaching. This might have contributed to the development of a strong, independent group of students who would soon be entering university, making them ready to adjust to any situation by using creative thinking skills and creativity in their decision-making processes. This might have also produced a group of Visual Arts education students whose perception regarding creativity was different from that which had existed prior to the pandemic; they had to create from home with whatever limited resources were available. According to the triarchic theory of human

[1] The reader is referred to a recent study conducted by Fourie (2022) titled “Exploring the development of formal and conceptual skills of visual arts learners within an online environment” in which he explored how educators had to adapt their teaching and learning methods to successfully teach during the national lockdown of the COVID-19 pandemic.

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intelligence, creative intelligence plays an important role in the development of cognition. It can, however, not be separated from analytical and practical intelligence. According to Aristotle, creativity – seen as art – plays an important role in the development of an individual (Sternberg & Williams, 1996) and art enables an individual to be creative, which contributes to the development of cognition by connecting creativity to the other two factors of development, namely practical and analytical intelligence.

Choosing JKU 101 as the main contextual focus of my study allowed me to identify creativity in first-year Visual Arts education students, as the arts permit students to be creative while posing limited restraints. Furthermore, this module allowed the participants to experience creativity through the tasks set for the module as well as through the activity presented to the students in the class. These three factors of the triarchic theory of human intelligence made it possible to connect the triarchic theory of human intelligence to the development of the student. Although much has been written about creativity in education, I approached this topic from the students' perspective, which allowed me to understand how creativity affected the students and future educators.

De Bono also believed that creativity should not be measured, but rather developed, to help individuals to become innovative thinkers who are able to adapt to any situation with which they are faced (de Bono, 1995). The premise I held at the outset was that creative thinking would help the first-year Visual Arts education students develop cognition by connecting their creativity to their analytical and practical intelligence. After establishing how they perceived creativity and what influenced these perceptions, it was important to understand what strategies could be implemented in the future to improve their creativity. This was established by taking their perceptions of creativity into account. I suspected that understanding which strategies to implement to improve creativity in the first-year Visual Arts education students could affect the success of their studies and that such strategies could influence their ideas on how to implement creativity in their own classrooms. This would, in turn, affect the learners' learning and success in the classroom. Fields and Bisschoff (2014) agree that "it is a challenge to encourage the development of creative motivation, skills, and abilities to ensure that adult creative achievement occurs after graduation" (Fields & Bisschoff, 2014:23).

Whilst I acknowledge the purpose and importance of creative strategies, it was not the objective of this study to develop these creative strategies. It is, however, something that might be explored in a future doctoral study. Instead, this study explored how the first-year Visual Arts education students perceived creativity to better understand their cognitive development through creative intelligence and to add to the pool of knowledge in this regard. It is accepted

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that the triarchic theory of human intelligence applies to every individual, but it was the aim of this study to show that the triarchic theory of human intelligence only formed a basis for the cognitive development of each individual, and that external influences on the individual played a big role in the development of that individual. These influences included family, friends, environment, culture, and education, among others.

1.2 Rationale for the study

This study developed from my personal interest in how creativity can influence one to make decisions, create solutions, and become a unique individual who contributes to society. Changing my degree from Foundation Phase Education to Intermediate Phase Education was one of the best decisions I made. As a first-year student, overwhelmed and unsure as to whether I would become a successful teacher, I doubted my choice of degree and contemplated changing my field of study completely. In the second semester of the first year, visual arts was part of the Creative Arts (JLK 120) module. During that semester, I learnt a lot about myself as a student-teacher, future educator, and individual. Creativity, developed through visual arts activities, influenced my thinking during this period and facilitated my analytical and practical thinking about situations while allowing me to find creative solutions for the challenges I faced as a first-year student. Consequently, I changed my degree and took art as a main subject. This led me to enrol in the art practical module, JKU 101, the following year. It also allowed me to identify certain personal characteristics that I still apply in my teaching. Because of this experience, I continued my studies in visual arts education until my final undergraduate year in 2016. This experience contributed to my personal motivation to conduct this study, as I intended to understand myself and my own development better.

Creativity enabled me to think outside the box and to find new opportunities in education. A lecturer during the first year of my BEd studies, Ms K. Potts, who taught the Creative Arts module (JLK 120), helped me to realise that with creativity there are few limitations, provided you allow yourself to use this skill. The influence that the Visual Arts and Creative Thinking modules had on my transition from student to beginner teacher raised some questions in my mind that have been incorporated into this study.

One of the questions which contributed to my professional and conceptual understanding of the phenomenon of this study was: How does creativity influence first-year Visual Arts education students in their pursuit of education? I had always wondered what the impact on learners would be if education students were inspired to be more creative in their thinking and to always strive to find new and creative ways to present their subjects. When exploring these

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factors, I found that they should be viewed from the perspective of the student and how the student perceives creativity. Finding some answers to those and other questions on a professional and conceptual level has helped me to gain a better understanding of this field and may assist future art educators in their own practice. Thus, even though much has been written about creativity in education, this study approached this topic from the student's perspective, focusing on understanding how creativity affected them as students and future educators.

The purpose of this study was to explore how the first-year Visual Arts education students at the University of Pretoria perceived creativity in fine and visual arts education, and what they created with what they were given. The study considered how each individual was influenced by their own social and environmental settings, personality, and how they perceived creativity (Runco, 2014). Taking the influences that were identified by Runco into account helped me to observe the principles of Sternberg's triarchic theory of human intelligence in each individual as well as the influences of each factor in the theory.

Although I agree that the triarchic theory of human intelligence applies to everyone, this study showed that it only formed a basis for the cognitive development of each individual. I selected visual arts as a subject because it was a platform where creativity was, to some degree, already implemented. JKU 101 is a multifaceted subject that allows students to react differently to creativity with only limited constraints on their thinking and creative processes. The activity that the participants completed for the purpose of this study (which is elaborated on in Chapter 3) allowed me to identify how the students, as individuals, perceived and applied creativity. The participants had to complete an activity with instructions that imposed limitations on them to test their creative problem-solving skills and to showcase their creativity. Each student's final artwork was different. The limitations imposed on the students included the use of medium, style, or presentation. These are discussed in the limitations section toward the end of the study. The focus of the study was, however, not on fine and visual arts, but rather on the students' perceptions of creativity.

1.3 Background and context

In their study, Cachia, Ferrari, Ala-Mutka, and Punie (2010) explain that even though teachers show great interest and positivity in creativity and the importance of creativity in the classroom, conventional ways of teaching still prevail in 21st century. Teacher-centred methods, frontal teaching, and chalk and talk prevail in many of the schools in Europe and in schools across the world that follow the Western tradition, such as South Africa. It is my belief that Western

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tradition and African tradition schools face a similar obstruction in their classrooms. Across continents, creativity is a priority for education and is central to the discourse on 21st century learning. The European reference framework on key competencies for lifelong learning explores how a greater focus on everyday creativity in schools across continents changes the dynamics of teaching and learning (Hozjan, 2010). Cachia *et al.,* 2010) further identify creativity as a core theme that leads to the development of the basic skills of literacy, numeracy, language, and the ability to communicate. The diversity of the creative arts enables students to become more open-minded, allowing them to take in new information and skills (Study International, 2019).

The 21st century has opened a new arena of holistic non-linear designs of complex systems when it comes to cognitive development. STEM is an interdisciplinary way to teach science subjects. Instead of having students learn about science, mathematics, engineering, and technology separately, STEM involves them being taught through complex projects that require the application of skills and knowledge from all these subjects simultaneously (Acer for Education, 2020). However, with STEM alone, there is a risk that a form of binary thinking will be encouraged in students and that students will be raised to believe that one can either be good at science or art, but not both, because the two fields require different skill sets and appear to have no connections between them (Acer for Education, 2020) and schools cannot continue to teach isolated disciplines based on simple reductionism. As a result, science, technology, engineering, and mathematics (STEM) had to be amalgamated with art to promote creativity; this changed the acronym to STEAM (Boy, 2013). With STEAM, students can discover unexpected links between the scientific and artistic sides of intelligence. For example, a talented painter might realise that paint would not exist without chemistry and that understanding its components can improve an artist's choice and use of materials (Acer for Education, 2020).

In his book, *Explaining Creativity: The Science of Human Innovation,* Sawyer (2012) discusses how creativity is held in high esteem when given as a compliment in Western culture, however, some may not see it as important in the 21st century classroom. According to Sawyer, preschool learners show creativity daily by creating stories, combining toys in various unexpected ways, or even enjoying the box in which the toy came more than the toy itself. Compared with the free-thinking creativity of children's play,[2] schools are rather standardised. Creative learners tend to ask more questions, be intuitive and risk takers, guess what an

[2] Play and creativity are important aspects development. Creative play is expressed when children use familiar material in a new or unusual way. Play allows them to be creative in a certain way. It allows them to discover why and how things are done within a certain framework (Popoviç, 2017).

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individual is about to say or what the correct answer may be, be independent in judgement and thinking, and sometimes might be unwilling to simply accept authority (Saywer, 2012:389-390). Unfortunately, according to Torrance (1965), teachers from at least five different countries have pointed out that they dislike learners who show these characteristics with their busy, persistent, and inquisitive behaviour (Saywer, 2012:390). This could lead to educators who might disadvantage learners by not allowing them to explore these characteristics or their creative natures. However, it is possible that educators might have a different expectation or understanding of what creativity entails and may associate creativity with artistic activities, not seeing it for its cognitive nature.

Stahl (2018) explains in her article, *Here's How Creativity Actually Improves Your Health*, that engaging in creative behaviour improves brain function, as well as mental and physical health. Stahl's theory of cognition postulates that being creative is a basis for human life. It increases happiness, reduces dementia, and improves mental health (Stahl, 2018). Lewis (2013:1) suggests that "creativity is so essential – it genuinely can be the difference between success and failure". Therefore, it is important to take into consideration the influence that creativity can have on the transition of first-year students from school to university. Land (2006) claims that creativity is not seen in adults as much as in children because it is buried by rules and regulations. He further asserts that creativity can be relearnt by applying creative thinking processes during the university years Naiman, (2014, as cited in Bentley, 2003). Owing to creativity becoming one of the main focuses in the 21st century classroom, it is expected that first-year students will show different levels of creativity because they should have had various opportunities to apply creative thinking in class (Bentley, 2003). Through the exploration of creativity in first-year Visual Arts education students, I was able to establish how creativity was perceived by these Visual Arts education students during the first-year JKU 101 module and activities.

When establishing the creativity of first-year Visual Arts education students and how they perceived creativity, it was important to consider the factors that influenced their creativity. These influences included their personalities, culture, and social and environmental settings. Although creativity is seen as something that happens in the brain, there are still environmental factors that can either boost creativity or prevent it from developing to its full potential (Greenway, 2018). Deng, Wang and Zhao (2016) conducted a study exploring how environmental factors and individual characteristics collectively affected creativity in university students. In their study, they found that certain environmental factors, such as the students' relationships with their families, had different effects on different students. In cases where there was more authoritarian parent involvement in the students' lives, the students had lower

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levels of originality and creativity compared to students whose parents were less authoritarian. An academic environment can also have an influence on the creativity of a student. If the student is allowed or even challenged to become a creative thinker, it will stimulate a positive attitude towards creativity later in life, leading to creativity developing freely in the individual (Deng *et al.,* 2016).

Deng *et al.*'s (2016) study correlates with what Land (2006) said about creativity not being observed as often in adults as in children due to rules and regulations. However, an aspect like colour can bring out the inner child in an individual, allowing them to be freely creative (Naiman 2014, as cited in Bentley, 2003). In this study, to identify the influence that creativity had on the first-year Visual Arts education students and how it would influence their lives and future teaching, it had to be established how these students perceived creativity. In an existing study, Fields and Bisschoff (2016) found the creation of measuring instruments to identify creative abilities to be problematic. Their tests were produced based on different definitions of creativity. Fields and Bisschoff (2014) found that a single valid and reliable test to measure creativity at tertiary educational level in South Africa did not exist (Fields & Bisschoff, 2014). Consequently, this study set out to determine how students perceived creativity.

As mentioned earlier, 21st century learning has tended to focus increasingly on creativity in classrooms. This focus allows students to be more creative in their tasks and critical thinking. In addition, the worldwide coronavirus pandemic and the resultant lockdown restrictions necessitated creative solutions to teaching and learning methods. Because the students in this study were from diverse backgrounds and schools, it could safely be assumed that their experiences of creativity and the implementation thereof would differ vastly. Therefore, I hypothesised that the students would show different signs and levels of creativity. This hypothesis took into account the triarchic theory of human intelligence (which is explained more thoroughly in Chapter 2) and the role and multiple facets of creativity in development.

1.4 Research questions

The following research questions underpinned my study:

1.4.1 Primary research question

1. How do first-year Visual Arts education students perceive creativity?

1.4.2 Secondary research questions

1. How does creativity manifest in the artwork created by first-year Visual Arts education students?

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2. What strategies can be implemented to improve the creativity of first-year Visual Arts education students?

1.5 Research methodology

1.5.1 Research paradigm

Epistemology refers to the way that human beings acquire knowledge and create meaning (Yilmaz, 2013). This qualitative research study used an art-based methodology and interpretivist research paradigm to collect and analyse data. The research methods focused on individual experiences and interpretations and helped me to explore the first-year Visual Arts education students' perceptions of creativity. Furthermore, I used the constructivist paradigm, which proposes that individuals create meaning or build their reality through their interactions with the world around them (Fox, 2001:25). Constructivism appears to influence the view of learning in the 21st century. It serves as a "metaphor for learning, likening the acquisition of knowledge to a process of building or construction" (Fox, 2001:26). Constructivism is an important component of research in education as it explores the way that teachers and learners construct meaning by interacting with their environment and each other. According to Fox (2011:26), the constructivist paradigm shows that "knowledge is gained, or at least filtered, through social constructions such as language, consciousness, shared meanings, documents, and other artefacts". Therefore, I believe that the constructivist paradigm was relevant to this study as it proposes that a person creates meaning through interactions in the world. This was observed during the analysis of the data gathered during the creation of the participants' artworks. Each participant's intention for the artwork was different – either out of passion or based on what they knew or because of something new they wanted to try. Even though the inspiration differed (because individuals find inspiration in different ways), the students' approaches were not too different as their final artwork, which was based on their prior experiences and knowledge, showed (refer to Chapters 4 and 5 for more detail).

The constructivist paradigm emphasises the value of multiple perspectives in a setting and has a long history as a theory of perception and memory (Fox, 2001). The central claim of constructivism as a theory of learning is that human knowledge is acquired through a process of active construction. Constructivist accounts are often "hopeful". For instance, they seem to promise that if teachers become aware of their learners' natural learning capacities, the ways in which knowledge is mediated via representations, and the many ways in which past knowledge affects present learning, then classroom learning will not be a problem (Fox, 2001). Some critics may believe that constructivist accounts are too ambitious, but I believe that

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constructivism ensures that the participants' experiences are taken into account during the collection of data, keeping in mind the influence that culture, personalities, and environmental and social settings might have on them.

When examining the students' perceptions of creativity in their visual arts activities, Gadamer's (1991) and Heidegger's (1962) notions of hermeneutics and the way in which the lived experiences of individuals influence their perceptions and understanding of their current situations were considered. Hermeneutics thus determined my exploration of how the first-year Visual Arts education students perceived creativity through the creation of their artworks. In hermeneutics, the visual, whether depicted or not, becomes equally as important as what is said. Whether it is clearly visible, expressed either verbally, visually or textually, it is important to pay close attention to the visuals used through their artwork to understand how they perceive creativity. This is particularly important in South Africa where concepts like language, culture, communities, traditions, and education are intertwined and are often more complex than they appear.

1.5.2 Research design

To assess how the first-year Visual Arts education students perceived creativity, I used a qualitative research approach employing artwork and document analysis, and questionnaires that were completed by the participants. Fortunately, classroom teaching was continued after being temporarily conducted online during the pandemic. I was also able to talk to the students in person and be present while they completed their activity for the study. It was also possible for me to return to their classroom to complete the questionnaires in person and to have short conversations with some of the students. It was very valuable for the study that I could be present in the classroom to observe how the participants created their artworks and to have informal conversations with them regarding their choice of inspiration and what they planned for their outcome. Meeting the participants also allowed me to get a better understanding of who each individual student was, which made it easier to analyse their work and answers.

The participants were asked to each complete an artwork with the art supplies that were available in the classroom. They were also allowed to use whatever they had in their school bags. They only had time to complete the assignment during that single class session and had to hand in their artworks at the end of the class. The students were introduced to a new concept, "pareidolia". Seeing familiar objects or patterns in otherwise random or unrelated objects or patterns is called pareidolia (Byrd, D. 2022). Pareidolia is a form of apophenia, which is a more general term for the human tendency to seek patterns in random information (Byrd, D. 2022). Visuals were used to demonstrate how this phenomenon occurs. Pareidolia

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was selected for the activity because it is connected to an individual's perception. The purpose of analysing the participants' artwork was to understand their perceptions so pareidolia created a perfect opportunity to observe these perceptions without guiding or influencing their perceptions. It provided enough inspiration to get the participants to create an artwork based on their own perceptions when considering the room in which they were situated. The students were then asked to create an artwork while keeping this new concept in mind. At the end of their first term in Semester 1, each participant received a questionnaire with questions about their thoughts regarding creativity, and specifically their own creativity, and how they had improved in their creativity skills. Some of the questions were based on the students' personal situatedness in the world (a concept born from Heidegger's hermeneutics theory (1889–1976)) to get a better understanding of the participants and their contexts (Human, 2022:6). The artwork and questionnaire are discussed in more depth in Chapters 4 and 5. The artwork and questionnaires were interpreted to get a comprehensive understanding of how the participants perceived creativity.

1.5.3 Research methodology and data construction

The design of qualitative research employs various experimental techniques encompassing a variety of accepted methods and structures. Even though there is no standardised structure, this type of study still needs to be carefully constructed and designed (Shuttleworth & Wilson, 2008). I had to continuously remain unbiased, use open-ended questioning techniques, and stay alert for possible errors. This involved an awareness of bias and a sensitivity to the phenomenon in question.

The advantages of qualitative research are that qualitative techniques are extremely useful when a subject is too complex to be condensed to a simple yes or no hypothesis. These techniques yield data that is richer and more insightful into underlying reasons and patterns within phenomena (Shuttleworth & Wilson, 2008). I am also aware of the disadvantages of qualitative research. For example, it can be time- and resource-consuming compared to quantitative experiments as I always had to be present during interviews and observations. I also to be sensitive to ethical issues and the philosophical underpinnings of the research questions (Shuttleworth & Wilson, 2008). The study focused on the artworks, the details worked into the artworks, and the art styles used to create the artworks. I was as unbiased as possible and continually endeavoured to focus only on what was created by the participants and the information gathered through the questionnaires. Only then, taking this information into account, was the data that was collected during the study analysed and conclusions reached.

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Another disadvantage to consider was that qualitative research is not a statistical form of data collection and analysis, which may have influenced the reliability of the findings. Furthermore, although the large quantity of data might have been difficult to manage and the analysis thereof time-consuming, this challenge was overcome by setting a realistic and reachable timeline and ensuring that the data collected was sorted into categories to ensure that the data was analysed with all influential factors in mind. The qualitative data for this study was comprised of the artworks and questionnaires completed by the participants. The analysis of these documents was conducted by me, the researcher. The data collected through the questionnaires enabled me to understand the lived experiences of the participants in relation to their perceptions of creativity. As these participants were experiencing creativity first-hand while enrolled for the art practical JKU 101 module for the first time, I believe that the participants' answers to these questionnaires provided valuable insight into understanding how they perceived creativity, which could provide a better understanding of the role that creativity plays in the development of each individual. The data collection and analysis methods are discussed below.

1.6 Research methods

1.6.1 Data collection

Fortunately, once the COVID-19 lockdown restrictions were lifted, the students were allowed to return to the classroom. I was, therefore, able to be present in the room to collect the data in person when the participants completed their artwork task. For the task, the participants were asked to complete an artwork with the art supplies that were available in the art class. At the end of the class, these artworks were collected for iconographic and iconological artwork analysis.

To remain unbiased and objective, during the creation process I only interacted to with the students to provide them with the project brief – otherwise I remained impartial and as unobtrusive as possible. I walked around the classroom to observe how the artworks were being created but did not provide any feedback, comments, or support to the students. This ensured that they were not influenced nor felt intimidated by me. The artworks did not form part of the students' marked assignments or projects but was purely an activity performed for research purposes. The students were made aware that the artworks were not for marks and would be used for research purposes only. They were also informed that they would not be marked on their style or skills and that they could create the artwork in any way or form that they wished; this was purposefully done to eliminate any possible limitations.

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For the data collection of the questionnaire data, I again visited the group of participating students in class at the end of the first term of the first semester. I had conversations with the participants about their experiences with the visual arts and asked the students to each complete a questionnaire using Google Forms. On the Google form, the participants were asked what pronouns they preferred. The participants either chose he/him or she/her. Therefore, for the purpose of the study, I refer to the participants' chosen pronouns.

After the artwork and questionnaire data had been collected, a spreadsheet was created with all the questions and answers (see Appendix A) in order to critically analyse each question and answer. All the students in the art class on that day were asked to participate in the activity, however, only seven participants were selected for the final data analysis. The participants were selected based on the artworks that they created, and the amount of information provided in their completed questionnaires. I analysed both the instructions and the outcomes of the artworks (see Chapter 4). The participants who had followed the instructions precisely and those who tested the instructions by approaching the activity in a different manner were selected. For example, the student who used only colour in their artwork, as opposed to the majority of the participating students who used black and white, was included. The potential participants available for selection was also influenced by the number of students who were willing to participate in the study. This drastically affected the size of the sample, as only a limited number of students wished to participate.

1.6.2 Selection of participants

The data for this study was constructed by the first-year Visual Arts education students enrolled for JKU 101. This is a year-long module, but this study was only conducted during the first two terms of the first semester of 2022. Based on previous and current enrolments, this module had approximately 40-50 enrolled students during that time; however, only 15-20 students were present for the first class. During this session, I introduced the research project to the participants and asked them to create the artworks that would eventually be used as data for this study. All the students who were present were asked to participate in the study, but only seven participants' submissions were analysed for the purpose of the study.

When selecting the participants, I considered the instructions they were asked to follow and the end product received from each student. I am aware that the selection of participants was in itself a determinant of the result. However, a selection was made to ensure that a diverse sample was used. Owing to the small number of students willing to participate in this study, there were not that many participants to choose from. I considered the choice of medium, colour, style, techniques, and how the item of choice was incorporated into the artwork. I then

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referred to their questionnaires and chose the responses that provided the most insight into and background about the participants and their perspectives of creativity. During the analysis, I kept other factors (for example, the participants' culture, gender, and background) in mind to ensure that the final data were interpreted accurately. Taking these factors into account produced a diverse pool of data and gave me a good understanding and perspective of creativity, how the participants perceived creativity, and how this perception influenced the participants during the creative arts activities, especially after their return from the tight restrictions of the COVID-19 pandemic lockdown.

Before selecting the participants, I first had to obtain permission from the head of the department and the dean of the faculty of the university. After this, I communicated with the lecturers and coordinators of the JKU 101 module to obtain their agreement that their students could be invited to participate in the study (this matter had been previously discussed with the lecturers and coordinators). I then communicated with the willing participants personally to explain the purpose of the study and what their participation would entail. The participants were informed that they had the option to withdraw from the study at any time if they so wished without any repercussions. Their participation in the study would in no way affect them or their marks for the JKU 101 module. The study was conducted anonymously to ensure that the personal details of the participants remained confidential. The participants were referred to as Participant 1, Participant 2, and so on. The participants were asked to provide a nickname to be used during the iconographic analysis of their artwork.

1.7 Data generation

1.7.1 Data generation process and analysis

The data required to answer the primary research question, which explored how the first-year Visual Arts education students perceived creativity during their Visual Arts classes was collected at the beginning and end of the first semester. This data was analysed using document analysis. In analysing the documents, I identified themes to consider in the final interpretation of the data (see Chapters 4 and 5).

The second form of data construction to support the document analysis was the questionnaires collected via the Google forms. A link was made available in class at the end of the first term of the first semester. These questionnaires provided insight into the influence that creativity had on the first-year Visual Arts education students and their perceptions of creativity. The data collected from the questionnaires assisted in the overall analysis and provided a deep understanding of the students' perceptions of creativity. The data collected

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from the questionnaires were documented in a table so that the answers could be compared, to gain an overall understanding of how the group saw creativity, and to identify similarities and differences in the way that the participants perceived creativity.

The constructivist research paradigm links to the interpretive paradigm. The interpretive paradigm is concerned with understanding the world as it is from the subjective experiences of individuals using meaning-orientated methodologies, such as interviewing or participant observation which rely on subjective relationships between the researcher and the subjects (Thomas, 2016). I relied on art-based research methods to decode and analyse the artwork. For these purposes, I used both iconological and iconographical art analysis methods. As it was also important to take the background and situatedness of the participants into consideration, I relied on various visual culture studies and meaning-making methods, such as those introduced by theorists like Gadamer and Heidegger.

These analyses relied on both Gadamer's and Heidegger's notions of hermeneutics and the importance of the artist's and viewer's situatedness in the world (Human, 2022:6), which links to the theoretical framework. Each artwork was first analysed using iconographical analysis; I then analysed the artwork and questionnaire of each participant using an iconological analysis.

Table 1. 1: Analysis of the artworks

Iconographical artwork analysis	Iconological artwork analysis (Taking the participants' situatedness into consideration)
Refers to: 1. Empirical data of artwork 2. Objective description 3. Describing artwork in detail (not simply referring to the picture) 4. Formal art analysis (the art elements and design principles found in the work)	Looks at: 1. Overview of the period (socio-cultural, political) 2. Artist's background and general work approach 3. Story of the artwork 4. Meaning and interpretation of visual elements

The findings and interpretations were systematically documented. The findings from the interviews either confirmed or contradicted the interpretations of the artwork. This was where the validity, reliability, and trustworthiness of the findings played a major role.

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I am aware that the participants' experiences may have been influenced by factors external to this project, and that there may have been differences between the different levels of participants' well-being at the time. This might be a limitation in my study. Once these interpretations and analyses were completed for each participant, I compared the findings for the different participants to establish whether they perceived creativity in a similar or different manner and how their perceptions differed. This allowed me to record the findings and to discuss the interpretations. I also identified themes, which are discussed in Chapter 5, to assist with the further interpretation of the data analysis. The research methods used are described in more depth in Chapter 3. The artworks are analysed in Chapter 4 and the findings are discussed in Chapter 5.

1.7.2 Methods used to ensure validity and reliability

According to Price, Jhangiani, and Chiang (2013: 589-601), "validity is the extent to which the scores from a measure represent the variable they are intended to" and "reliability refers to the consistency of a measure". The trustworthiness of the study was ensured because I was aware of potential personal bias and always remained neutral and objective. This was ensured as I was not in a position of authority, such as being involved in marking the students' work, and I did not interact with the participants while they were performing their activities (that is, creating their visual diaries or artworks for the module assessments). The research supervisor of this study was also unbiased as she did not teach the JKU 101 module. Having studied visual arts education for my degree in education, I was predisposed to certain ideas about creativity and the visual arts. However, while conducting the literary review, as discussed in Chapter 2, I found that creativity is comprised of different aspects[3] and I was, therefore, able to remain neutral throughout the research. My experience of the Creative Arts module could also have been beneficial as it allowed me to understand what was expected during the teaching and learning of the visual arts module and to be able to analyse the artwork to better understand the participants' perspectives.

To establish validity and reliability, I worked with the JKU 101 module lecturer, as well as my research supervisor who had the experience of teaching the subject in the past. When analysing the documents, I remained neutral to ensure that the "voice" of each participant could be observed in their artwork. I also took into account that creativity does not solely come from creating artwork but can also be seen in critical thinking and problem-solving tasks. In

[3] The creative aspects referred to are: 1. Using the past as a launching pad; 2. Proliferating options; 3. Tolerating risk; and 4. Scout to different distances. Other creative aspects are further discussed in Chapter 2, titled What experts say.

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addition, I endeavoured to interpret the perception of the student to understand how they perceived creativity.

To conclude and to answer the research questions, the findings of the questionnaires were compared with the iconographic and iconological analyses of the artworks. Both these processes had to be supportive of the findings when the artworks were analysed. Where they did not correspond, additional questionnaires were used to clarify any misconceptions or to improve understanding on the part of both me and the participant. In some cases, the participants did not elaborate sufficiently on their artworks for me to fully interpret what was created, therefore, a second questionnaire was compiled to gather the required data.

1.7.3 Ethical considerations

This study used questionnaires instead of interviews. Additional artworks and document analysis were used to explore the artwork of the participants. The questionnaires were used to understand how the participants perceived creativity and how they identified their own creativity. Additional questionnaires were provided to participants to better understand why they created their artworks the way they did. The nature and purpose of the study and the involvement of each participant was fully explained verbally (before the start of each session) and in written format (see Appendix B for the template of the consent form that was completed by the participants). The participants were reminded that they were allowed to opt out of the study at any time without any repercussions if they felt uncomfortable or did not wish to participate further. The participants participated on a voluntary and anonymous basis. When the data were analysed, I ensured that the participants remained anonymous, and that all personal information was treated as confidential.

The analysis of the documents was anonymous and will not be shared without the permission of the participants. It was only used to understand the participants and how they perceived creativity during problem-solving and to identify their cognitive development.

1.7.4 Outline of the chapters

In Chapter 2, “What experts say”, the notions of theorists like Sternberg (2003), de Bono (1995), Herrmann (1998), and Williams (1986) about the process of thinking and how it takes place are discussed. These theorists’ views regarding creativity and how it manifests in individuals are also explored in more depth. The theories and points of view are linked to obtain a better understanding of what creativity is and how it develops in an individual. These theories were used to better understand how an individual perceives creativity.

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In Chapter 3, “Approach to data collection and analysis”, the research design, methodology, and data collection and analysis methods are discussed. This includes how the participants were selected, what activity was planned for the participants to complete, and how the analysis of the data was approached. The research paradigm used to complete the research and data collection is also discussed in this chapter, providing an overview of the importance of the choices made.

Chapter 3 leads the reader into Chapter 4, “The significance of the collected data”. In this chapter, each participant’s artwork is showcased, followed by an iconographical analysis, which focuses on the art elements and techniques used to complete the artwork. This analysis is followed by an iconological analysis that discusses the possible meaning behind the use of the selected art elements, and the answers provided by the participants in the questionnaires. The analyses are compared to understand the deeper meaning of the artwork created, therefore identifying how each participant perceived creativity and whether it could be traced back to the theory used as basis for this study.

Chapter 5, “Discussion of findings” concludes with a discussion of the findings from the analyses in Chapter 4. This interpretation is used to identify the underlying themes in the study. These themes are discussed and linked to relevant literature to answer the research questions of the study. In addition, the interpretations and themes identified in Chapter 5 are used to establish the limitations that were experienced in the study. These limitations and strategies to improve the creativity of education students are discussed in Chapter 6, “The culmination of information”. Connections are made between the interpretations of the data and the research questions presented in Chapter 1. The conclusion of the study is discussed in full in the last pages of Chapter 6, providing an overview of the findings of the research regarding creativity and how the art education students perceived creativity.

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CHAPTER 2: WHAT EXPERTS SAY

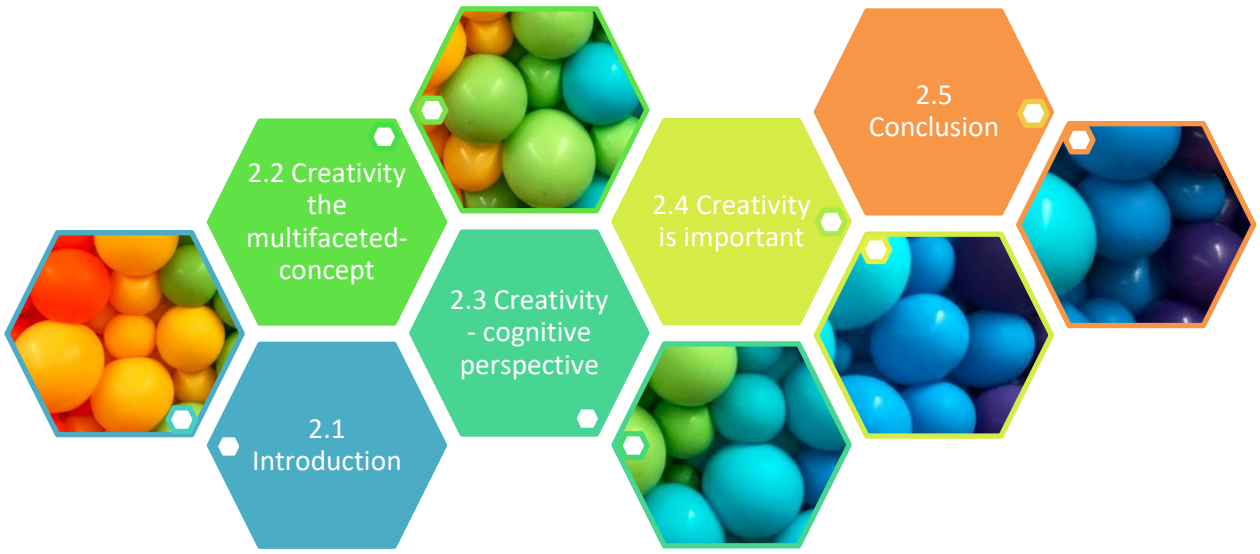

Figure 2. 1: Main items discussed in Chapter 2.

2.1 Introduction

This chapter discusses some of the existing literature on creativity. I identified literature that referred to the cognitive identification of creativity, that is, where it manifests in an individual's mind, and how it is shown through interactions and the creation of final products (specifically artwork). I also used the existing literature to provide me with a sound understanding of the importance of creativity in the cognitive development of individuals and to explain why we should see creativity as not a concept that merely describes artistic activities, but rather as something that involves the entire being of an individual – even if the individual does not view themselves as creative. Some of the literature refers to creativity as a process, which enabled me to identify and understand how individuals perceive creativity.

Creativity as a multifaceted concept was first discussed to emphasise how difficult it is to fully comprehend it as it is such a diverse phenomenon, and one which is easily affected by experiences and the individual involved. I am referring specifically here to definitions of creativity and how they are similar yet different. This guided me to explore how creativity could be viewed as four facets (discussed in Section 2.2.1), each with a different focus. These four facets were researched by Eagleman and Brandt (2017), psychologists who focused on the neurosciences and the connections made in the human brain. The four facets explored by them led me to the process of creativity, a concept elaborated on by Taylor (2017), a keynote speaker on creativity. I suggested a possible process of my own to show the process followed

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by the participants during the creation of their artwork. This process will enable me to understand how each participant perceived creativity while creating.

To discover if creativity can be experienced or identified in various ways, I explored the literature regarding levels of thinking and where creativity might fit in. I refer to the literature developed by Williams (1986) and de Bono (1995) and linked these notions to Bloom's taxonomy, which is used in schools to ensure that learners are motivated to develop in various cognitive areas. This enabled me to find possible solutions to improve creativity in education students (I did not develop the strategies, but merely suggest some strategies that could be considered in future research).

As I was working with the students, who were diverse in many respects, I referred to literature that focused on the various types of students[4] who could be identified as being in the first year of their university studies and the various types of creativity that could have been used, depending on the individual. The literature study allowed me to identify creativity, or rather how the students perceived creativity. In addition, it allowed me to remain consistent in terms of the analysis of the data.

Lastly, I linked the discussed literature to the two theories that inspired my study, namely the triarchic theory of human intelligence (Sternberg, 2003) and the whole brain thinking model (Herrmann, 2016). The theories developed by both Sternberg (2003) and Herrmann (1996) inspired the thought in me that all individuals could be creative, no matter whether they saw themselves as left- or right-brained thinkers. Therefore, I used Herrmann's (2016) theory to remove the concept of left- and right-brain thinking and instead referred to the individual as a whole, showing how various parts of the brain take part in creative and critical thinking. The triarchic theory of human intelligence considers or presents the cognitive development of an individual. I combined this theory with Herrmann's whole brain thinking model, which demonstrates why creativity should be seen as important and taken more seriously.

2.2 Creativity, the multifaceted concept

Creativity is a multifaceted concept and is thus difficult to define. The term creativity is characterised as the ability to perceive the world in new and unique ways (Naiman, 2016). Popova (2013:1) defines creativity as "a combinatorial force: it is our ability to tap into our

[4] Although the term "types" is problematic and reductive, it was a term used by Berzonsky & Cieciuch (2016) in his article "Mediational role of identity commitment in relationships between identity processing style and psychological well-being". When referring to his work and the findings in this study, "types" of students will be used. Berzonsky & Cieciuch's (2016) work is further discussed on page 33.

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'inner' pool of resources – knowledge, insight, information, inspiration" and all the fragments populating our minds – that we accumulate over the years just by being present". Another innovative description of creativity was provided by May (1994) who defines creativity as "the process of bringing something new into being". According to these theories, creativity requires passion and commitment. It brings to our awareness what was previously hidden and points to new possibilities and perspectives (May, 1994:3-5). Each individual or student has their own influences (environmental and social setting, personalities, and especially culture) and will thus see the world in their own unique way, showcasing their creative and critical thinking. I therefore set out to explore the creativity of first-year Visual Arts education students who were transitioning from school to university to show how a variety of individuals reacted to creativity based on the influences in their lives.

Creativity is essential in acquiring knowledge as it enables individuals to think creatively when connecting new knowledge to previous or existing knowledge and find creative solutions to social, emotional, and cognitive challenges that they might face. Examples of creative solutions include creating theories, tests, stories, solutions, analyses, and designs instead of simply trying to memorise information (Bentley, 2003). Bloom's taxonomy, created in 1956, is a classification of learning outcomes and objectives that has been used for everything from framing digital tasks and evaluating apps to writing questions and assessments (Heick, 2022) for more than half a century since its development. Bloom's taxonomy is widely used by the majority of the schools and educators in South Africa. Six levels of development are identified in Bloom's taxonomy with the first or lowest level being remembering, followed by understanding (Heick, 2022).[5] The highest level of Bloom's taxonomy is creating, which is thus the highest form of self-actualisation.[6] Creative thinking begins with the foundation of knowledge, learning a discipline, and mastering a way of thinking. An individual eventually learns to be more creative by experimenting with knowledge, exploring, questioning, assuming, using imagination, and synthesising information (Turak, 2011).

Humans have more brain cells between sensation and action and more suppleness in how those neurons collaborate than any other living beings (Eagleman & Brandt, 2017). This allows us to take in a situation, think about it, consider different alternatives, and eventually to take action (Eagleman & Brandt, 2017). Most of our lives take place in the neural neighbourhoods of our minds, between sensing and doing, and this is what allows us to be so resourceful

[5] Level 1 – remember, level 2 – understand, level 3 – apply, level 4 – analyse, level 5 – evaluate, and level 6 - create (Heick, 2022).
[6] Self-actualisation is the complete realisation of one's potential, and the full development of one's abilities and appreciation for life (Parera, 2020).

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(Eagleman & Brandt, 2017). Our brains are "energy-hungry", and, as a result, they have evolved to be more efficient in creating. "When the brain gets used to something, it displays less and less of a response each time it sees it – a phenomenon called repetition suppression" (Eagleman & Brandt, 2017:1). The more familiar something is, the less neural energy we spend on it. The better we understand something, the less effort we put into thinking about it. Thus, familiarity breeds indifference. Brains, therefore, seek a balance between exploiting the knowledge that we have gained and exploring new surprises (Eagleman & Brandt, 2017). Too much predictability and we tune out; too much surprise and we become disorientated. Individuals live with a constant struggle and competition between novelty and routine. Creativity, according to Eagleman and Brandt (2017), lies in that tension. Because of the way our neurons connect, we have mental agility that other species do not have. This makes us capable of behaviour determined by deliberation and not automation – it allows us to consider possibilities beyond what is right in front of us. "And that is a large part of the magic of human brains". We relentlessly simulate "what-ifs": this is a concept explored by Eagleman and Brandt (2017:1), who explain it as follows:

> What if thinking is so much a part of our daily experience that it's easy to overlook what an imaginative exercise it is. We endlessly speculate, often spending more time in the hypothetical than the real. Humans are designed so that we can easily upload our simulations to each other … If you'd taken this job, you'd be rich by now … If the manager had left the pitcher in, the team would have won the game … Hope is a form of creative speculation: we imagine the world as we'd like it to be, rather than as it is.

Humans' creative processes are helped along by the social nature of the brain. To bond with one another, we cannot afford to be on autopilot. There is a continuous loop between our ability to generate what-ifs and our need to engage with each other. We bond through our inventiveness (Eagleman & Brandt, 2017). According to Eagleman and Brandt (2017), to fully leverage our ability to create or experience creativity, there are four facets of human creativity that enable us to be more innovative.

2.2.1 Four facets of human creativity

1. Using the past as a launching pad

Creativity depends on remodelling what we have learnt and experienced. Because of the restlessness of human brains, we do not just set out to improve imperfections, instead we tamper with things that already seem perfect. When Picasso painted Cubist versions of paintings by Velasquez and Manet, for example, it was because he loved their work (Eagleman & Brandt, 2017). The first facet of creative mentality is that the past may be

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treasured, but it is not untouchable. Our knowledge and experience provide the fuel for our inventiveness (Eagleman & Brandt, 2017).

2. Proliferating options

Proliferating options is a cornerstone of the creative process. Our brains exist through connectivity. Certain connections become reinforced, creating paths of least resistance. Habits form and ready answers come to mind. To increase our options, we have to put our brains to greater use by not settling for the first solution that comes to mind, but constantly searching for more information, challenges, and solutions (Eagleman & Brandt, 2017). The physicist Feynman (1988) said that the key to his problem-solving abilities was that he was constantly seeking as many ways as possible to arrive at a right answer (Feynman, 1988 as cited in Eagleman & Brandt, 2017, p1). The second facet of human creativity that enables individuals to be more innovative is "when [they are] confronted with a problem, [they] do not just deliver a single solution, instead [they] birth an entire population" (Eagleman & Brandt, 2017:1).

3. Tolerating risk

Creative output typically requires many failed attempts. New ideas take root in environments where failure is tolerated. Human culture is littered with ideas that have been rejected by the public and, therefore, passed into obscurity. Many of these failed attempts were revived by famous contemporary creators. Similarly, one should allow oneself to experiment, no matter the possibility of failure. By doing this you allow yourself to learn from these failed attempts and to grow by building on this knowledge and improving your approach.

4. Scout to different distances

Eagleman and Brandt (2017) argue that "there is a pervasive problem in generating useful creations: you never know what the world needs and how it will receive it" (Eagleman & Brandt, 2017:1). In other words, we might believe that our creation is innovative and interesting and the world will benefit from it, however, this might not be the case. The world might have a different need and not show any interest in the creation. When proliferating ideas, it is important not to remain at a fixed distance from the familiar. Someone who only tinkers with prior art is unlikely to make a breakthrough product. It is important to train ourselves to explore the vast expanse from nearby to distant possibilities.[7] That diversity of approaches increases

[7] "Vast expanse" in the context of the text refers to exploring solutions for challenges that one faces now but also exploring possible solutions for possible challenges that might occur in the future. For example, society asks for a more sustainable car. Mercedes Benz designs a more sustainable family car but starts working on a futuristic car that is even more sustainable (perhaps not using any fuel), not leaving any carbon footprint behind. Therefore, to

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the odds that we will create something that will result in a successful outcome (Eagleman & Brandt, 2017).

I refer to these four facets along with the process of creativity to better identify how the participants perceived creativity. These four facets allowed me to understand the possible thinking process that each of the participants used when creating their artworks. Using a variety of ways to refer to how creativity could occur enabled me to look at the diverse group of participants and identify their unique ways of interpreting creativity. Lewis (2013), discusses in his article, "What is creative thinking and why is it important?" (2018), that creativity is a process of thinking, processing, and making information your own. Lewis (2013) further states that healthy creativity helps a person to face challenges and seek new opportunities.[8] These are vital for innovative thought (Lewis, 2013). Innovative thought entails that an individual does something new or does something old in a new way. In other words, the individual takes the initiative in creating new ways of completing a task. If first-year Visual Arts education students applied creativity and critical thinking, innovative thought would develop, which consequently would produce innovative thinkers. Creativity is an internalised process that has an external manifestation (Peschanel, 1996).

> Creativity is, in the first place, an individual inner process which has an outer manifestation. Modern Western societies have gradually shifted their interest in creativity from the mysteries of art and religion to the outer manifestations of innovation – technological, commercial, personal and social. (Peschanel, 1996:50-51)

However, for the practical purposes of creativity research, we should also understand that aspects of creativity, like innovation, only describe the outer environment and do not touch the core of creativity (Peschanel, 1996). The core mentioned here refers to the personal and invisible brain–mind process – much like the process of creativity described by Taylor (2017).

2.2.2 A process of creativity

Creativity can be seen as a process. It starts with research about a topic of interest or a question formed in a topic followed by a period where the brain processes the information, making it more personal (Lewis, 2013). According to Taylor (2017), the creative process can be divided into five stages: preparation, incubation, insight, evaluation, and elaboration.

digest the world around you, you must try out many ideas but be prepared to let most of them die. Embrace risk and error; venture to different distances from the familiar.

[8] Healthy creativity is about embracing the notion that successful artists and designers need more than technical skill and conceptual prowess (Petry, Kim, & Nwakudu, 2022).

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The first stage, preparation, involves trying to absorb as much information as possible. This leads to the second stage, incubation, which entails the information gathered during the first stage starting to connect with previous knowledge and ideas. The third stage, insight, is the stage considered to be the classical characteristic of a creative person, that is, the creation of a new idea or ideas based on previous knowledge. One starts to understand the knowledge that one has gained in the first stage, for example, while reading a book, listening to someone talk, or being present in a moment. Allowing oneself to use self-criticism and reflect on one's new-found knowledge is assessed in stage four – evaluation. This is also the period where you share your ideas with those around you for feedback for further development or to omit unnecessary information. Critical thinking plays an important role in this stage. The final stage, elaboration, consists of "one per cent inspiration and 99 per cent perspiration", where one starts working on an idea to create a more substantial theory or concept (Taylor, 2017:1). Figure 2.1 looks at the process of creativity in the participants in a practical way.

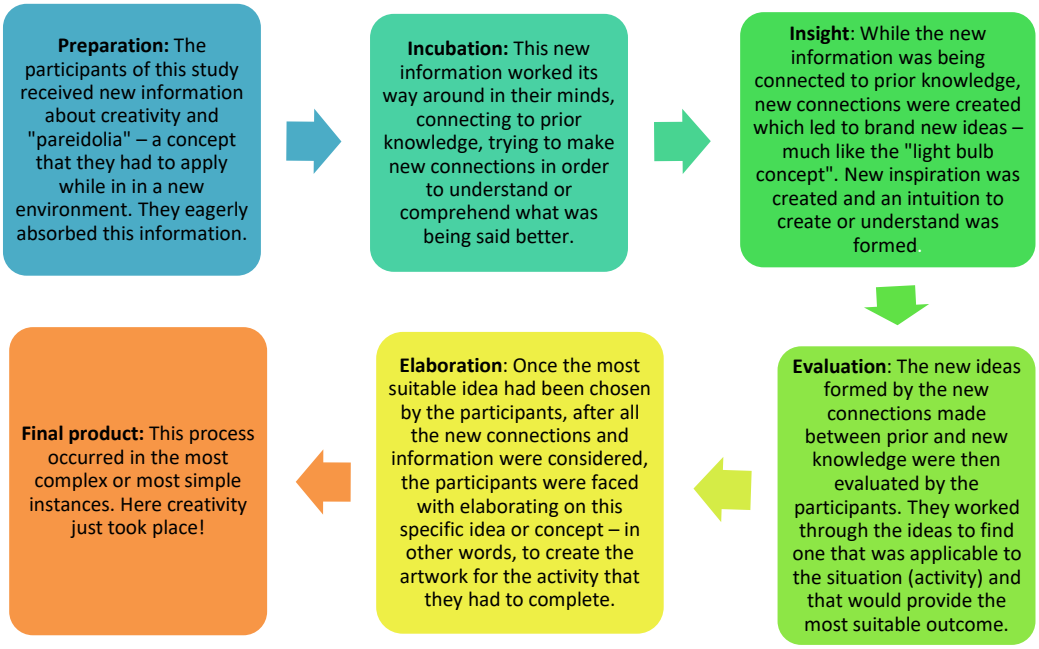

Figure 2. 2: How the process of creativity was identified in the participants.

In Figure 2.2, I indicate how the process of creativity was identified in the participants of this study. I used this process because it simplified creativity, making it slightly easier to identify how creativity was perceived by the first-year Visual Arts education students who participated in the study. This process could be expanded into more facets to enable us to see what happens between the processes – the smaller details that we might have missed. This can also be seen in Williams' (1986) taxonomy in which he identifies the thinking skill levels.

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Williams (1986) created a taxonomy to indicate the hierarchy of thinking skill levels. In his taxonomy, Williams identifies eight thinking levels similar to de Bono's (1995) thinking hats. Table 2.1 shows the different thinking levels identified by Williams, followed by the thinking strategy of each level. The left column indicates the thinking level while the right column suggests the thinking strategies employed in this thinking level.

Table 2. 1: Williams' thinking levels (Alessa, 2020)

Thinking level	Thinking strategies
Fluency	Come up with a variety of ideas, responses, choices, many ways to do the same thing
Flexibility	Think creatively to find many different and varied categories of ideas and situations
Originality	Come up with the most unusual and original idea that you can think of
Elaboration	Stretch your mind and tease your imagination by expanding, enlarging, or adding details to elaborate
Risk-taking	Try new challenges and explore new situations that involve some personal risks or chances
Complexity	Make sense of some complicated idea or bring structure to a complex situation
Curiosity	Follow a hunch, follow a point, wonder about alternatives in a given situation or experience
Imagination	Visualise, dream, wonder about things that do not exist or that are mere fantasies at this point

Even though schools are more accustomed to Blooms' taxonomy, in a very similar approach to cognitive development, Williams' (1986) approach contains three more levels. Williams' (1986) taxonomy of divergent thinking and feeling is, in fact, two separate taxonomies merged into one (Kruse, 2009). Four of the levels (fluency, flexibility, originality and elaboration) relate to the cognitive or intellectual domain, while the remaining four (risk-taking, complexity, curiosity, and imagination) are related to the behavioural or feeling domain (Kruse, 2009). Williams (1986) argues that creative thinking has as much to do with temperament as it does with cognitive processing. Therefore, hermeneutic theories were applied during the analysis of the data to remain sensitive not only to the cognitive process (thinking and connecting prior and new knowledge to create new ideas) taking place when creativity happens, but also to the affective process (feelings and behaviours – experiences).

Williams' (1986) thinking levels can be divided into the following two creative thinking groups when it is applied in practice, namely cognitive and affective, as described in Table 2.2.

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Table 2. 2: Cognitive and affective categories (Alessa, 2020)

Cognitive category	Affective category
Fluency level This level enables an individual to generate new ideas, answers, or choices to challenges and generate skills.	Risk-taking level This level enables an individual to deal with the unknown by taking chances, experimenting with new ideas, or trying new challenges.
Flexibility level This level allows an individual to change everyday objects to generate a variety of categories by taking detours and varying sizes, shapes, quantities, time limits, requirements, objectives, or dimensions in a given situation.	Complexity level This level permits an individual to create structure in an unstructured setting or to build a logical order in a given situation – improving and explaining ideas.
Originality level This level causes an individual to seek new ideas by suggesting unusual twists to change content or by coming up with clever or innovative responses to a situation.	Curiosity level This level encourages an individual to follow a hunch, question alternatives, ponder outcomes, and wonder about options in a given situation.
Elaboration level This level helps an individual stretch by expanding, enlarging, enriching, or embellishing possibilities that build on previous thoughts or ideas.	Imagination level This level allows an individual to visualise possibilities, build images in his or her mind, picture new objects, or reach beyond the limits of the practical.

Instead of creative processes as Taylor suggests, de Bono (1995) refers to six thinking hats. Each hat represents a different stage of creativity that takes place in an individual's mind, much like the levels discussed in Table 2.1 and Table 2.2 and could be used to identify creativity in an individual. Figures 2.3 and 2.4 enabled me to identify how each of the different thinking hats could be incorporated or even identified within William's thinking levels. Each of de Bono's (1995) thinking hats, seen in Figure 2.3, represents a different type of thinking, and should not be used to categorise an individual. These hats can, instead, be used to help an individual to change their way of thinking and become more creative in their thinking. These hats are not directly a creative technique, but rather make it possible to make time and space for creativity and creative thinking to develop and emerge (de Bono, 1995). De Bono (1995) did not design actual thinking hats that an individual could wear in order to think more creatively or to adjust their thinking to a certain task at hand, it is rather a tool that a team leader can use to guide a team, be more productive, work together as a team, and allow all members to participate without any individuals feeling left out or unheard. I analyse these hats a little more, by referring to Table 2.1 and Table 2.2.

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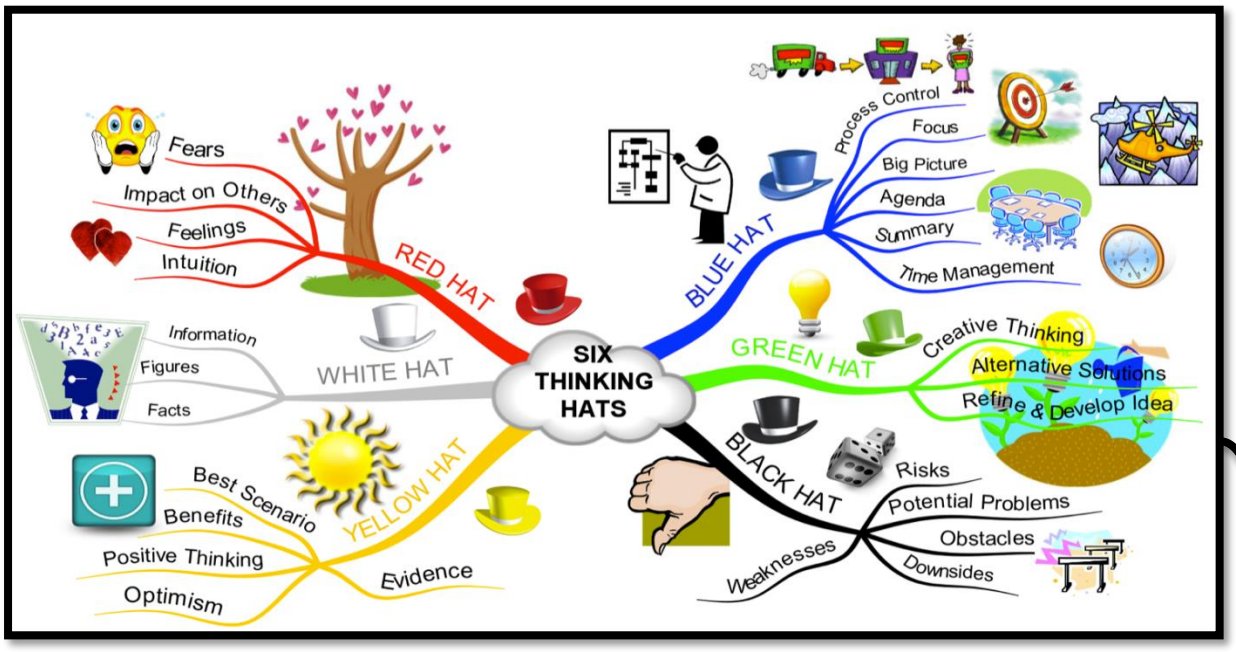

Figure 2. 3: Visualisation of de Bono's six thinking hats (Pinto, 2020).

Table 2. 3: The six thinking hats and what they represent (de Bono, 1995)

	White is for gathering of information. The white hat enables the group to think about the information and how this information will help them tackle a particular issue.
	Red is for feelings, intuition and emotions. The red hat enables the group to express their feelings, without having to explain why they expressed it and why they experience it.
	Black is for caution, criticism and assessing risks. The black hat is used in the group as logic and critical judgement but should never be seen as a negative hat. This hat encourages the group to consider any weak points in an idea or solution, in order to avoid them.
	Yellow is for benefits and feasibility. The yellow hat enables the group to be optimistic, yet logical. It assists the group in considering new ideas or a particular decision, and how feasible it would be.
	Green is for creativity, new ideas and possibilities. The green hat enables the group to be creative and is designed to encourage the group to seek new approaches and innovative solutions.
	Blue is for process control. The blue hat represents the whole thinking process. This hat is normally used only by the leader, guiding the team members in their thinking skills.

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As seen in Figure 2.3, de Bono's (1995) diagram does not seem to assert that creativity comprises sequential stages, but rather a degree of simultaneity. De Bono (1995) believes that there is a misconception about creativity, which has been holding people back in the development of creativity for at least two decades. In contrast to what Herrmann (2016) and Sternberg (2003) found, de Bono (1995) states that the brain is not designed to think creatively but rather is set up by routine patterns. These patterns can be influenced by judgement, which is seen as the enemy of creativity (de Bono, 1995). This notion can be linked to the discoveries of Deng *et al.* (2016), who assert that creativity is seen less in students with more authoritative parents, and Land (2006) who infers that rules and regulations stop creativity from happening. Figure 2.3 and Table 2.3 are visual representations of the theory that I have worked through in order to have a better understanding of the various ways creativity can be seen or inspired in an individual. It has also enabled me to identify the importance of creativity by understanding its process in greater detail.

De Bono (1995) furthers his argument by explaining that if we think more like children, we will be more creative because the innocence of a child leads to the belief that anything is possible, making the child more receptive to creative ideas. He also states that, contrary to popular belief, the right hemisphere of the brain is not where creativity happens, but rather where innocence, which in itself plays a role in creativity, occurs (de Bono, 1995). This statement is backed by researchers at Dartmouth College (Lewis, 2013) who also believe that the right hemisphere of the brain is not where creativity takes place. Bergland (2013:1) described creativity as:

> Human imagination stems from a widespread network of brain areas that collectively manipulate ideas, images and symbols, the study finds. This "mental workspace" had been theorised before, but this study provides new empirical evidence. For example, if a person is asked to imagine a banana spinning around quickly and getting bigger or smaller, he can do so effortlessly. When you start to look at more complex cognitive process[es] like imagination or creative thinking, it's not just isolated [brain] areas that are responsible, but communication of the entire brain that's required. The scans showed that a broad network of brain areas was involved in the imagination task, and they appeared to be working in concert. In particular, manipulating the images involved a network of four core brain areas — the occipital cortex, the posterior parietal cortex (PPC), the posterior praecuneus and the dorsolateral prefrontal cortex (DLPFC) — which are involved in visual processing, attention, and executive functions.

If we take this description into account, every individual can be creative, and creativity should not only be connected to the creative arts. According to Land (2006), creativity can be taught

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or learnt. De Bono (1995) believes that creativity is an unnatural process. He found a way of teaching creativity to individuals through lateral thinking.[9] This supports the idea that any student, no matter their skill set, is able to experience and apply creativity. De Bono (1995) draws attention to traditional critical thinking and compares it to lateral thinking. He claims that parallel thinking emphasises cooperative and coordinated thinking.[10] He also states that critical thinking has its foundations in a method of philosophising. In other words, de Bono (1995) believes that creativity is part of the cognitive development of an individual and is a skill that can be learnt. Consequently, he developed the six thinking hats to indicate how an individual can, with some assistance, learn to be more creative in their thinking by using the green hat. He does not believe that creativity is something that exists in the mind since birth, but rather that it is nurtured or developed through mental development. This notion correlates with that of Sternberg (2003) who defines creativity as the ability to react to novel problems and find solutions. Students might show this ability while finding solutions to the tasks and challenges that they face during visual arts activities. However, the participants involved in the study did not work in groups. The activity they were asked to complete was an individual activity. They could still, however, use the six thinking hats in a similar way to the process of creativity to create a new idea based on new knowledge connected to prior knowledge and experiences. The six thinking hats are, therefore, taken into account and referred to in the analysis in Chapter 4.

2.3 Creativity from a cognitive perspective

2.3.1 Berzonsky's types of student

All the aspects that can influence creativity in students and how creativity can be measured to understand exactly what creativity is and where it exists had to be taken into account to allow for an easier and a more successful analysis when exploring the creativity of the first-year Visual Arts education students. Furthermore, to understand what the impact of creativity was on them, it was important to explore the aspects that had an influence on creativity itself, such as social and environmental settings, personality, and culture.

In the next section, I explore the different types of students identified by Boyd, Hunt, Kandell and Lucas (2003) in a study regarding the development of first-year students at the University of Maryland, Baltimore, in the United States in which it was found that the first-year students were expected to be academically and developmentally prepared to handle all the

[9] Lateral thinking is the ability to use your imagination to look at a problem in a fresh way and to come up with a new solution (de Bono, 1995).
[10] Parallel thinking entails each thinker putting forward their thoughts in parallel with the thoughts of others, while not attacking the thoughts of others (The de Bono Group, 2019).

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responsibilities that came with studying and choosing a field of interest (Boyd *et al.,* 2003). During this study, they highlighted Berzonsky's model which identified three types of student in their first year of study (Berzonsky & Cieciuch, 2016).

The first type of student sought new ways to approach challenges and used new knowledge to adapt to new situations. These students identified a person of influence and adapted to this identified person's method of adjusting. Some identified with more than one person of influence. They constantly sought new ways to solve a problem or adjust to a situation or environment. Thus they referred to more than one person of influence to ensure they had the best method of adjustment that suited their current situation. One of the participants in my study demonstrated this in her creative process. She drew inspiration from artists whose illustrations she enjoyed as well as old tales told based on the illustrations. She used this prior knowledge and applied it during the creation of her artwork.

The second type of student included a group of students who were not so eager to seek and explore new ways of developing or adapting. They identified a person of influence and showed interest in their method of adapting but would not commit to adapting to their methods. These students adjusted their methods but did not become better at the task; rather, they completed the task. They only referred to the methods of a person of influence who would make this possible. In other words, the individual was aware of possible solutions or adjustments that had to be made to complete a task or to overcome a challenge, however, they were either not motivated to apply these changes (for emotional or mental reasons), or the individual was unsure how to apply these changes.

The third type of student did not want to adapt to a new situation at all. They preferred to avoid situations that would affect what they had already accepted as their way of interpreting situations. These students did not identify a person of influence to follow. They were also prone to drop out of their studies if they felt that they had to change their method of adjusting or leave their comfort zone.

This model, developed by Berzonsky (2016), can also be used to understand the creativity process that occurs in an individual or through their actions. This model is, therefore, taken into account in the study as creativity is influenced by personalities, social and environmental settings, and culture. One must remember, however, that the creativity process is different for each individual.

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Just as Berzonsky (2016) identified three types of student and their style of adjusting to a situation, I believe that the first-year Visual Arts education students' creativity could be identified in a similar manner. This also relates to the work of de Bono (1995) and other researchers who identified six stages of creativity. Students who come from similar social and environmental settings, including students with similar personalities and cultures, might perceive creativity in a similar way. Deng *et al.* (2016) found that personality and culture as well as environmental and social settings play a major role in the creative attitudes of individuals. Creative attitudes consist of two dimensions, understanding of creativity and affection for creativity (Deng *et al*., 2016). Guilford (1968:188-190) asserts "these creative attitudes are important as they help students to improve their consciousness of creativity, which helps to demystify creativity and promote creative ideas and products". When exploring the creativity of first-year education students, it is essential to keep the students' stress levels and the influences that culture and personality have on the creative attitudes of students in mind.[11]

Creativity can help individuals, such as students, adapt to changing demands (Cox, 2002). I surmise that the first-year education students could have used creativity to cope with the constant new demands and challenges that education presented during the 2020 COVID-19 pandemic. Teachers, students, and many businesses were challenged to become creative in their means of communicating and working, while having to sustain productivity. Critical thinking also arose when the students and teachers were forced to rethink the classroom situation and ways of studying.

Guilford (1968) believes that creativity is the key to education in its fullest sense and the solution to mankind's most serious problems, such as the state of education during the 2020–2021 COVID-19 pandemic.[12] The ideal way of learning is to actively search for information, which produces acts of creativity (Guilford, 1968). Many first-year education students were faced with challenges where they had to use creative and critical thinking to study, complete their projects and tasks, and connect with their lecturers to complete their studies. They were forced to think out of the box to complete assignments and study their course material on their own. Cox (2002) points out in his study about the relationship between creativity and self-directed learning that the stimulation of creativity in university students was a growing concern due to the lack of educators to stimulate creativity in learners in secondary schools. Students

[11] The students might have been overwhelmed by returning to classroom teaching and learning, having to adjust yet again to a new situation. The new environment, responsibilities, and challenges could also have been overwhelming and could have caused some level of stress as they tried to adjust.
[12] I am aware that in 2022 South Africa, for the most part, moved beyond the restrictions imposed by the COVID-19 pandemic. This study was, however, conducted during the pandemic,

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who tend to be creative, perceive creativity as “relying on oneself and doing things in unique, individual ways with an intrinsic motivational orientation” (Cox 2002:16). In other words, they see creativity as a means of surviving or overcoming a certain situation or challenge with which they are faced, and not as something that may bring them some form of joy. Although Geng and Midford (2015) mention in their study that first-year education students showed higher levels of stress, Cox (2002) points out that the multifaceted role of the community of a university allowed the students to have more control over their own learning, which contributed to creativity and creative thinking. Therefore, universities tend to be ideal places for students to become self-directed learners, that is, learners who take responsibility for their own learning. This links to the transcendental teaching paradigm and the whole brain thinking approach to learning (Cox, 2002).

2.3.2 Creative thinking processes

As already mentioned, creativity can be viewed or understood by considering different thinking processes. These processes depend on the perspective and approach to the topic of the challenge or situation that is faced.

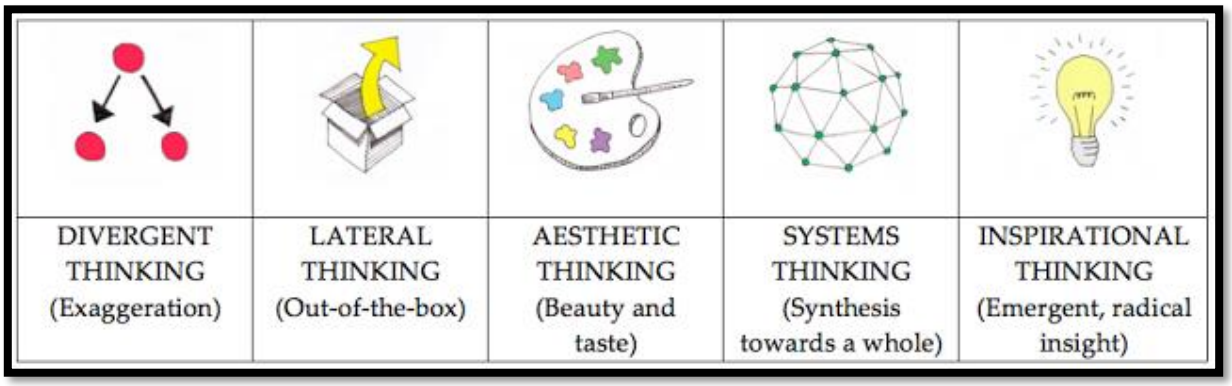

Figure 2. 4: Five types of creativity (Jorlen, 2020).

According to Jorlen (2020), creativity can be divided into five thinking categories when viewed from a cognitive perspective. These categories are depicted in Figure 2.4 above and described below:

- **Divergent thinking (exaggeration)**. Guilford (1957) proposed that an element of divergence is involved in the creative process. Divergent thinking is the process of thought in which a person uses flexibility, fluency, and originality to explore as many solutions or options to a problem or issue as possible. Brainstorming is a typical example, but it is limited in that it builds on realising the ideas that are already sorted in a person’s brain and not on generating new ideas. Divergent thinking is the opposite

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of convergent thinking; it has the characteristic of focusing on only one idea or single solution to a challenge.

- **Lateral thinking (out of the box)**. Creativity involves breaking out of established patterns in order to look at things in a different way (de Bono, 1995). De Bono (1995) came up with the term "lateral thinking" to distinguish between artistic and idea creativity. Lateral thinking is used to generate new ideas and problem-solve as, by definition, it leaves already-used ideas behind and looks for entirely new options (Jorlen, 2020). This type of thinking is based on avoiding the brain's intrinsic limitations, and rapidly sees patterns and handles information in a distinctive way. Lateral thinking is related to divergent thinking. Both have the purpose of breaking out of habitual ways of thinking.[13] Divergent thinking is still sequential in that it follows on from an earlier thought to play a role, while lateral thinking has no direct connection to an earlier thought (Jorlen, 2020).

- **Aesthetic thinking (beauty and taste)**. This category concerns the creation and appreciation of art and beauty, that is, aesthetics. Personal preference is also a key concept here. Each individual either has their own aesthetic. This is the appearance or personality traits by which they can be identified, and which are influenced by their interests. Furthermore, the study of, for instance, form, colour, and shape can augment a person's aesthetic thinking. This type of thinking involves producing or discovering things that are pleasant, harmonious, and beautiful (Peschanel, 1996). Some aspects of aesthetic thinking are visual and spatial, where knowledge of structure, composition, colour schemes, and shapes can be used to make things aesthetically pleasing.

- **Systems thinking (synthesis towards a whole)**. Systems thinking can be described as the ability to see how things are interrelated and form a larger "whole". Some people seem to perceive such links more easily than others. They connect the dots and understand that if one thing is changed, the whole system will change. This notion is demonstrated by Steve Jobs during a February 1995 Wired article:

  > Creativity is just connecting things. When you ask creative people how they did something, they feel little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while.

[13] Every person thinks differently, and what is out of the box for one person is not necessarily for the next. Therefore, creativity or creative thinking is experienced differently by every individual – although perhaps similar not one is the same.

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There are several different principles for a system's thinking approach, some of which are interdependence of objects, holism, and hierarchy (Jorlen, 2020). Systems thinking is closely related to aesthetic thinking in that synthesis and making things "whole" and perfect, is somehow related to elegance and beauty. It is also closely related to inspirational thinking.

- **Inspirational thinking (emergent, radical insight)**. This category concerns the perception of insights that have been received from somewhere or someone else. This process often happens in dreams or other states of consciousness – sometimes in extremely powerful, rapid bursts of clarity and focus, known as light-bulb moments or peak experiences (Jorlen, 2020).

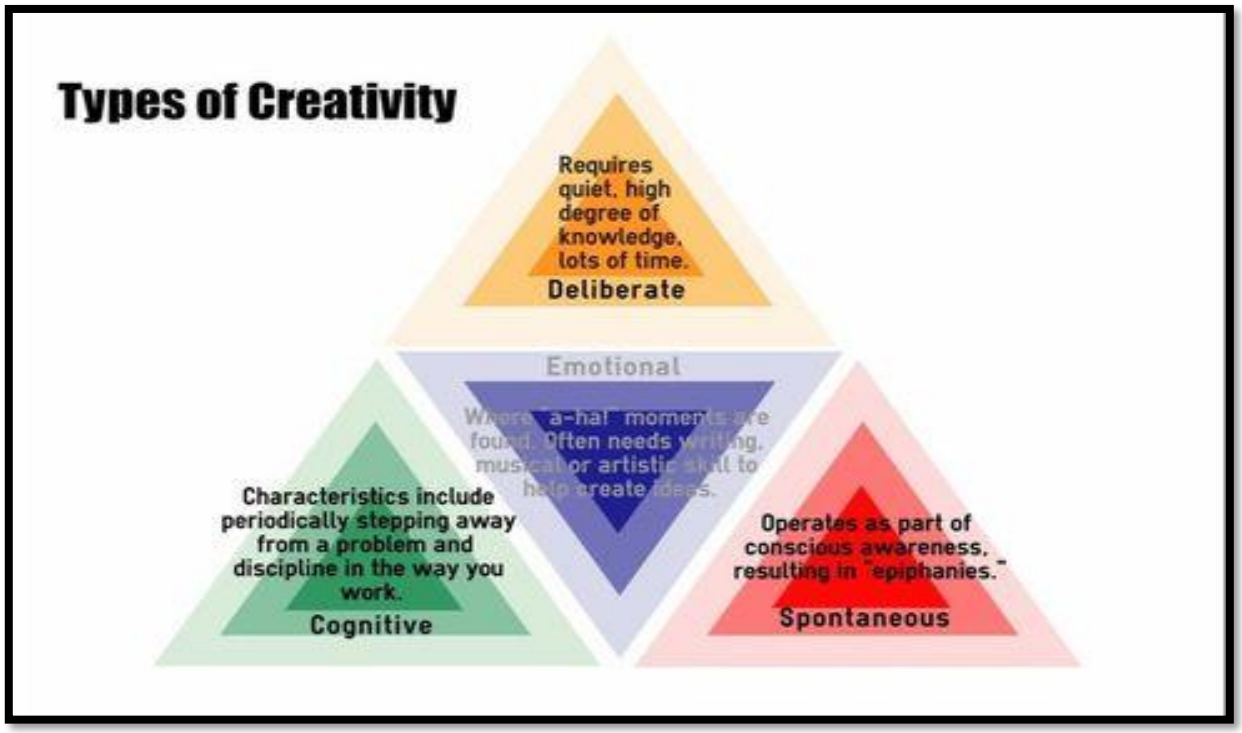

Figure 2. 5: Diagram indicating four types of creativity (Jorlen, 2020).

Figure 2.5 is another representation of the types of creativity found in an individual, namely deliberate, emotional¸ spontaneous, and cognitive. It is important to remember that creativity is a multifaceted concept, and, as mentioned earlier, it occurs in and uses various parts of the brain. Therefore, it is important to understand the various types of creativity that might occur in an individual. This enabled me to identify the way that each of the participants in this study approached the activity and what type of creativity was applied to answer the question, "How do they perceive creativity?".

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2.3.3 The whole brain thinking approach to creativity

With regard to de Bono's (1995) argument that creativity cannot be found in the right hemisphere of the brain, the question arises: "Where then does creativity occur in the brain?" Herrmann (1996) developed an instrument called the Herrmann Brain Dominance Instrument (HBDI) to describe the different ways that an individual might think. Before this is discussed further, it is important to consider the left-brain and right-brain thinking approach. Often people describe themselves as being either a left-brain thinker (analytical, logical, detail- and fact-orientated, numerical, and critical) or a right-brain thinker (creative, free-thinker, able to see the bigger picture, intuitive, and visualise more than using words). Herrmann (1996) argues that even though it is not wrong to say that we are either the one or the other, the one side of your brain does not switch off or go numb just because the other side is more active. He divides the brain into four thinking modes: cerebral, left, limbic, and right. While all four modes are actively present in one's mind, some are more prominent than others. In other words, the whole brain is used at all times. These thinking areas are depicted in Figure 2.5 and are described below.

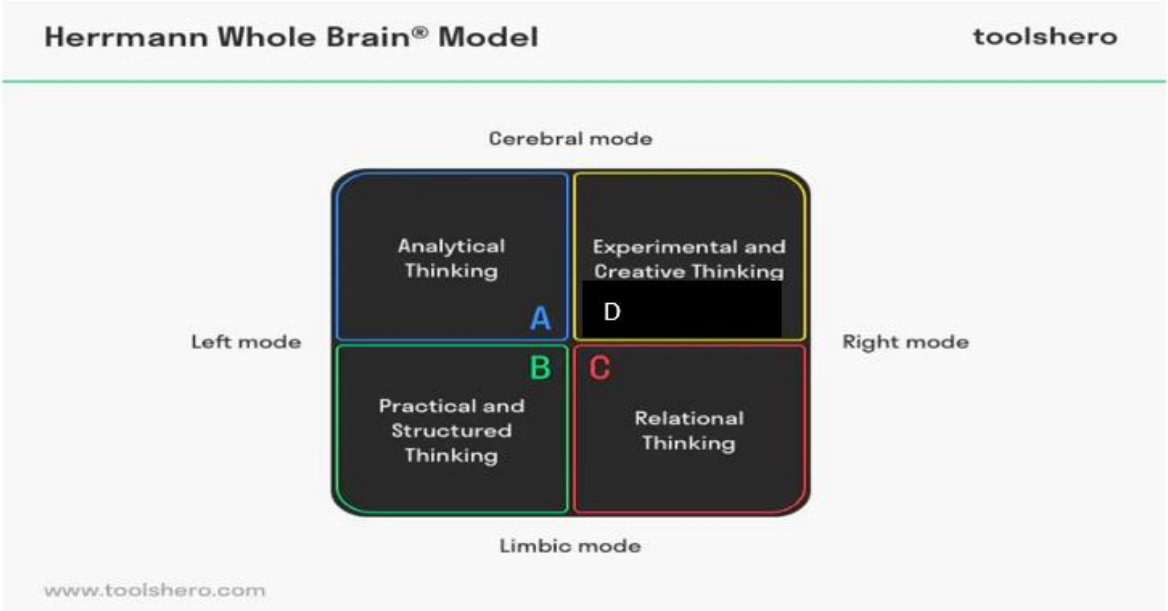

Figure 2. 6: Herrmann's (1996) Whole Brain model of thinking (Mulder, 2019).

Figure 2.6 illustrates how Herrmann's (1996) HBDI categorises an individual with the data it has available. The HBDI measures four integrated systems of thinking, as can be seen in Figure 2.6. Each of these systems (A, B, C, and D) is a cluster of interrelated mental activities and thinking preferences (Herrmann, 2016). These four systems are categorised in the diagram as Quadrant A, Quadrant B, Quadrant C, and Quadrant D.

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Quadrant A: Preference for logical, analytical, technical, and quantitative thinking, and is identified as analytical thinking.

Quadrant B: Preference for controlled, planned, administrative, and sequential thinking, and is identified as practical and structured thinking.

Quadrant C: Preference for emotional, interpersonal, feeling-orientated, and spiritual thinking, and is identified as relational thinking.

Quadrant D: Preference for imaginative, holistic, innovative, and synthesising thinking, and is identified as experimental and creative thinking.

The four quadrants can further be divided into four categories (Herrmann, 2016).

Cerebral mode contains analytical thinking (A) and experimental and creative thinking (D).
An individual who falls in this category can be described as follows:
You have a preference for analytical thinking. You excel at solving mathematical, numerical, and technical problems. You are also very imaginative and artistic with a conceptual way of thinking.[14] You have a holistic, intuitive, and innovative approach to problem-solving, are generally happy to take the initiative to lead, or create something new when needed. You believe problems can always be solved, and that challenges always come with solutions.

Left mode contains analytical thinking (A) and practical and structured thinking (B).
An individual who falls in this category can be described as follows:
You have a preference for analytical thinking. You excel at solving mathematical, numerical, and technical problems. You have excellent organisational skills. You work primarily in a controlled, conservative, and planned manner. You enjoy working in a very detailed, structured, and precise way, in search of solutions to problems step-by-step.

Limbic mode contains practical and structured thinking (B) and rational thinking (C).
An individual who falls in this category can be described as follows:
You have excellent organisational talents, you work primarily in a controlled, conservative, and planned manner. You enjoy working in a very detailed, structured, and precise way, in search of solutions to problems step-by-step. You also excel in communication, reasoning, and convincing others. You find interpersonal contact with others very important and have a kinaesthetic (sensitive) attitude.

[14] Thinking conceptually is the practice of connecting abstract, disparate ideas to deepen understanding, create new ideas, and reflect on past decisions. Conceptual thinkers can understand abstract concepts, like the function of a complicated business or a nonlinear digital process (Indeed, 2020).

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Right mode contains experimental thinking (D) and relational thinking (C).
An individual who falls in this category can be described as follows:
You are very imaginative and artistic with a conceptual way of thinking. You have a holistic, intuitive, and innovative approach to problem-solving, and are generally happy to take the initiative. You believe problems can always be solved, and that challenges always come with solutions. You also excel in communication, reasoning, and convincing others. You find interpersonal contact with others very important and have a kinaesthetic (sensitive) attitude.

Herrmann (1996; 2016) further explains that the HBDI tool can be used to indicate upper versus lower mode dominance. In addition to left-brain versus right-brain modes, the HBDI provides scores associated with preferences for the metaphorical upper mode (Quadrants A and D) versus lower mode (Quadrants B and C) mental activities. Higher scores in the upper quadrants are indicative of preferences toward logical, technical, innovative, and synthesising mental activities, whereas higher scores in the lower quadrants are typically indicative of preferences toward emotional, interpersonal, organised, and safekeeping mental activities.

Taking these modes into consideration, it is apparent that the core of creativity in an individual remains untouched or undeveloped. This core is identified as the invisible brain–mind process, which leads to creative and innovative achievements of individuals, work groups, corporations, and nations. It is thus safe to say that the “left-brain, right-brain approach”, also known as “the brain dominance test”, is an out-dated approach to identifying creativity in an individual. Researchers at Dartmouth College have debunked the myth that creativity is only connected to the right hemisphere of the brain. They have argued that creativity and imagination require a widespread neural network in the brain. Eleven different areas in the brain work together during the creative process which occurs in both hemispheres of the brain (Schlegel *et al*., 2013).

When considering each of the modes identified by Herrmann (1995), it is difficult to believe that all these factors can be found in a single individual at the same time. Sternberg (2003) has similar beliefs to Herrmann (1995) who asserts that all these modes, including creativity, are actively present in an individual. Sternberg (2003), who developed the triarchic theory of human intelligence to emphasise the role that creativity plays in the cognitive development of an individual, places as much importance on creative intelligence as practical and analytical intelligence.

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2.4 Why should creativity be considered important?

In their study, which served as a point of departure for this study, Fields and Bisschoff (2014) mentioned that at least 12 factors have to be taken into consideration when attempting to measure creativity. These are:

> …challenging the status quo, detachment, synthesis, cognition, association and communication, awareness, similarity, external motivation, sensitivity, experimentation and combination, dimensional thinking, and problem-solving. … These factors represent key elements in the creation of a measuring instrument that can be utilised to measure creativity at tertiary educational institutions – specifically in South Africa, and they have the potential to be applied and tested in various settings. (Fields & Bisschoff, 2014:52)

Although Fields & Bisschoff believe that these 12 factors may lead to the development of a measuring tool for creativity, such a tool has not yet been created.[15] These 12 factors are very similar to those mentioned by Williams (1986) in his levels of thinking, de Bono's (1995) observation of creativity, and Herrmann's (1996) approach to where creativity occurs in the brain. All these factors are kept in mind, however, not all at once; therefore, it is wise to use the guidance of Williams (1986), de Bono (1995), and Herrmann (1993) as they have developed systems that indirectly help to measure creativity and where it exists in an individual.

Creativity is defined in this study as:

> a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, identifying the difficulty, searching for solutions, making guesses, or formulating hypotheses about the deficiencies, testing and retesting these hypotheses and possibly modifying and retesting them, and finally communicating the results. (Kim, 2006:1)

This definition indicates that creativity requires a whole brain approach, as mentioned earlier in the literature review.

Fields and Bisschoff (2014) furthermore point out that traditionally educational institutions focus on educational programmes in terms of the development of the intellect and left-brain

[15] Creativity is a multi-faceted concept that perhaps many do not understand in full. To create a tool that is used to measure something, the thing that is measured should first be understood, including all aspects of that specific thing being measure. I believe that because creativity is still being explored, it may be difficult to create a tool to measure it as it is constantly developing and changing.

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activities, which include language, writing, reading, listening, calculating skills, logic, analysis, and sequence, and which leaves creativity to the right brain (Fields & Bisschoff, 2014). This contradicts the findings of de Bono (1995) and Herrmann (1996) who state that creativity does not occur in the right hemisphere of the brain. Fields and Bisschoff (2014:50) mention that "measuring creativity at a tertiary educational level is an additional challenge. The challenge at South African tertiary educational institutions appears to be that different disciplinary interpretations of creativity exist, which makes the identification and measurement of creativity difficult". In their conclusion, Fields and Bisschoff found that measuring creativity at tertiary educational level has been problematic due to the diverse teaching and learning processes and programmes used at tertiary educational institutions. Psychological factors are also key determinants in fostering or inhibiting creativity at tertiary educational institutions with the relative impact of social and cultural factors on creative and teaching processes in diverse academic disciplines in different countries (Fields & Bisschoff, 2014).

2.4.1 The triarchic theory of human intelligence

Piaget, Vygotsky, and Sternberg are three influencers of the theory of cognition. Piaget and Vygotsky (in Ebersöhn *et al.,* 2015:46-56) are psychologists who do not agree with the theory of cognition, each referring to different areas that they consider important. For instance, Piaget (in McLeod, 2018XX) developed a theory that explains how a child constructs a mental model of the world. Similar to de Bono's (1995) argument, Piaget (in Ebersöhn *et al.,* 2015:46) disagrees with the idea that intelligence is a fixed trait. He considers cognitive development as a process that occurs due to biological maturation and interaction with the environment. Children construct an understanding of the world around them, then experience discrepancies between what they already know and what they discover in their environment (Ebersöhn *et al.,* 2015). These discrepancies enable children to identify similarities and differences between situations or even themselves and others, influencing their choices and contributing to their development. Piaget (1936) believes that people constantly adapt to their environment and, in doing so, use their minds to organise the world in ways that they can understand. This theory of development represents constructivism (Ebersöhn, Gouws, Lewis & Theron, 2015).

Like Piaget, Vygotsky (in Ebersöhn *et al.,* 2015:46-56), a forerunner of the cognitive development theory, believes that higher cognitive processes originate in social interaction. he believes that we constantly adapt to our environment. However, he places an additional emphasis on social interaction. Social interaction can be influenced by the individual's environment, as new places often lead to new people with different points of view. I believe that both these aspects have a significant impact on an individual. The environment in which young people finds themselves will most likely shape the way that they react to or approach

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situations. This environment could be their home, parents, or emotional and mental environments in which they are raised. Later social encounters also have an impact on an individual. These interactions can include peer pressure or how an individual is conditioned to react in a certain way around a certain group of individuals, such as being socially sensitive or considerate.

Sternberg's (2003) approach is a combination of the theories of Piaget (1936) and Vygotsky (1978) in which intelligence is classified in terms of three aspects (Kokot, 1992). Sternberg's (2003) triarchic theory of human intelligence proposes that intelligence is comprised of three aspects, namely analytical, creative, and practical (Ebersöhn *et al.,* 2015). Referring only to the creative aspect of the triarchic theory of human intelligence, Sternberg (2003) defines intelligence as "effectively dealing with novel problems and automating responses to familiar problems, including creating, inventing, discovering, and imagining" (Ebersöhn *et al*., 2015:45). This correlates with Piaget's conviction that people adapt to their environments using their minds to create new understanding. The triarchic theory of human intelligence comprises three sub-theories, each of which relates to a particular kind of intelligence, namely contextual, experimental, and componential. The contextual sub-theory corresponds to practical intelligence or the ability to successfully function in one's environment; the experimental sub-theory corresponds to creative intelligence or the ability to deal with novel situations or issues; and the componential sub-theory corresponds to analytical intelligence or the ability to solve problems (Sternberg, 1999).

Sternberg's (1999) theory of intelligence shows similarities to the Greek philosopher Aristotle's theory of intelligence. Sternberg's analytical, practical, and creative intelligences closely resemble Aristotle's theoretical, practical, and productive excellences of intelligence. Each comparable component incorporates significantly related ideas (Tigner & Tigner, 2000). Aristotle endeavoured to introduce a distinct difference between excellence and intelligence whereas Sternberg (2003) identifies a connection between different types of intelligence and how they contribute to cognitive development. Both Aristotle and Sternberg mention the importance of creativity when it comes to intelligence; therefore, I refer to and rely on Sternberg's (2003) theory of intelligence in this study as they provide different perspectives.

According to the triarchic theory of human intelligence, cognition is the centre of intelligence. Aristotle believed that three distinct kinds of human activity exist, namely understanding or knowing, action or doing, and production or making, with each requiring the exercise of intelligence in its own characteristic way (Tigner & Tigner, 2000). Aristotle's general triarchy has been enshrined in art. Art personifies productive intelligence and is surrounded by

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symbols of the arts (Sherman, 1995). Sternberg's triarchy includes analytical intelligence, practical intelligence, and creative intelligence. Creative intelligence is important when we encounter novel situations and when we deal with recurring circumstances. Novel situations require skills that may only be loosely based on past experiences, and some people are more skilled than others at this kind of coping. Creative intelligence is thus closely linked to the experience of the individual (Tigner & Tigner, 2000). This study relies on this aspect of the triarchic theory of human intelligence, as the development of an individual depends on the balance between analytical, creative, and practical abilities, which function collectively to allow individuals to achieve success in a particular context.

Analytical intelligence is used to analyse, compare, and evaluate and is necessary for successful problem-solving and decision-making. Analytical intelligence is used to solve problems and is the mode of intelligence that is measured by a standard intelligence quotient (IQ) test (Tigner & Tigner, 2000). Practical intelligence is used to gain knowledge from one particular context to another context that appears during one's life. Practical intelligence is used by the individual to apply information to everyday tasks (Tigner & Tigner, 2000). Creative intelligence is closely linked to the experience of the individual and is acquired through observation leading to designing and making. Creative intelligence is better expressed in situations with minimal structure or constraint. Most academic settings impose a high degree of structure, which may stifle creativity (Tigner & Tigner, 2000). Although all three components are important, the focus of this study is on creative intelligence. However, I still refer to the other components as they all play a role in the development of cognition and influence each other. Understanding creativity ensures that I completely understand the role it plays in the development of cognition of the individual during adulthood.

Gardner (2013) has a similar view on the various intelligences found within an individual. He developed a theory of multiple intelligences, discussing nine various intelligences found in individuals. Gardner (2013:4) asserts that regardless of which subject you teach – "the art[s], the sciences, history or math" – you should present learning materials in multiple ways. Gardner points out that everyone has strengths and weaknesses in various intelligences, which is why educators should decide how best to present course material given the subject matter and individual class of students. Indeed, instruction designed to help students learn material in multiple ways can trigger their confidence to develop areas in which they are not as strong. In the end, students' learning is enhanced when instruction includes a range of meaningful and appropriate methods, activities, and assessments (Gardner, 2013).

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2.5 Conclusion

This chapter provided evidence of how multifaceted creativity is. Various descriptions of creativity and approaches to creativity, and many possible ways that creativity can be identified in an individual are provided. However, due to its diverse and multifaceted characteristics, there is no one way that creativity can be measured. I found that to truly understand how and where creativity manifested itself, it was important to consider various theories and literature about creativity to broaden my perspective on creativity. I therefore used three theories, namely Sternberg's (2003) triarchic theory of human intelligence, de Bono's (1995) six thinking hats or lateral thinking, and Herrmann's Whole Brain model (1996) in the study to understand how the individuals perceived creativity. I also established that experiences and emotions influenced their creativity, and to ensure that I did not miss this influence, I employed hermeneutics, as discussed in Chapter 3.

However, it is acknowledged that creativity cannot stand on its own. Other factors of cognitive development – as seen in Williams' (1986) taxonomy – cannot stand alone either. This brings me back to the three theories that emphasise how creativity is always present in the cognitive development process and thinking of an individual. I therefore used the knowledge obtained by means of the literature study and the choice of three theories in Chapter 3 to ensure that I remained consistent when collecting and later analysing the data.

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CHAPTER 3: MY APPROACH TO DATA COLLECTION

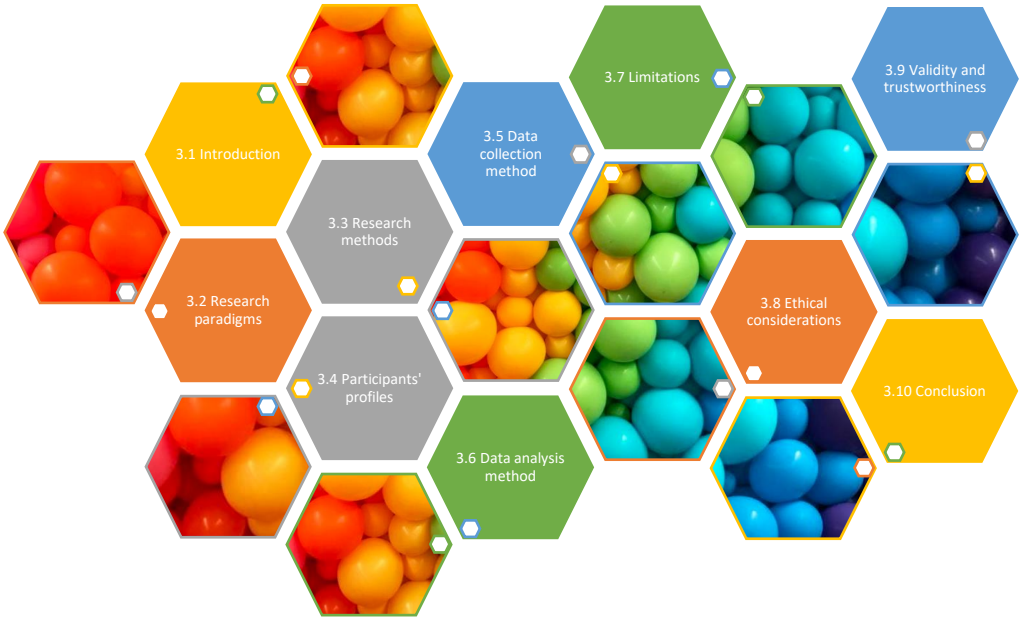

Figure 3. 1: Main items discussed in Chapter 3.

3.1 Introduction

The artwork below (Figure 3.2) is a representation of what I aimed to find out for myself.

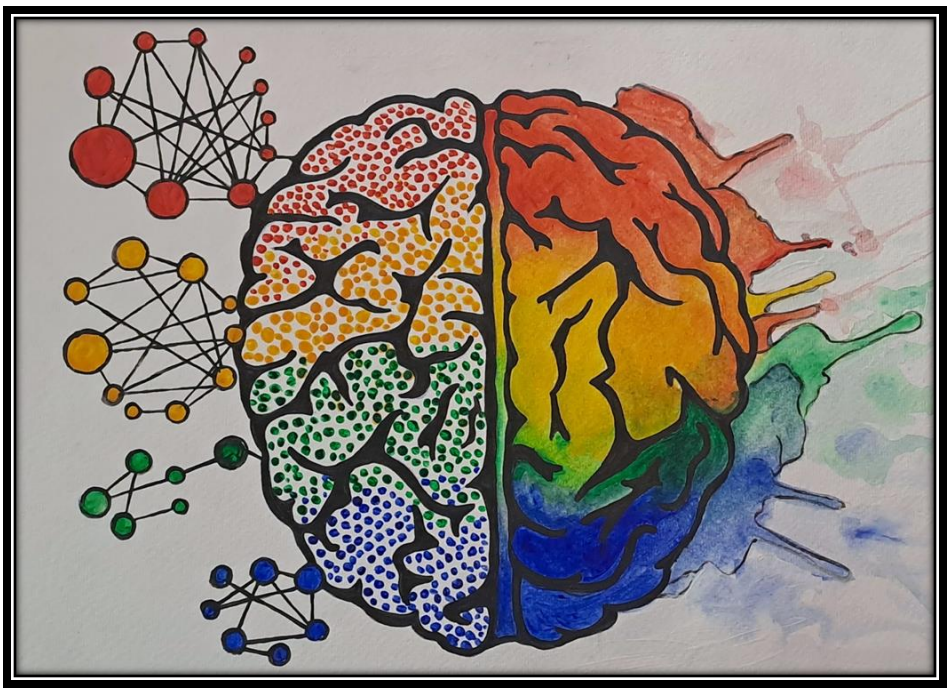

Figure 3.2: A representation of how the author perceived creativity. A collaboration between the artist A. Willemse and the author. Watercolour on paper, 51cm x 64cm. Photograph by author, 2022.

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In the figure, the right side of the brain is represented as colourful paint (ideas) running out of the brain. Usually, dull, grey numbers and blocks are drawn to signify the left side of the brain. I changed this notion and representation by adding colourful structures and dots. This is a representation of how I understand the brain. The right side is the free-spirited side as we have understood it to be historically, however, the left side, while still structured, is filled with colour (see Chapter 2 for the discussion explaining the theory and literature supporting this view). I believe that creativity occurs in the entire brain, although perhaps not in the way that we traditionally imagined it to happen. Therefore, this research project was approached with the purpose of establishing how individuals, in particular the first-year Visual Arts education students, perceive creativity, no matter whether they identify themselves as creative or not. I kept this notion (referring to Figure 3.2) in mind throughout each chapter and integrated this perspective into the research approach to ensure that I did not miss anything of importance. The honeycomb chart at the start of each chapter is a reminder of this concept. When the research methods and data collection were applied, I kept the following question in mind: How will I be able to determine what the perception of an individual is, especially when it comes to creativity? This question made it easier for me to identify the most relevant methods, paradigms, and approaches to conduct the research to answer the research question: How do first-year Visual Arts education students perceive creativity? The question also reminded me to take the time to listen to the voices of the participants, remain objective, and not become biased by referring to my own ideas and feelings. The research approach of this study was planned with the participants in mind. In this chapter, the research paradigms, approaches, data collection, and analysis methods are discussed. As mentioned in Chapter 1, under the methodology section, I use the participants preferred pronouns. This is based on the information gathered during the analysis of the questionnaire where the participants identified as either male or female. I did this to show respect for each individual who participated in my study.

3.2 Research paradigms

Although there are many others, three common research paradigms – positivism, pragmatism, and constructivism – are repeatedly referred to in research.[16] I considered each paradigm and the relevance that it had to this study and decided to work with the constructivist paradigm. The constructivist paradigm was most suitable for this qualitative research because

[16] Positivists hypothesise that there is only one reality that is possible to measure and understand (Carlstrom, 2022). Because this paradigm only believes in a single possible measurable reality, it would make sense that it would be used in a quantitative research approach. The pragmatic paradigm is suitable for both quantitative and qualitative research methods and supports the belief that “reality is continually interpreted and renegotiated against the backdrop of new and unpredictable situations” (Carlstrom, 2022:1), much like the participants and artwork with which the researcher decided to work.

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constructivists believe that “there is no single reality or truth, but rather multiple realities” (Carlstrom, 2022:1), which relates to the research focus of this study and the multiple perceptions regarding creativity. Constructivists focus on the meaning attached to an action. I did that by searching for the meaning embedded in the artwork that the participants created during the activity for the purpose of this study. (The activity and artwork are discussed in more detail later in this chapter). The focus of meaning-making shows that constructivists aim to answer the question “why?” by gathering data through interviews, case studies, or other methods that provide different perspectives of the participants, capturing the participants’ thoughts, ideas, and ideals.

Constructivist teaching is based on the belief that learning occurs when learners are actively involved in a process of meaning and knowledge construction rather than passively receiving information (Gray, 1997). Constructivism serves as a metaphor for learning, linking the acquisition of knowledge to a process of building or construction (Fox, 2001). Constructivism is an important component of research in education as it explores the way in which teachers and learners construct meaning by interacting with their environment and each other. Fox (2001:23) states that in the constructivist paradigm “knowledge is gained, or at least filtered, through social construction such as language, consciousness, shared meanings, documents, and other artefacts”. The students participating in this study were actively involved in the process of creativity by participating and creating meaning and knowledge.

This study acknowledged the importance of the participants’ cultural background, and thus considered the individuals’ backgrounds and past experiences as a point of departure to understand how they perceived creativity. In this regard, I considered Gadamer’s (2001) and Heidegger’s (1994) theories about hermeneutics, and how the participants’ lived experiences influenced their perceptions and understanding of their current situations, that is, the students’ perceptions of creativity in their visual arts activities. Hermeneutics determined the way I explored how the first-year Visual Arts education students perceived creativity through the creation of artwork. What was not said (namely the reason for using a certain medium or style) thus became as important as what was said (namely the message portrayed in the artwork) through their artworks.

This is particularly important in a South African context where concepts like language, culture, communities, traditions, and education are intertwined and are often more complex than they

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appear to be.[17] A constructivist paradigm emphasises the value of multiple perspectives in a setting and has a long history as a theory of perception and memory (Fox, 2001). The central focus of constructivism as a theory of learning is on human knowledge that is acquired through a process of active construction (Fox, 2001).

3.3 Research methods

The design of qualitative research uses various experimental techniques, encompassing a variety of accepted methods and structures. Even though there is no standardised structure, this type of study still needs to be carefully constructed and designed (Shuttleworth & Wilson, 2008). I continuously ensured that I remained objective by using open-ended question techniques and remained alert to potential sources of error. I was also aware that no personal description of the visual imagery — could be entirely objective, as a viewer inevitably accords some features of the view as more significant than others. This involved awareness of bias and deep sensitivity to the phenomenon in question. It was important to ensure this during the analysis of the data due to the different perspectives involved. When analysing the artworks, I remained objective and allowed the participant to speak through their artworks by remaining unemotional and not bringing my own emotions into the interpretation of it. I also saw things as they were represented in the artworks rather than from a personal point of view. I tried to focus on the details, methods, and media used to see the perception from the students' point of view to ensure that I did not focus only on what I saw, felt, or thought. Artwork or creativity may be perceived through emotion; therefore, I ensured that I did not analyse the data based on my emotions or perceptions by solely focusing on the participants' answers to the questionnaires and the possible reasons behind their choice of medium, style, and the paper used for their artworks. If this was not done successfully, the analysis would have been skewed and the students' perceptions might have been misinterpreted or misrepresented.

The greatest advantage of qualitative research is that the qualitative techniques are extremely useful when a subject is too complex to be addressed with a simple yes or no hypothesis. I am also aware of the disadvantages of qualitative research. It can be time- and resource-consuming compared to quantitative research as the researcher has to always be present during interviews and observations in qualitative research. To save time, I used a questionnaire to obtain more information about and from the participants in the study. This

[17] A language and culture are intertwined as the language is used in a culture where individuals communicate with each other. Communities are formed through interests and similar cultures. People in these communities communicate in the same language. Traditions are connected to the culture, where traditions keep the culture alive. Tradition describes a group's beliefs and behaviours, whereas a culture describes the characteristics of the group in that culture. Each factor leads to the next. In South African culture, tradition, language, and education are extremely important in the growth of the next generation (Leveridge, 2008).

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allowed me to look carefully at and examine the information and not to be pressured for time as I could work at my own pace. It also made it easier to connect the information to the artwork created by each participant, so that I could get a bigger picture of the meaning made by the participants. To ensure that I remained unbiased and sensitive to the ethical issues and philosophical underpinnings of the research question (Shuttleworth & Wilson, 2008), I employed hermeneutics. This enabled me to be more sensitive to the culture, tradition, language, and other background factors that might play a role in the students' artwork. I also used iconological and iconographical methods of analysis. This enabled me, to a large extent, to remain objective and unbiased as I referred to what I saw on the paper (the artwork created). Only after looking at what was presented did I refer to what the intended meanings of these artworks might be when the information was collated. (The iconographic and iconological analysis are discussed in more detail under Section 3.6, the data analysis).

Another disadvantage to consider is that qualitative research does not involve a statistical form of data which may influence the reliability of the findings. Findings are based on perception and each individual's perception differs. How I analysed the data might differ from how other researchers approach and analyse the data. Furthermore, I might have misinterpreted what the participants intended to create. Therefore, I am reminded of the question: "How do Visual Arts education students perceive creativity?" The intention in this study was not for me to analyse the meaning of the artworks, but rather to analyse how the participants perceived creativity in their use of media and methods. Furthermore, in qualitative research, the large quantity of data can be difficult to manage, and the analysis thereof can be time-consuming. Owing to the possible large amount of data in this study, I decided not to use some of the data collecting methods that I had initially considered and to move away from interviews, focusing instead on questionnaires. This allowed me to gather additional background information about the students to better understand their perceptions of creativity, while saving time and allowing me to work through the data without any pressure. The data were collected at the beginning of the first term of Semester 1, and again at the end of the first term of Semester 1. I believe that the participants demonstrated growth in how they perceived creativity during this period. The data collected were from the participants' artworks and the questionnaires in the format of a Google form. This was used to illustrate the process and the progress of how creativity influenced the first-year education students during Visual Arts. The data were also used to indicate how creativity influenced each individual uniquely.

The data collected through the questionnaires enabled me to see the development of the participants, their creativity, and also to understand the lived experiences of the participants in relation to their perceptions of creativity. As these participants were experiencing creativity

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first-hand while participating in an art practical module for the first time, their answers to the questions in the questionnaires provided valuable insight to help me to understand how they perceived creativity, which contributed to a better understanding of the role that creativity plays in the development of each individual.

3.4 Profiles of the participants

At the start of first term, I attended the first session of the JKU 101 module with the lecturer. I was given the opportunity to engage with the students and explain to them what the research was about and to give them with some information on creativity in general. I specifically chose students from the University of Pretoria, not only because I had easy access to them and their artwork, but because I understood how the University of Pretoria operated, specifically with regard to the Visual Arts modules. I completed the JKU 101 module during my own studies, despite initially feeling overwhelmed and unsure whether I could do it. Therefore, I believed that if the students felt the same, especially after returning to the classroom after lockdown, it would create a sound basis for my study.

I started by introducing the participants to an activity, during which the concept of pareidolia was introduced. The students were asked to create something new by looking at an object, for example, a crack in the wall, a spill on the table, or even a shadow against an object. This was connected to the concept of pareidolia, a phenomenon causing individuals to, for example, see faces in nature (or objects) around them. This concept was first discussed by the psychologist Diana Deutsch in 1995. The students were able to use different coloured, sized, and textured paper and different media like chalk, charcoal, paint, ink of different colours, pencils, or any other media that they happened to have with them. They were motivated to use either the media provided or to create their own. The students were allowed to rip up different types of paper to create a new sheet to work on or they could fold their paper into a shape that they preferred. There was no limit in this regard. The only exceptions or limitations were that the students had to use the concept of pareidolia, which was discussed at the beginning of the session, and they only had time to complete their artwork in the class during the one session. The amount of paper and media available could also be viewed as a limitation. Limited examples of pareidolia art were provided as I wanted the students to use their own ideas when creating their artworks, without me imposing expectations.

The second form of data construction to support the document analysis was a questionnaire in the format of a Google form. The students were asked to complete the questionnaire at the end of the first term of Semester 1. This questionnaire was intended to provide insight into the

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influence that creativity had on first-year Visual Arts education students and their perceptions of creativity. The data collected from the questionnaires assisted in the analysis and provided a deeper understanding of the students' perceptions of creativity. The data collected from the questionnaires were documented in table format (see Appendix A) to compare the answers of the participants and to connect the iconographic and iconological analyses with each other. The data collected showed some gaps, in that I was not entirely able to identify the participants' choices in creating their artworks. Consequently, a second questionnaire or Google form was sent to the participants to better understand why they chose to complete their artworks the way they did. The responses to both the questionnaires were used during the data analysis process and integrated into the discussion of the findings in Chapters 4 and 5.

3.4.1 Participant profile and sampling

The data of this study were constructed from the artworks of the first-year Visual Arts education students who had enrolled for the year-long JKU 101 module. As noted, however, the study was only conducted during the first two terms of the first semester of 2022. Owing to the strict rules and regulations of the COVID-19 pandemic lockdown, the students did not return to their classes in 2021. However, classes continued via the online learning platform called Blackboard that was used by the University of Pretoria. I was privileged to join two or three of these sessions to connect with the Visual Arts students. During these sessions, the aim of the study and the collection of the data was introduced to the group. Initially, 21 students agreed to participate and joined me in a WhatsApp group where I elaborated on the study and what would be expected of the participants if they agreed to participate. Unfortunately, when the participants were asked to submit digital versions of their artworks and visual diaries, the majority decided to withdraw from the study. They explained that they found their first year of studies, especially being online, to be overwhelming and they no longer wanted to participate due to the workload with which they were faced. Regrettably, this happened close to the end of the year, and it meant that I had to wait until the following year, 2022, to work with a new group of students.

Fortunately, campus classes resumed at the start of 2022. JKU 101 had only one class of approximately 40-50 students, but only 15-20 students attended the sessions I presented. While all the students were asked to participate, only seven participants' submissions were analysed for the purpose of the study. When choosing the participants, I considered each participant's responses to the questionnaires along with their final artwork. I specifically looked at how they approached the activity, the media that they chose for the final artwork, how they used their choice of paper, their styles or art skills, and how they incorporated their inspiration into the artwork. I decided to focus on these factors to keep the participants' work anonymous,

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taking into account the situation (the activity) and how the participants defined themselves in a world where creativity exists. I also considered the participants' background, gender, experiences, passions, and interests when connecting the iconological analysis (that is, the analysis of the answers found in the questionnaires) to the iconographical analysis. These data analysis methods are discussed in Section 3.6. I believe that these factors also influenced the perspectives of the students which is why I took the participants' hermeneutical backgrounds – namely their situatedness in the world and how this influenced how they made and perceived meaning – into account. I am aware that selection is in itself a determinant of results, however, I do not believe that in my study this was the case. I believe that the selection of the participants made my sample more diverse. Owing to the time-consuming nature of iconographical and iconological analysis, I could not make use of all the participants' work and therefore had to make a choice. I thus chose to select participants who would provide diverse data and enable me to complete the analysis. In terms of these factors, I looked at different cultural characteristics, different genders (or the gender with which the students identified), different traditions, and their social and environmental backgrounds (for example, were they from a place where financial support was needed?). How a person is raised or how they have developed over time, looking or referring to themselves in a particular way, influences the way in which this person makes and perceives meaning. An example of considering a person's social context is if an individual comes from an impoverished background, they might use their creativity (creating items or food to sell) to earn an income to "survive" from day to day. I chose a diverse group of participants to see similarities or differences in their perceptions of creativity with reference to their artworks. The findings of the study showed that although these factors were not the only influencers of how creativity was perceived, they were some of the main influential factors. Ensuring that these factors were kept in mind ensured that a diverse pool of data was collected and gave me a better understanding and perspective of creativity and how it influenced the participants during creative arts – especially when they were at home.

Before selecting the participants, I first had to obtain permission from the head of the department and the dean of the education faculty of the university. Thereafter, I obtained ethical clearance and permission from the University of Pretoria Survey Committee to use university students as participants in the study. Once permission had been obtained, I communicated with the lecturers to ensure that I would be allowed to ask their students to participate in the study and to use one of the classes to complete an activity with the students.[18] I then personally communicated with the willing participants to explain the purpose

[18] The researcher's supervisor is one of the coordinators of this module. The intended study was also discussed with the lecturers of this module.

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of the study to them and what their participation would entail. The participants were informed that they had the option to withdraw from the study at any time if they so wished with no repercussions. The study was conducted anonymously to ensure that the personal details of the participants remained confidential. The participants were, therefore, referred to by using the pseudonyms Participant 1, Participant 2, and so on.

3.5 Data collection methods

During the first session with the first-year Visual Arts education students, I spoke to them about creativity to find out what their understanding of creativity was. During this meeting, the students each completed an artwork that was handed in at the end of the session. These artworks were analysed, and the data were collated through iconological and iconographic methods. At the end of the first term of the first semester, I had another face-to-face meeting with the students where I spoke to the them about their experiences of the visual arts during the first term. After this discussion, the participants were asked to complete a questionnaire containing questions about their backgrounds, what they understood creativity to be, and how they had grown during the term. It was important to ensure the safety of the participants. To make sure that they were comfortable while talking in the classroom, I created a secure and safe environment by assuring the participants that there were no wrong answers and that each of their responses were important.

The first-year Visual Arts education students were all in one class. I selected the sample group for the study from the artworks and questionnaires received. I chose the participants by looking at their backgrounds and different understandings of creativity. This ensured that the group was diverse, which was confirmed through the information provided in the questionnaires that they had completed. The students were asked to use their student numbers on their artwork as well as on the questionnaire to make it easier for me to put the information of each participant together so that the correct artwork could be considered in relation to the relevant questionnaire. The artworks completed by the students during this session did not form part of their curriculum work but was seen as an introductory activity to the module where no limits were set, allowing the students to express their own style to make each artwork unique. The activity was explained to these students using a few examples. However, I did not want to use too many examples to ensure that the students used their own ideas during the activity. Although not set by me, some limits were present, for example, the limited types of paper and media available in the class. The time the group had available to complete the activity could also be seen as a limitation as the participants might have experienced some pressure to

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complete their artworks before the time was up. Two methods of data collection were used for each student: an artwork and two questionnaires.

3.5.1 Artwork

As previously mentioned in this chapter, the participants were introduced to the concept of pareidolia. Art supplies were provided along with the brief on the activity. At the end of the session, the participants were asked to write their student numbers on the backs of their artworks to make it easier for me to identify which artwork belonged with which questionnaire, once the questionnaires were completed. The participants were also asked to complete an information document providing their name, surname, student number, and contact details, before they left the room. This document provided a space where the participants could indicate whether they were interested in participating in the study or not. All the artworks were then handed in and placed in a folder.

I worked through the artworks and referred to the activity that was introduced at the beginning of the session. I looked at the skills, artistic style, media, and overall finish of each artwork to decide who the participants would be. I did not make a final decision until I had received the questionnaires that were completed by the participants. These provided greater insight into the artwork and made it easier to choose a more diverse group based on how they approached the artwork and what they said about themselves and their perceptions of creativity.

3.5.2 Questionnaire 1

The participants' responses to the questions on the questionnaire provided more information about the participants and their understanding of creativity. As the hermeneutical background and situatedness of the participants were important to the analysis of the data, some of the questions might have seemed to be personal. The following questions were asked in the questionnaire:

1. Name, surname, and student number.
2. Please indicate if you want to participate in the study.
3. Is this your first time taking art education at a university?
4. Why did you decide to enrol for art education?
5. With which gender do you identify as?
6. How did art education influence your perspective on life?
7. What is your age?
8. Describe the culture in which you were raised and with which you identify.
9. Please elaborate on your current environment of residence.

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10. How would you describe your thinking? “Right-brain thinker” or “left-brain thinker”? Why?
11. Do you have any background in the visual arts? If yes, please specify.
12. How would you describe creativity?
13. What do you think is the importance of creativity?
14. What is your favourite creative activity? Why?
15. How would your peers, family or friends describe you? Why?
16. What inspires you to be creative?
17. How would you describe your artistic style?
18. Why do you prefer the above-mentioned style?
19. Compare your first and last artworks of this semester. Do you see any difference? What is different? Why do you think it is different?

3.5.3 Questionnaire 2

During the analysis of the seven participants’ artworks, I realised that there was not enough information to complete a thorough analysis of both the iconological and iconographical analyses. I therefore requested that the participants complete a second questionnaire to gather the information needed to fill some of the gaps. Unfortunately, three of the participants did not want to comment on their final artworks, and I only received four completed questionnaires. Nevertheless, the four participants provided more than enough information to enable me to understand their artworks and thought processes when creating them. The questions in the second questionnaire that the participants were asked to complete were as follows:

1. When referring to your artwork, what was your inspiration to create this specific artwork?
2. (Refer to your answer in question 1) Why were you inspired by this?
3. Why were you drawn to use the paper you chose to complete the artwork with?
4. Why were you drawn to the medium you chose in which you completed your artwork?
5. Why did you use the colour(s) you chose to complete your artwork in?
6. What is the story behind your artwork? (Please explain what your artwork is about or what it is portraying.)
7. Would you change anything of this artwork? (If you answered yes, please explain why.)
8. How would you compare this artwork with your previous artworks?
9. How would you compare this artwork with your current artworks?
10. What was your thought process when you created this specific artwork?
11. What have you learnt about yourself? (Referring to your creativity.

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3.6 Data analysis method

The following table elaborates on the choices of data construction techniques

Table 3. 1: Data construction techniques

	Benefits	Challenges	Documentations
Questionnaire	• Provides an opportunity for the interviewer to understand the perspective of the interviewee. • Follow-up questions can be asked to prevent misinterpretation. • The data can be recorded and revisited.	• Participants may not share their answers confidently. • Processing the data is time-consuming. • As it was a predetermined questionnaire, it was difficult to accommodate follow-up questions.	• The answers to the questionnaire are documented in table format and saved as PDF documents, which were uploaded to a safe platform. • The data is not stored on a platform that can be hacked or where the data can be lost. • Only the researcher and the study supervisor have copies stored on a safe hard drive.
Document analysis – Artwork analysis	• An efficient and effective way of gathering data, documents are manageable and practical resources. • Documents are a very accessible and reliable source of data. • Document analysis supports and strengthens research. • Documents can also contain data that can no longer be observed, provide details that informants have forgotten, and can be used to track change and development.	• Documents are not created with data research agendas and therefore require some investigation skills. • Not all documents provide all the necessary information required to answer the questions. • Some documents may only provide a small amount of useful data or sometimes none at all.	• Coding to enable the identification of themes throughout the study.

As described previously, the constructivist paradigm can be linked to the interpretive paradigm, which is concerned with understanding the world. This method considers the subjective experiences of individuals, using meaning-orientated methodologies, such as interviewing or participant observation, that rely on a subjective relationship between the

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researcher and the subjects (participants) (Thomas, 2016). I relied on art-based interpretation methods to decode and analyse the artworks. For these purposes, I used both iconological and iconographical art analysis methods. As it was important to take the background and situatedness into consideration, I relied on various visual culture studies and meaning-making methods, such as those introduced by Gadamer and Heidegger. To comprehend Gadamer's applications of hermeneutical phenomenology, it was important to understand the philosophical development of phenomenological hermeneutics.

Gadamer's approach to art goes against conventional philosophical expectations (Gadamer, 1963, as cited in Davey, 2018:401). He does not account for the aesthetic in any customary sense the world. In other words, he aims to identify how an individual's lived experiences influence the art that they create and find inspiring. Gadamer also discussed how the interpreter's experiences influence the interpretation of an artwork. In other words, the lived experiences of the researcher might have influenced the way in which the researcher interpreted the artworks of the participants. Therefore, using Gadamer's approach enabled me to analyse the participants' artwork more effectively as it allowed me to understand how they were influenced by their lived experiences and emotions. I therefore analysed each artwork according to the iconographical and iconological artwork analysis methods (see Figure 3.3).

Table 3. 2: Outline of Iconographic and iconological analysis

Iconographical artwork analysis	Iconological artwork analysis (Taking the participants' lived experiences into consideration)
Referring to: 1. Empirical data of artwork 2. Objective description 3. Describing artwork in detail (not simply referring to the picture) 4. Formal art analysis (referring to the art elements and design principles found in the work)	Looking at: 1. The overview of the time period (socio-cultural, political) 2. Artist's background and general work approach 3. Story of the artwork 4. Meaning and interpretation of visual elements

I started the iconographical analysis by first describing the empirical data of each artwork. This means that I provided an overview of who the artist/participant was, the title of the work, the media used, and the size of the work. Thereafter, I provided an objective description of each artwork, explaining what could be seen in the work by relying on the formal art elements and design principles. During this stage of the analysis, I did not attempt to provide an interpretation of any deeper meaning or to elaborate on the artist's intention. Instead, I

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described the work as if describing it to a blind person. At the end of the analysis, I discussed the findings and possible meanings observed in the artwork. This allowed me to start with the iconological analysis.

After completing the iconographical analysis, I moved to the iconological analysis of each artwork, starting with the overview of the information gathered in the questionnaires. The answers provided an overview of the background of the participant. The artwork was then connected to the background to identify whether it had influenced the participant in any way. I again referred to the iconographic analysis – specifically the art elements used to create the artwork – and identified general characteristics, making connections between what the participant created and the possible meaning. While working through the meaning of the artwork, I constantly took the background of the participant into account to ensure that I remained objective and did not miss the meaning that the participant wanted to convey, whether intentionally or unintentionally. Referring to the background while considering the possible meaning of the participant enabled me to see the story behind the artwork. I used literature to establish what the elements in the artwork might mean and to connect it to the participant's answers and background to ensure that I had a complete idea of what was created. Referring to the second questionnaire guided me in confirming whether I had understood or misinterpreted the message. The second questionnaire thus also served as form of triangulation to validate the findings in the study.

This analysis relied on both Gadamer's and Heidegger's notions of hermeneutics. The findings and interpretations were systematically documented and the findings from the questionnaires either confirmed or contradicted the interpretations of the artwork. After analysing the artwork using iconographical analysis, I again referred to the answers that the participant had provided in their questionnaires. At first, I tried to find the meaning of the artwork before referring to the participant's answers, but the findings or informal analysis changed as soon as I had worked through the participant's responses. The responses were then incorporated into the iconological analysis of the artwork to guide me and to provide background on the possible choices made by the participant.

This is where the validity, reliability and trustworthiness of the findings (discussed in Section 3.9) played a major role. It reminded me to remain objective to allow the participants' voices to be heard in the artworks that they had created. I reminded myself to look at why the participants chose the specific medium, paper, style, and skills, and to refrain from commenting on how I would have preferred the activity to be completed or I would have done it differently. I also refrained from commenting that the participants could have improved their

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artwork. In addition, I avoided any form of guidance in the classroom during the completion of the activity to allow the participants to create freely and for their work to be authentic. Once these interpretations and analyses had been completed for each participant, I compared the findings for the different participants to each other to establish whether the participants perceived creativity in a similar or different manner and how their perceptions differed. This allowed me to record the findings and to discuss the interpretations, as discussed in Chapter 5.

3.7 Methodological limitations

I decided to focus on the first-year Visual Arts education students because of the diversity of the group and their backgrounds. Some of the students took art as a school subject, while others were engaging in JKU 101 as a Visual Arts module for the first time since their primary education. The students' backgrounds differed with regard to educational, economic, religious, and other aspects. I believe that these aspects influenced how each individual perceived and consequently portrayed creativity. This not only showed in their final product[19] but also in the process they chose to follow to complete the project. A challenge derived from this. Since the participants had very different backgrounds and diversity, their perceptions of creativity were very different from each other, hence making it difficult, but not impossible, for me to group the findings.

The fusion of horizons is a central concept in Gadamer's hermeneutic ontology in which interpretation of meaning is a process of fusion of the subjects' and my understanding of concepts and categories relevant to the research (Gadamer, 1989; Heckman, 1984; Human, 2015; Lawn, 2006; Patterson & Williams, 2002). A fusion of horizons occurs whenever a research subject's viewpoints are understood in relation to what a researcher already knows about a topic based on experience and disciplinary perspective (Human, 2015). I relied on this concept to better understand what the participants were saying in their artworks and through their choices when they created their artworks. The limit here was the researcher, as I may not have understood nor been able to make a clear connection with the meaning made by the participants. Consequently, I reminded myself to remain objective and to find answers in the artworks of the participants. Another limitation that might have caused difficulties was the time-constraints. Art analysis, both iconographical and iconological analysis, is time-consuming and it was expected of me to remain objective and sensitive to the smaller details found in the artworks created by the participants. Each art style and method analysed was connected to

[19] I refer here to the final artwork or completed activity that the participants created during the session that they attended specifically for the purpose of this study.

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the iconological analysis, creating meaning and understanding the process the participant went through when creating their artwork. All the data gathered during the analysis was then connected to the theory in order to answer the research questions.

3.8 Ethical considerations

As mentioned earlier in this chapter, the participants were each asked to create an artwork and complete two questionnaires, one at the end of Term1, Semester 1 in 2022, and the other after the artwork had been analysed. The second set of data was then analysed using the artwork analysis and document analysis methods discussed in Section 3.2. The questionnaires were used to understand the participants better, and how they perceived and identified creativity in themselves. Before any of this could take place, I applied for ethical clearance to work with the participants in person and use their artwork in the study. In order to use questionnaires, I had to apply for a second ethical clearance through the Survey Committee at the University of Pretoria, as the participants were all students at the University of Pretoria. After being granted permission to use these documents, I was able to ask the participants to complete the questionnaire. Applying for the ethical clearance first ensured that the participants would not be harmed physically, emotionally, or psychologically during the research process. This reminded me to remain sensitive to the participants and their thoughts and to respect the participants' contributions in the form of their artworks and the feedback provided in the questionnaires.

The nature and purpose of the study and the involvement of each participant was fully disclosed verbally and in written format before the participants created their artworks and before each questionnaire was answered (see Appendix B for an example of the consent form that had to be signed by the participants). The participants were reminded that they could opt out of the study at any time if they felt uncomfortable or if they no longer wanted to participate, without any repercussions. The participants were also reminded that their artworks would not count towards their final marks for the semester and would only be used for data collection and analysis purposes for this study. Participation was voluntary and the participants would remain anonymous. When the data were analysed, I ensured that the participants' remained anonymous throughout the study by referring to them as Participant, followed by a number, 1 to 7 (for example, Participant 1, Participant 2, and so on). The data obtained through this study was strictly used to understand the participants, to understand how they perceived creativity during problem-solving, and to identify their cognitive development.

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All communication with the participants via WhatsApp was kept private to help the participants feel more comfortable and in control of what information would be shared. The questions in the questionnaires did not require the participants to share personal details that could jeopardise their anonymity. Some of the questions might have seemed personal, although the participants had a choice as to whether they wanted to answer these questions or not. The information was only used to better understand the background of the participants in order to complete the artwork analysis. I also ensured that this information was not shared with any other individual. To ensure that the artwork remains safe and the information anonymous, the data is stored at the Groenkloof Campus of the University of Pretoria and will be for 10 years. My supervisor also kept a copy for safekeeping to ensure that the data remains protected.

3.9 Validity and trustworthiness of the study

According to Price *et al.* (2013), validity is "the extent to which the scores from a measure represent the variable they are intended to" and reliability refers to "the consistency of a measure" (pp. 589-601). The trustworthiness of the study was ensured by me being aware of potential personal bias and remaining neutral and objective at all times. This was possible as I was not in a position of authority, such as marking the work of the participants or interacting with the students during the process of completing their activities (artworks).[20] As I studied Visual Arts education for my undergraduate degree in education, I am predisposed to certain ideas about creativity and the visual arts. My experience with the creative arts was also beneficial as I understood what was expected during the module and was, therefore, able to analyse the artwork to better understand the participants' perspectives. To further ensure that the data analysis was trustworthy, I cross-referenced the findings of the analysis of the artworks with the answers received from the questionnaires. After the data were analysed, themes were identified and linked with the literature. This enabled me to further understand how the participants perceived creativity and how this new-found information would influence the answer to the research questions. I also relied on the literature and the applicable theories throughout the data analysis to remain objective and make meaning out of what was created.

To establish validity and reliability, I worked with the JKU 101 module lecturer and my supervisor who had experience teaching the subject. The module lecturer was present during the class and provided feedback throughout. I also met with the module lecturer and my supervisor before presenting to the students. They provided valuable feedback and raised some points that I should keep in mind to successfully gather data, such as how to approach

[20] My supervisor was also unbiased in this regard, as she was not teaching the JKU 101 module at the time of the study.

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the students and get them invested enough to participate. When analysing the documents, I remained neutral to ensure that I heard the “voice” of each participant through their artwork. I also took into account that creativity does not solely come from creating artwork but can also be seen in critical thinking and problem-solving. This was done by again referring to de Bono (1995), Sternberg (2003), and Herrmann’s (2016) theories regarding creativity and critical thinking. I tried to comprehend the perception of each participant to understand how they perceived creativity by having conversations with each participant during the creation of their artwork. To determine how they perceived creativity I included questions in this regard in the questionnaire that the students completed at the end of the first term of the first semester. The data were reliable because it was created by the participants. The aim was to investigate the perceptions of the participants and not to create or confirm my own perception, which meant that the data were derived first-hand from the participants, making it reliable and trustworthy.

3.10 Conclusion

Using the constructivist paradigm made it easier for me to work with the students and to analyse the data gathered during these face-to-face sessions. The choice of the methodology to analyse the artwork enabled me to understand not only the artwork created by the participants, but the participants as well. It enabled me to answer the research question in Chapter 6, providing insight into the area of interest. Using a hermeneutic approach also assisted me to remain more objective and open to new ideas. It reminded me not to expect the participants to complete the activity in the way that I would have expected or perhaps wanted them to, but to rather keep an open mind, to hear the participants’ voices, and to understand their perspectives. What follows in Chapter 4 is a discussion of the analysis process and the findings regarding the artwork and questionnaires.

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CHAPTER 4: THE SIGNIFICANCE OF THE COLLECTED DATA

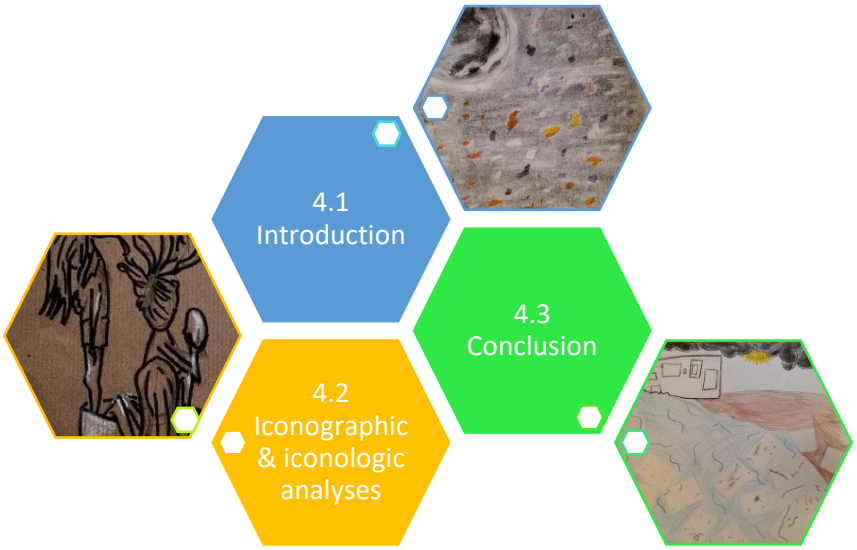

Figure 4. 1: Main items discussed in Chapter 4.

4.1 Introduction

The purpose of this study was to explore how the first-year Visual Arts education students perceived creativity in Fine and Visual Arts education, and what they created with what they were given; keeping in mind that each individual was influenced by their own social and environmental settings, personalities, and perception of creativity (Runco, 2014). Many of the terms and concepts used in this analysis reflect a Western paradigm. I concede that others might have drawn different knowledge from the material. If the analysis had been reflected on from an African paradigm or perspective, the findings might have changed or varied. Furthermore, my perception was not authoritative, nor a universal eye and others would undoubtedly read these works differently or accord significance to other aspects.

Taking the influences that were identified by Runco into account helped me to observe the principles of the triarchic theory of human intelligence (as discussed in Chapter 2) in each individual. Using iconographic and iconological art analysis allowed me to investigate the thought processes of the student participants, as I was able to understand how the participants perceived creativity while creating their artworks. The iconographic art analysis made it possible to see the artwork more comprehensively by referring to formal art elements, such as shape, colour, lines, or texture and design principles, such as balance, movement, and rhythm to provide an objective description and formal analysis of the work. Subsequently, by using iconological art analysis, I was able to understand why these art elements were used in

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the student participants' creation of their artworks. To develop a deeper understanding of the participants' perceptions regarding creativity, I referred to the information gathered in the questionnaires that were completed at the end of the first term of Semester 1 (see Appendix A), in both the iconographical and iconological analyses. The participants were asked, among other things, about their personal backgrounds. They were also asked to compare their first artwork that was completed at the beginning of the term with their last artwork that was completed at the end of the term. The backgrounds of the participants added value to the interpretation of the artworks as it provided different perspectives and created different meanings.

To ensure that no important factors that contributed to the creation and interpretation of the final artwork were missed, hermeneutics was considered to help me to become sensitive to the culture, tradition, age, experience, and other background factors that might have played a role in the students' artworks. I kept the concept "fusion of horizons" in mind to better understand the situatedness and life-worlds of the participants. I also took my own "horizon" or understanding of the world into account when interpreting the respective artworks. The fusion of horizon is a central concept in Gadamer's hermeneutic ontology in which interpretation of meaning is a process of fusing the participants' and the researcher's (my) understandings (Gadamer, 1989; Heckmen, 1984; Human, 2015; Lawn, 2006; Patterson & Williams, 2002). The fusion of horizon was implemented in the analysis of each participant's artwork. I referred to the participants' answers in the first questionnaire, where applicable, and connected it to the artworks they had created. I used the information in the questionnaire and sought visual connections in each participant's artwork. I then looked at the meaning behind the colours and shapes used to create a deeper understanding of what the participant might have intended to create. A second questionnaire was sent out regarding the artwork to ensure that the meaning of the artwork was not lost and that I had correctly identified the perspective of the participants.

The triarchic theory of human intelligence was taken into account during the analysis of each participant's artwork and the information gathered from the questionnaires. This theory refers to the development of an individual that depends on the balance between analytical, creative, and practical abilities or intelligences. Analytical intelligence is used to analyse, compare, and evaluate information. It is necessary for successful problem-solving and decision-making on a daily basis. Analytical intelligence is used to solve problems and can be measured by standard IQ tests (Tigner & Tigner, 2000). Practical intelligence refers to an individual's ability to successfully interact with the everyday world. Practically intelligent people are especially adept at behaving effectively in their external environment (Tigner & Tigner, 2000). Creative

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intelligence is closely linked to the experience of the individual and is acquired through observation and expressed though designing and creating. Creative intelligence refers to an individual's ability to use existing knowledge to create new ways to handle new problems or to cope with new situations (Tigner & Tigner, 2000). During the analysis, I aimed to establish how all three intelligences were present when the artwork was created. This relates to Herrmann's (2002) whole brain model as it was applied by me when looking at creativity and how the individuals perceived creativity. The visual analysis of each of the artworks, including reference to the information gathered from the questionnaires, follows.

I first analysed each artwork iconographically by providing an objective overview of the art elements and design principles. Thereafter, I used iconological analysis to examine the deeper meaning behind each work, integrating the theories and methods that were described in the previous paragraph. For the sake of the analysis, I refer to left- and right-brain thinkers before providing an overview of how this information contradicts or confirms that creativity is not only found in one hemisphere of the brain. In the questionnaire, the participants were asked to identify themselves as either left- or right-brain thinkers. I used this observation and connected it to the theory and analysis of the participants' artworks and questionnaires to identify whether it would contradict the theory or confirm what was already discussed in the literature review. However, I am not saying that the left- and right-brain approach was the only approach to creativity. In fact, I aim to show that it was not.

4.2 Iconographical and Iconological analyses of artworks

4.2.1 Participant 1: The dancing figures

Title of artwork:	The Dancing Figures		
Year of artwork:	2022	Size of artwork:	39,5 cm x 23,5 cm
Media used for artwork:	Black ink, white chalk, and brown wrapping paper		

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Figure 4. 2: *The Dancing Figures,* created by Participant 1, 2022. Ink and chalk, 39,5 cm x 23,5 cm. Photograph by the author, 2022.

4.2.1.1 ***Iconographical analysis***

Objective description

In this drawing, three figures can be seen standing, sitting, or climbing out of what seems to be a flowerpot. At first, the artwork seems unbalanced because the drawing is in the bottom left-hand corner of a 39,5 cm x 23,5 cm brown piece of paper. The figure sitting on top of the pot, on the right, seems to be holding something. Next to the drawing are two words, “PLANT” and “pot”. The word pot is circled. On closer inspection, different types of lines can be seen – mostly soft and curved lines that create a sense of movement. The entire drawing is comprised of bold black lines with white highlighted areas. No colour was used to create this artwork. It consists mainly of black and white lines with some traces of grey edging and white shading. Shading is incorporated with sharp diagonal lines in grey pencil. White chalk is used on some parts of the artwork. The use of white chalk on the brown paper creates some interesting

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textures on the pot and arms of the figures. The figurine on the far left seems to be looking down, drawing attention to the figurine below that is either climbing in or out of the pot. The figurine holding onto the white shaded object draws the viewer's focus first due to the contrast of the use of the white chalk.

Colour

Black and white contrast one another; they are used throughout the artwork. Grey is used for shading. It is not directly visible at first but is used on the back, head, and hair of the figures. No colour is used in the artwork. This may contribute to the possible mood of depression, gloom, misery, sadness, sombreness, tearfulness, unhappiness, calmness, contentment, peacefulness, relaxion, tranquillity, boredom, dullness, lifelessness, or insipidness that is captured in the artwork, allowing the viewer to use their own perspective.[21]

Lines, forms, and shapes

Soft, curved lines are used to create the artwork. Looking at the limbs of the figures, some of the lines appear sharply diagonal, horizontal, or vertical. Grey pencil is used in diagonal lines to create shading in some areas of the figures. Some of the lines used to create the artwork are in bold black, almost creating an outline of the figures. These lines are more prominent than the grey diagonal lines used to create shading, which are barely visible at first. The lines used in, what seems to be the hair of the figures, are repeated in all the figures. The black bold lines are shaped in an oval to create the faces of the figures. Some of these oval shapes are used to create what seems to be a plant pot. The notion of this being a plant pot is reinforced by the words "PLANT" and "pot" that appear next to the drawing. What seems to be rectangles or parallelogram shapes are used to create the ligaments and torsos of the figures. A rectangular shape, drawn in a curved motion, is used to create the top and bottom parts of the pot where the figures appear.

Texture, rhythm, and movement

Little overall texture is visible in the work. The texture of the brown paper comes through, especially where the white chalk is used, which creates a rough texture, mimicking the texture that a pot might have. However, this might be coincidental and not a conscious decision by the participant. The diagonal lines of the grey pencil create a rough texture on some of the figures. Some of the lines on the figures' heads also create a rough texture; however, this might be coincidental as the grey lines provide shading. The repetition of some of the lines in

[21] Some viewers might experience the use of black, white, and grey as negative while others are not affected by the mood created by the use of black, white, and grey. Therefore, how the viewer looks at the artwork, perhaps influenced by their current emotion, will influence how they experience the artwork at first glance.

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the figures' hair create rhythm, which contributes to the movement that hair would have, if blowing in the wind. This rhythm also allows the viewer's eyes to move through the artwork, away from the focal point. The movement created by the figures contributes to the overall movement in the artwork.

Space, composition, and balance

The use of grey shading and the incorporation of white chalk creates a three-dimensional effect on the pot and figures. The shading on the pot created by the shadow of the figure accentuates the three-dimensional effect that the participant created. Owing to the figures in the lower left corner making up the positive space of the artwork, a larger negative area around the drawing, in comparison to the positive area used, is created. This produces an unbalanced feeling in the overall artwork. However, looking at the drawing of the figures in isolation, the figures seem balanced due to the different heights used throughout. The black, white, and grey overall textures and lines all add to a balanced composition of the drawing. The drawing was created in an asymmetrical style, but it does not add to an unbalanced feeling. Some items, like the pot in or on which the figures are placed, were drawn symmetrically, which is in contrast to the asymmetrical style of the overall drawing.

Perspective, proportion, and harmony

The perspective used in the artwork is atmospheric. There are no specific one-point or two-point representations of the objects. However, an impression of dimension is discernible through the use of texture in grey diagonal lines as well as the use of white chalk added to some areas where light might fall, thereby indicating the participant's understanding of depth creation. The figurine holding the white object creates a focal point on which the viewer can focus. This helps the viewer to move their eyes over the rest of the figures. The pot in or on which the figures are found seems to be smaller in size than the figures, due to it being cut off at the bottom of the artwork. The figure climbing in or out of the pot seems larger in size than the figure sitting on the right because it is hidden behind the head of the figure climbing on the side of the pot. These two observations once again emphasise that the participant understands how depth is created. The use of black and white, as well as the shapes used to create the figures, all work together in harmony. The use of white allows the viewer's eye to move around the artwork, taking in all the details for an overall perspective. The use of space also contributes to the harmony of the artwork; it draws the viewer in almost immediately.

Technique

The media used in the artwork were used in thin layers; they were not thickly applied. The black lines used to create the figures create an outline effect, however, the use of chalk and

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grey shading softens the overall view of the artwork, creating a three-dimensional effect throughout the artwork.

Conclusion of the iconographic analysis of Participant 1's artwork

At first, the artwork seems unbalanced because the drawing is at the bottom left-hand corner of the brown sheet of paper. However, this changes when only the drawing of the figures is taken into consideration. The three figures – standing, sitting, and climbing out of a flowerpot – are drawn in bold black lines. Black and white, in contrast to one another, are used throughout the artwork. On closer inspection, the use of different types of lines can be seen, mostly soft and curved, that create a sense of movement, especially when looking at the hair of the figures. The repetition of the lines in the hair of the figures also creates a sense of rhythm and can be connected to the feeling of movement. Shading is incorporated with sharp diagonal lines in grey pencil, mostly on opposite sides of the white chalk that was used. This creates a three-dimensional feeling as the grey can be seen as shadow and the white as light on the figures and pot. The use of white chalk imitates light on the items, indicating a light source from both left and right. The use of white chalk on the brown paper also creates some interesting textures on the pot and arms of the figures. This contributes to the balance of the artwork when the grey, diagonal lines are also taken into consideration. The use of smooth, edgy, and rough textures throughout the artwork contributes to the balance of the artwork. The figurine holding on to the white shaded item draws the viewer's focus first as a result of the contrast of the white chalk used. This figurine allows the viewer's eyes to move to the figurine looking down, drawing attention to the one that is either climbing in or out of the pot. I noticed that the participant used colour, which contributed to the mood of their artwork. This was done intentionally and is discussed in more detail in the iconological analysis below. At first, I believed that it was because the participant was provided with the medium, and possibly it was a new medium that the participant had not worked with before. However, deeper into the analysis of the artwork, it became clear that the participant intentionally chose black, white and grey. The figures also contribute to the emotions, as discussed above, as well as the texture or use of medium. The participant played with rhythm and movement which, as always, contributes to what the viewer sees. The hair of the figures contributes to the movement and the emotions. It covers the figures' faces, similar to individuals who identify as "emo", a style of rock music resembling punk but having more complex arrangements and lyrics that deal with more emotional subjects, according to the Oxford dictionary. This "emo" style can be connected to the emotions of the figures, like sadness. Individuals who identify as "emo" are sensitive to emotions or aspects connected to emotions.

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4.2.1.2 Iconological analysis – Participant 1's artwork and questionnaire

When looking at the iconographical analysis of the participant's artwork, the first thing that stands out is the absence of colour. The entire artwork is created on brown paper, commonly used to cover books or gifts, using black ink, grey pencil, and white chalk. The participant was the only one who used this type of paper, although they were not the only one to complete the artwork in black, white, and grey. Limited supplies were available to create the artwork so it is possible that the participant used materials that were available after other materials were used by other participants. At first, it seems as if the participant intentionally chose black, white and grey to add to the deeper meaning of their artwork, however, when the participant was asked about their choices in colour and paper, this was not the case. The participant mentioned that she only chose these media because she had never used them before. She did not have her final artwork and meaning in mind. Her reason for choosing the brown paper, thought to bring more meaning into the artwork and connecting the viewer to the artwork, was only chosen because she "thought an earthy background would work well with the charcoal sticks and the chalk with highlight and tone variation compared to white paper".

Generally, the colours used in artwork, or rather the absence of colour, would affect the mood it portrays (Cherry, 2020). The mood we experience from this artwork, due to the use of black, white, and grey drawing tools, can be any of the following: depression, gloom, misery, sadness, sombreness, tearfulness, unhappiness, calmness, contentment, peacefulness, relaxation, tranquillity, boredom, dullness, lifelessness, or insipidness (Cherry, 2020). However, the brown paper used in the background creates a vintage or old feeling, taking some of the more negative or sad moods away. Vintage can create feelings of nostalgia, taking a viewer back to a time in their lives that made them feel happy or created a sense of comfort. Therefore, even if the image is not connected to their direct past, it reminds the viewer of a time in their past that lifts their mood (Schrader, 2012). The three figures in the artwork may also add to some of the mentioned moods due to their body language. The figurine on the far left is standing with its arms hanging down, its head bent forward, and its hair hanging down in front of its face. Its body language can be connected to the body language one would identify in someone who is depressed, sad, tearful, or unhappy. One might wonder whether this stance is indicative of the participant's own mood and mental health.[22] The figurine on the right is holding something, while seeming to stare into the distance, its knee bent upwards with its arm resting on its knee. This body language can be connected to someone who is inquisitive

[22] The students had only recently returned to in-person classes after the two-year online teaching and learning during the COVID-19 pandemic. Perhaps the student was struggling to adapt to the new circumstance of attending lectures in-person, causing a feeling of being overwhelmed and insecure.

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or an active critical thinker. This interpretation was confirmed by the participant in their notes on the story behind the artwork. The third figurine can be seen climbing into or out of the pot, almost looking clumsy and childlike. Children are usually connected to moods of innocence, joy, excitement, and care. This mood could possibly indicate the participant's childlike excitement of a new year, taking the Visual Arts art practical module, or the fact that after two years online teaching and learning she is now able to interact with her lecturer and peers in person. When each figurine is viewed individually the overall mood of the artwork will change. Therefore, the mood of the artwork is also influenced by the viewer's perceptions and experiences. When the participant was asked what the deeper meaning was behind her artwork, she responded by indicating that there were "three people in a pot doing a variation of things and depicting different emotions – from sadness, determination and curiosity". I was, therefore, correct in saying that the artwork is filled with emotion, however, not the emotions that it seems to indicate. It seems that the participant aimed to portray emotions that were different from how I interpreted them. This shows that despite an artist's intentions, the manner in which an artwork is interpreted and understood depends on the viewer and their situatedness. Gadamer's notion of the fusion of horizons becomes evident here. Despite the artist's intention, it is the intersection of their horizon with the viewer's interpretation that determines the meaning that is created.

The fact that the participant used a dead plant (Figure 4.3), transforming it back to life by using living figures, also influences the emotions portrayed in the artwork. Townsend (2008) explains in his book *Art and Death* that death is about beginnings as much as it is an ending (Townsend, 2008). He furthers this notion by saying "death has in common with birth that it is an event that cannot belong to us, but rather only to those around" (Townsend, 2008:4). The participants of this study had experienced a hard lockdown, as we all did, and death might have been more prevalent at home than we know. Many people lost family members or friends to the pandemic and the participant might have been someone who had lost a family member or friend. All the participants were reminded on a daily basis of death during the pandemic as radio stations, news outlets, and other sources of information updated the number of those who had contracted and succumbed to the virus during the pandemic, hourly. The participant transformed the dead plant into something new by using living figures, drawing the plant as it is given new life. This could link to the new beginning that the participant was experiencing by being able to go to class after the majority of classes were suspended due to COVID-19 protocols. It could also be an indication that the participant was taking the situation into her own hands and creating something new on her own terms. During the pandemic she might have felt that she had no control over the situation or certain aspects of her life, but regained this control when she created her artwork, connecting the image to strong emotions. The

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following image is part of the dead plant that the participant used as inspiration to create the artwork:

Figure 4. 3: The dead plant that Participant 1 used as inspiration for her artwork. Photographed by the author, 2022.

In the questionnaire (see Appendix A1, questions 5 and 15), the participant identified as female, describing herself as “calm, happy but serious, quiet, while also noisy and strange”. These somewhat contradictory descriptors can be seen reflected in the mood created by the artwork and the actions of the figures. The aforementioned feelings of insecurity and being overwhelmed might thus be indicative of the participant’s emotions reflected in the figures that she drew. In Western cultures, women are often described as very emotional beings (Chaplin, 2015). When this is taken into consideration, it can be connected to the artwork that is filled with various emotions. However, the participant identified her culture as Sotho. According to some of the earliest Western writings on South Sotho cultures, the social role of women was one of labour and servitude. They were expected to take care of household duties and their children, allowing their husbands to make the decisions. It was often looked at with great sympathy by those who did not understand the culture (Chaplin, 2015). Some outsiders might see this treatment of women as a form of oppression, however, others, especially those familiar with the Sotho culture and rituals, see it as a form of respect that a woman would have for her husband. Therefore, assuming that the artwork is emotional because it was created by a female artist, is not entirely correct. The artwork was inspired by an observation of dead

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plants in the room, sparking the idea that each plant showcased a different emotion. The artwork was not created out of emotion as such, but rather out of curiosity of how each plant showed a different emotion. The participant spoke more about this when asked why and where her inspiration came from. According to the participant, the three emotions portrayed in the artwork are “sadness, determination, and curiosity”. These emotions could be associated with the participant’s Sotho background, that is, sadness due to not being able to make some of the decisions in her life, as all Sotho women have to ask their husbands or fathers for permission to make certain decisions. Determination could refer to the loyalty or the determination of a woman, and curiosity could be connected to her age. It was the first time she could be on campus, which was a whole new world for her, making her curious about what the year would hold for her. She was 19 years old, and a first-year student at university. She might have been curious about her new surroundings and becoming who she would want to be.

In addition, some of the participant’s answers could be linked to the mood and emotions created in the artwork. The participant described creativity as “a way of expressing one’s mind”, and that the importance of creativity being “to understand where creativity comes from” in an individual (Appendix A1, question 12). The participant also mentioned that her inspiration came from her emotions and ideas and expressing the images and ideas in her mind. The participant’s reply to the question where her creativity came from and it being connected to her emotions and the ideas in her mind, confirms that the artwork was filled with the emotions that the participant identified at the time she created it. Furthermore, the emotions are portrayed through the use of the colours black, white, and grey. All of these indicators in her artwork can be linked to the influence that emotion can have on the creativity of an individual. It could also indirectly be linked to the participant identifying as female, when considering that Western culture regards women as emotional, and Sotho culture does not take a woman’s voice into account unless it is first sanctioned by a man (Chaplin, 2015). When asked about the Sotho culture, both my males and female colleagues who were from the Sotho culture mentioned that a woman may not make any decisions without prior discussion with and approval by either her husband or her father. Therefore, if an individual does not understand the form of respect or the reason that this should happen, it could seem as if she has no voice. This was also seen in the artwork. The figures had no mouths or any other facial features, possibly indicating that the participant experienced that she had no voice. The facelessness might also relate to her developing identity. She might have felt that she had no strong sense of self and hence did not have a distinct identity yet.

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When asked to describe her artistic style, the participant's answer was "loose and young". Looking at the artwork, it is evident that the entire artwork was created in black ink. The image was drawn in bold black lines that flowed over the page. The participant did not use sharp diagonal lines; the only sharp or straight lines used can be seen in the drawing of the pot. Some of the lines used for the legs of the figures are straight but with a soft curve. Most of the lines used to create this artwork are soft, natural lines. Some of these lines are repeated, creating a sense of movement. This can be seen especially in the hair of the figures where the repetition of the lines creates a sense of movement – in the way that hair might freely move in the wind or with movement. The participant was asked what her thought process was when creating the artwork and she indicated that it was "just to make it different and go with the flow, following the lines and see where it takes me". The participant's response can also be considered as the reason for her decision to use these types of lines throughout her entire artwork.

In some areas, white chalk was used, creating some lighter areas in the artwork, indicating areas where light might fall. The participant mentioned that she chose white chalk and grey pencil because "I have seen people use white media to create depth with highlights". Looking at the shading and tinting in the artwork, it is unclear where the light may have come from; however, it seems deliberate, planned, and harmonious. When asked what she would have done differently looking at her completed artwork, the participants said that she would have "put the white tone in a better way", for example, portraying the roundness of the pot better or being realistic about where the light source was and how it highlighted the people (the figures in the artwork)". This indicates that the white chalk that used as light may not have initially been placed deliberately, but rather where she thought it should be placed. Keeping all these points in mind, we can connect this to the answer that the participant provided in the questionnaire when describing her artistic style as "loose and young". The reason the participant provided for describing her style as "loose and young" was that she could not follow artistic rules because they were overwhelming and left her with a rigid piece of work. This description may also be indicative of the participant's current mood, namely that she was overwhelmed and insecure after returning to classes on campus. The "rules", that is, the COVID-19 regulations and precautions that needed to be followed, might not only have restricted her creativity, but also her freedom. She enjoyed "following the flow of my hands when creating an artwork". She also believed that her art style was "young because it is still in development". These aspects can be identified in the artwork, indicating how she saw herself during this "post-COVID-19" reintegration period.

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However, these aspects are often contradicted in the artwork. The participant's artwork can seem "young", when, for example, looking at the way in which the shading and tinting in particular were created in some parts. The participant revealed that she did not follow art rules due to the end product that she ended up with. However, her artwork shows that some art rules or steps were followed. This can be seen especially in the shading and tinting created in the artwork. The participant shows a clear understanding of how a shadow must fall if the light source comes from a specific angle. She also followed the rules of proportion with regard to the figures. This is confirmed when one looks at the artwork as the figures are all in proportion to the pot and each other. In fact, the participant consciously included shading of objects, casting a shadow and highlighting where the light source was coming from.

The participant mentioned that she had had no experience in art after her Senior Phase, Grade 9 schooling, and was studying Visual Arts education at university level for the first time. This might explain why she felt that her art style was still developing and might not have felt confident as a result of seeing the artwork around her, such as that created by her peers or other students whose work was displayed in the art room. These artworks might possibly have been created by more experienced artists showing skills that they had mastered through many years of practice. However, the participant's opinion about her ability was contradicted by her artwork. The participant believed that she could not draw, yet she created an artwork that was in proportion, contained harmony, and flowed well. The participant indicated that drawing was her favourite creative activity, but also stated that she could not "really" draw. It might be that the participant lacked the confidence to deem her artwork "good enough" to be recognised by others. It could also not be the case, but rather that the participant's left-brain perspective was playing a role. Left-brain thinkers are very critical in their thinking. They are also very precise in the way that they approach an activity. The participant described herself as a right-brain thinker, highly influenced by her left brain. When referring only to left- or right-brain thinking, not taking whole brain thinking into consideration would explain why the participant did not believe that she could draw.

A left-brain thinker is more analytical, logical, detail- and fact-orientated, numerical, and a critical thinker (Cherry, 2022). The participant stated that she was significantly influenced by her left-brain thinking, and this became evident by the way in which she critically analysed her art skills. A right-brain thinker is seen as being more creative, freethinking, able to see the bigger picture, intuitive, and likely to visualise more than think in words (Cherry, 2022). This information contradicts what the participant pointed out, showing that she might not know where her way of thinking and doing fitted in. The participant described herself as a right-brain thinker who was highly influenced by her left-brain thinking, however, her artwork was more

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evident of right-brain thinking. For example, her freethinking can be connected to her free style of drawing, and her intuitive nature can be connected to how she approached the challenge with which she was presented. When referring to her artwork and answers, based on what she considered creativity to be, it becomes clear that she was more right-brain driven. The participant believed in creativity, stating, “Art has made me more creative in all aspects in life. It is important to understand where your creativity comes from, it is expressing your mind and thought[s]”.

She mentioned that creativity was a set part of her daily life, being a part of the decisions that she made and her way of thinking. The participant was also able to follow the instruction to create the artwork and took the initiative to create something new from something old. The participant used the dead plant in the room (see Figure 4.2 above) as inspiration to create her new artwork. The participants were asked to identify an object, line, or any other shape in the art room and to create something completely new. The participant used what there was, for example, the texture of the paper was used by rubbing white chalk over it. This is generally associated with a right-brain thinker who takes the initiative to use what they have to make something new. De Bono (1995), nonetheless, does not support the concept of right- or left-brain thinking. He describes in his work that creativity should not be used to categorise but rather to empower an individual (de Bono, 1995). De Bono’s (1995) argument is strongly supported by Herrmann’s (1995) whole brain model, where he specifically points out that the concept of brain dominance should be rejected as the entire brain is active when thinking occurs (Herrmann, 1995). De Bono (1995) introduced the notion that each individual possesses six “parallel” or “lateral” areas of thought, which he called thinking hats that help to enhance or “activate” creativity in any individual (discussed in Chapter 2). If these thinking hats are used effectively, any individual can be inspired to be creative in any situation with which they are faced.

I believe that the discussion about the concept of pareidolia that incorporated visual stimulation, inspired the participant to create her artwork, using her own knowledge and existing skills (relating her way of thinking to constructivism). In terms of de Bono’s six thinking hats (1995), four of the six hats were evident in the participant’s process of creating the artwork although not specifically so in the artwork itself. The participant applied red hat thinking, which is associated with intuition and emotions. Emotions were intertwined with the participant’s artwork as confirmed by the participant. White hat thinking, which is associated with working through information, was applied as the participant had to use her knowledge of pareidolia when completing the activity. Another hat that was used was the blue hat, which enables an individual to see the bigger picture and apply time management to complete an activity. The

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participant was able to see the bigger picture when creating her artwork and was also able to apply time management as she was able to complete her artwork on time. However, the most prominent thinking hat that is evident was the green hat, which is associated with creative thinking, and refining and developing ideas. The participant applied green hat thinking in creating her artwork to refine and develop her idea. Once she identified her inspiration to create an artwork, she applied creative thinking to let herself become creative and develop the object further, making it unique.

Sternberg's (1999) triarchic theory of human intelligence and de Bono's (1995) thinking hats method have both abandoned the concept of right- and left-brain dominance and describes creativity as intelligences found in the whole brain. In the participant's artwork, two of the three intelligences identified by Sternberg namely, analytical intelligence (the ability to solve problems) and creative intelligence (the ability to create something new while using existing knowledge) are evident. The participant was faced with a challenge – to create something new out of something old and make it her own. The participant was able to use existing knowledge, skills, thoughts, and ideas to create an artwork that addressed the challenges that she was facing. Identifying two of the three aspects described by the triarchic theory of human intelligence in the participant's work shows how these aspects contributed to the development of her cognitive ability. The participant used these aspects to complete the assignment she was given, showing how she was dependent on these aspects to create or develop a cognitive part of herself.

Overall, the participant's work shows that she lacked understanding of where her creativity came from or how it worked. In fact, she was more creative than she gave herself credit for. When faced with a challenge, she used her existing skills and knowledge to create an artwork that was something completely new. She used a dead plant and drew figures coming to life, standing in a plant pot that contained a dead plant. This shows that she was intuitive and able to create using her current knowledge and skills.

4.2.2 Participant 2: The moon and stars

Title of artwork:	The Moon and Stars		
Year of artwork:	2022	Size of artwork:	32 cm x 25,5 cm
Media used for artwork:	Oil pastels, charcoal, and grey pencil on white paper with a smooth texture		

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Figure 4. 4: *The Moon and Stars,* created by Participant 2, 2022. Charcoal, ink and oil pastels, 32 cm x 25,5 cm. Photograph by the author, 2022.

4.2.2.1 ***Iconographical analysis***

Objective description

The artwork consists of what appears to be a moon with a large crater on the left and a constellation of some sort on the rest of the page. The moon drawn at the top left corner draws the viewer's attention first, making the artwork seem unbalanced. The outer ring (outline) of the moon is drawn in grey pencil. The details of the moon are filled in in black charcoal with white (erased) areas. The white areas throughout the artwork and the moon are created by rubbing out the black charcoal with an eraser of some sort. The space around the moon is covered in charcoal with the exception of coloured specks, which appear to be drawn randomly. These coloured specks (orange, black, yellow, pink, purple, brown, and white) were created using highlighters. A repetition of orange, black, yellow, pink, purple, brown, and white specks can be seen throughout the space around the image of the moon. A white ring is

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formed around the moon, replicating light or creating a form of halo. The only lines used in the artwork are soft curved lines to create the shape of the moon. The use of charcoal on white paper creates a slightly rough texture, especially on the image of the moon. The repetition of the coloured specks contributes to this texture, creating an uneven or rough surface. Overall, due to the size of some of the specks in comparison to the moon, dimension is created – depending on the viewer's perception.

Colour

Black charcoal and orange, yellow, black, pink, brown, and purple oil pastels are used throughout the artwork. The artwork contains warm and cold colours. Black is not considered warm or cold but might be connected to a cold colour in this artwork, indicating the absence of light. The warm colours that were used were pink, yellow, orange, and brown (the brown used has undertones of orange and yellow). The cold colours that were used were black and purple. The artwork is mostly created in black. The coloured specks are, in contrast to the black, making them stand out more than they would on white paper. Overall, due to the neutral black and grey tones, this work appears rather cold and distant in nature. It almost seems as if there are no emotions, or, if there are, they are very sombre emotions, like coldness, loneliness, emptiness, or hopelessness.

Lines, forms, and shapes

No pertinent vertical, horizontal, or diagonal lines are used in the artwork. The only use of lines is one soft, curved line, used to create the shape of the moon. The white spots around the image of the moon create a sense of lines, but upon closer inspection, no lines can be seen in these blank or white areas. The only shape used is a circular shape to create the moon. The specks used in the artwork can be seen as biomorphic or organic shapes due to their irregularity. While some of these specks appear flat, others have been created with different tones, giving some depth to these forms. These specks can also depict debris floating in space, hence the colours used.

Texture, rhythm, and movement

The use of charcoal in the background, which was rubbed over the paper, creates a subtle rough texture over the artwork. More texture can be seen in the shading of the image of the moon. The use of the specks creates a rough, uneven texture when viewed from a distance. The white used to create the crater of the moon produces a smooth, uneven texture. The repetition of specks creates an uneven rhythm as the viewer's eyes move from one side of the page to the other, or from one speck to another. The white horizontal smudge or rub-out in the middle of the page creates movement. It almost seems as if the specks are moving in a

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whirlwind or tornado-like shape, similar to leaves blowing in the wind, or debris in space moving at a very rapid pace.

Space, composition, and balance

The shading on the moon and the white ring formed around it create the illusion of a three-dimensional object. The specks are flat against the dark background on which they are placed. However, by using different shades and tonal variation of colour in these specks (orange and yellow, and purple and pink), the participant might have wanted to create the illusion that these specks were three-dimensional. Owing to the rubbing of the charcoal on the paper, some areas are slightly darker than others. This creates an illusion of depth and three-dimensional space. Most of the space used is negative space (the darker background with coloured specks), as the positive space used contains the moon and the specks themselves. The artwork seems heavy and unbalanced on the left side of the work due to the dark image of the moon in the top left corner. Although the rest of the space around the image of the moon is used, it still seems unbalanced due to the dark colours used in the image of the moon. There are no other dark parts that could balance this because all the other colours used are lighter overall. The visual weight on the top left corner is therefore heavier, tipping the work asymmetrically to the top left. The artwork is drawn in an asymmetrical style, which contributes to an overall feeling of imbalance.

Perspective, proportion, and harmony

The perspective used in the artwork can be seen as a one-point representation of the objects. The image of the moon is the focal point and draws the viewer towards it. The viewer, therefore, starts looking at the moon and then moves their eyes over the rest of the artwork. This happens because the moon is much larger than the specks used in the area around the moon. The viewer's eyes are, therefore, immediately drawn to the moon as it is a large form in the top left corner of the artwork with a halo around it, which makes it stand out. The use of black and colourful specks, as well as the distinct white ring around the image of the moon, seem to work in harmony with each other. The use of colours, shapes, and textures creates an image of a night sky, which works in harmony to create a cohesive artwork. However, the roughness of the specks and black background do not make it easy for the viewer to move their eyes over the artwork; instead, they cause the viewer's eyes to jump from one part of the artwork to the next. This detracts from the harmony in the artwork. As a result, the viewer's eyes keep moving back to the image of the moon.

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Technique

The charcoal rubbed on the background of the artwork was done in a thin layer. The participant used highlighters as an alternative to get the colours that she needed to create the specks as the colours provided did not cover all the colours that she needed. The black used in the image of the moon is also applied more thickly than the rest of the black. This is done to create depth in the moon, cast shadows on the image of the moon, and give a three-dimensional effect to the artwork.

Conclusion of the iconographic analysis of Participant 2's artwork

At first the viewer is drawn to the moon in the top left corner. It is the biggest form in the artwork and contains the darkest area. Dark charcoal is used to create the darker spots that one can generally see on the moon when looking at it at night. The moon is drawn differently to the rest of the objects in the artwork. The participant approached it using a realistic style, making it stand out even more. The grey pencil outline of the moon could indicate that the participant is unsure of herself and relies on what she knows – a "safety net". The eyes are then drawn towards the various sized specks, in various colours, drawn on a grey and black background. The artwork seems flat at first, but the more one looks at it, the more dimension the artwork seems to get, as if the coloured specks are slowly moving around in space. It is uncertain whether the participant accidentally used two different styles or if it was done intentionally, however, this creates a more diverse interpretation. The coloured specks can either be stars in different shapes and sizes or debris drifting around in space and moving around the moon, almost as if it is stuck in a windstorm.

Figure 4. 5: The sink found in the art class. Photographed by the author, 2022.

In later discussions with the participant, she indicated that her inspiration came from a sink (washbasin) in the classroom that still had old splatters of paint in it (see Figure 4.4 below).

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The inspiration of her choice either led her to draw the halo around the moon because of the silver metal ring around the drain of the sink, or because she realised, based on her previous knowledge, that the moon reflects bright light from the sun, creating a bright halo around it in the dark night sky. Among the coloured specks there are white spots or possibly halos on a black background. It seems to have been done accidentally but, on closer inspection, the specks seem to become more intentional as some of the dots were erased. The artwork seems top-heavy as the darkest and largest form is drawn in the top left corner. However, the coloured specks in the space around the moon seem to balance the artwork, convincing the viewer that it is, in fact, a balanced artwork. There are no sharp-edged lines at any angle in the artwork, only soft curved lines. This adds to the smooth texture created by the use of rubbed black charcoal, creating an almost serene and quiet feeling, as if one is floating in space. At first, with reference to the outline of the moon, Participant 2 seems to be unsure of herself, but she shows her confidence in her creativity when she decided to use highlighters, instead of the ink pens provided, that were in not the colours she wanted. Some of the highlighter colours were mixed to create the mixed paint colours she saw in the sink, which she used as inspiration. The participant was, perhaps, still allowing herself to explore her creativity, not completely confident in her abilities; however, her intuition with regard to the highlighters shows that she was quick to create solutions to accomplish what she set out to do.

4.2.2.2 Iconological analysis – Participant 2's artwork and questionnaire

The artwork was created by a 20-year-old female participant with previous experience in the visual arts. With regard to the iconographical analysis of the artwork created by Participant 2, the large circular object, identified as the moon, was drawn in the top left corner, along with the coloured specks covering most of the artwork that immediately caught the viewer's attention. The detail used to create the moon made it easier to identify the round shape as a moon with a crater on the left side, close to the bottom.

When this participant was asked what inspired her to create this artwork, she pointed to the washbasin and said, "The specks of dried paint left behind in the washbasin looked like stars, and when I saw the drain it reminded me of a moon, inspiring me to draw the galaxy" (Appendix A2, question 1). The following image is perhaps what she saw when she looked into the basin:

She further explained that she was inspired by the idea of "colourful stars" and, therefore, chose to use the sink as inspiration. To establish the creative thought process that the participant possibly went through when creating this artwork, I refer to de Bono's (1995) thinking hats concept. Of the six available thinking hats, Participant 2 used the red hat by applying her intuition and finding inspiration that made her happy. She also used the blue hat

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by being able to see the bigger picture and creating a moon in place of the drain because it reminded her of the night sky. Time management, another characteristic of the blue hat, also featured, as she completed the artwork on time. The participant also used the green hat that was responsible for creative thinking, as she was able to create something new out of an existing object and developed her idea by using the highlighters when she could not find the correct colours or medium to create the colourful specks that she saw in the sink. The participant showed initiative when she decided to use the highlighters instead of the ink pens provided. She was faced with a challenge but was quick to find a solution. I believe that this was what guided the participant to use the charcoal, rubbing it on the white paper to create a darker grey, similar to the colour of the washbasin, and also imitating space. However, this was proved not to have been the case. The participant admitted that she had never worked with charcoal before and wanted to try it (Appendix A2, question 4). Participant 2 was not the first to choose a medium out of curiosity instead of practicality. She mimicked the colours that she saw in the washbasin by choosing colours that matched them. She also mentioned that if she had to recreate her artwork, she would have approached the choice of medium and colours very differently. She described her original artwork as “childish” and “not very accurate”. However, she acknowledged that she felt proud of it because she had been “innovative” when creating this artwork. This is, perhaps, indicative that she considered using new and/or unknown materials as creative. Her perception regarding creativity thus entailed pushing the boundaries of what was known and what she was comfortable with. She preferred her most recent works because her skills had improved. Nonetheless, she still referred to this artwork because she was impressed with her approach and thought process when creating it. She stated, “At first, I could not find anything to draw, but when I found something to draw, I became passionate about my artwork” (Appendix A2, question 9).

Participant 2 used highlighters to create the coloured specks because she could not find the correct colours to mimic what she saw in the sink. This shows intuition and a creative solution to a minor problem in her artwork. The moon was created with charcoal that was applied thickly on the paper to create the darker spots that can be seen on the moon. White oil pastels were used to create the crater to the bottom left of the moon. She then completed the moon by leaving or rubbing a white line around the moon to create a halo, imitating the light reflected by the moon. The white seen on the moon was created by leaving the space blank because the paper used was already white. In some areas of the artwork, specifically where the coloured specks are seen, the participant rubbed out the charcoal that was rubbed over the paper. This could have been to create stars. The stars were sometimes painted with white or a very light colour to show the light that it reflected in the dark. The charcoal in these areas around the coloured specks was not evenly applied, almost imitating the white “dust” that one

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can see when looking up at the Milky Way in a clear sky. It is not apparent whether the student did this intentionally or by accident. The participant's maturation in art can also be seen in the fact that she identified painting as her favourite creation technique or genre but chose to use a different medium as the outcome would be better for what she was trying to create.

Participant 2's artwork showed intuitive thought in the way she tried to copy her inspiration and change it slightly to allow the viewer to form their own understanding of what was created. She followed the instructions regarding the activity very well, but also made it her own by adding small details, like the crater on the moon and the white areas around the coloured specks, imitating the Milky Way galaxy. This action is indicative of how the student relied on a constructivist learning approach by building her new knowledge and understanding on already existing knowledge. On a hermeneutical level, it is evident that the student used her situatedness and connotations to present new information, based on her own past experiences and understanding of the world (Human, 2022). This can be linked to the answer that the participant provided in the questionnaire. When asked how she would describe creativity, she stated, "It is the ability to create something new out of the ordinary." (Appendix A2, question 12). This could be an indication that, to some extent, the participant regarded herself as creative. Popova (2013:1) identifies creativity as "a combinatorial force: it is our ability to tap into our 'inner' pool of resources – knowledge, insight, information, inspiration, and all the fragments populating our minds – that we accumulate over the years just by being present".

This is not only the way in which the participant understood creativity in herself, but also how she applied creative thought when creating her artwork. She used her knowledge or idea of the moon and the night sky to create her own by using the inspiration that she found in the classroom. She also mentioned in her response to the questionnaire that she had experience of the visual arts from high school. This skill became evident in her drawing of the moon, when she added smaller details and created a sense of depth by adding darker areas where shadows would be seen on the moon. It could also be seen in the way that she applied the coloured specks thickly, imitating the thick paint specks in the washbasin. She also cleverly mixed some colours to show how the colours could have mixed as they all got stuck on the surface of the washbasin. This simultaneously created depth in her work. She copied some details to show the viewer where she got her inspiration for the activity, but then changed it to create something new (by adding the moon in the place of the drain). The darker areas seen on the moon could also replicate the dark holes seen in the drain itself.

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When it comes to calming individuals or getting rid of extreme feelings of anxiety, they are often told to look up at the night sky (Nicholls, 2021). This action creates a feeling of weightlessness, where problems or overwhelming emotions are no longer a hefty burden to be carried around. This action also evokes a feeling of being quiet, allowing people's minds to be silent in that time or space (Nicholls, 2021). The night sky gives the viewer a sense of perspective, making them feel that they can conquer it all (that is, all that life throws at them), and that they are capable of handling whatever it is that they have to face (Nicholls, 2021). It is not apparent whether the participant created the artwork with these ideas or emotions in mind, however, when she commented on why she chose art education, she said, "I have a passion for art, I want to be able to teach others how to do art and find something to release their emotions". It then becomes a clearer that the participant was aware of emotions and the impact that they have on art and that art has on the emotions. Therefore, I am of the conviction that the artwork was created with emotion in mind.

Earlier in the analysis of this participant's questionnaire, she described creativity as the ability to create something new. One would expect that when asked if she regarded herself as a right- or left-brain thinker, she would classify herself as a right-brain thinker due to her previous knowledge and the fact that right-brain thinkers are more creative, freethinking, able to see the bigger picture, intuitive, and visualise rather than using words, and her intuitive, creative, and freethinking nature was seen in her art. Yet, she viewed herself as both a left- and right-brain thinker, using "different types of thinking depending on the subject at hand" (Appendix A2, question 10). This comment by the participant shows that she was aware of the different areas of the brain that were used for different types of thinking, as identified by both Herrmann and de Bono, who contend that the whole brain is used when working through a challenge, making creativity available to anyone as it is always present (Herrmann, 1995). The participant later described her artistic style as "realistic since I am a bit of a perfectionist because I have a need for things to look the same" (Appendix A2, question 17 and 18). Both the concept of the left- and right-brain dominant thinkers and Herrmann's theory on whole brain thinking supports the theory that the left-mode or left-brain thinker uses analytical or critical thinking due to the individual's love for order and the need for things to happen step-by-step. I believe that the participant's comment regarding her artistic style can be connected to the left-brain thinking mode, confirming that she is both a left- and right-brain thinker.

Participant 2's realistic art style can be identified in the smaller details that she added to the moon, with specific reference to the crater and lines that we can see in its image. This also shows that the participant paid attention to finer details – a characteristic that one can find in the work of artists who prefer creating realistic artworks. The participant compared her first

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and last art assignments for the term as follows: “My first artwork was a drawing of a hand, my own, created with strong lines and was not shaded properly” (Appendix A2, question 19). However, her last drawing was for the front cover of her visual diary where she drew “hands that did not have the outlines and looked more realistic than the first” (Appendix A2, question 19). This can be linked to her love for realism and finer details and is also associated with a left-brain thinker who needs as much detail as possible in order to reach their goal. These two artworks show a development of the student’s technical skills during the course of the first semester. While these works were not particularly conceptual in nature, they show that the student used her left-brain detail-orientated abilities to improve a visual depiction of hands. As mentioned, the participant used her left-brain, detail-orientated abilities to apply realism to her artwork. This can be linked to Herrmann’s (1995) whole brain model, which indicates that creativity occurs in both hemispheres of the brain and not only in the right hemisphere.

In Participant 2’s artwork, analytical intelligence, according to Sternberg’s (1999) triarchic theory of human intelligence, is clearly evident throughout. Analytical intelligence is the intelligence that an individual uses to analyse, compare, and evaluate a situation to successfully solve a problem. This participant’s mature artistic skills and decisions can be linked to the use of analytical intelligence to solve a problem. This intelligence can indirectly be associated with the cerebral mode that is identified in the HBDI and whole brain model of thinking (Herrmann, 1995). The cerebral mode involves analytical thinking, as well as experimental and creative thinking. Both experimental (exploring a new medium – in this case, charcoal and highlighters) and analytical thinking (applying a realistic style when drawing the moon) are present in the participant’s artwork; the experimental thinking is slightly more visible than the analytical thinking due to the activity brief received by the students. However, the left mode is also evident in the participant’s thinking in terms of the answers that she provided in the questionnaire and the artwork that she created. The participant described herself as a “perfectionistic, someone who is organised, planned, and enjoys detail” (as confirmed by her realistic artistic style) (Appendix A2, question 18). This mode of thinking, according to the HBDI model, occurs in the lower left side of the brain, while the other side of this mode is concerned with creative thinking. Referring to the triarchic theory of human intelligence’s notion of practical intelligence – that is, when an individual uses previous knowledge to create a solution to a new challenge – one can identify the participant’s ability to use previous skills to complete the activity by using a medium that was outside her comfort zone. She did not instantly choose a style or medium for reasons of convenience, but rather based her choices on her curiosity to try a new medium that she had not used before. The third intelligence, creative intelligence, was also present throughout the artwork. Creative intelligence is closely linked to the experiences of the individual, is acquired through observation, and is better

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expressed in situations with minimal structure (similar to the activity brief), which inspires designing and making.

Overall, the participant's artwork shows an understanding of her skills and how she wanted to portray her ideas or even her emotions. A combination of both technical and conceptual skills is evident in the work of this participant. Her confidence in her skill shows in the choices that she made, choosing, for example, charcoal – a lesser-known medium to her – over paint with which she was more familiar to create a more meaningful artwork to complete the activity with which she was faced. She admitted in her questionnaire that she was "more confident and used to art but I know I am still growing, finding my passion" (Appendix A2, question 6). This shows that she was aware of her creativity and how it was developing in her art. The balance between her left- and right-brain thinking points back to Herrmann's (1995) theory of whole brain thinking and the fact that creativity is present in all four modes of thinking. This could also indicate that, in spite of how the student viewed herself, she was a creative person.

4.2.3 Participant 3: The whimsical storm

Title of artwork:	The Whimsical Storm		
Year of artwork:	2022	Size of artwork:	51 cm x 64 cm
Media used for artwork:	Charcoal, yellow ink, blue ink, and brown, blue, and grey pencil on smooth white paper		

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Figure 4. 6: *The Whimsical Storm,* created by Participant 3, 2022. Colour pencil, ink, oil pastels and charcoal, 51 cm x 64 cm. Photograph by the author, 2022.

4.2.3.1 Iconographical analysis

Objective description

The artwork, titled *The Whimsical Storm,* was created horizontally on a 51 cm x 64 cm piece of white paper. Black charcoal, brown, blue, and grey pencil, grey oil pastel, and yellow ink were used throughout the artwork. The artwork is darker at the top with shapes that appear to be black clouds, a few blue clouds, and a bit of yellow in the shape of a sun peeking through the clouds. A rectangular shape was used throughout the artwork. In the top left corner of the artwork, there seems to be a building or rectangular-shaped object containing more rectangles – possibly representing windows. Above the object or floating in front of it on the left side is another rectangular shape in black with grey rectangular shapes on the inside. From the dark rectangle, almost floating in the top left corner, flows a river or stream that covers most of the bottom of the artwork. In the river, more floating rectangular shapes containing black and grey dots or specks and uneven lines can be seen. These white shapes are outlined in grey or black pencil. On either side of the blue river are brown pieces of what appears to be land. To the left of it, a small piece of brown with small dots or specks of brown can be seen. More of the brown area, containing more rectangular shapes, is visible to the right of the river. The brown area on the right may be the shape of a mountain or hilltop. In the far top right corner of the artwork, next to the black clouds, dark blue clouds can be seen. This could be an

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indication of changing weather. Between the brown area and the black and blue clouds, there is a white or blank space. The dark, black clouds at the top of the artwork draw the viewer's attention almost immediately. The black clouds are outlined in a darker black colour. The blue clouds to the right are also outlined in a blue ink that is darker than the actual clouds. The artwork seems heavier on the left side due to the rectangular objects and the use of most of the space on the paper.

Colour

While both warm and cold colours were used in the artwork, the overall atmosphere appears to be rather cold. The cold colours used are different tones and hues of blue from light to dark. The black and grey used for shading are more solid in some areas and contribute to the cold feeling of the artwork. The warm colours used are orange and brown. Brown is categorised as a warm colour due to its orange undertone. In this work, however, the brown does not provide an overly warm feeling. The rest of the artwork contains white patches. This was either deliberately left open to incorporate the white colour, or perhaps the artwork is incomplete.

Lines, forms, and shapes

Horizontal, vertical, and diagonal lines as well as lines that are soft and curved are used throughout the artwork. Some diagonal lines were created by colouring (albeit not solid) the brown and blue areas (possibly ground and a river). Other diagonal lines towards the top left corner of the artwork have sharp, jigsaw-like edges. Some of the vertical and horizontal lines (in the structure in the top left corner of the artwork) are traced from a rectangular shape, while other vertical and horizontal lines, for example those in the river, are uneven and rigid. Lines in the shape of a half-circle are used to create clouds and a smaller-sized sun in the middle of the clouds. The sun is in a typical child-art-like style, using a formula of a half-circle with perpendicular lines protruding from it. Sharp, jagged lines were used to create the rays of the sun. A single green horizontal line was used to create a divide between the horizon and the land. Curved lines were used to depict moving water around the rectangular lines in the river. The work overall appears rather flat, with some depth created through perspective and the reduction in size of shapes towards the back of the work. This can be seen in the smaller shapes in the structure in the top left corner and the bigger blocks or rectangles in the river at the bottom of the page. No three-dimensional forms are used in the artwork, except for the dark clouds which appear to be somewhat three-dimensional. However, most of the artwork consists of rectangular shapes. Some of the rectangular shapes are cut in half diagonally either due to the edge of the artwork or due to the shapes moving behind other obstacles or objects indicating once more the student's understanding of depth creation. However, none of the objects touch each other. In the top left corner, a structure similar to a building, perhaps,

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was created by the repeated use of rectangles. Some of the rectangles are drawn inside each other but never touch. There are also rectangular shapes “floating” in the river.

Texture, rhythm, and movement

The clouds have a soft texture as the charcoal was rubbed onto the paper to create a fuzzy effect. The blue clouds in the top right corner have a rough texture due to the lines created when they were coloured. The black rectangular block at the top left has both a rough and a smooth texture due to the different styles used to colour it. Both the blue and brown in the picture (possibly depicting land and a river) have rough textures due to the uneven way in which the colouring was done. Some of the lines in brown are either horizontal or diagonal, creating an uneven and textured feeling. The specks and uneven lines used in the white rectangular shapes also create an uneven, gravel-like texture. It is unclear what these shapes represent. The repetition of curved lines, specks, and rectangular shapes used in the river create rhythm in the artwork. The use of a one-point perspective, together with the curvy lines, creates movement in the artwork, allowing the viewer’s eyes to move from the top left corner down towards the bottom of the artwork. The darker clouds at the top of the artwork then draw the viewer in once more, bringing them back to the focal point created by the objects in the top left corner.

Space, composition, and balance

Only two-dimensional shapes were used throughout the artwork, which create a rather “flat” feeling. No three-dimensional objects were used. The river on the left starts small and becomes bigger towards the bottom of the page, covering almost the whole bottom area of the artwork. It pushes the top part of the work backwards creating the illusion of depth. The rectangles used in the top left corner of the object are smaller than the rectangular shapes in the river at the bottom of the page. This contributes to the illusion of depth. Most of the artwork contains positive space, whereas the negative space (the blank areas) is mostly in the area directly under the dark blue and black clouds. The artwork covers almost the entire surface of the white paper. The artwork is created asymmetrically and is, therefore, unbalanced, with the focal point at the top left corner. Some components, like the structure in the top left corner, were also drawn asymmetrically. The same shapes are used throughout; however, the artwork still seems unbalanced and uneven. The use of rectangular shapes throughout the artwork combines most of the artwork into a whole. The smooth texture of the clouds contrasts with the roughness of the river and the land drawn in the lower part of the artwork. The cluster of shapes at the bottom of the artwork creates an overall balance, compensating for the dark parts at the top that might make the artwork seem unbalanced. The artwork was drawn asymmetrically with a one-point perspective. The focal point is in the top left corner. The

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bottom of the artwork balances the rest of the artwork. The river flowing from the top left corner becomes bigger at the bottom of the page making the artwork seem balanced as it covers most of the artwork. The top part of the artwork seems slightly unbalanced due to the darker colours used.

Perspective, proportion, and harmony

The artwork has a one-point representation of dimension. The rectangular objects in the top left corner of the paper form the focal point of the artwork. This effect is created by the objects at the top of the paper that have been drawn smaller than the objects in the lower part of the paper. This creates an illusion of depth and contributes to movement. However, the darkness of the clouds might draw the viewer's eye first; the focal point will draw the viewer in and allow their eyes to travel over the artwork, either to the darker clouds on the right or following the flow of the river towards the bottom of the artwork. The items or objects drawn at the bottom of the artwork are larger in proportion to the items or objects drawn at the top of the page, contributing to the one-point perspective. However, the viewer can also be drawn in by these larger objects in the river, moving their eyes towards the top left corner, causing the focal point to be at the bottom of the artwork, where the river flows. The use of cold colours in relation to the overall context of the artwork work well together. The yellow is contrasted with the black and complements the blue in the top right corner. Some of the textures work well together, while the textures in the river and the land work against each other, making it difficult to differentiate between water and land. However, the different uses of colour make up for this. It is uncertain what the purpose of the rectangular shapes is or what they represent, however, they create blank spaces in the artwork, making the artwork seem incomplete. It is possible that these incomplete shapes were created purposefully.

Technique

The black clouds at the top of the artwork were coloured using charcoal and then rubbed to create a smoky, smooth texture. The sun just beneath the black cloud is coloured in yellow oil pastels that were applied rather thickly, creating a smooth texture. The rest of the artwork was roughly coloured in a sketch-like style using blue and brown pencil, creating distinct lines that also contribute to the texture. To depict moving water, soft curved blue lines were drawn in the river, where the biggest part is coloured blue. The river was also outlined using curved lines to contribute to the concept of moving water.

Conclusion of the iconographic analysis of Participant 3's artwork

When looking at the artwork for the first time, it seems incomplete due to some of the shapes and areas not being coloured in. It is uncertain whether this was done intentionally. The way

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the artwork was coloured also makes it seem unfinished. It creates a rough, uneven texture throughout the artwork. Upon closer inspection, the artwork becomes interesting as it has more than one possible focal point, depending on the viewer's perspective. Although the artwork might seem flat, the expansion of the river flowing from the object in the top left corner creates a three-dimensional effect in the artwork. The way that the black clouds were coloured depicts a storm brewing, ready to erupt. It is, however, strange that the clouds in the top right corner of the artwork are dark blue and not black, as if they are not part of the storm. This is perhaps indicative of changing weather, or a "brighter side" to what the student is focusing on. In addition, a bright yellow sun, creating some contrast in the artwork, can clearly be seen in the middle of the clouds at the top of the artwork. The textures used in the rectangular shapes at the bottom of the river, along with the texture used in the river, contribute to rhythm and the movement that one can find in a flowing river. More than one type of medium was used in this artwork, contributing to the overall texture and style of the artwork.

4.2.3.2 Iconological analysis – Participant 3's artwork and questionnaire

Participant 3 was 19 years old and the only male participant in the study. He was also one of two participants (Participants 3 and 4) who referred to literature (writing poetry) as a favourite "creative" activity because, he stated, "I am a person who is always alone, never having someone to express myself to and poetry gives me a chance to do this" (Appendix A3, question 14). The participant had no previous experience of the visual arts. He enrolled for Visual Arts to "learn more about art, to understand how to interpret art, and to learn how to make art" (Appendix A3, question 4). This background or contextual information about the participant indicates that he was perhaps in search of a way to communicate his emotions or feelings to those around him. It seems that the participant was keen to find new ways to get in touch with his thoughts and the emotions that came with them. His creativity might have developed through the literature with which he surrounded himself, enabling him to not only express himself but also to enjoy other experiences through the characters and stories he encountered in the literature. Perhaps he was trying to break away from reality or to find some adventure because he was stuck in his new reality, which at the time of this study was the COVID-19 pandemic. Unfortunately, the participant declined to elaborate on his final artwork, his inspiration, and the choices he made when creating the artwork. Consequently, my interpretation is speculative and cannot be verified through the participant's questionnaire responses. I surmise that it is possible that the participant found inspiration unconsciously in his immediate surroundings, such as the tables in the art room (referring to the shapes and the number of tables around him) as seen in Figure 4.7.

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Figure 4. 7: The tables in the art room. Photographed by the author, 2022.

Regarding the iconographical analysis of the participant's artwork and taking the activity brief into consideration, it seems that the participant either understood the activity very well or not at all. He created something new by using an object in the art room (a rectangular object) in his artwork. (Regrettably, I am not able to identify this object as the participant declined to elaborate any further on the artwork itself). However, when the activity was explained, the participants were asked to identify a line, shadow, shape, object, or anything else in the room and create something new from it, in other words, when they looked at the artwork, they should have seen the original line, shape, or object and how it was changed into something completely new. An example of this could be a crack in the wall changing into lightning that was striking the ground. However, in this participant's artwork, the object was merely incorporated into the artwork and not changed into something new although he created an entirely new artwork from the shape. The object was incorporated into the river flowing from the top left corner towards the bottom right corner of the artwork. The object was also incorporated into the brown area on the right side of the river. A rectangular shape was drawn in the top left corner of the page, containing some traces of this object, however, some of the shapes were hand-drawn, mimicking the original object that was used.

It could have been that the participant had a difficult time accessing his creativity because it was the first time he had attended a visual arts class. In the first questionnaire, which the participant completed, he mentioned that his first time taking the Visual Arts course had taught him that "there is more to art than meets the eye, art pieces have a deeper meaning" (Appendix A3, question 6). Therefore, this could also mean that the participant had a deeper intention for the use of the rectangular object used in the artwork. O'Connor (2019:1), explains in her

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article, “The meaning of SHAPES in design”, that squares and rectangles represent stability and strength. She contends that the rectangle is the most used area shape in design because it represents honesty, solidity, and stability. She further argues that rectangles are not as “flashy” as other shapes and are often seen as boring; however “clever designers may twist or turn them to add interest to a design” (O’Connor, 2019:1). The participant used rectangular shapes throughout most of the artwork. The rectangular shape can be seen in the river, the land, and in the structure in the top left corner of the artwork. It is uncertain what the structure may be or what it represents, however, it could be interpreted as a building of some sort. The rectangles could, perhaps, symbolise pages of poetry drifting down the river, which, on their own, could represent the flow of creativity. The participant mentioned in his response to the first questionnaire that he enjoyed poetry as a way to express his emotions. Poetry is known to promote honesty and reveal deeper feelings (Blair, 2016). Therefore, I believe that the participant used this shape to embed a deeper meaning, maybe without being aware of what he was doing or creating. Perhaps the participant felt unheard and lonely; therefore, he used the rectangle because it provided him with the stability and solidity that he might not have been experiencing in his home environment or life. The use of symbolism could be associated with a right-brain thinker, who is identified as an individual who tends to be emotional and a visual thinker. These individuals create through the emotion or feelings that they experience when looking at an object or inspiration.

However, even though the participant comes across as expressive, he did not identify himself as being expressive. This is ironic as poetry is very expressive and emotional, and art is expressive as well. The participant chose Visual Art to learn more about art and what it entails. Asked in the questionnaire whether he identified as a left- or right-brain thinker, the participant responded by saying that he identified as both. “As much as I enjoy problem-solving, I hate math, and as much as I enjoy art, I am not very expressive” (Appendix A3, question 10). This response relates to what Herrmann (1996) believes about where creativity and certain areas of thinking occur in the brain. The participant can be placed in either the limbic mode or the right mode, according to Herrmann’s (1996) HBDI. In the limbic mode, the participant has good organisational skills, and works primarily in a controlled, conservative, and planned manner. In the context of this study, Participant 3 appeared to enjoy working in a very detailed, structured, and precise way, in search of step-by-step solutions to problems. He mentioned in his questionnaire that he enjoyed solving problems, but not mathematics, which eliminates one of the dominant applications of analytical thinking. He would probably also have excelled in communication, reasoning, and convincing others. An individual in the limbic mode finds interpersonal contact with others to be very important and has a kinaesthetic (sensitive) attitude. This type of thinking could be linked to this participant’s love for literature and his

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expression of his emotions through the writing of poetry. In the right mode, the participant could be described as very imaginative and artistic with a conceptual brain. He had a holistic, intuitive, and innovative approach to problem-solving and was always happy to take the initiative. He also believed that problems could always be solved and that challenges always came with solutions, which was indirectly connected to his love for problem-solving. He also excelled in communication, reasoning, and convincing others.

This connection between the limbic mode and the right mode, shows how two different areas of the brain or different types of thinking are present when the participant is trying to find a solution to a challenge with which he is faced. To complete the artwork, Participant 3 found a solution that worked for him – he created something new using the object, even if this was not in the same way that the other participants had approached the activity. He further mentioned in response to the questionnaire that he did not have anyone to express himself to and, therefore, found comfort in poetry. His challenge was to be heard by someone or to express his emotions and feelings, and his solution was writing poetry. I believe that, even though there are many ways to identify and describe creativity, this participant understood how to identify creativity in himself and others. He described creativity as “how unique an individual is relating to their imagination and thinking” (Appendix A3, question 12). This comment can be linked to the participant being imaginative in his writing and art. He also referred to the importance of creativity as something that gives others a “fresh perspective on things” (Appendix A3, question 13). This “fresh perspective” could be seen in the way that he approached the artwork, which was different from the other participants. Instead of turning the object into something new, for example, a car or a box, he created an entirely new artwork using the shape of the object. This could also be linked to his analytical way of thinking, which according to Herrmann’s (1995) HBDI, is associated with the limbic mode of thinking.

In the iconographical analysis, it can be seen that the participant was not very comfortable or confident in the way that he used art media. Here, I specifically refer to the harsh strokes of the brown and blue pencils used to colour the land or ground and the water areas. It can also be seen in the clouds in the top right corner of the artwork. To the left of these clouds, the participant tried a different technique, which entailed rubbing charcoal into the outlines of the clouds, to create a softer, smoother look. The participant explained that he had not studied the visual arts before which could explain why he was not yet comfortable or confident about his creativity. This could also clarify the “childlike” style that he used to create the sun and clouds in his artwork, as he had not undergone the developmental phases that would have taught him how to draw objects more realistically by taking the art elements and design principles into account. He relied on his limited primary school education knowledge of using

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a “formula” to create known objects. This could be linked to theories of early childhood creative development. The participant described his artistic style as “light-hearted and dark” (Appendix A3, question 17). These two words seem to contradict each other, but the participant’s explanation of his answer puts his description of his artistic style into perspective. He believed that his artistic style was this way because he “can either be positive or negative” (Appendix A3, question 18) – much like poetry. William Shakespeare, for example, wrote poetry that was sarcastic, romantic, tragic, or even “light-hearted”. Therefore, this is a very appropriate description of the participant as it fits into his love or admiration for poetry.

The artwork can also be seen as either positive, negative, or perhaps both. The positive can be found in the sun breaking through the clouds – the sun possibly being a symbol for new beginnings as a new day starts with the sun rising. The river is another positive effect caused by the rain that has fallen from the clouds. The river indicates that rain might have fallen. Rain in itself can be seen as positive – like rain falling after a long drought bringing joy to farmers who are in desperate need of water for their crops. It can, therefore, represent new beginnings and possibilities, like returning to class, being around new individuals, connecting with them, and allowing the participant to be heard. The blue clouds next to the dark clouds can also be an indication of the storm passing after the rain fell, also creating a positive message that the worst had passed. The artwork can, however, also be seen as negative due to the dark clouds, Clouds are often associated with negative emotions, as frequently depicted in films. When a character is going through a difficult time or receives bad news, it tends to rain. The clouds could, perhaps, be linked to the COVID-19 pandemic and the possible effect it had on the participant. This period was possibly a very challenging and lonely time for him.

What the participant drew and how he described his artistic style can be connected as it shows in his artwork. He later declined to elaborate on the comparison of his first and last artwork. He only stated that he saw some improvement, but it was not clear what improvement he was referring to or where it could be seen and what this improvement might be. One also wonders whether this improvement was regarding his technical skills or conceptual development, which might have indicated whether the participant was more left- or right-brained.

Overall, in referring to the participant’s answers to the questionnaire and the analysis of his artwork, I am of the conviction that the participant understood that one does not use only one side of the brain when thinking. He was able to determine why he believed that he used both sides of his brain, indirectly confirming Herrmann’s (1995) notion regarding the thinking areas in the brain of an individual. I also believe that if this individual had participated in a de Bono six thinking hats (2002) exercise, he would have been able to determine how he could have

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become more creative, which would have given him more confidence to excel not only in his writing but also in his art.

4.2.4 Participant 4: The modern lady

Title of artwork:	The Modern Lady		
Year of artwork:	2022	Size of artwork:	29,5 cm x 20,5 cm
Media used for artwork:	Charcoal and grey pencil on smooth white paper		

Figure 4. 8: *The Modern Lady,* created by Participant 4, 2022. Charcoal and ink, 29,5 cm x 20,5 cm. Photograph by the author, 2022.

4.2.4.1 Iconographical analysis

Objective description

The Modern Lady was drawn vertically in black and white on smooth white paper. It mainly consists of charcoal and black ink. A figure in a dress and top hat was drawn in charcoal and outlined in black ink. It is also possible that the artwork was first outlined and then filled in with charcoal afterwards. Texture and finer details were added using black ink over the charcoal.

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The figurine takes up slightly less than half the space on the piece of paper (comprising the positive space of the work) and is drawn in the middle of the page, widening from top to bottom and leaving negative space on either side of the figure. The only negative space is the white areas on the left and right sides of the figure, which seem to be slightly tainted with fingerprints that do not form part of the artwork. The figure is dressed in a floor-length skirt, small corset, and a high-necked, short-sleeved blouse. On the blouse that the figure is wearing, there are seven small black buttons. The sleeves of the blouse are ruffled. The corset shows a repetition of lines, creating either a pattern or texture. These lines can represent the ribbons used to tie the corset. The figure is wearing a top hat on a full head of short curls. She does not show any facial expression and is sticking her left hand out to the left side of the artwork. The figure's right hand is hidden behind the skirt. There are a few grey fingerprints on the background (negative space) around the figure. These were, however, created coincidentally rather than intentionally. It also seems as if some of the dust from the charcoal was rubbed onto the paper, slightly shading it and taking away the stark white colour of the paper. It is not clear whether this was done deliberately or unintentionally. Shading was incorporated around the folds of the fabric of the skirt, giving it a three-dimensional effect. Some shading was also done on the hat, neck, and face of the figure, contributing to the three-dimensional effect.

Colour

Charcoal that had been smoothed out on the white paper produced the black and grey variants in which the artwork was created. Stark black ink was used to draw lines for texture, shadows in the skirt, and the curled hair and face of the figure. Black ink was also used to outline the blouse that the figure is wearing. Shading incorporated in black ink was used in the material folds of the skirt, the sides of the top hat, the high neck of the blouse, the folds of the arms, and below the corset over the torso area of the figure. The participant was asked to elaborate on her artwork in a later discussion, and her reason for using charcoal and only black in her artwork was that "it is easy to work with monochromes" (Appendix A4, question 5). She further explained that only charcoal had been left to work with (indicating her choice of medium was perhaps already taken), and, even though charcoal was not her favourite medium as she found it "rather difficult to work with", she still used it because she found monochromes easier to work with.

Lines, forms, and shapes

Vertical and horizontal lines were used to create the corset and top hat, imitating the rigid nature of these clothing pieces. Horizontal lines were incorporated on the corset to depict the ribbon used to lace up a corset. Lines drawn in circles or coiled up lines were used to create the figure's hair. Soft curved lines at various angles were integrated to create the skirt of the

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figure and a soft flow, imitating material. Half circles were used to create the ruffles of the skirt. The entire figure was outlined throughout the work. An oval shape was used to create the shape of the face and the top part of the top hat. A rectangular shape was used to create the shape of the corset and the bottom part of the hat. Circles were used to create buttons on the figurine's blouse and the eyes of the figurine. The overall shape of the figure is biomorphic. The dress is puffy with a repetition of triangular shapes. Semicircles were used to create the ruffles of the dress. The top hat is the only three-dimensional form found in the artwork, due to the angle and shading used.

Texture, rhythm, and movement

The skirt that the figure is wearing has both soft and rough textures. The use of charcoal gives the skirt a soft silk-like texture. The black ink that was used to add detail and shading to the skirt creates a rough texture. This mimics the different textures that material can portray from different angles. The repetition of horizonal lines on the corset create a rough texture but is combined with a softer texture due to the use of charcoal to colour the corset. The blouse of the figurine is only coloured with charcoal, possibly mimicking a soft or silk-like material. The figurine's cheeks also have a smooth shading of charcoal, possibly to show a blushing figurine. The top hat worn by the figurine has a smooth texture overall, similar to a smooth or silky material. The lines drawn in some areas of the hat create a rough texture but do not influence the overall look. The repetition of the curled lines in the hair of the figurine and in the ruffles on the sleeves of the figurine's blouse create rhythm and flow in the skirt of the figurine, which creates movement in the artwork. This movement of the skirt of the figurine mimics the movement when a person walks around in a skirt of this length. The movement in the artwork seems restricted due to the focal point being the skirt. As the viewer's attention is drawn to the bottom of the artwork, the top part of the figurine could almost be missed, but then the figurine's curls catch one's eye, causing the attention to move towards the top part of the artwork. Despite all the movement and three-dimensional aspects created in the work, the stark outlines still flatten the image to a large extent.

Space, composition, and balance

The figurine is drawn in the middle of the page, leaving a large negative space containing no objects around her. The only parts of the artwork that showed three dimensions are the skirt and top hat worn by the figurine. The shading was not done on only one side, making it difficult to identify which side the light source was coming from. Therefore, most of the artwork is two-dimensional. Some parts of the artwork, such as the torso, chest, and arms of the figurine are drawn very flat and show almost no dimension. Some parts of the figurine are not in proportion, creating an asymmetrical appearance. Overall, the artwork is balanced and asymmetrical. The

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arm on the right side balances the skirt on the left which is larger. The figurine in the middle divides the artwork precisely in half. The hat of the figurine is drawn from the top, as if the viewer is viewing the figurine from an angle that is slightly above the figurine. This perspective does not, however, correlate with the perspective of the figurine, causing an unbalanced perspective of the artwork, which nonetheless, contributes to the style and technique of the work.

Perspective, proportion, and harmony

The figurine is neither drawn in a one-point nor two-point perspective. There are also no signs of an atmospheric perspective. The figurine is drawn in a flat perspective as only the front of the figurine can be seen. However, it looks as if the hat of the figurine is drawn from the top perspective, as if the viewer is seeing the figurine from an angle slightly above the figurine (birds-eye-view). It could be that the hat is sitting at an angle on the figurine's head. The folds of the skirt are also depicted from different angles, challenging the idea that the figurine is drawn flat.

The figurine is not drawn in proportion. The head of the figurine is almost the same size as her torso. The arms of the figurine are much longer than her torso. By contrast, the legs appear to be extremely long in relation to the rest of the body. The focal point of the artwork is the skirt of the figurine owing to the use of darker colours and shading. This works against the movement in the artwork as the viewer's eyes move towards the bottom of the artwork, leaving the top part of the artwork almost unnoticed. The proportions of the artwork, that is, the elongated arms, short torso, and large head, make the figurine seem doll-like. The textures complement each other, portraying the different textures of material when looked at from different perspectives. The rough texture of the figurine's hair is in contrast to the smoothness of the dress that the figurine is wearing. These aspects work well together and complement each other. The dark skirt could be linked to the dark buttons on the figurine's blouse and the ruffles on the sleeves of the blouse. Although the proportions of the figurine are incorrect, the artwork overall still has some form of harmony.

Technique

The artwork was drawn in charcoal and outlined in black ink. It is possible that it was first outlined and then filled in with charcoal. The black ink was added over the charcoal to add details like shading, structure, and texture – possibly in an attempt to create depth. There are contrasting textures throughout the artwork, where smooth areas were used to portray material and the rough use of black ink was integrated to bring in some texture.

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Conclusion of the iconographic analysis of Participant 4's artwork

The artwork seems to depict a doll-like figure. Considering the entire figurine, it can be seen that some proportions of the figurine are incorrect, making it seem as if it might be a doll. The clothing of this figurine seems to be from a particular era, probably Victorian. She is wearing a long skirt, corset, and ruffled blouse. The curled hair and top hat also contribute to the impression that the figure is from a particular era, possibly the 1800s, when curly hair, ruffled blouses, corsets, and full skirts were worn – especially by European women. The artwork was mostly created in black charcoal that was rubbed to create shade and imitate the smooth textures of the clothing. The artwork contains areas with fine detail, like the ruffles of the blouse and the texture added in the folds of the skirt to portray how shadows are cast between the folds of the skirt. Some facial features were also added in ink with shading in charcoal on the cheeks. I opine that the participant was driven by her passion for the Victorian era. During a casual conversation between the participant and me, it was revealed that the participant was fascinated by Victorian fashion. She explained that she adored anything that was from the Victorian era, especially stories and films based on that era. Earlier in the analysis of this participant's work, I noted that the participant decided to use a monochromatic palette for her artwork. I infer that this was a comfort zone for the participant. She chose a medium that was "difficult" for her to use within a comfort zone where she could have more control over what she created. This approach could have been due to the challenge with which she was faced to create an artwork with the concept of pareidolia in mind.

4.2.4.2 Iconological analysis – Participant 4's artwork and questionnaire

Participant 4 was an 18-year-old girl with high school experience in the visual arts. In her response to the questionnaire, she elaborated that her main source of experience in art and inspiration came from her father. He was not an artist but could draw very well and sent her for art classes when she was younger. I had a conversation with the participant and asked what the inspiration behind her artwork was. She explained that she had chosen a lampshade that was in the shape of the lady's skirt. The participant was asked why she chose the lampshade out of all the objects available and she replied, "I wanted something different, and it reminded me of old Victorian fashion" (Appendix A4, question 9). She also explained that she was "obsessed" with the 2020 Netflix series *Bridgerton* and the stories written by the 18th century English novelist Jane Austen. This was an indication that her interests and experiences influenced her final choices when creating this artwork. The rest of the attire worn by the lady in the top hat was inspired by 18th century fashion.

The artwork is mainly in black and white, however, the background or white paper used for the artwork seems to be grey due to the fingerprints that the participant left behind. This could

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have been accidental or intentional to make the artwork seem slightly older, connecting to the 18th century inspiration. The participant pointed out that she was raised in both Afrikaans and English households and, therefore, adopted both the Afrikaans and English cultures. It could be that having been raised in a traditionally Western, English household with an English culture, she developed a love for English history and literature. The 18th century is romanticised in many English films and novels.

The participant mentioned that her favourite creative activities were reading, yoga, and dance, leading me to believe that she was rather romantic. The *Bridgerton* television series, novels by Jane Austen, and the majority of stories based on the Victorian era are romantic with a romantic ending where the main characters find love or love plays a major role in their lives.[23] Another important point to consider is that in *Bridgerton* and Jane Austen's novels, the main characters are mostly women who have strong opinions and an inclination to take control of their own choices – especially choices that influence their lives. Perhaps it was not her obsession with romance, but rather with the strength that these women portrayed in the novels or stories of that era that inspired her and are prevalent in her work. The participant's artwork can be linked to romanticism. Peckham (1951) (in Ducksters, 2022:1) wrote in his article, "Toward a theory of romanticism", that romanticism refers to a general and permanent characteristic of mind, art, and personality. Ducksters (2022) refers to romanticism in more detail by defining romantic art as being focused on emotions and feelings, different moods, spirituality, imagination, mystery, and fervour. The subject matter and descriptions of life during that time varied widely and included landscapes, religion, revolution, and peaceful beauty (almost like the figurine created in the artwork) (Ducksters, 2022). The pandemic left many individuals feeling overwhelmed and not in control of their lives due to the hard lockdown and the uncertainty of what was going to happen next. Through the characters in the novel and the character in her artwork, the participant was perhaps able to live out the strength that she hoped to experience during the uncertain times of the pandemic. This is, however, only speculation – the participant did not confirm any of my interpretations.

In the iconographical analysis of Participant 4's artwork, I established that the artwork was created with expressive lines, such as the strokes used to create the skirt and the hair of the lady in the artwork as well as the overall use of outlines in the artwork. It could be that this, along with the greyish background, was a new technique for the participant that she used for

[23] Even though I have referred only to the romance found in the romantic period, the romantic period was also about idealism and the sublime (to name a few).

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the first time to create the artwork. When asked to describe her artistic style, the participant replied that she had no specialisation. She explained,

> I chose to try something different with every project. I wanted to start from scratch on a new medium, style, etc. I made this decision in matric, and it was difficult because my peers had chosen their medium/style and worked towards mastering it and I did not. This meant that I experienced everything [but] a jack of all trades is a master of none, but always better than a master of but one. (Appendix A4, question 17).

Perhaps this decision was inspired by her father's style or skill, inspiring her to always want to try something new. This can be indirectly linked to Sternberg's (1999) approach to classifying intelligence by function and level. All three intelligences of Sternberg's (1999) triarchic theory of human intelligence can be identified in the participant based on her answers to the questionnaire and her artwork. The participant's analytical intelligence is evident in her ability to analyse, compare, and evaluate the challenge in order to find a solution. She had to evaluate and compare previous styles and media that she had used in to decide which one would suit her artwork best. The medium and style used by the participant added to the 18th century feeling and look. Her practical intelligence is demonstrated by her ability to recall previous experiences, skills, and knowledge to complete her artwork. She noted that her experiences and previously acquired art skills influenced how she created her artwork. She also used her previous knowledge of 18th century clothing and applied it to her artwork.

The participant mentioned that she was unable to compare her first and last artworks created in the first term due to the different styles and media used in each one. She explained by saying, "The first artwork was more limiting in drawing style because we were taught how to draw, where[as] my last artwork was more stylised and freer." This can be linked to the way that the student described her art style. She did not use just one style and preferred to choose her own style and medium. Therefore, when she was told to use a particular style or medium she felt limited. It might also have influenced her creativity as she might have felt more creative if she had had the final say in her style and medium. Nevertheless, she believed that "one cannot choose a favourite style unless you have tried all of them" (Appendix A4, question 17), which indicates that she enjoyed the freedom of choice and did not thrive when she was limited. Another indication of her freedom of choice or freedom as an artist was found in her description of herself. She believed that others might describe her as "academic, artistic and unique, not one to follow traditions" (Appendix A4, question 15). The descriptors "unique" and "not one for following tradition" when referring to herself could indicate that the participant did not like to be categorised, similar to her artistic style, which relates to the notion that creativity

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does not entail being placed in just one descriptor or "box" but rather requires various descriptors. Even though it is difficult to put a name to or a specific descriptor on creativity, I am of the conviction that the individual was working with the idea of creativity, being unique in terms of her own styles, and feeling that others would also describe her as unique and different.

The participant's creative intelligence was closely linked to her experiences and was acquired through observation, which inspired designing and making. She had the ability to refer to what she wanted to express and found a way to make it possible. It is interesting that her creative intelligence was obvious yet she did not think she was able to "think creatively" (Appendix A4, question 12).

When the participant was asked about her inspiration for her art piece, she replied, "I am going to die; I may only have one life on this planet. I have had some rock bottom moments and they inspired me to live" (Appendix A4, question 1). Her emotions and experiences seemed to be her main inspiration and could be connected to her love of reading. The participant further explained that she believed creativity is "odd, it is difficult to think creatively, but sometimes it only takes a second to come up with some outrageous ideas, for example painting with concrete" (Appendix A4, question 12). She continued by saying that creativity was important because "it is nice to have and be creative, however, it is OK to live without it" (Appendix A4, question 13). In both these descriptions of creativity, the participant referred to the absence of creativity, which implies that she believed that she lacked creative thinking skills. This could be linked to her answer as to whether she is a left- or right-brained thinker. She answered that she "does not believe in left- or right-brain thinking. I believe we all have some talents that apply to both left- and right-brain elements. Art might be considered more of one side, but when you draw you need math and timing" (Appendix A4, question 10). It appears that the participant linked thinking to the skills, abilities, and talents that an individual possesses. She did not associate it with thinking as such. She mentioned that "art might be creative, but you still need math and timing" (Appendix A4, question 10).

According to the HBDI, this could place the participant in the cerebral mode, indicating that she was more inclined to think analytically. She probably excelled at solving mathematical, numerical, and technical problems and was very imaginative and artistic with a conceptual brain. The participant might have had a holistic, intuitive, and innovative approach to problem-solving and was always happy to take the initiative. She also probably believed that problems could always be solved and challenges that always came with solutions. The participant could thus be placed in the left mode, which is similar to the cerebral mode, as she enjoyed working

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in very detailed, structured, and precise ways, always in search of step-by-step solutions to problems.

Overall, the researcher concluded that the participant identified creativity as a talent or skill and not necessarily as a way of thinking. The participant expressed the view that each individual's way of thinking is influenced by their skills, abilities, and talents. She also revealed that she did not think that she was able to think creatively. However, when identifying which intelligences of Sternberg (1999) and modes of Herrmann (1995) were evident in the participant's thinking, I conclude that all modes and intelligences involved creativity. The participant did not associate her artistic skills with creativity but rather saw it as being a result of her experiences and emotions, as she referred directly to the "rock bottom moments" (low-points in life) that she experienced and how she had learnt from them. The experimental style used in her artwork is associated with creative thinkers who enjoy experimenting and expressing what they feel in visual ways. Her perception of creativity, therefore, indicates that lived experiences were the source of her inspiration to create and evolve.

4.2.5 Participant 5: The viral scene

Title of artwork:	The Viral Scene		
Year of artwork:	2022	Size of artwork:	63 cm x 51 cm
Media used for artwork:	White chalk and shredded pieces of coloured paper on black sugar paper		

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Figure 4. 9: *The Viral Scene,* created by Participant 5, 2022. Chalk, 63 cm x 51 cm. Photograph by the author, 2022.

4.2.5.1 ***Iconographical analysis***

Objective description

The Viral Scene was created on black sugar paper using white chalk and small, ripped pieces of coloured paper. At the top of the artwork the outlines of clouds can be seen. On the left, under the clouds, the COVID-19 molecule was used in place of a sun. On the right, just below the clouds, what appears to be a hand holding onto a steam kettle or watering can is coming from the clouds. Directly under the kettle or watering can, on the bottom right, is a gravestone with the words “In loving memory, Earth xxxx-2022”. Under the gravestone, on the right, is another cloud and what seems to be an imitation of the sun. At the bottom of the artwork, towards the left of the picture plane, grass and leaves or flowers are visible. The leaves are growing towards the sky. In the middle of the artwork, standing on the grass is a post box with a floral design and paintbrushes coming out of the top. In the middle of the paintbrushes a figure can be seen. It is also possible that the floral design is, in fact, items stuck inside the box and that the paintbrushes at the top are flowers growing around the figurine. The figurine

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has a heart-shaped body with a neck and head coming from it. It looks somewhat like a ballerina. Depending how one looks at the ballerina, she seems to be angry or slightly evil, floating above the box like a ghost. She could also be a flower, instead of a ghost, with her head the bud of a new flower.

Colour

The paper used for the artwork is black. White chalk, contrasting with the black paper, was used to draw the artwork. None of the shapes or forms have been coloured. Therefore, the entire artwork was created using outlines only. Pieces of orange, blue, brown, and white coloured paper were used to create the top part of what seems to be paintbrushes or flowers (the figure standing among these items looks like a flower). These are the only bits of colour used in the artwork. The blue used is a cold colour, combined with the warm colours orange and brown (due to the yellow undertone). The black and white colours used in the artwork are considered to be neither cold nor warm. Nonetheless, the overall colour scheme appears to be cold.

Lines, forms, and shapes

Vertical lines were used repetitively to draw grass at the bottom of the artwork as well as at the top where the arm or hand holding the watering can or kettle is coming from the clouds. These repeated lines create movement and rhythm in the work. The post box or podium contains diagonal and horizontal lines. The diagonal lines were used to create the hand coming from the clouds, holding onto the watering can or desk lamp. The vertical and diagonal lines were used to create the paintbrushes, which also create rhythm and movement owing to their repetition. The rest of the artwork was drawn using soft, curved lines. A semi-circle was used to create the shape of the COVID-19 molecule, the sun in the lower right corner, and the opening of the kettle or watering can. Semicircles were used in different ways to create the clouds and the gravestone. Ovals with sharp points were used to create the leaves at the bottom of the page. Most of the artwork contains biomorphic shapes, however, the geometric shape of a box in the middle of the artwork stands out in comparison to the soft edges of the biomorphic shapes.

Texture, rhythm, and movement

The use of white chalk on the rough surface of the black sugar paper creates a rough overall texture. The ripped pieces of paper used for flowers or brushes also create a rough texture. More repetitive lines used at the bottom of the artwork create the texture of grass. Also, the repetition of clouds and vertical lines create a subtle rhythm complementing each other. This allows the viewer to move their eyes around, taking in each object drawn in the artwork. The

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use of vertical lines for the grass guide the viewer's eyes towards the clouds or the figurine in the middle, and thus guide the viewer throughout the artwork. The figurine guides the viewer upwards towards the clouds. The clouds then guide the viewer to the hand holding the kettle or watering can and then towards the gravestone and cloud in the lower right corner of the artwork, leading to the sun and towards the grass and leaves. The grass and leaves then guide the viewer back towards the figurine, creating a full circle to take in the artwork.

Space, composition, and balance

The entire paper was used to create the artwork, which consists only of outlines – no shading or other colours were used in the objects created. This may seem as if most of the artwork consists of negative space, but when the objects or shapes are taken into consideration, one sees that most of the artwork consists of positive space. The layering of the clouds produces an illusion of depth, however, as no additional colour or shading was used, the depth perception is limited. Some form of three-dimensionality is, however, created in the brushes or flowers made of ripped pieces of paper glued onto the black sugar paper. The artwork is asymmetrical, but still appears to be balanced. The grass, leaves, and clouds in the lower right ground the artwork while the top part of the artwork balances it. The figure in the middle of the page forms the focal point and allows the viewer to move their eyes over all the objects on the page to take in the overall perspective. However, the brushes or flowers may also create a main focal point due to the ripped pieces of paper that stand out and capture the viewer's attention almost instantly. Most of the artwork is drawn asymmetrically with the visual weight on the right side of the paper. This makes the artwork seem slightly unbalanced; however, the rest of the objects balance it adequately.

Perspective, proportion, and harmony

The figure is drawn from neither a one- nor two-point perspective. There are also no signs of an atmospheric perspective. The figure is drawn flat as only the front of it can be seen. The clouds, grass, leaves, and other objects do not add to the depth of the artwork. The focal point is the coloured paintbrushes consisting of ripped pieces of coloured paper glued onto the black sugar paper in the middle of the artwork. Owing to the length of the figurine above the paintbrushes, the viewer's eyes move either upwards towards the clouds and then towards the right until the sun is seen, or down towards the floral design on the post box, leading to the grass and clouds on the right side and then upwards towards the clouds and COVID-19 molecule. All the objects in the artwork complement each other and guide the viewer to move from one object to another, allowing their eyes to freely move over the artwork. The many lines in the artwork do, however, cause some visual distraction. The viewer's eyes are not always sure where they should focus. The texture is subtle and does not influence the overall look of

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the artwork. The use of vertical lines for grass anchors the artwork and balances the image. The many lines, as mentioned above, are, however, somewhat busy and distracting.

Technique

The use of outlines only in drawing the artwork allows the viewer to use their imagination to fill in the rest of the details. Thin layers of white chalk were used to draw the outlines of the artwork. There are also ripped pieces of paper glued onto the middle of artwork to depict the hair of the brushes or the buds or petals of the flowers drawn in the artwork to create an abstract rather than a realistic image. The artwork is very expressive and, therefore, conveys the strong message that the participant was trying to put across, as discussed in the next section, Section 4.2.5.2.

Conclusion of the iconographic analysis of the artwork

Many different elements and objects are portrayed in the artwork, however, each detail brought into the artwork works together to develop the bigger picture. Every time one looks at the artwork a different object calls for one's attention. This changes the focal point, depending on the viewer's perception. The use of white on black works together as the colours complement each other. This enables the participant to portray a strong message as the white stands out, putting more emphasis on the artwork than colour might have done. The visuals used make it clear that the artwork was relevant to the COVID-19 pandemic and its aftermath that the participant was facing. The artwork has clouds at the top of the artwork, moving down the right side of the artwork, leading the viewer to the short diagonal lines used at the bottom of the artwork to portray grass and plants. The sun at the top of the artwork was replaced by a COVID-19 molecule, with the image of the sun relegated to the bottom right corner, just below a gravestone commemorating Earth. Above the gravestone, a watering can held by a bony hand can be seen. This links to the plant-like figurine in the middle of the artwork that is standing above a box shaped like a post box. The figurine has three-dimensional plants or paintbrushes protruding from it, which is the only three-dimensional aspect of the artwork. The artwork could have seemed unbalanced as most of the artwork is on the right, but the student drew a white line on the left edge of the paper, which helped to balance the work.

4.2.5.2 Iconological analysis – Participant 5's artwork and questionnaire

Participant 5 was a 19-year-old female who enrolled for the Visual Arts module for the first time as a first-year student. The participant said that she was "once a person who loved art but randomly stopped. I decided to pursue it again because I missed the feeling of creating a

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piece that is original and sentimental to me" (Appendix A5, question 4).[24] When asked about her background in art and whether she had had any experience in this regard, she explained that she took art as a subject until Grade 9, but that she had spent most of her time in the art class because of her friends. She continued by saying that she had the privilege of having had art and art education in her life since she was very young. "Coming to university did not overwhelm me. I felt a lot more confident than perhaps my peers who had no prior experience," she explained (Appendix A5, question 8). She described her "birth culture", Hinduism, as being a culture of "colour and light" (Appendix A5, question 8). This might have been the reason for her love of art. This inspiration was also evident in the artwork under discussion. She described her culture as being filled with "gorgeous designs and colours, which made me fall in love with fashion, realising I can use art to create fashion through the different patterns and techniques explored" (Appendix A5, question 8). I believe that the participant referred to her culture (or rather religion) as her "birth culture" because she has since become a Christian while staying in touch with the colourful nature of her "birth culture" (Appendix A5, question 8). I understood that this influenced her interesting choice of art. However, in a later conversation with the participant about her artwork, she referred to herself as an "environmentalist" and mentioned that she wanted to "make people aware of the damage done to Earth" (Appendix A5, question 1). This greatly influenced my understanding of the possible meaning behind the artwork. I was under the impression that the artwork depicted how COVID-19 had affected the participant, however, it turned out that the participant's intention was to show how COVID-19 had affected our surroundings and the damage already done to Earth (as pointed out by the participant). The participant used ripped pieces of coloured paper, linking it to the idea that Earth was dying.

Some pops of colour were introduced in the centre of the artwork. The participant ripped pieces of coloured paper into thinner pieces and pasted them into the centre of the artwork. These pieces of paper formed part of the paintbrushes or flowers growing out of the top of a post box. The three-dimensional texture created by these pieces of paper was intentional for textural purposes. When asked about her artistic style in the questionnaire, the participant responded that her style was a "texture style". While somewhat vague in its description and not necessarily an artistic style, I infer that what the participant implied is that she enjoyed creating art that was not only visually attractive, but also pleasing physically or tactilely (being able to be touched). The artwork was created to allow each viewer to experience the work based on their own background and connotations. Her reason for creating such an experience

[24] One might wonder why the participant stopped loving art. Was it because of a specific teacher or a comment that someone made about her work? And then the question arises as to how that experience might have influenced her perception regarding creativity.

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for the viewer was that she loved to touch her art (Appendix A5, questions 17 and 18). She enjoyed connecting with it and could therefore be identified as a kinaesthetic learner – someone who learns or connects better through touch or physical movement. Kinaesthetic or tactile learners enjoy making things with their hands, connecting better with an object when they experience it through touch (Laskey, 1997). Therefore, the kinaesthetic or tactile approach to creating can also be seen in her favourite creative activities, which were painting and sculpting. The participant enjoyed feeling her art, not just seeing it, and using texture gesso to feel the artwork (Appendix A5, question 18). The participant's perception regarding creativity was to experience it by physically touching or connecting with her artwork, indicating that creativity to her meant being able to physically touch the artwork.

The lack of colour used in the artwork may also have had an impact on the overall message that the participant tried to portray. Using white on black made the entire artwork stand out and could be an indication that it, and not just one part of it, is connected to the message. Participant 5 got her inspiration from the environment around her. She looked at the natural surroundings outside the art classroom and also identified some items in the room. When the participant was asked what the story behind her artwork was, she responded, "I am an environmentalist. I enjoy nature but I do not enjoy how it is being destroyed … the artwork is showing that nature is in danger and one person cannot change it alone" (Appendix A5, question 1).

The figure of a woman, in the middle of the artwork, might catch the viewer's attention first. The white chalk used will then guide the viewer over the entire artwork. In other words, the viewer becomes "the one person" that the participant referred to in her description of the artwork. The participant makes the viewer part of the artwork, allowing him/her to feel what she is experiencing – the sadness that she feels due to losing something that she loves – nature. The sun is usually considered the centre of our universe, however, during the pandemic, Covid-19 became the centre of everything. Where the sun is responsible for life and growth Covid-19 sucked the life out of everything and everyone. The participant replaced the sun with a Covid-19 molecule, perhaps indicating how Covid-19 was caused by the way we treat nature – almost like a warning sign that we should start working together.

With regard to the iconographical analysis of the participant's artwork, I interpreted the artwork entirely differently to what the participant later explained. I understood that the sun was replaced by a COVID-19 molecule and a gravestone with the words "In loving memory, Earth xxxx-2022" inscribed in the bottom right corner to indicate that in 2020 a pandemic broke out worldwide. The pandemic was caused by a virus known as COVID-19. Many individuals

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suffered during this time and many lives were lost. It could be that the individual was retelling this story or how she experienced this time in her life. I thought that the post box might be a symbol of a message being sent to those around the participant, to understand how she felt at the time. It is unclear whether a hand was holding a watering can, or a desk lamp was coming from the clouds in the top right corner. I believed that it might be a hand holding onto a watering can. At the tip of the watering can, the participant pasted a ripped piece of paper. This could have depicted water coming from the watering can. I explicate that the hand might be God's hand, as the participant had explained that she identified as Christian, in spite of being from a Hindu background. The flowers grew from the top of the post box, with a bigger flower, which had a face, growing in the middle. Based on the figure's "outfit", this large flower could be a female character. The outfit looks similar to a corset due to the heart-shaped neckline, perhaps connected to Earth, which is often described as female – "Mother Earth". The ripped pieces of paper could also be flowers that are withering, connecting to the gravestone that is visible in the right bottom corner. The gravestone was in memory of Earth, indicating that Earth was either dying or had already died. Perhaps this was an indication of how the participant felt during the COVID-19 hard lockdown period. Her life had possibly changed, making her feel as if her version of Earth no longer existed.

However, the participant provided clarity as what she actually meant to convey with her artwork. The sun was replaced with the COVID-19 molecule to emphasise the impact that COVID-19 had on Earth. The impact could either be seen as positive, for example, humans were asked to stay home, allowing nature to recover somewhat, or it could be interpreted negatively, seeing COVID-19 as the result of the way that Earth is treated by humans. A gravestone with the words "In loving memory, Earth xxxx-2022" at the bottom right corner, was placed there to show "how nature is treated", and a warning that if things continue in this way, we may lose Earth entirely. The post box in the middle of the artwork was used as a place of safety for all the beautiful things in the participant's life. She explained it as follows: "I trapped all things great and small in the flower box as a form of protection" (Appendix A5, question 1). The woman growing from the box was a symbol of herself, trying to preserve and save nature, while the paintbrushes were turned into flowers to form part of her, growing from this box (Appendix A5, question 1). The hand coming from the sky was a "skeletal hand, holding a water can, pouring poison on[to] Earth" (Appendix A5, question 1). At the tip (spout) of the watering-can the participant pasted a ripped piece of paper. This depicts the poison being poured onto Earth.

The entire artwork can be seen as a representation of how the participant experienced the time during lockdown when COVID-19 was a threat. Participant 5 explained that emotions, her

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mother, and nature (the outdoors) were three of the biggest inspirations for her art. The outdoors could be seen in the artwork, as the entire artwork was created using elements found in nature. Clouds, a sun, flowers, leaves, grass, and other floral designs can be seen throughout the artwork. She could have felt restricted during the hard lockdown when no one was allowed to leave their homes. This restriction could also be connected to the gravestone, as the participant had to forego one of her biggest inspirations, being in nature, and possibly one of her biggest joys due to the restrictions. However, the first form of inspiration identified by the participant was emotion. Emotions or feelings motivated her to take up art again as she had missed it very much, and the artwork she created in her first week on campus was this emotion-filled artwork about COVID-19.

The participant's favourite quote to live by, which she identified in the questionnaire, was, "In times of crisis, the wise build bridges while the foolish build barriers. We must find a way to look after one another as if we were one single tribe" (Appendix A5, question 21). It is unlikely that this quote was mentioned intentionally to connect with the artwork, because the questionnaire was completed months after the artwork was created. However, it links to the message that the participant portrayed in the artwork, namely that "the environment is in danger and one person cannot change it alone" (Appendix A5, question 1). The participant described creativity as "the ability to create something out of nothing, a reflection of who we are", confirming that the artwork that she created can be linked to her nature to help others, as indicated by her favourite quote. She might not see this nature of helping others in herself, When asked how others would describe her, she used words like "jovial, talkative, and creative", without mentioning her inclination to help others.

Participant 5 viewed herself as being creative, but described her thinking as "hybrid", in other words, she used both left- and right-brain thinking. She further described her hybrid thinking as using logical thinking to figure out things. She stated, "I am very expressive, together with using artistic means to express myself when I am either happy or unhappy" (Appendix A5, question 10). Again, the participant referred to emotion as an inspiration, not only for her creativity, but also with regard to her way of thinking. According to the HBDI, her connection with her emotions could place her in either the limbic or right mode. The participant had exceptional organisational skills and worked primarily in a controlled, conservative, and planned manner. She enjoyed working in a very detailed, structured, and precise manner in search of step-by-step solutions to problems. If she is a right-brained thinker in limbic or right mode, it is possible that she might excel in communication, reasoning, and convincing others. She might find interpersonal contact with others very important and have a kinaesthetic (sensitive) attitude (Herrmann, 2016). She was also very imaginative and artistic with a

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conceptual brain, had a holistic, intuitive, and innovative approach to problem-solving, and was always happy to take the initiative. She also believed that problems could always be solved and that challenges always came with solutions. These characteristics placed the participant's thinking style or creativity in both hemispheres of the brain, confirming what the student believed, which was that she had a hybrid way of thinking.

With regard to the triarchic theory of human intelligence (Sternberg, 1999), both practical and creative intelligences were indicated. Practical intelligence can be identified in the way that the participant used existing knowledge and experiences in her artwork. This can clearly be seen in her artwork as it portrayed some aspects associated with COVID-19 and how Earth was affected by these aspects. The participants also included a broader message about nature. Her incorporation of existing knowledge then linked to creative intelligence, in which an individual creates something new by using their previous experiences and emotions. Her artwork can be directly linked to her experiences during the COVID-19 pandemic.

Overall, it became evident that the participant was guided by her experiences and emotions, which correlated with both practical and creative thinking (Sternberg, 1999). She also showed indications of three out of four areas in the HBDI (Hermann, 2016). She was well informed about her style of thinking and what went into her art. She conveyed the meaning of her artwork by connecting with the viewer in the way that she would have connected with her artwork – by touching it. She indirectly allowed the viewer to also connect with their own personal experiences of the COVID-19 pandemic. The artwork shows her intuition as an artist and her visual expressive nature. This observation and finding confirm my conviction that the theory of left- and right-brain thinking is not as accurate as it may seem at first.

4.2.6 Participant 6: The monster

Title of artwork:	The Monster		
Year of artwork:	2022	Size of artwork:	38 cm x 32 cm
Media used for artwork:	Black ink on brown cardboard		

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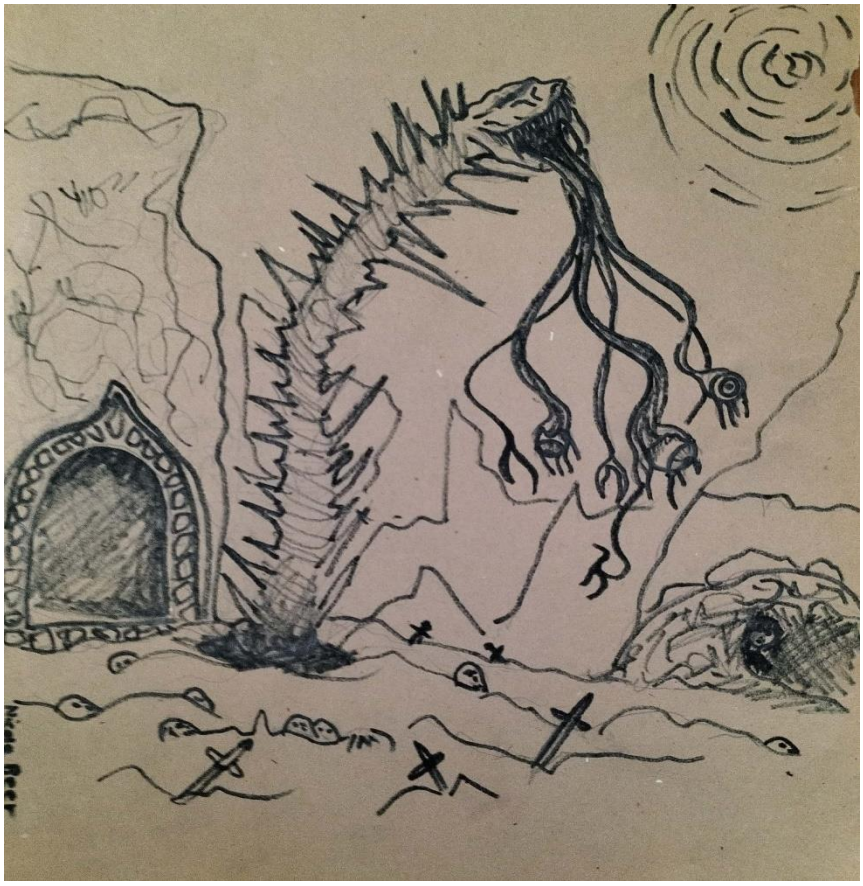

Figure 4. 10: *The Monster,* created by Participant 6, 2022. Ink, 38 cm x 32 cm. Photograph by the author, 2022.

4.2.6.1 ***Iconographical analysis***

Objective description

The Monster was created in black ink on brown cardboard. In the middle of the artwork, a figure with a rigid body, sharp edges, and a rough texture is standing with its mouth open, showing its sharp teeth and multiple tongues that turn into tentacles with eyes almost like a miniature monster in the middle of the artwork. The viewer's eyes are drawn to the bottom part of the figure due to the dark area around the bottom of the figure. Next to this, to the left, a doorway into the rugged mountain can be seen. Around the entrance there are stones or carvings along the curved sides of the opening, all the way up to the sharp tip at the top. Next to this opening there seems to be sand; this was formed by the repetition of edged lines. Swords can be seen sticking out of the sand, some buried deeper than others. Some skull-like objects also stick out of the ground or sand among the swords. On the right of the artwork, another opening can be seen. At first, the space appears to be a black hole, almost like a cave, but on closer inspection the face of a small figure can be seen. The edges around this opening are more jagged and uneven than the cave or entrance on the left of the artwork, implying that it might be a natural cave of some sorts. Above this cave in the far top right

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corner, a sun or light can be seen, drawn using the repetition of lines in a circular motion. In the background, behind the main figure in the middle, more mountains can be seen. Owing to the lack of plants, we can assume that the artwork depicts a desert-like landscape.

Colour

The colour of the paper was light brown – close to a tortilla- or peanut-coloured brown. The whole artwork was drawn in black ink. No colours were used in the artwork.

Lines, forms, and shapes

Most of the lines used in the artwork were sharp, harsh, curved, uneven, and jagged lines. Diagonal lines clustered together or crossing each other were used to create shading and depth in sections of the artwork. This can be seen in the caves on the left and right sides of the artwork, in the monster's body, and in the mountain on the left. A repetition of curved lines in a circular motion was used to create a sun or light in the top right corner. Jagged lines were also used to create the monster and its teeth. Curved lines were used to create the monster's tongues that merged into eyeballed creatures. Diagonal, horizontal, and vertical jagged lines were used to create mountains. The texture of the mountains was created by random, curved, and edged lines. Zig-zag lines were used to create the texture of the monster's body. Diagonal lines were used to create the swords sticking out of the sand. The sand from which the swords were protruding was created using curved lines in random places, indicating different levels of sand. No forms were used in the artwork; therefore, no three dimensions were created. Instead, harsh outlines were used throughout this work to create the subject matter on the picture plane. Semicircles were used to create the two openings: the opening on the left and the cave on the right. Circles were used to create the eyes of the figure, coming out of its mouth. Triangular shapes were used to create the sharp edges of the figure as well as its teeth. The swords sticking out of the sand almost look like crosses next to the skulls. Ovals were used to create the shape of the skulls as well as the figure hiding in the cave on the right. Squares and diamonds were used to create the shapes around the edges of the opening on the left of the artwork. Only the openings on the left and right gave a resemblance of depth due to the shading on the inside of the caves.

Texture, rhythm, and movement

The texture of the mountains was created using random, jagged lines filling the space. Zig-zag lines were used to create the texture of the monster's body, the mountain on the left, and the two caves on opposite sides of the artwork. The tongues with eyes were roughly coloured in black ink, also creating texture. The bottom of the monster was also shaded using lines

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layered together in a hatching and cross-hatching pattern. This also created texture due to the uneven use of lines.

The uneven, rough, and edged lines along with the repetition of the lines in a circular motion at the top of the artwork creates rhythm in the artwork. The jagged lines used in the monster contribute to the rhythm of the artwork. The roughness and unevenness contribute to the context of the created image. The repetition of elements with no specific regular interval creates an uneven rhythm. The repetition of lines in a circular motion or shape to draw the sun, create movement, imitating how light can be seen – especially if it is the sun. The way in which the tongues of the monster have been drawn also creates movement, allowing the viewer to move their eyes towards the bottom of the artwork where the swords are sticking out of the sand. The roughness of some of the lines produces rather an uneven movement of the eyes, imitating the roughness of the mountain and the skin or body of the monster.

Space, composition, and balance

The two openings on either side of the artwork create depth due to the shading used in each of them. The entire paper is filled with objects, textures, and figures. Most of the space is covered by positive space, leaving the negative space in the background (around the monster, mountains, and sun) to a minimum. None of the objects, other than the openings and the base of the monster, have shading thus none of these shapes or objects create a three-dimensional feel to the artwork. The artwork contains a foreground, middle ground, and background. In the foreground, there are swords and skulls sticking out of the sand. In the middle ground, we see the space from which the monster emerged as well as two openings on either side of the artwork. In the background, mountains that are drawn slightly lighter than the mountains in the middle ground, and a sun or light figure, can be seen. This creates a form of depth in the artwork, even though there is not that much use of shading. Only the mountains in the middle ground or front have texture. The mountains drawn in the background have no texture, contributing to the limited depth of the artwork. The textures used, the shading added as well as the use of a foreground, middle ground, and background, all work together. The hidden objects – the words, skulls, and little creature in the cave on the right of the artwork – allow the viewer to freely move their eyes around trying to find these hidden objects and also taking in the complete artwork with all its facets.

The artwork seems balanced. The main focus point is in the middle of the artwork, followed by the two darker spots on either side of the monster figure drawn in the middle of the artwork. The movement created by the jagged exterior of the monster's body as well as the tongues coming from its mouth create a flow and invite the viewer to look around. The rough texture

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used throughout the artwork also contributes to the overall composition, ensuring that all elements belong in the artwork. The artwork is drawn asymmetrically and might seem unbalanced; however, the use of textures and different heights creates a balanced look. The textures used throughout the artwork contribute to this. The monster is drawn at an angle that makes the artwork seem slightly off-balance and heavy on the right as it is leaning forward with its tongues hanging out. The use of foreground, middle ground, and background may also contribute to the overall balance of the artwork. It adds depth and allows the viewer to move their eyes around the artwork to take in all the elements or aspects.

Perspective, proportion, and harmony

If the monster in the middle of the artwork is considered to be the focal point, the perspective used for the artwork is a two-point perspective. The two points connecting to the focal point, which is the monster, are the two dark spaces on either side of the monster. A one-point perspective can also be seen as the focal point is the only perspective point that moves to the sides (the mountains and open spaces on either side of the monster). This perspective allows each viewer to see something else. If the focal point is seen as the opening on the left of the artwork, it would be a one-point perspective, as everything seems bigger next to it. The hole from which the monster is emerging also draws the viewer's attention first, guiding them upwards towards the monster's head and tongues.

The textures used in most of the artwork complement each other. Some textures were used to create shading, while others indicate the texture of the objects as well as indicating where in the artwork the objects are situated. However, if shading had been used around some of the objects, it would have contributed to the depth of the artwork, making it more balanced and cohesive. An example of this is the opening of the cave on the left. The shading shows that there is an opening in the mountain, however, there is no shading around the edge or frame of the opening, leaving the mountain looking almost flat. It is unclear whether this was a conscious decision by the participant, or whether she ran out of time.

Technique

The artwork was created by combining various types of lines to create shapes, objects, and textures. Some of these lines were repeated to create shading, which contributes to the depth of some parts. When looking at the artwork from afar, all the lines work together to create an image with different sections (foreground, middle ground, and background). The artwork was created using one medium, namely black ink. In some areas the black ink was applied more thickly to make the colour darker.

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Conclusion of the iconographic analysis of the artwork

The artwork contains minimal texture and shading, it is mostly drawn in outlines. However, the type of lines used in the artwork contributes to dimensions and texture, drawing the viewer in. This also contributes to rhythm and movement in the artwork, contributing to the way the viewer looks at the artwork. The artwork looks like a fantasy scene, with the monster, the small figure in the bottom right corner, and the doorway on the left with small stones forming the doorframe. The monster in the middle of the artwork has no eyes, but the tongues or tentacles coming from its mouth have eyes at the tips, looking in various directions. The use of various lines and textures, for example, in the mountains, the sand at the bottom, and the sun at the top of the image contributes to the sense that this is a scene from a desert or dry area. It is challenging to establish what type of figure is peeking out from the cave in the bottom right corner of the page, although a full face and torso can be identified. At the bottom of the artwork, scattered in what seems to be sand, are skulls and swords sticking out of the sand. It is possible that a battle of some sort has taken place and that the monster has survived or won the battle.

4.2.6.2 Iconological analysis – Participant 6's artwork and questionnaire

Participant 6 was a 22-year-old female student who was taking Visual Arts as a subject in her second year of studies. She had a love for Celtic fairy tales, which was very clear in her artwork. Celtic fairy tales are Irish folk tales. The Irish believe that the fantasy beings in Celtic fairy tales are neither human nor ghosts. They believe that these beings bring blessings and are generous, bringing fortune and good luck (Derry, 2020). When looking at the illustrations of Celtic fairy tales (as seen, for example, in Figure 4.10 below) it becomes clear why the participant used the medium and paper on which the artwork was created.

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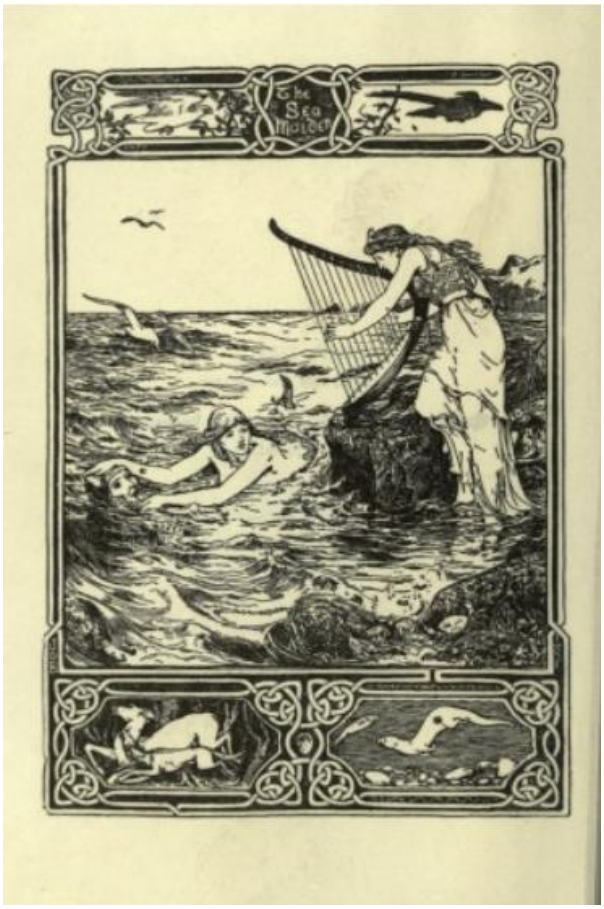

Figure 4. 11: *The Sea Maiden.* Illustration by John D. Batten from *Celtic Folk and Fairy Tales*, circa 1892. Black ink on paper, 20cm x 34cm (Batten, 1892).

Celtic tales from the 1800s have illustrations drawn in black ink, similar to the artwork created by the participant, on paper that has browned with time, also similar to the final artwork on brown paper created by the participant. The newer versions of Celtic tales contain more colourful illustrations. However, the older, original illustrations were created using black ink only. I infer that the participant found the older, more original works more interesting, therefore creating her final artwork in this way.

I found that this participant was the only participant to use the brown cardboard usually found at the back of a notepad. She used a black ink pen to draw the entire artwork. This is very similar to the style in which old Celtic fairy tale illustrations were drawn. These illustrations had a brown background and were printed in black ink only. They contained mythical creatures, usually mermaids, dwarfs, fairies, sea creatures, or dragons to name a few (Derry, 2020). The participant drew a dragon-like monster in the middle of her artwork, surrounded with skulls and swords. In the bottom right corner, a fairy or dwarf can be seen hiding in a cave-like

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structure. The participant's response to what creativity can be was linked to why she enjoyed Celtic fairy tales. The participant's response was:

> I have a very vast imagination, often where my mind travels and I daydream way too much. I find that I am able to create stories and write them down. I especially love Celtic fairy tales as they have a dreamlike fantastical origin, while also having the most beautiful illustrations. A lot of my art is inspired by these fairy tales. (Appendix A6, question 12)

It seems that the participant was connecting creativity to her ability to daydream and imagined stories in a visual way. Right-brain thinkers are known for their ability to visually express themselves. They visualise rather than using words and are able to see the bigger picture first. This can be linked to the participant's ability to daydream and visualise her ideas before creating them and being able to imagine the final product before she creates it. She was able to use her existing knowledge of Celtic tales, how the characters were drawn, and the style used to create these artworks to create her own artwork with her own characters and story.

Although the participant might have displayed the strong characteristics of a right-brain thinker, as referred to in the brain dominance theory (Cherry, 2022), when asked how she would describe her thinking, she responded that she was "a bit of both" (that is, a left- and right-brain thinker), as she was extremely logical in some instances, "to the point where people get annoyed" (Appendix A6, question 10). This description of herself could indicate that she engaged in analytical thinking, that is, the ability to deal with technical problems. It could also be that she was very technical or specific in her choices thus annoying those around her. She further stated in her answer that "in other instances I am creative to the extreme where people find it comical when I come up with the weirdest things to say or do" (Appendix A6, question 12). Her statement can be linked to her view of creativity, which was the ability to create stories or strange things to say that amused those around her and which could be why she enjoyed writing stories –because of the amusement or joy it brought to those around her. In other words, she used creativity to amuse or soothe the people around her, and not necessarily to solve problems.

Using creativity to amuse others can be seen as practical and structured thinking, or even experimental and creative thinking in that an individual believes that problems can be solved, or it can be seen as the ability to be very imaginative and artistic with a conceptual brain (Herrmann, 1995). Based on the HBDI, an individual such as Participant 6 might portray characteristics that would have a holistic, intuitive, and innovative approach to problem-solving and would always be happy to take the initiative. According to the HBDI, the participant can

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be placed in either the left mode or the cerebral mode, situating the participant's thinking mostly on the left side of the brain. The participant's responses could classify her as both a left- and right-brain thinker.

The correlation between the participant's thinking and the HBDI is explained by de Bono's (1985) theory that creativity is not found in just one side of the brain. The participant's approach indicated both Herrmann (1995) and de Bono's (1985) notions regarding where and how thinking and creativity take place in the brain. However, Sternberg's (2010) triarchic theory of human intelligence cannot be excluded from this discussion. The participant's responses and artwork can be linked to all three the intelligences identified by Sternberg (2010). Analytical theory is applied when components of intelligence are employed to analyse, evaluate, judge, or compare and contrast (Sternberg, 2010). Analytical intelligence was applied by the participant when she analysed the activity and evaluated her options with regard to how she wanted to create her final artwork. She used her existing knowledge of Celtic tales and what each character represented. The participant also used practical intelligence, which involves individuals applying their abilities to the various problems that confront them in daily life (Sternberg, 2010) when she had to find a solution for the challenge with which she was faced. She was asked to create an entirely new artwork using an item or inspiration found in the art room. This item or inspiration had to be visible in her artwork. She therefore chose an item that she could connect to her love for Celtic tales to enable her to create the artwork that she enjoyed. I believe the source of inspiration was a shadow in the room which she referred to. Creative intelligence was also applied. This intelligence entails an individual using their new knowledge as well as existing knowledge and experience to create a solution or to apply new knowledge. The participant used this intelligence by applying her artistic skills and knowledge of Celtic illustrations.

Some contradictions were found between the participant's responses to the questionnaire and her artwork. The participant described her artistic style as realism, however, her artwork shows no characteristics of realism. Perhaps this was done on purpose by the participant or as a result of her confusion regarding the meaning of the term. Furthermore, she described her favourite creative activity as:

> painting with water colours as it is subtle and beautiful. It is fun to mix and blend colours to create my own characters, drawing inspiration from other artists creating artwork so beautiful and meaningful, so that I want my art to be recognised. (Appendix A6, question 14)

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Water colours are sometimes used in realistic artwork. Perhaps the participant enjoyed using water colours when applying realism in her artwork and the artwork created for this activity was not meant to be realistic. It is interesting to note that in this activity she did not use realism or watercolours, both of which she seemed to enjoy. She also mentioned that she preferred realism because, she stated, “I can understand what I see and do on [sic] a logical sense. It is difficult for me to break rules and stray from what I understand and am used to” (Appendix A6, question 18). However, she also explained that she wished to change. This wish to change could be linked to her artwork as it was not realistic at all, showing that she might have been challenging herself to change her view regarding realism. It was also uncertain what object, shape, lines, or shading the participant used as inspiration to create her Celtic-style artwork. Perhaps she decided to use one of her own stories as inspiration to create this artwork, meaning that she did not understand the activity brief.

Overall, this participant showed clear signs of both left- and right-brain thinking. The artwork that she created and the answers that she provided to the questionnaire show how both sides of her brain were actively present, confirming not only Herrmann’s (1995) theory, but also de Bono’s (1985) theory that creativity is present in more than one area of the brain and that both hemispheres are present in thinking, which negates the brain dominance theory.

4.2.7 Participant 7: The geometric shapes

Title of artwork:	The Geometric Shapes		
Year of artwork:	2022	Size of artwork:	63,5 cm x 51 cm
Media used for artwork:	White chalk, gold-coloured ink, and black ink on black sugar paper		

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Figure 4. 12: *The Geometric Shapes,* created by Participant 7, 2022. Chalk, ink, 63,5 cm x 51 cm. Photograph by the author, 2022.

4.2.7.1 ***Iconographical analysis***

Objective description

Black sugar paper, white chalk, black ink, and gold-coloured ink were all used to create *The Geometric Shapes.* The paper was folded into various shapes. The white chalk was rubbed over some of these folds and was also rubbed into some areas around these folds. Gold ink was used to draw a pattern on the paper, while all the other shapes were drawn in white chalk and black ink, making the entire paper the artwork. Black ink was then used to add some texture to the inside of some of the shapes that were drawn in gold-coloured ink to create a pattern. There are also some black ink textures outside the gold-coloured shapes. In some areas the white chalk is applied in thick layers, creating a smooth surface. In other areas the white chalk is applied in thin layers and takes on the texture of the black sugar paper. When the artwork is laid flat on a surface, the folded parts of the artwork catch the light on one side, and create shadows on the other side, creating a different pattern from the one drawn in gold-coloured ink.

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Colour

Black ink, white chalk, and gold-coloured ink were used throughout the artwork. The black and white (including the black paper) were a contrast to each other. The gold complemented the black, allowing the gold to stand out more. The white also stood out more than the gold-coloured ink used in the artwork. The only warm colour used in the artwork was gold with its yellow undertone.

Lines, forms, and shapes

The artwork is comprised of lines and colour. Diagonal and horizontal lines in the shapes of rectangles and triangles were used to create the patterns and shapes with gold-coloured ink. Criss-crossed lines in black ink were used to create textures in the gold-coloured shapes used to create a different pattern. Parallelograms were used to create the pattern in gold-coloured ink. The black ink and white chalk imitated these shapes because they were only used to fill in some areas in the shapes. Triangular shapes can be seen in the folds of the paper – some in white where the white chalk was rubbed.

Texture, rhythm, and movement

The use of different black ink lines creates a texture in the golden shapes. The white chalk produced a smooth texture where it was applied more thickly than in the rest of the artwork. The white chalk that was applied in a thinner layer in various areas mimicked the rough texture of the black sugar paper. The gold-coloured ink was roughly applied in some places and also gave off a rough texture. The repetition of black lines created texture while the golden shapes created a regular or alternating rhythm due to the repetition of the shapes. A random rhythm was created by the folded pattern. Some of the shapes created by the folds were triangular, creating a form of repetition. Movement was created by the folded lines, which created a pattern. Owing to the light falling differently on each part of the artwork, the folded lines capture the viewer's eyes first, allowing their eyes to move from one fold to another. Only on closer inspection was the viewer able to take in the pattern created by the golden shapes. Some of the folded lines moving across the entire page caused the viewer's eyes to jump from one part to another.

Space, composition, and balance

Despite the folds made in the paper, the two-dimensional perspective remained. No three-dimensional shapes were created, and the pattern and shapes used were flat. The entire artwork, including the black background, was comprised of positive space. The entire paper was turned into an artwork.

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Owing to the repetition of the shapes used throughout the work, the artwork has a rhythmic pattern. Harmony is achieved through the touches of white and black throughout the artwork. Two sets of patterns were created: The first pattern consists of golden shapes with texture in white chalk and black ink, and the second was created by the white chalk having been rubbed over the folds in the paper. When there is no light from the side, only one pattern is visible, but when there is light from the side, a second pattern can be seen, always providing the viewer with something new to see. As the light moves, the pattern created by the folded paper changes and different forms or patterns emerge. At first, the artwork seems unbalanced and chaotic, but, on closer inspection, balance becomes evident in the artwork. The artwork is both asymmetrical and symmetrical. In terms of the pattern in gold, the artwork is symmetrical. The shapes used create a pattern throughout the composition. This creates a calm and balanced feeling. The pattern created by the folds of the paper and white chalk rubbed over these folds creates an asymmetrical perspective which could make the artwork seem unbalanced and chaotic. These two sides are in contrast to one another, inviting the viewer to explore the artwork and all the shapes, shades, and lines in it. The folded pattern changes even more when the light moves or comes from different angles.

Perspective, proportion, and harmony

Although the work is flat, balance is visible through the shapes created by the folds. Looking at the artwork as portrayed in the image above, the focal point is the folded triangular shape formed by the folds in the paper. It is just to the left of the mid-point of the artwork, followed by a lighter rectangular strip crossing the entire artwork. The white parts next to each other, almost in the centre of the page, might also be the focal point because the white stands out against the black and covers a large portion of the artwork. When the artwork is moved away from the light to an area where there is no light from the sides, the golden shapes in the middle and to the left become the focal point. The focal point changes with the viewer's perspective. Perhaps there is no focal point at all. The viewer's perspective changes the way in which the artwork is viewed. The two patterns (the folded pattern and the pattern drawn on the paper) might seem as if they work against each other. One is organised and calm while the other is more chaotic and unbalanced, nevertheless, they still work together, constantly showing something else for the viewer to absorb. The rough, uneven use of black ink in the pattern created by the golden shapes connects the uneven, unbalanced, and chaotic pattern created by the folds of the artwork. This forms a middle ground between the two types of patterns, creating balance and harmony. The random use of white keeps the folded pattern in sight, even after the light is gone. Because of this, all the elements used in the artwork work very well together.

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Technique

The black sugar paper was folded into different shapes. White chalk was rubbed onto some of the folds – in some areas thicker than others. This created different textures and shapes. Gold-coloured ink was used to create golden shapes in a pattern. Black ink was used to fill in some areas of the golden shapes, and white chalk was then used to fill in other areas not covered by the black ink. The main textures were created through the repetition of lines made in black ink and the white chalk thinly applied, picking up the texture of the black sugar paper. This artwork is abstract in nature and is the only abstract artwork that was submitted for the purpose of this study.

Conclusion of the iconographic analysis of the artwork

The artwork changes as it is moved around. A pattern was created by the folded paper. This pattern catches the light, creating shades in different shapes. On top of the paper, a different pattern containing hatched and cross-hatched lines in some of these gold ink patterns was drawn in gold-coloured ink. In some areas white chalk was rubbed over some of the folds in the paper, creating more patterns and texture. Overall, even if there is no light, a pattern is still visible due to the pattern created in gold ink. The white chalk mimics some of the shapes created by the folds, providing the viewer with a different pattern to look at. The artwork can be viewed from all angles, depending on the viewer's perspective.

4.2.7.2 Iconological analysis – Participant 7's artwork and questionnaire

Participant 7 was a 20-year-old female student with a background in visual art. She had visual arts as a subject at high school and always had a passion for art because she grew up in a home that was filled with art. She explained, "My mother is an art teacher at a local high school in KwaZulu Natal, so she created the passion in me for art." (Appendix A7, question 4)

Regarding the iconographical analysis of the participant's artwork, there are many aspects that capture the viewer's eyes at once. The participant mentioned that her inspiration for this artwork was a crack in the wall that reminded her of a geometric pattern. She decided to use this crack to design her own pattern. The following image is of some of the patterns the participant referred to as inspiration for her artwork (from the angle where the participant was sitting):

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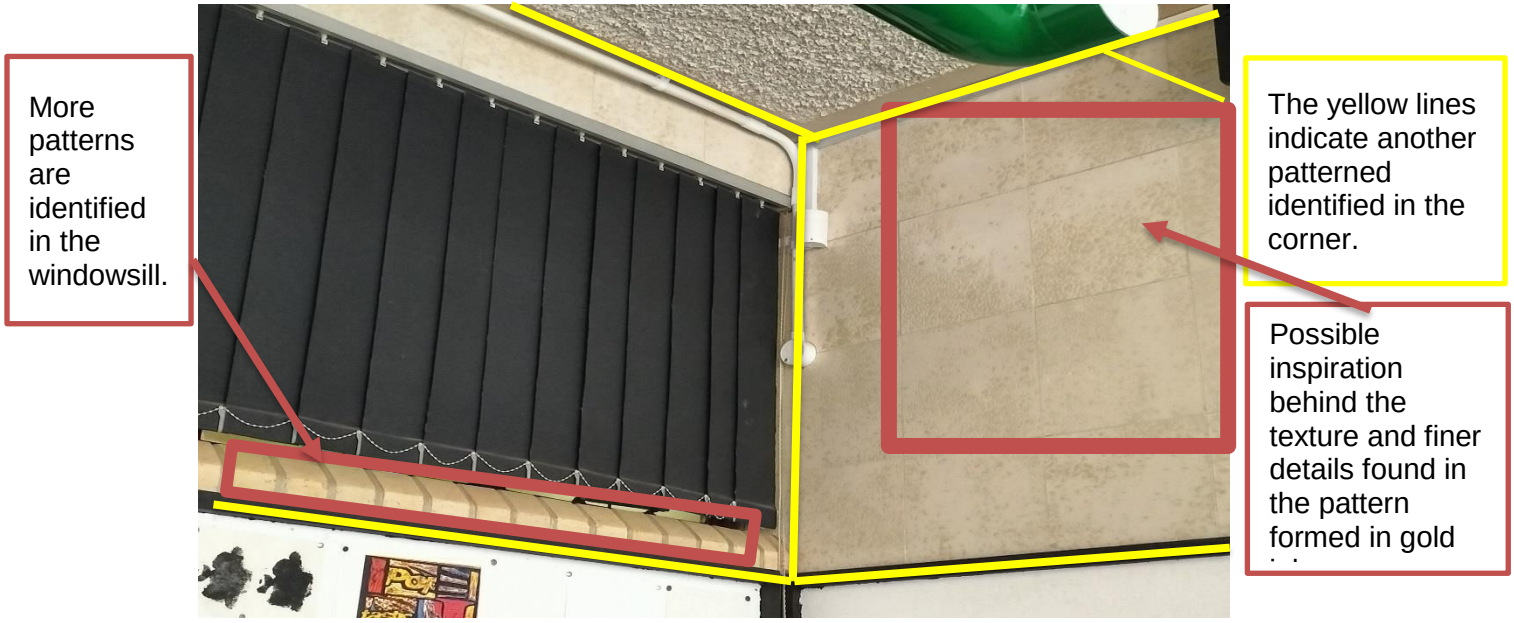

Figure 4. 13: The corner that Participant 7 referred to as her inspiration. Photographed by the author, 2022.

The participant showed intuition in the way she approached the activity. She started by folding the paper in various places. Before folding the next part, she rubbed white chalk over the folded piece to create a new pattern when the paper was opened again. She continued folding the paper until most of it was folded and filled with white chalk. She opened the paper and drew a different pattern using gold ink and adding texture to some of these shapes with black ink. In response to the question of how she would describe her artistic style, she identified it as abstract, because, she explained, she "loves the weirdness and imagination that you can explore" (Appendix A7, question 18). The artwork created by the participant confirmed her love for abstract art. She experimented with the concept of pattern, light, and medium. When the artwork was unfolded, a different pattern was created depending on where the light fell, creating shadows. As the light moved around, the patterns changed together with the moving shadows. The participant's favourite creative activity fitted into her artistic style. She explained that her favourite creative activity was "pencil drawings, but weird abstract things and taking pictures while going for walks and runs on their farm" (Appendix A7, question 18). She also explained that her biggest love and inspiration for art came from those around her – especially her mother who was very different from anyone else she knew. The participant was influenced by things that were different and she placed a great deal of emphasis on this. In fact, she mentioned this in her idea of creativity, inspirations, favourite activities, and artistic style. Therefore, I infer that the participant identified her creativity as strange and exciting events, ideas, or individuals around her. She might even find her inspiration in the strange things around her, allowing her to create unique artwork which resonates with her.

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When asked how she would describe creativity, Participant 7 responded, “It is the exploration of one’s imagination” (Appendix A7, question 12), adding “with an emphasis on exploring.” This can be connected to what was found in the analysis of her artwork, namely that she enjoyed exploring. The participant identified creativity as exploring something new, specifically with your imagination. She repeated this idea of new things and exploring when talking about the importance of creativity. She mentioned that without creativity “life will be dull and no longer exciting. With creativity life is filled with joy and new ideas” (Appendix A7, question 13).

Of all the seven participants, this participant was one of two who identified their thinking according to previous brain dominance theories. Participant 7 identified herself as a right-brain thinker because, she explained, “I have a creative and artistic side, which is way more dominant over everything else” (Appendix A7, question 10). This brings us back to the theories discussed in previous chapters on where creativity resides in the brain, and how thinking takes place. According to the HBDI, this participant’s thinking could be classified as either the limbic mode or the right mode. The participant had exceptional organisational skills and worked primarily in a controlled, conservative, and planned manner. This could be seen in the way she approached the artwork that she created. She completed the artwork in steps, almost as if she had a clear final product in mind. She indirectly challenged the viewer to take in the “strangeness” that she valued so much. This individual might enjoy working in a very detailed, structured, and precise way, in search of step-by-step solutions to problems. She might also excel in communication, reasoning, and convincing others, finding interpersonal contact with others very important and having a kinaesthetic (sensitive) attitude. Her mother and friends described her as a sensitive individual, always seeing the good in those around her. She was also very imaginative and artistic, with a holistic, intuitive, and innovative approach to problem-solving. She was clearly always happy to take the initiative. This placed her thinking predominantly on the right side of the brain, although she showed some signs of left-brain thinking. However, this does not mean that the participant only used one side of her brain during activities. She showed some characteristics (including practical and structured thinking) that were associated with left-brain thinking, which again confirms that both sides of the brain were actively present during problem-solving.

Overall, the participant was correct when she described herself as a right-brain thinker, however, she missed some of her thinking skills that were associated with the left side of the brain. She, therefore, showed characteristics of using both sides of the brain. Her use of shapes might even have been connected to the analytical side of her thinking due to the mathematical nature of shapes and patterns. The HBDI shows how more than one area of

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thinking is present in an individual at any time, proving that even some of the most “creative” or intuitive individuals can be classified as left-brain thinkers.

4.3 Conclusion

Most of the participants linked their creativity and/or creativity in general to an object, event, or inspiration associated with either an individual in their life or experiences they had had. The majority of the participants also described their thinking as a combination of both hemispheres of the brain. Only two participants referred to existing dominance instruments to identify their thinking. Six of the seven participants understood the activity and completed it in the manner that was expected, while one participant completed the artwork in an entirely different way to the other participants. The artwork showed that this individual interpreted the activity differently, but not necessarily wrongly. I was able to show how the HBDI could be used to identify more precisely where an individual’s thinking occurred. I was also able to identify characteristics correlating with Sternberg’s (1985) theory in most of the individuals – in cases where I had enough information to work with. I was not able to provide a full analysis of all the artworks as some participants did not provide enough information in their questionnaires for a conclusion to be reached. Therefore, I asked the participants to complete a second questionnaire to elaborate on their artworks. However, three of the seven participants declined to provide additional information regarding their artwork, leaving me to analyse their work by relying on my own understanding. In the following chapter, the themes or similarities that were identified among the participants are discussed. The limitations that were encountered in the study that would influence the outcome of the findings and future studies on the topic of creativity are also discussed.

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CHAPTER 5: DISCUSSION OF FINDINGS

Figure 5. 1: Main items discussed in Chapter 5.

5.1 Introduction

In Chapter 4, iconographical and iconological analyses were used to examine the data gathered from the artwork and the completed questionnaires. In this chapter, the data that were gathered during the analysis process in the previous chapter is discussed and interpreted, connections are made, and relevant theories introduced to fully examine the findings and answer the research questions. The findings are connected to the theories discussed earlier in the dissertation and the literature discussed in Chapter 2. This will provide a better understanding of the theories and literature and how they applied to this study. I will also be able to establish whether the chosen theories and literature were applicable in answering the research questions, as set out in Chapter 1. In Chapter 6, the discussion in this chapter will enable me to answer my research questions. During the discussion of the iconographical and iconological analyses, similarities, and differences between the work of the different participants are identified. The similarities and differences will help me to further understand how the participants approached the instructions to create their artwork.

I have identified four common themes: (1) the absence of colour, (2) emotion, (3) the COVID-19 pandemic, and (4) death. Each theme is discussed by referring to how it was identified in the data as well as the possible meaning attached to each theme. These theories provide insight into the data, bringing to light why the participants made certain choices when completing their artworks, and consequently how they perceived creativity. These findings will

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aid me in formulating answers to the research questions: How do first-year Visual Arts education students perceive creativity? How does creativity manifest in the artwork created by first-year Visual Arts education students? and What strategies can be implemented to improve the creativity of first-year education students?

5.2 Discussion and interpretations of the findings

During the analysis of the artwork and the questionnaires in Chapter 4, I noticed that some of the participants showed similarities and differences in the way that they approached their artworks. To create a connection between the participants' artworks and the meaning behind each artwork, the findings of each participant's iconographical and iconological analysis were discussed. My interpretation of the findings enabled me to answer my research question: How do first-year Visual Art education students perceive creativity? To better understand the creative process used by each participant, I have created a diagram as a visual representation of how the creative process developed by Taylor (2017) could have taken place during the creation of the artworks. It consists of a six-step process: presentation, incubation, insight, evaluation, elaboration, and the final product. Each visual representation (see Figures 5.1 to 5.8, excluding Figure 5.4) is based on the data collected from each participant. The following are the findings related to the participants and the interpretation of their work.

5.2.1 Participant 1

When comparing the artwork created by the seven participants, Participant 1's artwork stands out from the rest of the group. She was the only participant who used the brown wrapping paper that was provided with the rest of the paper, although not the only one to use brown paper as Participant 6 used brown cardboard for her artwork. When Participant 1 was asked why she chose the brown paper, she explained, "I chose the paper because I think the earthy colour works well with the charcoal and white chalk" (Appendix A). She further explained that she chose her media out of curiosity, wanting to use charcoal for the first time and wanting to use the highlighting technique that she had seen others use by applying white chalk. Her choice of medium was motivated by curiosity; however, her choice of paper was consciously made to complement her artwork and the medium she chose. This shows intuition, thinking ahead, and having the final product in mind. The participant explained that the earthy tones caught her attention. She mentioned more than once in her questionnaire that she wanted to try the medium as she had seen it used by other artists. The participant also indicated that she had had no prior experience in the visual arts before taking art at university. She did, however, study Arts and Culture until Grade 9 at high school, which provided her with some experience in art and art techniques. Perhaps her lack of existing knowledge regarding art

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created the curiosity to try the new medium and to combine it with the paper. She explained that she wanted to try what she saw others doing even though she might not yet have had the skills to try other techniques.

When considering the artwork, *The Dancing Figures* (see Figure 4.1) and the message that it portrays, three emotions can be identified (see Chapter 4 for a detailed analysis of the artwork). In the second (follow-up) questionnaire, the participant was asked about the meaning of her artwork. In her answer she spoke about portraying three emotions: sadness, determination, and curiosity. She succeeded in portraying these emotions, although at first I (the researcher) identified only two of the three emotions correctly before referring to the participant's answer to find out what emotions she had intended to portray. Gadamer's (1967) (in Human 2015) notion of the fusion of horizons becomes evident here. Despite the artist's intention, it is the intersection of their horizon with that of the viewer that determines the meaning that is created. Although the participant wanted to portray sadness, determination, and curiosity, I only saw sadness and curiosity – perhaps indicating my own state of mind at the time.

It is unclear why the participant decided to portray these emotions, or any emotions in general, in the artwork. Perhaps she experienced these emotions prior to attending the class, having had to stay at home due to the restrictions during the COVID-19 pandemic. The participant explained that emotions inspired her to create her artwork. Perhaps these emotions were experienced by the participant more frequently than other emotions. The figures in the artwork had no facial expressions, features, or mouths. This could indicate that the participant felt as if she had no voice during the tight restrictions of the pandemic, which limited her freedom of expression. However, through this activity, she had the opportunity to express herself through her art. Taking the incorporation of emotions one step further, one might be able to connect their inclusion to her left-brain perspective. The participant described herself as a "right-brain [thinker] highly influenced by my left-brain" (Appendix A). Left-brain thinkers are very analytical and tend to critically analyse a situation or final product.

The participant used a dead plant as a source of inspiration to create something new. This demonstrates intuition and that she was able to see something new in this object, bringing the dead plant to life in her artwork. The participant further showed intuition by using what was available to her, for example, the texture of the paper which she used by rubbing white chalk over it. This action can be associated with a right-brain thinker who takes the initiative to use what they have to make something new. De Bono (1995) believes that individuals use thinking hats that help to enhance or "activate" creativity in them. When the six thinking hats are used

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effectively, any individual can be inspired to be creative in any situation with which they are faced. I believe that the concept of pareidolia, which incorporated visual stimulation, inspired the participant to create her artwork using her own knowledge and existing skills (relating her way of thinking to constructivism). In terms of de Bono's six thinking hats (1995), four of the six hats are evident in the participant's process of creating the artwork although not specifically in the artwork itself. The participant applied red hat thinking, which is associated with intuition and emotions. Emotions are intertwined with the participant's artwork as confirmed by her. White hat thinking, which is associated with working through information, was applied as the participant had to use her knowledge of pareidolia and where the activity fitted in. Another hat that was used was the blue hat, which enables an individual to see the bigger picture and to apply time management to complete an activity. The participant was able to see the bigger picture when creating her artwork and was also able to apply time management as she was able to complete her artwork on time. However, the most prominent thinking hat that was evident is the green hat, which is associated with creative thinking and refining and developing ideas. The participant applied green hat thinking in creating her artwork to refine and develop her idea. Once she identified her a source of inspiration to create an artwork, she applied creative thinking to she let herself become creative, looking around the room for inspiration in order to create her artwork. This analysis of Participant 1's artwork is represented in Figure 5.2.

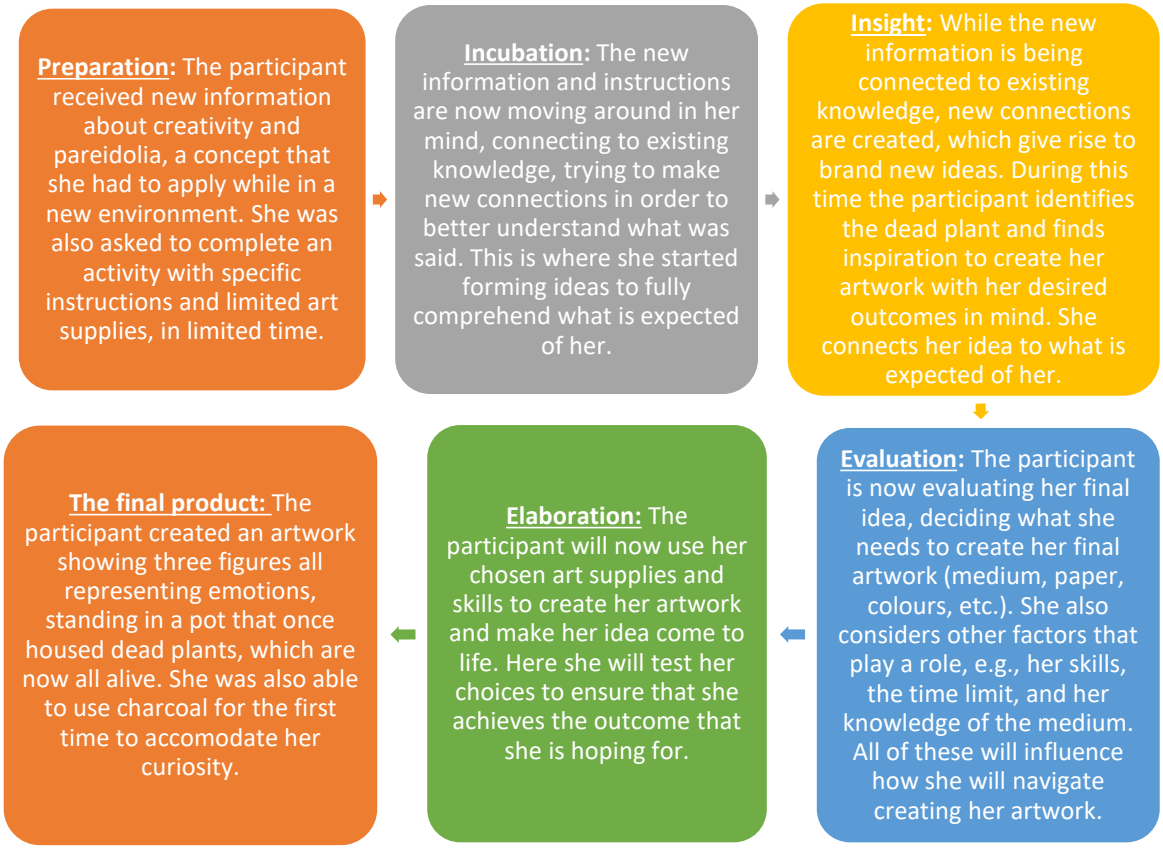

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Figure 5. 2: Illustration of the creative process followed by Participant 1.

As indicated in Figure 5.2, the participants used the same creative process discussed in Chapter 2, however, due to the influences and inspiration, the outcome varied with each participant. Each participant had to use the new knowledge, but how they decided to apply it varied.

To further understand how Participant 1 perceived creativity, it is important to identify the type of creativity that the participant used. There are five types of creativity (as discussed in Chapter 2, Section 2.3.2). Referring to the analysis of the artwork and the questionnaires that the participant completed, it seems as if the participant was showing characteristics of lateral thinking and aesthetic thinking. Lateral thinking involves an individual breaking away from established patterns to look at something from a different perspective. Lateral thinking is used to describe how an individual generates new ideas and solves problems by leaving older ideas behind and working on entirely new options (Jorlen, 2020). Lateral thinking was identified and developed by de Bono (1995) and is explained by referring to six thinking hats. As mentioned earlier, the participant showed use of the characteristics of the six thinking hats, and consequently, lateral thinking also became evident. However, the participant also showed characteristics of aesthetic thinking. This category involves the creation and appreciation of art, including the beauty thereof. This type of thinking involves producing and discovering things that are pleasing, harmonious, and beautiful to the viewer (Jorlen, 2020). An aesthetic thinker is influenced by interest and inspiration. The participant explained that she wanted to use the medium because she was curious and saw others using it, and therefore she wanted to try the same techniques. This is a characteristic that is associated with aesthetic thinking. She chose her paper based on the earthy feeling and how it would complement her chosen medium. Aesthetic thinkers are often guided by personal preference, including emotion (Jorlen, 2020). The participant indicated that her emotions inspired her, and her final artwork was based on emotions.

I therefore believe that Participant 1 is an aesthetic thinker who perceived creativity through emotions and her own preferences based on her interests and inspiration. She was influenced by her emotions and possibly prior experiences that caused these emotions. She did not believe that she was very creative and believed her left-brain influenced her creativity. However, closer inspection of her artwork and her responses to the questionnaires indicate that her left-brain did not influence her thinking, and that she was, in fact, creative or able to think creatively, despite the fact that she showed signs of left-brain thinking.

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5.2.2 Participant 2

Participant 2 was one of the three older participants in this study and had prior experience in the visual arts. These prior experiences were evident in her drawing skills, particularly with regard to the moon that she drew as part of the artwork. The moon was detailed, drawn in a realistic way, and contained darker spots that mimicked the holes of the drain in the sink that she used as a source of inspiration. The participant explained in her questionnaire (see Chapter 4 and Appendix A) that her source of inspiration was a sink covered in paint specks. The background of her artwork was covered in a light layer of grey charcoal – either mimicking the sink that she used as inspiration or the galaxy that she imagined when looking into the sink. Referring to the moon that she created, the participant used a realistic art style to draw the moon. In the questionnaire, she also described her favourite art style as realism. Her skills showed practice or experience not only in terms of art but also in the style that she decided to use.

Most of her artwork was created using dark grey, white, and black with small specks of colour widely spread over the artwork. When asked why she decided to use charcoal as her main medium, she (like Participant 1) replied that she was curious about using the medium for the first time. Her choice of paper was slightly different to her choice of medium. She explained that the paper that she had used was “the first paper I found and I liked the texture” (Appendix A). Her process in choosing the paper was not the same as when choosing the medium. Instead, it was based on convenience and a texture that she liked. Charcoal was a medium she had never used before, thus placing her outside her comfort zone. Perhaps she chose the paper because it was a form of comfort, something that she liked, to allow herself to work with a medium that she had never worked with before, to enable her to be more creative and confident. She said that she liked the texture – so not only was it out of comfort, but perhaps she was also curious as to what texture would be created when charcoal was used over this textured paper – so curiosity comes through again. This could also be seen in the way she chose the colours for her artwork. The colours were chosen after the moon was created. The participant explained in the questionnaire that she could not find the colours that she needed among the pencils provided to mimic the specks in the sink. She therefore chose to use the highlighters, mixing some of the colours to create the colours that she needed. She took the initiative to find a simple yet creative solution for the challenge she faced. She was more confident in this choice than in her previous choices of the paper and the medium. The choice of highlighters could also be the reason that the participant described this artwork as “childish” and “not very accurate”. However, the moon that she drew was relatively accurate, if compared to images of the moon. The participant added the finer details of the moon that can be

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identified in images. She described the artwork as “childish and not very accurate” when asked why she chose the highlighters and colours. She continued that her inspiration was to create the colours that she saw in the sink, but mostly because she was inspired by a “colourful sky” and the belief that “not every dark night is a dark night, there is always light”, which I consider to be a very optimistic response.

The artwork shows intuitive thought in the way that the participant tried to copy her source of inspiration and adapted it ever so slightly to allow the viewer to form their own understanding or perspective of what was created and what the meaning behind the artwork might be. This action is indicative of how the student relied on a constructivist learning approach. She built her new knowledge and understanding on existing knowledge. On a hermeneutical level, the student used her situatedness and associations to present new information, based on her own past experiences and understanding of the world (Human, 2015). After describing her artwork as “childish”, the participant explained that she was proud of it because “I was innovative when creating this artwork” (Appendix A). This can be linked to her passion for art. No matter how she felt about her artwork, she was still impressed by her own skills and what she created in terms of the entire artwork, or rather the thought process that went into creating it. The way the participant approached the artwork can be linked to some of the characteristics of a right-brain thinker (see Chapter 4), however, she described herself as both a right- and left-brain thinker, as she was “using different types of thinking, depending on the subject at hand” (Appendix A).

This remark made by the participant shows that she was aware of the different areas of the brain used for different types of thinking, as identified by Herrmann and de Bono. Both these theorists concluded that the whole brain is used when working through a challenge, making creativity available to anyone as it is always present (de Bono, 1995; Herrmann, 1995). I believe that the participant’s comment regarding her artistic style, in which she mentioned that she preferred realism, could be connected to the left-brain thinking mode, confirming that she is both a left- and right-brain thinker. To establish the creative thought process that the participant possibly went through when creating this artwork, I refer to de Bono’s (1995) thinking hats. Of the six available thinking hats, the participant used the red hat by relying on her intuition and finding inspiration that made her happy. She also used the blue hat by seeing the bigger picture, creating a moon instead of the drain because it reminded her of the night sky. Time management, another characteristic of the blue hat, also featured as she completed the artwork on time. The participant also used the green hat, which is responsible for creative thinking, and was able to create something new out of an existing object, developing her idea by using the highlighters when she could not find the correct colours or medium to create the

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colourful specks she saw in the sink. The participant showed initiative when she decided to use the highlighters instead of the ink pens provided. She was faced with a challenge but was quick to find a solution for her it.

The various thinking hats that are present in the participant's thinking and creativity can be led back to de Bono's (1995) belief that creativity is present in any individual but is influenced by the situation that the individual is facing. However, the way the participant used various thinking skills can be connected to what Sternberg (1985) believes about creativity. Sternberg (1985) rejects the concept of right-brain and left-brain dominant thinking and describes creativity as different intelligences manifesting in the whole brain. In Participant 2's artwork, analytical intelligence is clearly evident throughout. Using this intelligence, an individual is able to analyse, compare, and evaluate a situation to solve a problem successfully. The participant's mature artistic skills and decisions can be linked to the use of analytical intelligence to solve a problem. This intelligence can be indirectly connected to the cerebral mode identified in the HBDI model. Analytical thinking, along with experimental and creative thinking, are associated with the cerebral mode. Both experimental (exploring a new medium by using charcoal and highlighters) and analytical thinking (applying a realistic style when drawing the moon) are evident in the participant's artwork, with her experimental thinking style being slightly more visible than the analytical due to the activity brief that the students received. However, left-mode application is also evident in the participant's thinking in the answers that she provided to the questionnaire as well as the artwork that she created. The participant described herself as "perfectionistic, someone who is organised, planned and enjoys detail" (as seen in her realistic artistic style) (Appendix A). This mode of thinking occurs in the lower left side of the brain, according to the HBDI model, while the other side of this mode consists of creative thinking. With regard to the notion of the triarchic theory of practical intelligence – which contends that an individual uses previous knowledge to create a solution to a new challenge – one sees the participant's ability to use previous skills to complete the activity, such as using a medium outside her comfort zone and not instantly choosing a style or medium out of convenience, but rather based on the curiosity to try a new medium that she had not used before. The third intelligence, creative intelligence, is thus also present throughout the artwork. Creative intelligence is closely linked to the experience of the individual and is acquired through observation, which stimulates designing and making. Creative intelligence is better expressed in situations with minimal structure or constraint, similar to the context of the activity brief that the participants were given (Sternberg, 2003). This analysis of Participant 2's artwork is represented in Figure 5.3.

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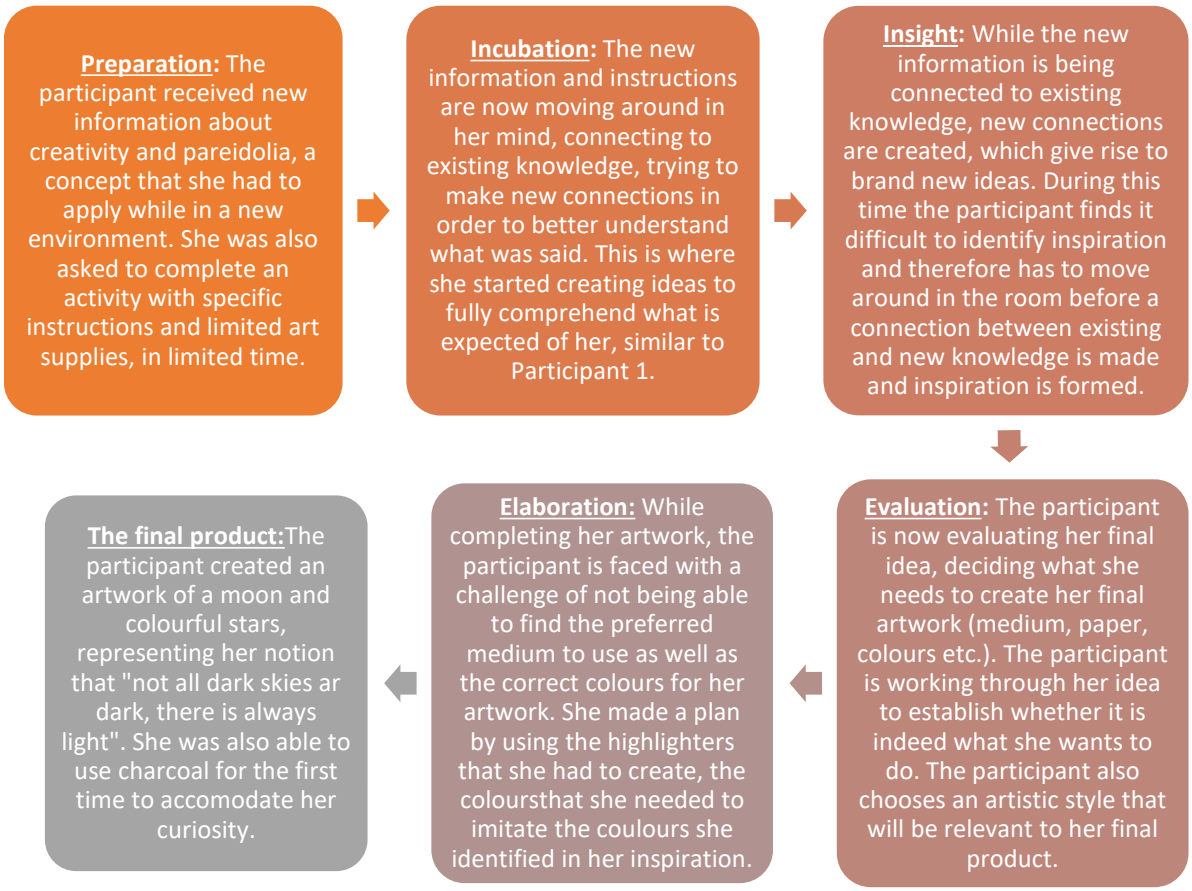

Figure 5. 3: Illustration of the creative process followed by Participant 2.

As illustrated in Figure 5.3, the participant used her left-brain detail-orientated abilities to apply realism in her artwork. This can be connected to Herrmann's (1995) whole brain model, indicating that creativity did not only take place in the right brain. The participant also said that she used more than one type of thinking, thereby identifying her as both left- and right-brain orientated. This is a characteristic of lateral thinking, which describes the individual as someone who wants to break away from established patterns by looking at something from a different perspective. The participant mentioned in her questionnaire that she wanted to break away from her perfectionism to become freer and express herself more (Appendix A). This approach to thinking is to avoid the brain's intrinsic limitation to rapidly see patterns and handle information in a distinctive way (Jorlen, 2020).

Therefore, I am of the conviction that the participant was guided by her interest, curiosity, and mostly her passion for art when creating or finding a solution to any challenge she was faced with. The participant described more than once how passion was a part of her artistic inspiration and an influence on her choices (for example, wanting to become a teacher so that she could share this passion – see Appendix A). She was not only driven by inspiration or motivation but also by her passion for art, which was a deep-rooted emotion. Participant 2's

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perception regarding creativity was similar to that of Participant 1's, as both were influenced by emotion, which was connected to their personal interests.

5.2.3 Participant 3

Participant 3 was the only male who took part in this study. This participant had no prior experience in the visual arts; however, he studied creative art until Grade 9. This limited experience in the visual arts was evident in his artwork, as he was not very confident or experienced in terms of using the medium or his drawing technique. Although he was the only participant to create his entire artwork in colour, not just adding some hints of colour as the other participants did, his execution of the media was rough, uneven, and childlike. He used a childlike approach in his art, which was visible in the way he drew the sun and clouds at the top of his artwork. As he had not undergone the developmental phases that would have taught him how to create more realistic-looking objects, he did not take art elements and design principles into consideration. He relied on the limited knowledge of art that he had acquired in primary school using a "formula" to draw known objects. A similar approach is used in literature in which poets use their raw feelings to create poetry that will "speak" to those reading it. In spite of his lack of experience and confidence in his skill, this participant showed enthusiasm to experiment with a new medium and style. This can be seen in the way that he drew the darker clouds in his artwork using charcoal. This was the only area where the participant used charcoal in his artwork. He applied it entirely differently from the way in which he used the coloured pencils. He outlined the clouds and rubbed the charcoal to create a smooth surface for the inside of the clouds.

This participant (like Participant 7) approached the activity entirely differently from the other participants. He identified an object that inspired him and used this object or shape throughout his artwork as part of the new creation. He did not change the object into something new. Instead, he created an entirely new artwork by repeating the object or shape in his artwork in different positions and sizes. In some places, the object seemed to either form part of the land or the mountain. In others it floated in the river or was combined with other shapes to create a building from which a river seemed to flow. The participant described creativity as being "important because it gives everyone a fresh perspective on things" (Appendix A), which reflects the way that he approached his artwork. He demonstrated a different and fresh perspective on the activity that he had to complete. I believe this participant understood how to identify creativity in himself and others, although there are many ways to identify and describe creativity. He described creativity as "how unique an individual is relating to their imagination and thinking" (Appendix A). This comment can be linked to the participant being imaginative in his writing and his art. This can also be connected to his analytical way of

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thinking in the limbic mode of thinking, according to the Herrmann Brain Dominance Instrument. This connection between the limbic mode and the right mode shows how two very different areas of the brain or different types of thinking are simultaneously present when the participant is finding a solution for a challenge with which he is faced. In terms of the artwork, he came up with a solution that worked for him – he created something new even if it was not in the same way that the other participants had approached the activity. He further explained in his response to the first questionnaire that he did not have anyone to express himself to and therefore found comfort in poetry. His challenge was to be heard by someone or to be able to express his emotions and feelings, and his solution was writing poetry.

Participant 3 was one of three participants (together with Participants 3 and 4) who referred to literature as a favourite creative activity, allowing him to express his thoughts. He explained, “I am a person who is always alone, never having someone to express myself to, and poetry gives me a chance to do this” (Appendix A). The participant elaborated that his first time in art class taught him that “there is more to art than what meets the eye, art pieces have a deeper meaning” (Appendix A), in the same way that literature contains deeper and sometimes hidden messages to be discovered by the reader. Poetry is known for promoting honesty and revealing deeper feelings. Perhaps the participant felt unheard and lonely, therefore he used the rectangles as they symbolised strength and stability, something he might have wanted for himself. Right-brain thinkers are identified as emotional and visual; they are sometimes emotion-driven. Perhaps the participant chose art not only out of interest, but to find a new way of expressing or communicating his emotions or thoughts, as he mentioned that he was a “lonely person, never having someone to express himself to” (Appendix A). When asked whether he identified as a left- or right-brain thinker, the participant stated in his questionnaire that he identified as both. He explained, “As much as I enjoy problem-solving, I hate math and as much as I enjoy art, I am not very expressive” (Appendix A). This response can be linked to Herrmann’s (1995) notion of creativity and the areas of the brain where thinking occurs. Herrmann (1996) explained that all areas of the brain are active during problem-solving or creation, however, not all areas are as active as others.

Participant 3 can be placed in either the limbic mode or the right mode, according to the HBDI. Limbic mode indicates that the participant has good organisational talents, working primarily in a controlled, conservative, and planned manner. In the context of this study, Participant 3 appeared to enjoy working in a very detailed, structured, and precise manner in search of step-by-step solutions to problems. In his questionnaire, he elaborated that he enjoyed solving problems but not mathematical problems, eliminating one of the dominant uses of analytical thinking. According to the limbic mode, he would probably also excel in communication,

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reasoning, and convincing others. An individual in the limbic mode usually deems interpersonal contact with others to be very important and has a kinaesthetic (sensitive) attitude. This type of thinking could be linked to this participant's love for literature and expressing his emotions by writing poetry. In the right mode, the participant could be described as very imaginative and artistic with a conceptual brain. He would have a holistic, intuitive, and innovative approach to problem-solving, and would be happy to take the initiative. He would also believe that problems can always be solved and that challenges always come with solutions, which is indirectly linked to his disposition to solve problems. He would also excel in communication, reasoning, and convincing others. This analysis of Participant 3's artwork is represented in Figure 5.4.

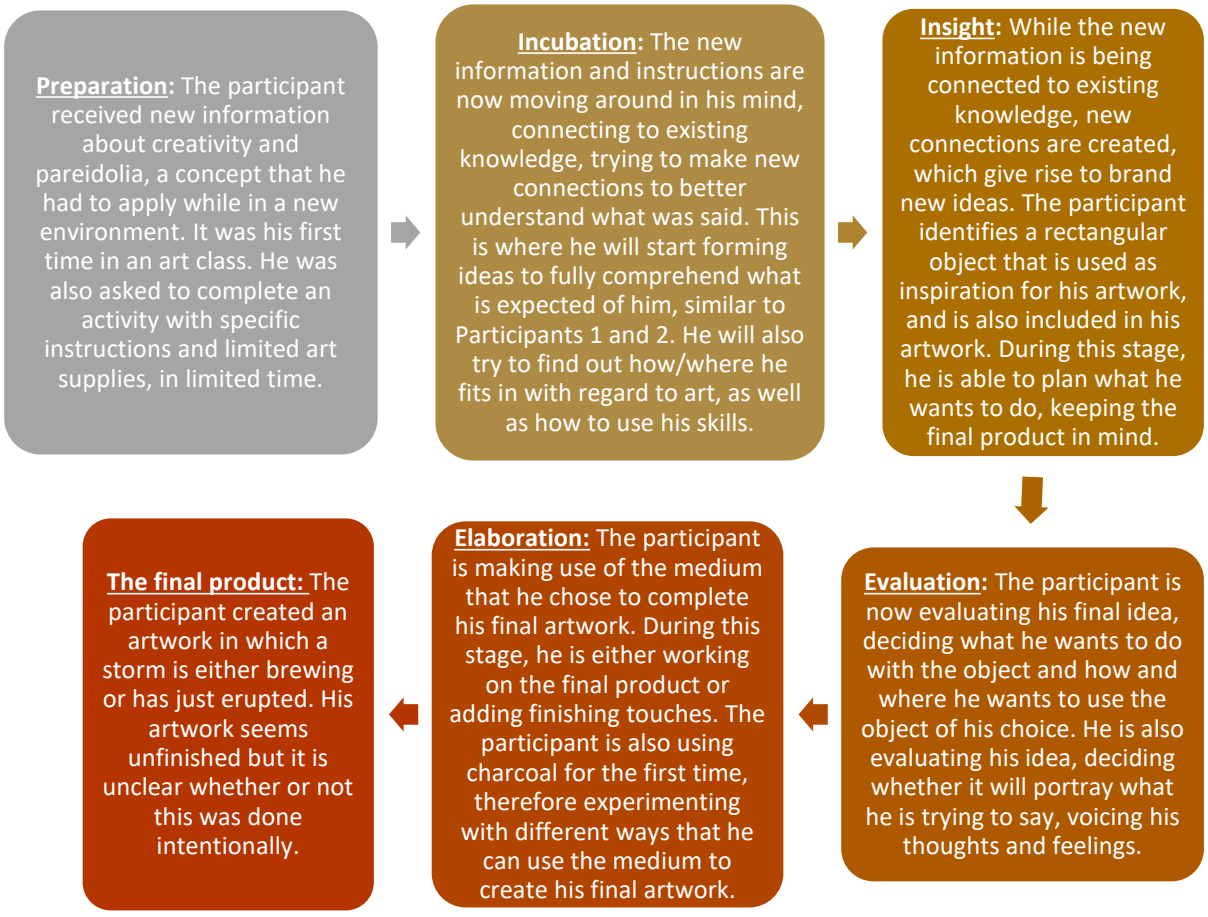

Figure 5. 4: Illustration of the creative process followed by Participant 3.

This participant processed the activity brief in a different way, applying his source of inspiration in an entirely different manner to all the other participants. This is an indication that he processed the information differently, connecting it to his existing knowledge and skills. Figure 5.3 illustrates the creative process that Participant 3 followed. It was not easy to identify the participant's type of creativity as he declined to share more details as to why and how he

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created his artwork. However, he showed characteristics of inspirational thinking, which entails the individual receiving insight or information from somewhere or someone that leads to a burst of ideas. Perhaps the participant saw the rectangular shape and was instantly inspired to create his artwork. The participant had limited experience in art, so any new information that he received in the art class could either have inspired or overwhelmed him. I infer that, in this case, the discussion regarding pareidolia inspired the participant, enabling him to want to create an artwork of his own.

I am, therefore, of the conviction that the participant's creativity was guided by his interests – such as his love for literature which guided him to find his voice – and his curiosity and emotions. It is not clear whether, other than the COVID-19 pandemic, the participant's past experiences influenced him. He seemed to focus on aspects that were visible. As mentioned, literature can be linked to emotions, and the fact that the participant did not feel heard could have evoked more feelings, contributing to these emotions. In my opinion the participant accessed his creativity when he felt the need to be heard or seen as a unique individual, accepted by his peers. This may not be the only way in which he perceived creativity, but it played a role in how he used his creativity.

5.2.4 Participant 4

Participant 4 was 18 years old, making her the youngest participant in the study. She was also the only participant who remarked that she came from a very creative background, specifically having been encouraged and inspired by her father who loved art. While her father did not classify himself as an artist, the participant described him as someone who could draw very well. Her father was also the person who had sent her to arts classes, which was possibly where her love for art began.

Participants 1, 4, and 5 were the only three participants who drew figures that had human features and which took up a great part of their artwork. Participant 4's artwork depicts a female figure dressed in what seems to be 18th century attire. The participant explained, "I am obsessed with *Bridgerton*" (Appendix A).[25] The link between the participant's artwork and this series is clearly evident. The characters in the series wear attire similar to that of the figure that she drew, as seen in Figure 5.4 below.

[25] *Bridgerton* is a TV series that tells the story of individuals who lived in the 18th century, seeking love and gossip.

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Figure 5. 5: A scene from *Bridgerton* (Image by Liam Nel, Netflix series, 2020).

Participants 4 and 6 both used only black to create their artwork. Participant 4, however, used more than one type of black medium to create her artwork. She combined charcoal and black ink, using the charcoal almost as a base to cover most of the artwork and using the black ink to add finer detail like the hair, facial features, and other details, for example in the dress. This participant also referred to reading and literature as one of her favourite creative activities (like Participant 3). This may explain her love for *Bridgerton* (2020), which was based on a book in a genre that she enjoyed reading (or watching). The participant's artwork could be associated with romanticism. Romantic art focuses on emotions, feelings, and moods of all kinds including spirituality, imagination, mystery, and passion (Ducksters, 2022). The subject matter varies widely and includes landscapes, religion, revolution, and peaceful beauty (similar to the figure drawn in the artwork) (Ducksters, 2022).

Participant 4 was the only participant who stated that she did not prefer a specific art style. She explained this further, saying, "I choose to try something different with every project. I want to start from scratch on a new medium, style, etc." (Appendix A). She referred to her father as the reason that she wanted to try various styles and not settle for one specific style. The participant elaborated on this and mentioned that she did not want to compare her artwork because she had used different media. When asked about her inspiration when it came to being creative, Participant 4 replied, "I am going to die; I may only have one life on this planet. I have had some rock bottom moments and they inspired me to live" (Appendix A). In this case, the participant seems to have been led by her emotions and her experiences. Referring to the discussion about her preference regarding an artistic style, it also seemed that the participant did not like to be limited. This could explain why she enjoyed reading or literature

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in general. The stories provided her with an outcome or the freedom to imagine without being limited. The participant explained that she thought it was acceptable to live without creativity, perhaps because she felt that her literature and love for 18th century designs were enough for her, and that she did not have to be creative to find comfort or joy. The participant identified herself as being both a left- and right-brain thinker, reasoning that "although you are creative, you still need math and timing in art" (Appendix A).

This statement can be linked to Sternberg's (1999) approach that intelligence is classified by function and level. All three intelligences described by Sternberg (1999) can be identified in the participant's answers to the questionnaire and in her artwork. The participant's analytical intelligence is evident in the analytical skills that she applied to analyse, compare, and evaluate the challenge to find a solution. She had to evaluate and compare previous styles and media that she had used to decide which would best suit her artwork. The medium and style that the participant used contributed to the 18th century feel and look. Her practical intelligence is illustrated by her ability to use previous experiences, skills, and knowledge to complete her artwork. She mentioned that her experiences and previous skills obtained in art influenced how she created her artwork. She also applied her previous knowledge of 18th century fashion and applied it to her artwork. According to the HBDI, this could place the participant in the cerebral mode, indicating that she preferred analytical thinking. According to the cerebral mode, she would most probably excel at solving mathematical, numerical, and technical problems and also be very imaginative and artistic, having a conceptual brain. The participant might have a holistic, intuitive, and innovative approach to problem-solving and always be happy to take the initiative. She also probably believed that problems could always be solved and that challenges always came with solutions. The participant could also be placed in the left mode, which is similar to the cerebral mode as she enjoyed working in a very detailed, structured, and precise manner, always in search of step-by-step solutions to problems. This is seen in the manner in which she approached her artwork, adding finer details to represent the attire that she loved and with the lampshade that she used as inspiration. This analysis of Participant 4's artwork is represented in Figure 5.6.

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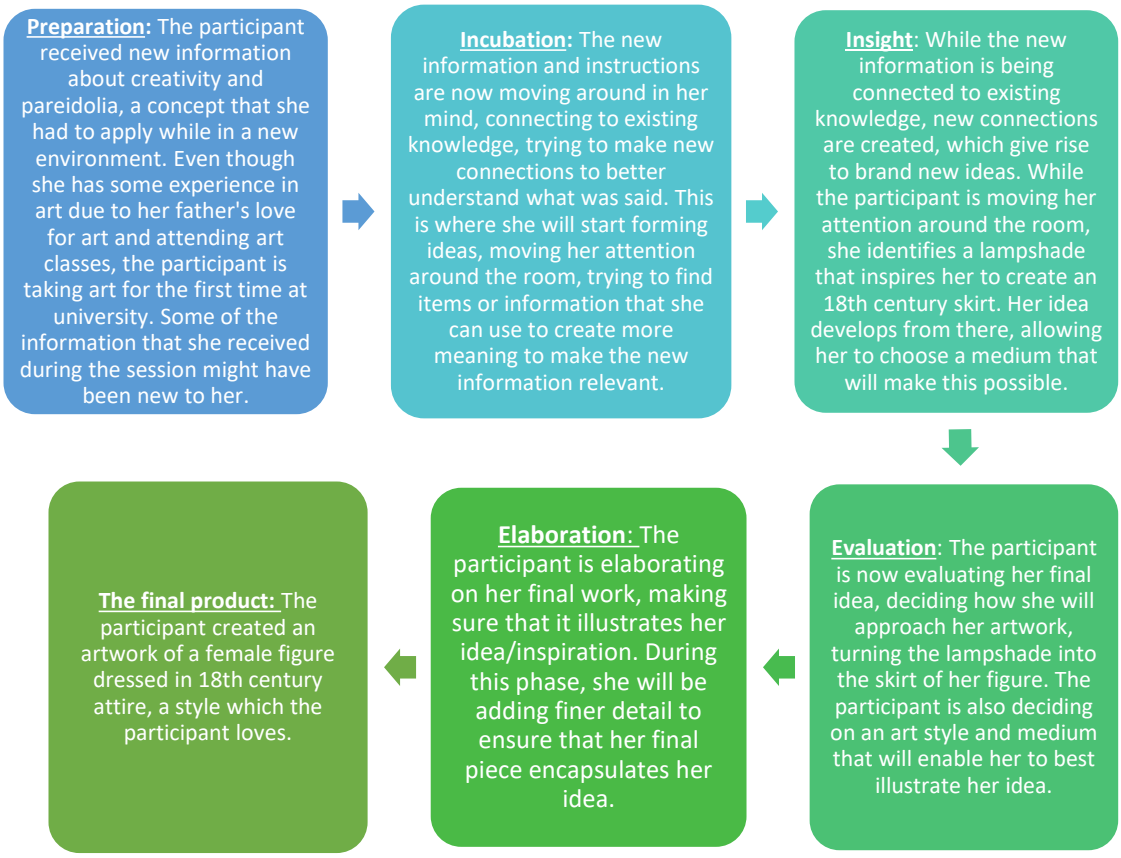

Figure 5. 6: Illustration of the creative process followed by Participant 4.

In her answers to the questionnaire, Participant 5 revealed that she did not think that she was able to think creatively. When identifying the intelligences described by Sternberg (1985) that manifested in the participant and the way in which the whole brain model was applied to identify the thinking modes of the participant, I came to the conclusion that all modes and intelligences contain creativity. The participant demonstrated characteristics of aesthetic thinking as a type of creativity. She created her artwork based on personal preference – her love for 18th century fashion and stories. Her artwork depicted a female figure dressed in 18th century clothing. She used a lampshade as a source of inspiration because it reminded her of the skirt that a lady would have worn in the 18th century. This type of thinking involves producing or discovering things that appeal to our senses as they are pleasant, harmonious, and beautiful (Peschanel, 1996).

The participant linked her experiences and emotions rather than her artistic skills to creativity when referring to her “rock bottom moments” (low points in life) and how she had learnt from them. The experimental style evident in her artwork is associated with creative thinkers who enjoy experimenting and expressing what they feel in visual ways. She also created work

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based on what she was interested in or found pleasing and advantageous to herself, although not in a selfish manner.

5.2.5 Participant 5

Participant 5 was one of two participants (Participant 7 being the other) who used black sugar paper to create her artwork. She is also one of two participants who used white chalk as one of the main media in her artwork, although not for the same purpose as Participant 1 who used white chalk to highlight certain areas. However, Participant 5 was the only participant who created her entire artwork using white chalk and only added colour using ripped pieces of paper to emphasise her message. Participant 5 described herself as "someone who once loved art but randomly stopped but … decided to pursue it again" (Appendix A). Before taking Visual Arts as a first-year module, she had had no prior experience of the subject other than the creative arts she was taught at school until Grade 9. However, this did not cause her to feel any less confident. She explained that "coming to university did not overwhelm me, I felt a lot more confident than perhaps my peers who had no prior experience" (Appendix A). She made this statement based on the amount of time that she had spent in the visual arts classroom at high school while visiting her friends who were completing their artworks. Therefore, although she did not study art at high school, she joined her friends who did.

The participant also explained in her answers to the questionnaire that she had been brought up in the Hindu faith but became a Christian when she was older. However, she still referred to the Hindu customs as "gorgeous designs and colours, which made me fall in love with fashion, realising I can use art to create fashion through the different patterns and techniques explored" (Appendix A). Nevertheless, the patterns prevalent in the attire associated with her first religion did not influence her final artwork. Instead, she described herself as an "environmentalist" and explained that she had wanted to convey a message through her artwork that "one person cannot change what was damaged" (Appendix A). It is, therefore, evident that her passion for nature and not her love for colour and patterns inspired her to create this artwork. This is perhaps why only little bits of colour are visible in her artwork. The three-dimensional texture created by the use of these pieces of paper was intentional for textural purposes. When asked about her artistic style in the questionnaire, the participant responded that her style was a "texture style". She enjoyed creating art that was not only visually attractive, but also physically or tactilely pleasing (by being able to be touched). The artwork was created to allow each viewer to experience the work based on their own background and connotations. Her reason for creating such an experience for the viewer was that she loved to touch her art (Appendix A). She enjoyed connecting with her artwork and could thus be identified as a kinaesthetic learner – someone who learns or connects better

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through touch or physical movement. Kinaesthetic or tactile learners enjoy making things with their hands, connecting better with an object when they experience it through touch (Laskey, 1997). Therefore, the kinaesthetic or tactile approach to creating could also be seen in her favourite creative activities of painting and sculpting. As she said, “I enjoy to feel my art, not just see it and [I] use texture gesso in order to feel the artwork” (Appendix A).

The lack of colour in the final artwork contributes to its final message, namely that Earth is being damaged and that the participant did not like what she was seeing. She pointed out that she wanted the viewer to become aware of the problem and that “one person cannot change it alone” (Appendix A). Her inspirational objects originated from more than one area or object in the art studio, including a post box, the paintbrushes that looked like flowers in a pot in the room, and the sun and nature outside the room (see Chapter 4 for a full analysis). The entire artwork is a representation of how the participant experienced the time during lockdown when COVID-19 was a threat. The participant explained that emotions, her mother, and the outdoors were three of the biggest inspirations for her art. The outdoors can be seen in the artwork, as the entire artwork was created using elements found in nature: clouds, the sun, flowers, leaves, grass, and other floral designs can be seen throughout. She might have felt restricted during the hard lockdown when no one was allowed to leave their homes. This restriction could also be linked to the gravestone as the participant had to forego one of her biggest inspirations and possibly one of her biggest joys, namely nature, due to the restrictions.

The participant described herself as being creative, but defined her thinking as “hybrid”, using both left- and right-brain thinking styles. She further described her hybrid thinking as using logical thinking to figure things out, stating, “I am very expressive, together with using artistic means to express myself when I am either happy or unhappy” (Appendix A). She referred to emotion as an inspiration, not only for her creativity but also for her way of thinking. Her connection with her emotions places her in either the limbic mode or right mode, according to the HBDI. The participant possessed excellent organisational skills, working primarily in a controlled, conservative, and planned manner. She enjoyed working in a very detailed, structured, and precise way in search of step-by step solutions to problems. She also excelled in communication, reasoning, and convincing others and might have found interpersonal contact with others to be very important, having a kinaesthetic (sensitive) attitude (Herrmann, 1995). She was very imaginative and artistic with a conceptual brain and a holistic, intuitive, and innovative approach to problem-solving. She was always happy to take the initiative and believed that problems could always be solved and that challenges always came with solutions. These characteristics placed the participant’s thinking style or creativity in both hemispheres of the brain, confirming her belief that she had a hybrid way of thinking.

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In terms of Sternberg's (1985) triarchic theory of human intelligence, both practical and creative intelligences were evident in Participant 5. Practical intelligence can be identified in the way that the participant used existing knowledge and experiences in her artwork. This was clearly seen in her artwork which reflected some elements of COVID-19, which she believed was the effect of global warming on the earth. The participant also included a deeper message about nature itself – that Earth cannot be saved by just one willing individual but rather by a group of individuals who are willing to work together. Her incorporation of existing knowledge was linked to creative intelligence, in which an individual creates something new by using their previous experiences and emotions. The artwork could be directly connected to the participant's experiences during the COVID-19 pandemic. This analysis of Participant 5's artwork is represented in Figure 5.7.

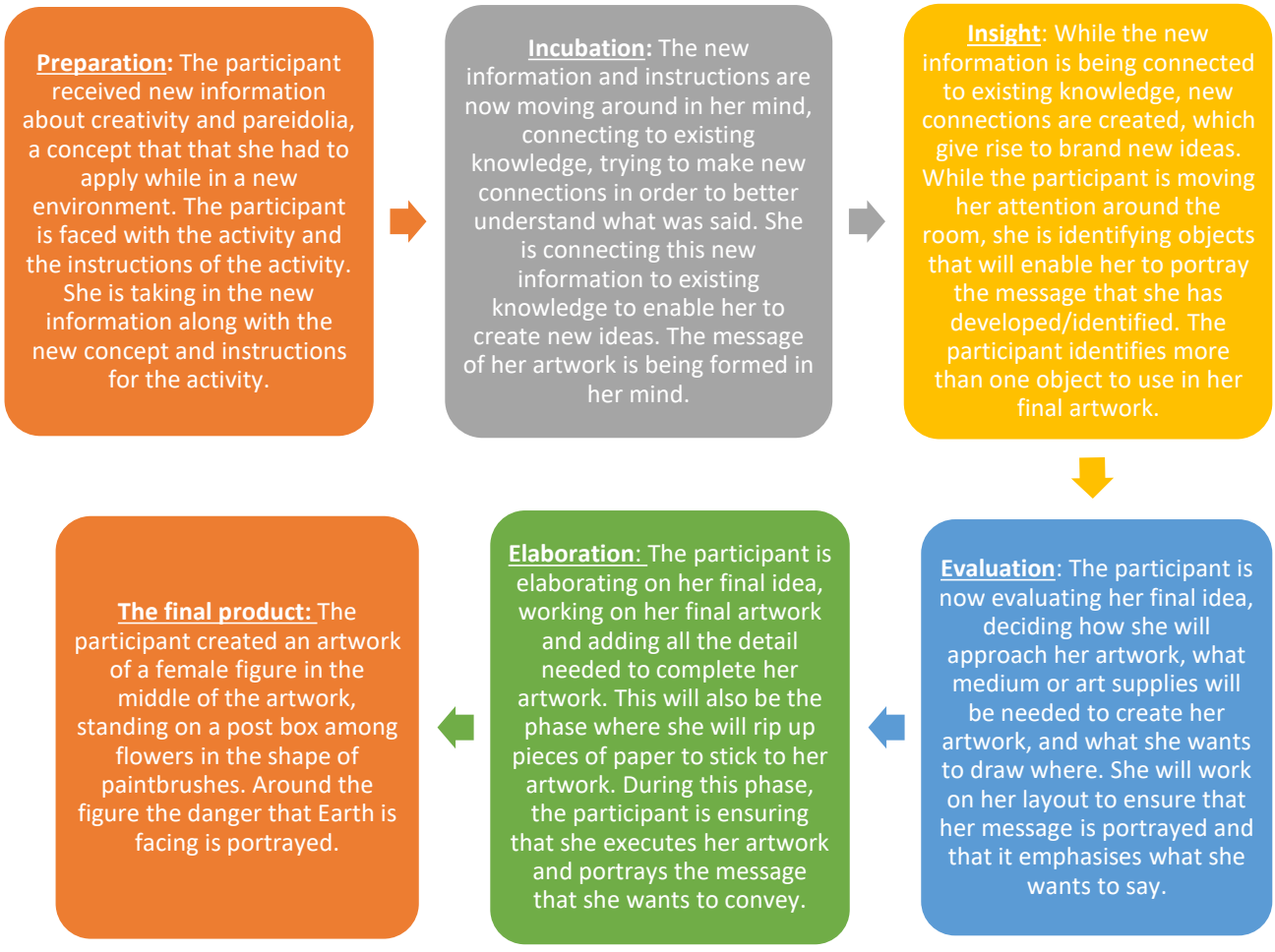

Figure 5. 7: Illustration of the creative process followed by Participant 5.

It seems that Participant 5 kept the message that she wanted to portray in her artwork in mind as she searched the room for inspiration. The illustration in Figure 5.4 demonstrates how the participant received the information and searched for objects that would help her to portray

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her idea, which was created during the insight phase. She used more than one object, indicating that she had a bigger idea in mind and needed various items to create this idea.

The participant's approach to the activity, along with her answers to both questionnaires, showed characteristics of a divergent thinker and an aesthetic thinker. Her aesthetic thinking was not visible in her final artwork, but rather in the way that she spoke about her creativity and inspiration for future art activities. The way that the participant described her love for bright colours and patterns as a source of inspiration indicates that she was inspired by aesthetically pleasing elements, therefore showing characteristics of aesthetic thinking. Divergent thinking was not evident in her choice of medium, although she used intuition to rip up pieces of paper to create the brushes (now flower petals) of the paintbrushes in her artwork. Instead, divergent thinking can be seen in the way that she approached her artwork, for example, her choice of objects to draw and turn the sun into a COVID-19 molecule. Divergent thinkers focus on ideas that have already been in the individual's mind, not generating new ideas but rather using what already exists and applying it to the new or unknown situation. The participant saw herself as an environmentalist and so might already have had the idea that she wanted to express her feelings about the danger that Earth is facing. Perhaps she just needed inspiration from her surroundings to visualise this idea and create her artwork.

The participant was guided by her experiences and emotions, connecting her to both practical and creative thinking, as identified by Sternberg (1985). She also showed characteristics of three areas out of four of the HBDI. She was well informed about her style of thinking and what went into her art. She conveyed the meaning of her artwork by connecting with the viewer in the way that she connected with her artwork by touching it. She indirectly allowed the viewer to connect with their own experiences of the COVID-19 pandemic. The artwork shows her intuition as an artist and her visual expressive nature. This observation and finding confirm the conviction that the theory of left- and right-brain thinking is not as accurate as it may seem at first. In this case, the participant's creativity was not driven by her love for colour and patterns (as she explained earlier), but rather by her love for nature and the need to portray a very serious message.

5.2.6 Participant 6

Participant 6 was 22 years old and the oldest participant in the study. She enrolled for first-year Visual Arts in her second year of study (see Appendix A). The participant's love for Celtic fairy tales was evident in her artwork, as it had a similar approach to how historic works were created using black ink on brown paper. Describing how she perceived creativity, Participant 6 remarked, "I especially love Celtic fairy tales as they have a dreamlike fantastical origin,

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while also having the most beautiful illustrations" (Appendix A). If one considers the illustrations of Celtic fairy tales, it becomes clear why the participant chose this particular medium and paper for her artwork; some older illustrations were created using only black ink (see Figure 4.10). Also, the paper on which the original works were created would sometimes turn a brownish colour as they aged. The participant used the brown hard backing of the booklet that contained the black sugar paper. Regrettably, she was one of the three participants who declined to elaborate on her artwork, so it is unclear why she chose this hard backing for her artwork. The black ink pen that she chose to draw her artwork started drying in some areas, contributing to the old look, similar to that of old Celtic tale illustrations. Perhaps this was done intentionally or maybe it was just a lucky coincidence. The black ink lines were layered, causing the dried lines to show in more than one place.

The participant's response to "what creativity is" could be connected to why she enjoyed Celtic fairy tales. She explained:

> I have a very vast imagination, often where my mind travels and I daydream way too much. I finds that I am able to create stories and write them down. I especially love Celtic fairy tales as they have a dreamlike fantastical origin, while also having the most beautiful illustrations. A lot of my art is inspired by these fairy tales. (Appendix A).

It seems as if the participant associated creativity with her ability to daydream and imagine stories in a visual way. Right-brain thinkers are known for their ability to daydream and use their imagination. They find it easier to visualise rather than use words, creating a thought as an image (Cherry, 2022). This might be an indication that the participant was a right-brain thinker in terms of the dominance approach. However, the participant identified herself as a whole brain thinker, referring only to her left-brain thinking by saying, "I am extremely logical in some instances to the point where people get annoyed" (Appendix A). Perhaps the participant was referring to analytical thinking and the ability to deal with technical problems. It could be that she was very technical or specific in her choices, therefore annoying those around her. She further stated in her answer that "in other instances, I am creative to the extreme where people find it comical when I come up with the weirdest things to say or do" (Appendix A). Her statement can be connected to her view of creativity, which is the ability to create stories or strange things to say that amuse those around her and it could be why she enjoyed writing stories, because of the amusement or joy it created in those around her. In other words, we have the creativity to amuse or soothe the people around us, not necessarily to solve problems. Creativity to amuse others can be seen as practical and structured thinking, or even experimental and creative thinking, where an individual believes that problems can be

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solved or the ability to be very imaginative and artistic with a conceptual brain (Herrmann, 1995). The participant had a holistic, intuitive, and innovative approach to problem-solving and was always happy to take the initiative. According to the HBDI, the participant could be placed in either the left mode or the cerebral mode, placing the participant's thinking mostly on the left side of the brain. The participant's response, however, could classify her as a both left- and right-brain thinker.

The correlation between the participant's thinking and the HBDI is explained by de Bono's (1985) theory that creativity is not found in just one side of the brain. The participant confirmed both Herrmann's (1995) and de Bono's (1985) notions of where and how thinking and creativity take place in the brain. However, Sternberg's (2002) triarchic theory of human intelligence cannot be excluded from this discussion. The participant's responses and artwork could be linked to all three intelligences identified by Sternberg (2002). Analytical theory is applied when components of intelligence are employed to analyse, evaluate, judge, or compare and contrast (Sternberg, 2002). Analytical theory was applied by the participant when she analysed the activity and evaluated her options with regard to how she wanted to create her final artwork. She used her existing knowledge of the Celtic tales and what each character represented. The participant also used practical intelligence, which involves individuals applying their abilities to the various problems that confront them in daily life (Sternberg, 2002). Practical intelligence was applied when the participant had to find a solution for the challenge with which she was faced. She was asked to create an entirely new artwork using an item or source of inspiration found in the art room. This item or source of inspiration had to be visible in her artwork. She therefore chose an item that she could connect to her love of Celtic tales to enable her to create an artwork that she enjoyed. Creative intelligence was also applied. This intelligence entails an individual using their new knowledge as well as existing knowledge and experience to create a solution or to apply new knowledge. The participant used this intelligence by applying her artistic skills and knowledge of Celtic illustrations.

The participant was later asked in the questionnaire how she would describe her artistic style. She claimed that she believed her artistic style was "realism", however, her final artwork shows no signs of realism. In comparison to Participant 2, who drew a moon in a very realistic style, Participant 6 did not apply a realistic style to this artwork. Furthermore, she described her favourite creative activity as "painting with water colours as it is subtle and beautiful. It is fun to mix and blend colours to create my own characters, drawing inspiration from other artists creating artwork so beautiful and meaningful, so that she wants her art to be recognised" (Appendix A). Water colours are sometimes used in realistic artwork. Perhaps the participant enjoyed using water colours when applying realism to her artwork and the artwork created for

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this activity was not meant to be realistic. It is interesting to note that in this activity she did not use realism or watercolours, both of which she seemed to enjoy. She also mentioned that she preferred realism because “I can understand what I see and do in a logical sense. It is difficult for me to break rules and stray from what I understand and am used to” (Appendix A). Perhaps the participant was not able to create her work in a realistic style, even though she enjoyed it. It is possible that she tried to, but what we see in her work is the best that she could do. This analysis of Participant 6’s artwork is represented in Figure 5.8.

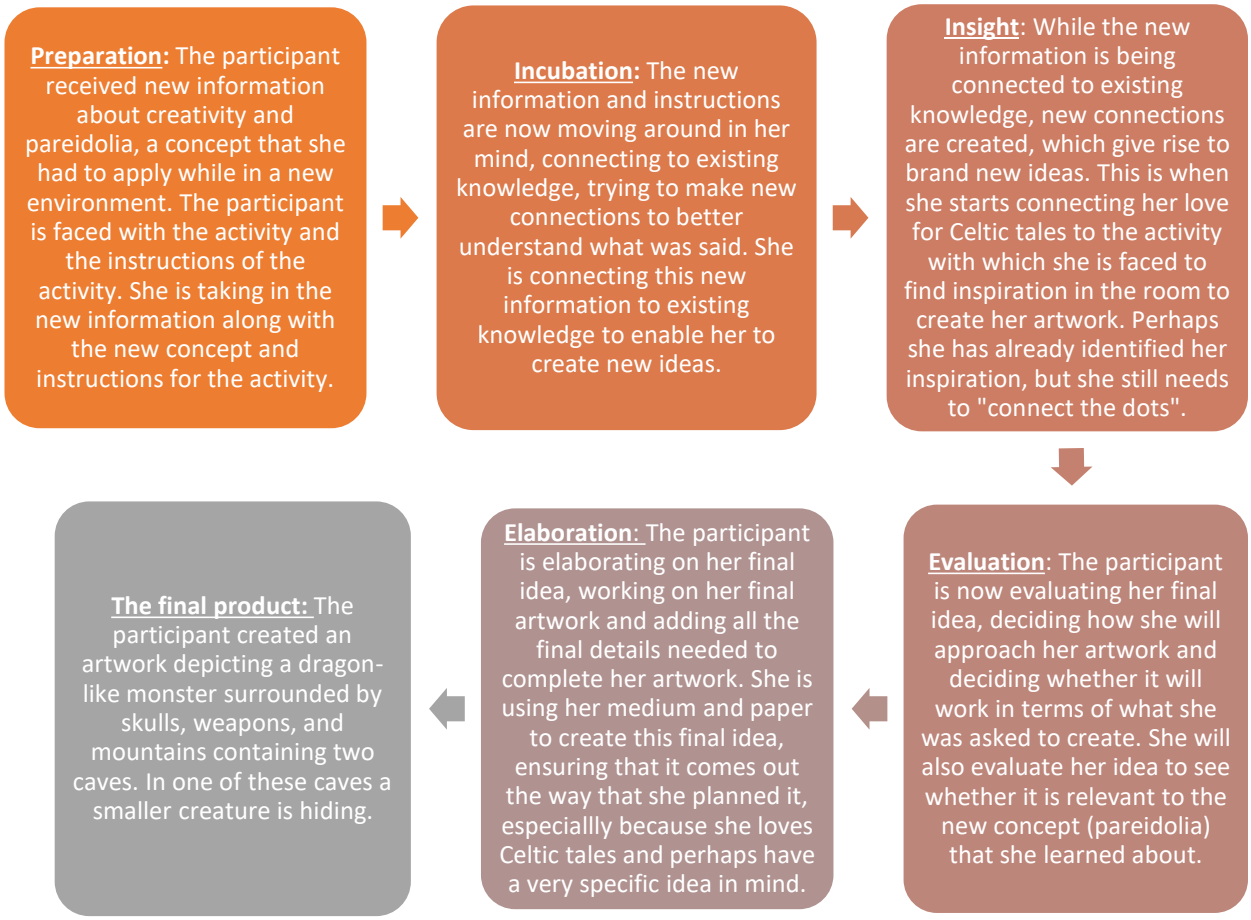

Figure 5. 8: Illustration of the creative process followed by Participant 6.

Although the participant did not want to share more details about her final artwork nor her inspiration, choice of medium, or other factors which might have provided more insight into why she decided to draw this Celtic-inspired artwork, it was still possible to identify some characteristics of aesthetic thinking. The participant explained that she loved Celtic tales and created a Celtic-inspired artwork, although not in the medium or artistic style expected. For this artwork, however, the participant decided to act on what she found interesting and enjoyed, thus leading me to believe that she used aesthetic thinking when creating her

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artwork. The participant perceived creativity through what she enjoyed and what was to her advantage. When the participant was asked to describe creativity and how she understood it, she referred exclusively to what she enjoyed, which was Celtic tales.

5.2.7 Participant 7

Participant 7 was one of two participants (Participant 5 being the other) to use the black sugar paper that was available in the room. She was also one of three participants who used white chalk as one of their main media; however, it was not her only choice of medium. The participant used white chalk, black ink, and gold-coloured ink to create her artwork. The participant furthermore played with light by folding the paper into various triangular shapes, in different directions, so that when the artwork was unfolded the light would create interesting shadows, adding to the overall artwork that was based on patterns. The participant created a pattern in gold, adding texture or finer details using the finer black ink pen. She also created patterns in white chalk by rubbing it over the folded pieces of paper before folding them again. Participant 7, much like Participant 3, approached the activity entirely differently from her peers. She decided on an abstract approach. Regrettably, she declined to provide more details regarding her final artwork and her reasoning was, therefore, unclear. However, the participant informally explained during the creation of her artwork that she was not sure about what she was doing. She had seen a pattern on the wall of the room and wanted to create a pattern of her own. The pattern on the wall that she referred to was a crack moving through tiles that had holes in them and which covered most of the wall.

In response to the question how she would describe her artistic style, she identified it as “abstract”, because, she said, “I love the weirdness and imagination that you can explore” (Appendix A). Perhaps the participant enjoyed the freedom that came from being able to create whatever she felt at that moment, almost moving outside the lines, not being restricted by too many details. The participant’s mother was an art teacher, and therefore the participant was surrounded by art while growing up. Perhaps the participant had time to explore various art styles and found comfort in abstract work. The artwork created by the participant confirmed her love for abstract art as she experimented with the concept of pattern, light, and medium. When the artwork was unfolded, a different pattern emerged depending on where the light fell and shadows were created. As the light moved around, the patterns changed together with the moving shadows. The participant’s favourite creative activity matched her artistic style. She explained that her favourite creative activity was “pencil drawings, but weird abstract things and taking pictures while going for walks and runs on their farm” (Appendix A). When asked what inspired her to create these abstract art pieces, she explained that her biggest love and inspiration for art came from those around her – especially her mother who was very

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different from anyone else she knew. The participant was influenced by things that were different and placed a lot of emphasis on it. In fact, she mentioned this in her idea of creativity, inspirations, favourite activities, and her artistic style. Therefore, I infer that the participant identified her creativity as emanating from strange and exciting events, ideas, or the individuals around her. Finding her inspiration in the strange things around her allowed her to create unique artwork which resonated with her.

This participant was one of two who identified their thinking by referring to previous brain dominance theories. She identified herself as a “definite” right-brain thinker because she “has a creative and artistic side which is way more dominant over everything else” (Appendix A). This brings us back to the theories discussed in previous chapters on where creativity resides in the brain, as well as how thinking takes place. According to the HBDI, the participant could be classified as either the limbic mode or the right mode category. The participant had exceptional organisational skills and worked primarily in a controlled, conservative, and planned manner. This can be seen in the way that she approached the artwork that she created. She completed it in steps, almost as if she had a clear final product in mind. She indirectly challenged the viewer to take in the “strangeness” that she valued so much. This individual might enjoy working in a very detailed, structured, and precise way, in search for step-by step solutions to problems (Appendix A). She might also excel in communication, reasoning, and convincing others, find interpersonal contact with others very important, and have a kinaesthetic (sensitive) attitude. Participant 7’s mother and friends described her as a sensitive individual, always seeing the good in those around her. She was also very imaginative and artistic, with a holistic, intuitive, and innovative approach to problem-solving. She was clearly always happy to take the initiative. This placed the her thinking predominantly on the right side of the brain, although she showed some signs of left-brain thinking. However, this does not mean that the participant only used one side of her brain during activities. She also showed some characteristics (practical and structured thinking) that are associated with left-brain thinking, which again confirms that both sides of the brain were actively present during problem-solving. This analysis of Participant 7’s artwork is represented in Figure 5.9.

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Figure 5. 9: Illustration of the creative process followed by Participant 7.

Participant 7 used an abstract style in her approach to the activity. As seen in Figure 5.9, the participant used her preferred style and found a source of inspiration that she could connect to in order to create her artwork. It is also possible that the participant saw her inspiration in something that was similar to her preferred style. She saw things in a different, perhaps more abstract way, and was possibly inspired by an object that already resembled abstract art.

Although all five types of creativity or thinking can be identified in the artwork created by the participant, the most prominent types are lateral thinking and systems thinking. Lateral thinking, connected to de Bono's (1995) thinking hats, showed that the participant was an individual who thought outside the box. This type of thinking is based on avoiding the brain's intrinsic limitation to rapidly see patterns and handle information in a distinctive way. The participant did not limit herself and experimented with her artwork, folding the paper, and

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rubbing chalk over it thereby adding more patterns and texture. However, systems thinking might stand out slightly more than lateral thinking when referring to the artwork. Systems thinking involves the ability to see how things are interrelated and form a larger “whole”. The participant was able to trust the process when creating her artwork, understanding how the folds in her artwork and rubbing the chalk over it would influence the patterns created. She also understood how adding the gold pattern and texture using a fine black ink pen would collaborate with the final look of the artwork.

The participant drew inspiration from the room, finding her creativity from what she saw. Strange things around her influenced her approach and allowed her to create a unique artwork with which she resonated. Asked how she would describe creativity, the participant’s response was, “it is the exploration of one’s imagination” (Appendix A). This emphasis on exploration can be linked to what was found in the analysis of her artwork. The participant identified creativity as exploring something new, specifically her imagination. She elaborated on the idea of new things and exploring when talking about the importance of creativity. She mentioned that without creativity “life will be dull and no longer exciting. With creativity life is filled with joy and new ideas” (Appendix A).

5.3 Themes

After working through the art analysis of each participant’s artwork and connecting the findings to the theory, I identified four main themes that were prevalent in the artworks created by the participants. These themes are briefly outlined in the table below and discussed in the paragraphs that follow.

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Table 5. 1: Themes

Theme 1: The absence of colour	**Theme 2: Emotions**
Participants 1, 2, 4, 5, 6, and 7 created their artwork using mostly black and white, and only small bits of colour. Participant 3 created his artwork entirely in colour. Grey was used as a shading "colour" in the artwork of Participants 1 and 4.	All the participants' emotions somehow influenced their artwork. Emotions are described as source of inspiration in the artwork of Participants 1, 3, and 4. Participants 1, 2, 4, and 5 found emotional comfort in art. Artworks of Participants 1 and 5 were filled with emotion. Participant 1's entire artwork was about emotions.
Theme 3: COVID-19 pandemic	**Theme 4: Death**
The participants felt overwhelmed after returning to the classroom after the lockdown. The participants' feelings of restriction and having to stay at home during the pandemic were evident in their artwork. The possible influence that the pandemic had on the participants also manifested by their artwork.	Participants 1 and 5 used dead plants as a source of inspiration for their artwork. Participant 5 created an artwork warning the viewer of the danger that Earth is facing (death). A possible connection between death and the pandemic is evident in Participant 5's artwork. Participant 6 also created an artwork that was filled with images or symbolism of death.

In the following sections each theme is discussed in relation to the study and what the literature says about each theme. These themes, which are outlined in Table 5.1, were identified in the study, and contributed to answering the research question: How do first-year Visual Arts education student perceive creativity?

5.3.1 Theme 1: The absence of colour

During the iconographical analyses, I established that colour was not widely used in the artwork created by the participants. The participants had a variety of colours to choose from in a variety of media that included ink, paints, pastels, and paper. The choice of black and white was either a practical choice or a cognitive decision to portray a specific message or to

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evoke a feeling in the viewer. White media were used on the black paper, while black was used either on the brown or white paper. Considering the COVID-19 pandemic, the choice of black and white might have been subconscious, influenced by the emotions that the participants might have been experiencing when creating these artworks. It is also possible that black and white were the colours with which the participants were comfortable, seeing that the majority of the participants had no prior experience in the visual arts.

Participants 1, 2, and 4 explained that they chose their media based on what they had seen others do and, because they were curious about working with the medium, they wanted to try new skills and media in their own work, All the participants who either worked with charcoal or chalk said that they had never worked with these media before and had wondered what it would be like. This leads me to believe that the participants chose their media, and subsequently the colour out of curiosity or interest. However, many chose black as a shading colour in their artwork, and not necessarily as the main colour (Nassif, 2021). The advantage of using such a highly contrasting colour is that one can concentrate on the picture overall. Black and white are regularly viewed as “more immortal and modern than coloured images or paintings, capturing the attention of the audience” (Nassif, 2021). Colour is usually not as prominent in the work of high school and tertiary students as it is in the work of learners in primary school classes. When he created his artwork, Participant 3 used the art skills that he had acquired in primary school. This can be seen in the way that he drew the sun and clouds, as well as in the choice of colours and the rough, uneven way that he coloured in his artwork. Colouring in is a concept that is usually associated with primary school art rather than mature art. There is a possibility that the participants chose black and white as their basic colours due to the basics that they had learnt about art at school. Learners in the foundation phase often use black or grey to draw the outlines of the artwork using a grey pencil before colour, shading, or light is added using different colours, tints, and tones, for example, in a colouring book. However, in the higher grades, learners are generally discouraged from drawing outlines. That being said, the majority of the participants did not study art at school, which means that they never went through the development phases as other art learners would do.

We often choose our favourite colours in everyday activities, for example, our favourite mug in our favourite colour or designing our room in our favourite colour because it brings us comfort or joy. According to Franceschini (2021:1), “choosing colours, appreciating and combining them, are actions that, knowingly or automatically, we carry out every day, often guided by our taste, mood of the day, or even by introjected aesthetic rules”. Colours are extremely important in giving the desired atmosphere to an environment, in communicating something through our clothing, and in describing the personality of an object or a brand in an

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advertisement. This is because any colour hides, in its shades, a symbolic meaning that speaks directly to the most intuitive part of human beings (Franceschini, 2021). Black and white are referred to as non-colours. The influence they have on a subconscious level is extraordinarily strong. Black was the first pigment used by prehistorical human artists. This pigment was made from a mixture of charcoal and iron. As such it was the beginning, but it also symbolically represents the end, as charcoal comes from things that have died (Franceschini, 2021). Perhaps indirectly and subconsciously, the use of black in the participants' artwork symbolises new beginnings. A new beginning after the strict restrictions of the COVID-19 restrictions were lifted, and when the participants were able to return to class where they could communicate with other individuals and explore their creativity in a new way – with some help from their lecturers.

As mentioned previously, the participants who used mainly black and white, chose their media (which produced black and white artwork) based on their curiosity. Creativity and curiosity go hand in hand to contribute to greater intelligence and personal expression (Hauck, 2021). The brain's elasticity strengthens and expands when an individual is curious and seeks different experiences (Hauck, 2021). This brings us back to de Bono's (1995) thinking hats. Using each hat enabled the participants to become more aware of their surroundings. I believe that if team leaders or educators allowed teammates or learners to use the green hat more often, it would create more curious and creative thinkers. Sternberg (2002) explained how the three intelligences, which he described as practical, analytical, and creative, need each other in order for an individual's cognitive thinking to develop. If being more curious creates more opportunities to be creative, more opportunities for an individual to be curious and inquisitive should be provided. Hauck (2021:1) further explained that "a way to foster both creativity and curiosity is through art education". Different art forms push students to take up the challenge of creating personal works of art. Students forget their concerns as their thoughts become focused on the journey of a creative activity. Their innate curiosity to try new things, make new projects, and learn new art forms ignites their creativity, since "art builds a sense of self, self-esteem and the well-deserved feeling of pride in creating a personal piece of artwork" (Hauck, 2021:1).The participants' curiosity was activated because they were in a safe area in which they could be creative. This was confirmed when I later spoke with four of the participants during the completion of a second questionnaire that was based on their artwork. The participants were able to provide more information about their perception regarding creativity, their skills, and inspirations, which was very different from the way that they answered the first questionnaire at the beginning of their first year, first semester. I believe that this was because they were more comfortable with their skills and they understood each concept (colour, shape, deeper meaning of an artwork, perspective, and inspirations) a lot better and were able to

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explain this in more detail. Because they have not worked or seen their artworks in a while, they had a fresh perspective of the work and were able to communicate this perspective.

Although some of the participants' artwork reflected many emotions (see Chapter 4), and the majority of the participants indirectly (some directly) referred to emotions as an influence and inspiration for their creativity, none of the participants chose their black and white media based on emotion. For example, Participant 1's artwork focused solely on emotions. She could have chosen her medium to emphasise the emotions in her artwork, using black for sadness, green or colours for curiosity, and perhaps a more obvious or suitable colour for determination. However, she chose charcoal as medium, meaning that most of her artwork was in black. Her choice was not based on the emotions in her artwork but rather on her curiosity to work with the medium. Even her choice of paper was influenced by her curiosity as she believed that the texture and earthy colour of the paper would complement the media that she chose to enable her to try a new skill (working with highlights using chalk) as she had seen others do. I therefore infer that the participants were not only influenced by emotions when it came to what they drew or created or what type of creativity they applied, but also by the colours or media that they chose. Curiosity guides an individual to try something that they find interesting. This in itself can create an entirely new experience that can be either good or bad. This allows the individual to create a new experience, which has an impact on their creativity as they might refer to this creative experience in future situations.

5.3.2 Theme 2: Emotions

When the participants were asked why they chose art and how it influenced them, almost all of them connected their answers to a feeling, passion, or how they expressed themselves so that others might understand them. During the iconological analysis of the different works, it was found that some of the artworks contained deep emotions. The majority of the participants identified emotions as their main source of inspiration when creating their artworks. They also emphasised the importance of being unique and being able to express their thoughts. Two of the participants explained their answers by adding that literature inspired them to create art, which they identified as their favourite creative activity. The participants associated being creative with being unique and standing out from the crowd. Perhaps the participants did not experience this feeling of being unique or standing out during the COVID-19 pandemic because they had had to follow strict rules (for example, wearing masks) and conform to what society (and the government) expected of them. However, it is my opinion that once the participants were able to break away from these restrictions, they were able and encouraged to become the unique individuals that they were by being allowed to communicate their thoughts or emotions.

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Participant 1's artwork was filled with emotion (as already discussed) – not only through the colour used but also by the figures depicted in the artwork. The participant explained that she wanted to emphasise three emotions, namely determination, sadness, and curiosity in her artwork. The figures in the artwork each portrayed one of these emotions. The figure on the left, facing left, with its hair in its face, represents sadness. The figure sitting down, staring at a white object in its hands, represents curiosity. The figure climbing into or out of the pot represents determination. Although her choice of medium was not based on the emotions, but solely on her curiosity, the black charcoal and brown background still contributed to the emotions portrayed in the artwork. Similarly, each participant evoked emotions by using images (for example, clouds or dark colours, or even the absence thereof) that would make the viewer feel emotional or by using strong images that evoked strong, raw emotions. As mentioned, Participant 1 aimed to emphasise emotions in her artwork.

Participant 2 portrayed space in her artwork, creating a feeling of weightlessness, as space often does. When it comes to calming individuals or getting rid of an extreme feelings of anxiety, they are often told to look up at the night sky (Nicholls, 2021). This action creates a feeling of weightlessness, where problems or overwhelming emotions are no longer a hefty burden to be carried around. This action also evokes a feeling of being quiet, allowing their minds to be silent in that time of space (Nicholls, 2021). The night sky gives the viewer a sense of perspective, making them feel that they can conquer it all (in terms of all that life throws at them) and are capable of handling whatever it is that they have to face (Nicholls, 2021).

Participant 3's artwork was about a storm either brewing or passing. The artwork can also be seen as either positive or negative, or perhaps both. The positive can be found in the sun breaking through the clouds – the sun possibly being a symbol for new beginnings as a new day starts with the sun rising. The river or stream is another positive symbol, indicating that rain that has fallen from the clouds. Rain in itself can be seen as positive – like rain falling after a long drought bringing joy to farmers who are in desperate need of water for their crops. Rain can, therefore, represent new beginnings and possibilities, like returning to class, being and connecting with new people, and allowing the participant to be heard. The blue clouds next to the dark clouds can also be an indication of the storm passing after the rain fell, thereby creating a positive message that the worst had passed. The artwork could also be seen as negative due to the dark clouds; dark or grey clouds are often associated with negative emotions, as often depicted in films. When a character is going through a difficult time or receives bad news, it often rains. The clouds could perhaps be linked to the COVID-19 pandemic and the possible effect it had on the participant. This period was perhaps a very

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challenging and lonely time for him. However, there is a river indicating that rain might have fallen, bringing some joy and even hope.

Participant 4's artwork did not portray emotion as clearly as the work of the rest of the participants. Instead, her artwork was created out of love for the era on which it was based. The participant drew a female figure in 18th century attire. The figure had no facial expression (except perhaps a rather blank expression). Perhaps she did not draw a facial expression because she did not feel confident enough, or it did not come out the way that she had planned. Nevertheless, the blank expression can either be seen as serious, or it can be linked to women in the 18th century not having the same right to speak their minds as men, having to stay respectable and submissive to their husbands. However, I do not believe this to be the case because the artwork was created out of a love for the fashion of the time.

Participant 5's artwork was filled with emotion. The participant explained in the questionnaire that she created her artwork as a warning to humanity about the danger that Earth was facing and that one individual (perhaps herself) could not fix it alone. The sun was replaced by a COVID-19 molecule. The sun brings new life, while the COVID-19 molecule brought death. By switching the sun and molecule, the participant emphasised that death would follow if humanity did not listen or react to the danger that Earth was facing. To emphasise this message, the participant drew a gravestone to symbolise the death of Earth. The participant also explained that the skeletal hand coming from the clouds was pouring poison onto the earth, further emphasising her message about the danger that Earth was facing. She drew all the "beautiful things" in the box below the "woman protecting what is still beautiful" (Appendix A). Perhaps this woman represents this participant trying to make a change but unfortunately standing alone.

Participant 6's artwork evokes a feeling of fear or horror by portraying a monster in the middle of the artwork, surrounded by skulls (death) and a small figure hiding in a cave, possibly out of fear for the monster. This artwork was done in the style of a fairy tale illustration and may, therefore, not evoke many emotions because the viewer knows that a fairy tale or make-believe monster will not appear and kill everyone. By contrast, Participant 5's artwork represents reality more accurately, as COVID-19 really happened.

Participant 7's artwork evokes different emotions from different viewers because of its abstract nature. Psychologists Trach, Ramanujan, Saron, and Singh (2022) established that humans are social, emotional beings and, for this reason, humans tend to experience intense emotions, which can be either positive or negative. As previously mentioned, the majority of

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the participants were influenced by their emotions and prior experiences. This, as established throughout this dissertation, also influenced their creativity. They created their artwork either around emotions or by depicting emotions. Some of the participants created their artwork based on their interests. For example, Participant 4 created her artwork because of her love of fashion, Participant 5 created her artwork based on her passion for the environment, Participant 6 created her artwork based on her love of Celtic tales, and Participant 7 created her artwork out of her love of the abstract. Therefore, it can be concluded that each participant's creativity was influenced by their interests and the emotions that they experienced at the moment when they found inspiration. Their emotions were, perhaps, also influenced by their chosen source of inspiration.

In addition, I observed that none of the participants used light-hearted emotion in their artwork. In other words, no humour, romance, or joy was depicted in the artworks presented. The artworks either contained images or symbolism of death, which could provoke some intense negative emotions in the viewer, or images that produced feelings of serenity or peace (for example, the lady in the top hat, the moon, and the patterns). It is also possible that these serene effects created in some of the artwork could have provoked joy when the viewer was reminded of moments of happiness in their own lives because of the symbolism used. The viewer's participation always plays a role in the interpretation of an artwork, especially when viewers experience different emotions when viewing it. The way we see things is affected by what we know or what we believe (Berger, 1972). Berger (1972:8) explains that when an individual is in love, "the sight of the beloved has a completeness which no words and no embrace can match". As viewers, we never look at just one thing, we are always looking at the relationship between things and where we fit in. "Images offer a direct 'testimony' about the world which surrounded people at other times, therefore, in this respect images are more precise and richer than literature" (Berger, 1972:8). Berger (1972) further explains that "the more imaginative an artwork is, the more profoundly it allows us to share the artist's experience of the visible" (Berger, 1972:10). The emotion or feeling that connects an individual to an object or type of image will influence the way that they interpret an artwork, much like a person in love would enjoy looking at an artwork that portrays love as it reminds them of their beloved. In the same way, the artist is influenced when creating an artwork. If the artist, for example, has little affinity for nature, they will most likely not create an artwork depicting nature with the same amount of care that an artist who loves nature would.

5.3.3 Theme 3: COVID-19 pandemic

As mentioned in Section 5.3.2, the influence that emotions have on the participants might have been related to the COVID-19 pandemic. The participants might have felt overwhelmed by

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their situation or emotional after the pressure that they had endured during the COVID-19 pandemic. The possible connections between the participants' final artwork and the COVID-19 pandemic that were identified in the final artwork of each participant are discussed next.

Participant 1 drew figures in a plant pot in her artwork. This perhaps depicts isolation, showing how each figure did not know how to act or what to do due to the tight restrictions during the pandemic. The figures appear lost and isolated – perhaps similar to how the participant felt during the pandemic.

Participant 2 drew the night sky. Perhaps this was all she could see from the window of her home. She might also have experienced isolation, not being seen or heard, with the quiet in her room becoming overwhelming like the quiet one would experience in space. The moon, which is big and overwhelming, could be likened to the COVID-19 molecule that was also big and overwhelming, taking over the calmness that we knew before the pandemic.

Participant 3 perhaps experienced COVID-19 as intense isolation, like the building or structure in his artwork. There is no road to the building or structure, only a river flowing from it, which might indicate that he felt trapped. The emotions created, perhaps linking to sadness or loneliness, could relate to the emotions that he experienced during the pandemic.

Participant 4 created a figure dressed in attire from her favourite time period, perhaps creating a new reality because she wanted an escape from her reality during the pandemic. It could also refer to the fact that people were watching far more television than usual, and certain series, such as *Bridgerton*, became very popular and defining, partly because of lockdown.

Participant 5 dedicated her entire artwork to COVID-19 and the dangers faced by Earth, with COVID-19 being caused by the way that Earth was treated, which would eventually mean the demise of all living beings.

Participant 6 perhaps saw the COVID-19 pandemic as a monster with many heads, leaving death in its wake. The little figure hiding in the cave could be the participant hiding from the virus and the destruction that it caused.

Participant 7 expressed how COVID-19 was experienced by different individuals, represented by the different patterns, which emphasised how each individual was influenced differently by the pandemic – some were chaotic (like the white chalk) and some more

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structured where they could use the time for themselves (perhaps as healing). The pattern could also refer to the COVID-19 pathogen that kept changing and evolving.

Some individuals thrive in social environments while others thrive in isolation, for example, in the confinement of their own homes. As mentioned, human beings are social; they thrive on the energy of those around them as well as the confirmation and guidance that they might receive from those around them (Trach *et al.*, 2022). Therefore, the isolation period during COVID-19 pandemic was, perhaps, a negative shift from the participants' busy social environments to the enclosure of their homes (This is not a reference to the emotional or physical ordeals that individuals might have faced). Thomas (2022) wrote in *Emotional impact of COVID-19 on women academics in South Africa*, an online blog, that the isolation period during the pandemic resulted in "feelings of emotional overload without ready compensatory outlets" (Thomas 2022). Most of the participants indicated in their responses to the questionnaire that art was a way for them to express their thoughts and emotions, something that helped them show their uniqueness. This is similar to the finding of Thomas (2022) that "the consequence of this sudden and unexpected shift to online functioning, combined with a near-total loss of social interactions, free movement in public spaces, and loss of work, have been hard on the emotional well-being of individuals". This might have been the case for some of the participants. The emotions and emotional influences of the participants were discussed in Section 5.3.2 to indicate how most of the participants were influenced by their emotions, which the researcher established could largely be ascribed to the COVID-19 pandemic.

The participants' explanation of how art allowed them to express their emotion could be an indication that these participants wanted to create a place of comfort (being able to express themselves fully) while being heard or being unique. When universities reopened and returned to a "normal" routine, some of the participants might have felt overwhelmed and unsure of themselves, in addition to the anxieties that first-year university students often face, being in a new environment and freshly out of school with many being far away from their parents and homes. This could be another reason that the participants did not experiment with new techniques, styles, or skills when creating their artwork, but rather stuck to what they knew and were comfortable with. This could be a form of coping in an area or situation (such as being in the classroom and attending an art lecture for the first time) that was overwhelming and new. Referring again to the influence that emotions had on the participants, it becomes evident that the participants' creativity was not only influenced by their emotions but also by their lived experiences. For example, one of the participants created an entire artwork based on the COVID-19 pandemic and the impact that it had on her. Each participant's creativity was also influenced by their need to be heard or seen as a unique individual. Perhaps this was

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why so many of the participants decided to use a new medium, not only out of curiosity, but rather because they believed that it would make them stand out and seem unique or different if they left their comfort zone, or perhaps what their peers would consider a comfort zone.

5.3.4 Theme 4: Death

The pandemic can be connected to the representation of death as a source of inspiration for the participants' creation of their artworks, or the depiction of death in their artworks. During the COVID-19 pandemic, the number of deaths related to the virus were displayed on television screens, announced over radio stations, and updated on a daily basis, constantly reminding South African citizens of the threat of death surrounding them. Family members, friends, or other people close to the participants may have lost their lives, making the threat more real and personal. Hearing about death on a daily basis became the norm. For this reason, the choice of a dead plant as a source of inspiration makes sense as death was something the participants had grown accustomed to. Participants 1 and 5 chose the dead plant as a source of inspiration for their artworks, but also created new life. Participant 1 portrayed the dead plants as little figures starting to move around as if waking up from a long sleep. She was, perhaps, starting to discover her own creativity, being able to move around once the tight restrictions had been removed. Her choice of artwork and consequently her creativity can be seen as hopeful – she was hopeful about a new beginning or about the new beginning that she was facing in her first year at university. Participant 5 had a different approach. Death can be seen throughout her artwork but, in this case, it was inspired by her passion for Celtic fairy tales. The scene depicted in the artwork seems to be from a great battle (referring to the dragon surrounded by swords and skulls). The artwork was created out of the love that the participant had for Celtic fairy-inspired stories.

The two participants who used the dead plants as a source of inspiration and created something that represented new life could also be seen as taking control and changing the outcome of something (death) that felt out of control during the pandemic. One of the participants (Participant 5) created her artwork based on COVID-19. Although this shows the impact that the pandemic had on the participant and her perspective, it can also indicate how the death surrounding COVID-19 impacted her. The participant could have created any artwork but chose to recreate a scene devoted to COVID-19. In the artwork, the viewer can identify a rather large gravestone in the bottom right corner with the words "in loving memory, Earth xxx". The participant described this as a foreseeing of what would happen if humans did not change their ways. The focus was on COVID-19 but equally on death.

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Sullivan (2018), a writer who experienced trauma in 1993, explained how words failed him when he needed to communicate how his traumatic event affected him. The only way he could express his feelings was through creating art (Sullivan, 2018). It is common knowledge that art creates a safe space for a person to express the feelings, thoughts, or emotions that they would otherwise not find easy to share with others. Art provides an outlet when words fail. Drawing pleasant objects or objects that help you to release feelings connected to trauma helps one build grounding and coping skills (Fabian, 2019). The participants went through a traumatic time, as we all did, during the pandemic in 2020 and 2021. Each participant experienced the trauma differently. Consciously or subconsciously the participants created artwork that either portrayed their experiences during the pandemic, or the feelings that they experienced in their new post-COVID-19 contexts. Not all the emotions or experiences were necessarily negative, but each had an influence on the participants' creativity. The artwork activity was not related to COVID-19, and, as the researcher, I did not mention the pandemic. Nevertheless, the majority of the participants incorporated some aspect of the pandemic that had clearly had an impact on them. This shows how lived experiences and the emotions connected with it influence an individual's creativity.

As mentioned in Theme 3, death as a source of inspiration was evident in most of the artwork created by the participants. When communicating with the initial class group that was present in the room when the activity took place (before the seven participants were selected), the majority indicated that the dead plants were a source of inspiration for the creation of their artworks. Three of the seven participants chosen for the study (Participants 1, 5, and 6), incorporated death in their completed artworks. Participant 1 chose the dead plants as a source of inspiration and created something new in her artwork. Participant 5 used entirely different objects (paintbrushes, the sun and nature outside, and a post box) as sources of inspiration but created images devoted to COVID-19. Participant 5 recognised the impact that the pandemic had on the world and on her as an individual. Death was not the main focus of her artwork but was used to show the urgency of what was emphasised in it. As previously mentioned in Section 5.2.3, the participants were surrounded by death during the COVID-19 pandemic in 2020 and 2021. They did not necessarily face death but were reminded of it on a daily basis. Perhaps they were communicating how traumatic this experience had been by subconsciously incorporating death in their artworks. It is also possible that this was a sign of hope and that the participants were trying to break away from their reality in which death had become too familiar as an everyday occurrence.

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The designer and writer, Enger (2022) states that “death is one of the most pervasive themes in art history. While many artworks celebrate afterlives in heaven or hell, death is most often referenced as a *grim reminder of numbered days, and a powerful motivator to live well”* [my emphasis] (Enger, 2022:2). Although death is mostly seen as a negative reminder of how short life is and of the loss that one might have experienced to date, it can also be symbolic of new life or something new around the corner. Therefore, some may view death in a more positive light. The participants decided to create something new and “living” from something that was dead. In Mexican culture, the concept of death is viewed in a totally different manner. Perhaps the participants did not have a negative message in mind when they created their artworks, but instead had a positive point of view. Participant 1 turned the dead plants into living figures that moved around and had new purpose, like the figure climbing out of the pot that portrayed determination. This figure can be a metaphor for the participant who was determined to get out of the pot to start something new. Participant 5 did not create her artwork as a negative symbol to scare people, but rather as a notion of hope to inspire people to stand with her to have a positive impact and change the situation together. Participant 6 created her artwork out of her love for Celtic tales and not to emphasise death per se. This can be connected to what Berger (1972) explained, namely that the perspective of the viewer is influenced by the way that the person experiences emotions and/or situations.

The participants’ artworks could either be viewed in a negative way, namely that death is here to remind us that we will all die and that our time on Earth is limited, or it can be seen in a positive way, as a celebration of what was. The participants who used death as a source of inspiration created life in their artworks, therefore making it a celebration of something new coming from something that has ended. It is almost as if the participants were relieved that the COVID-19 pandemic had ended and therefore were celebrating this by creating new life coming from death to indicate a new beginning after the restrictions were lifted after the pandemic lockdown period.

5.4 Conclusion

When working through the data gathered in Chapter 4, some similarities and differences regarding the choices of media, styles and paper were evident among the participants. There were differences because each participant had a different idea or concept in mind. No specific instruction was given for the participants to all create the same artwork, or artwork that had to look the same. The majority of the participants chose the media that they worked with based on practicality and convenience because they knew and understood the medium. I also found that the majority of the participants created their artworks based on their passions and

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interests, again connecting to a type of comfort or confidence. Time played a role in the creation of the artworks, as the participants were limited in terms of the amount of time that they had to complete their artworks and they consequently chose media that would accommodate this limitation. The participants were not limited with regard to colour, and in fact, one of the participants decided to create his entire artwork in colour. I am of the opinion that the participants decision to limit the colours used was based on what they knew and due to the pressure of the limited amount of time that they had to complete their artwork.

After reviewing all the participants and the possible factors that might have influenced them during the creation of their artworks for the given activity to access their creativity, it was clear that the majority of the participants had either the same or similar influences when it came to their creativity. Emotions, lived experiences, and interests were three of the main aspects that influenced almost all the participants' creativity. Explaining how they created their artworks, the participants either referred to their emotions, how they felt about something, or the fact that they wanted to feel heard, or to show their uniqueness. Therefore, it can be concluded that these factors would influence how they created their artworks. As mentioned in the discussion of Theme 1, the participants' artwork was all filled with emotions, while family was connected to lived experiences. Some of the participants referred to family and how various family members had inspired them in their creativity, either through their ability to draw or their experience in art. COVID-19 was a lived experience that all the participants experienced, although in different ways, and this showed in their artworks, as explained in the discussion of Theme 3 and Theme 4 with most of the artworks containing some references to death. It also became evident that the perception regarding an artwork is influenced by the viewer as well as the artist due to the different lived experiences and emotions that they have experienced. This may cause the meaning of an artwork to change depending on who is viewing it. I acknowledge that this might have influenced the way in which the participants' artworks were viewed and interpreted, however, using a second questionnaire to obtain additional information regarding the artworks, changed and improved this interpretation. The participants were also influenced by their interests and passions, seeing that some of the participants created their artworks based on a theme, concept, or idea they were passionate about and that they enjoyed or loved.

In examining the creative process to establish whether there was a difference in the way that the participants approached and therefore perceived their creativity, it appears that even if the inspiration and interests differed due to differing emotions and lived experiences, the creative process was very similar for each individual. The completed artwork was only influenced by the external aspects that were added to the creative process. These aspects include emotions,

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feelings, thoughts, experiences, interests, family, and passion or love for something. It was also found that the participants reacted out of curiosity which contributed to their creativity. Using a new medium and exploring their curiosity also made them more confident in their skills.

Herrmann's whole brain model played a significant role in determining why the participants made certain choices in the completion of their artworks and how they identified themselves (as right- or left-brain thinkers). Four main themes (colour or the absence thereof, emotions, the COVID-19 pandemic, and death) were identified in the data. These themes were explored to further understand how the choices made by the participants indicated how they perceived creativity. These findings guided me in answering the three research questions, the primary and sub-questions, in Chapter 6. Limitations and suggestions for future research have been identified and are also discussed in Chapter 6 to ensure that questions surrounding creativity are explored in more depth in future research.

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CHAPTER 6: THE CULMINATION OF INFORMATION

Figure 6. 1: Main items discussed in Chapter 6.

6.1 Introduction

In Chapter 5, I discussed the findings obtained through the data analysis. Herrmann's whole brain model played a role in discovering why the participants made certain choices in the completion of their artwork and how they identified themselves (as right- or left-brain thinkers). Four main themes were identified in the data. These themes were explored to further understand how the choices made by the participants indicated how they perceived creativity. However, I also referred to the process of creativity taking place along with the type of creative thinking used by the participants when creating their artwork. This process enabled me to have a better understanding of how the participants perceived creativity, enabling me to answer the primary research question: How do first-year Visual Arts education students perceive creativity? Along with the themes and identifying the creative processes, many similarities among the participants regarding their main influences and possible approaches to the activity, were identified (see Chapter 5). These similarities are used in this chapter to answer the research questions to understand how the participants understood not only what creativity was or how to apply it, but also what their own creativity entailed. This guides me in answering the three research questions (one primary and two sub-questions). Limitations and suggestions are also identified and discussed in this chapter to ensure that questions regarding creativity

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are explored in more depth in future research. My investigation was not intended to be an exact science, and what seems evident in the work inevitably involved interpretation on my part. The analysis was done from my own understanding and perspective to try and understand how the participants perceived creativity.

6.2 Research questions and findings

The main objective of this study was to explore how first-year Visual Arts education students perceived creativity by reflecting on the theories of Herrmann (1996), Sternberg (2010), and de Bono (1995) to consider the various ways in which thinking takes place and the role that creativity plays in these thinking processes in an individual. The research questions set out in Chapter 1 of this study were answered in Chapters 4 and 5. In Chapter 6, I discuss these research questions and how they can be addressed in future studies. I start by considering the two sub-questions and then answer the main research question concerning first-year Visual Arts education students' perceptions of creativity. I highlight the main focus of the question and then discuss this focus and suggestions for future research in more depth. In answering the research questions, I do not repeat the information and findings already discussed but merely draw a conclusion based on these findings in order to answer the research questions.

6.2.1 Sub-questions

How does creativity manifest in the artwork created by first-year Visual Arts education students?

Creativity, as highlighted in the question above, is identified by connecting iconographic and iconological analyses to the whole brain model, the process of creativity, and the types of thinking taking place during creativity. Understanding how creativity manifests in the artworks of the participants was guided by understanding what influenced each participant when they created their artwork. The influences that the participants faced were evident in the artworks and, therefore, manifested in the meaning of the work as perceived by the viewer. This sub-question was comprehensively discussed in the artwork analysis and discussion of findings in Chapters 4 and 5, in which I critically considered how creativity manifested itself in the work of the first-year Visual Arts education student participants. As established, the artworks of the participants were filled with emotion, passion, signs of or references to death, and the effects of the COVID-19 pandemic. Nonetheless, curiosity guided the participants to apply their creativity. As discussed in both Chapters 4 and 5, most of the artworks created by the

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participants displayed emotions or were guided by emotions. The influences created by emotions can be connected to Sternberg's (2010) triarchic theory of human intelligence, specifically emotional intelligence. Practical intelligence could be identified when looking at how some of the participants created their artworks based on a passion, obsession, or love for a specific topic or theme, and this showed in their artworks. For example, Participant 4 had a love or "obsession" for 18th century fashion, as she pointed out. She created her artwork based on this emotion and passion.

Not surprisingly, most of the participants' artwork had some depiction of or reference to death. Some used death as the inspiration to create their artworks, for example, Participant 1 created three figures emerging from a dead plant. However, there was no mention of death in the activity brief, nor in the examples shown to participants during the introductory presentation. However, I believe that being surrounded by death and the constant reminder of death, such as the daily release of statistics regarding the number of deaths during the COVID-19 pandemic period, influenced the participants' thinking and consequently their artworks. Nevertheless, the students were curious about the new art media and, therefore, chose media that they had not worked with before. Six of the seven participants used a new medium because they were curious. Only one participant, Participant 3, used a medium that he was familiar, and possibly comfortable, with. The findings thus show that there are different ways for creativity to manifest in the artworks of the first-year Visual Arts education students. While I identified four common themes in the participants' work, I recognise that these similarities may have differed if a different group of participants had been observed at a different point in time. Context and curiosity are thus key to understanding how creativity manifests in the work of the first-year Visual Arts education students.

What strategies can be implemented to improve the creativity of first-year education students?

Strategies as referred to in the question above refers to de Bono (1995) six thinking hats and Herrmann's (1995) whole brain thinking model. When referring to first-year education students, I refer to all first-year education students. I refer to education students because I have realised that current education strategies and curricula lack the creativity that learners need to become critical and creative thinkers. By focusing on education students, the expectation is that the next generation of educators to step into a classroom will be better prepared and able to identify what type of thinkers their learners are and in which areas (in terms of their thinking) these learners need support to become more creative thinkers. Education students will be able to stimulate curiosity in the learners, which will lead to

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creativity, enabling learners to approach challenging situations with more creative solutions. I am of the conviction that if the first-year education students are motivated or allowed, from the start, during their first year of study, to develop their creativity and critical thinking skills, they will, perhaps, feel less overwhelmed. Developing their creativity from an early stage will enable students to become more confident about their creativity before they walk into a classroom. If lecturers apply the strategies set out by de Bono (1995) to develop students' lateral thinking skills, the students will be equipped to strengthen their critical and creative thinking abilities. Becoming more confident in terms of critical and creative thinking and being able to effortlessly apply these skills will empower the students to apply these skills in the classroom.

Another strategy to consider is the use of more than one taxonomy. Only focusing on Bloom's taxonomy limits the students and does not allow them to use their creative skills optimally in the classroom. I found that the participants understood creativity in themselves, and, when they were provided with more information on creativity, they were curious and inspired to try new media and skills that they had not used before. Some of the participants understood that creativity occurs in the entire brain, consistent with Herrmann's theory, but they did not necessarily understand the concept of creativity. The participants were able to approach the activity without the skills that other more experienced individuals might have done. This confirms my belief that creativity should not be connected to one hemisphere of the brain but should rather be seen as an important aspect found within all individuals. The participants were art education students, surrounded by and constantly reminded of the idea or concept of creativity. However, other education students are not exposed to the same creative environment and, therefore, need to be reminded of their creativity as well. Because not all education students are exposed to creativity as the participants were, it might set a standard among educators when creating a safe environment for all learners to explore their creativity. As seen in Sawyer's work, educators dislike learners with creative characteristics because they misinterpret creativity and do not see its cognitive nature (Saywer, 2012).

To improve creativity, or at least the understanding of creativity and how creativity is manifested in each individual, it is important that creativity and the creative process is emphasised more from an early age. This will enable individuals to get to know and understand their own creativity and their capabilities to solve problems and think critically to become more confident in the way that they confront or approach challenges. Nevertheless, this study focused only on understanding how a group of individuals perceived creativity and did not aim to find a solution to improving creativity. I merely suggest how creativity could be improved in individuals with the intention of examining this idea in future studies. If our understanding is expanded beyond Bloom's taxonomy (which is a good approach in

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education) to instead apply different approaches to creativity with a better or broader view of the concept of creativity, more opportunities will arise for creativity to take place freely, no matter what type of "thinkers" the individuals involved are deemed to be. Approaches such as William's (1986) thinking levels, the Herrmann Brain Dominance Instrument to identify the type of thinking that manifests in an individual, or de Bono's (1995) six thinking hats to guide the individual to apply lateral (various types of) thinking can be implemented in the education system to improve the way that individuals, especially young learners, approach the idea of creativity. Curiosity in an individual leads to creativity, which improves the individual's confidence with regard to making choices (Hauck, 2021). Curiosity also provides a safe space in which an individual can be creative.

Although first-year Visual Arts education students were used in this study, it is important that all education students are ultimately involved so that they can form part of and contribute to the solution. I am of the conviction that it is important that our prospective educators, who are preparing to become effective educators, understand the importance of creativity, where creativity comes from, and how it manifests in individuals. It is also important that various aspects of creativity are understood to create a broader understanding of not only what creativity is, but how it is influenced, what it is influenced by, and how to improve and strengthen an individual's ability to use creative thinking to improve their critical thinking skills. It is also important that education students expand their knowledge regarding creativity and recognise creativity in themselves to improve their own thinking skills and approaches to creativity. This will enable these prospective educators to apply creative skills to any and every subject that they teach to create a holistic experience for their learners.

6.2.2 Primary research question

During the literature review on creativity and how individuals may perceive creativity, I realised that creativity cannot be measured. However, the perceptions individuals have of creativity can be identified, and therefore the primary question in this study was: How do first-year Visual Arts education students perceive creativity?

After critically considering the theories of Herrmann (1993), de Bono (1995), Sternberg (2010), and the literature about the process of creativity and the types of creativity occurring in individuals, I established that the students' perceptions would change over time. The participants were mainly influenced by the emotions that they experienced at that specific time in their lives and with the influences of their family, their current group of friends, and their interests, to name a few. When these factors change, their approach and perception of creativity will undoubtedly also change. However, some facets, such as their passions and

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culture, which influenced the creativity of some of the participants and how they perceived it, may remain the same.

The research question above, therefore, refers to how the students perceived creativity in a specific situation, at a specific moment – in this study – during the creation of their artwork. Individuals develop and their mindsets change over time as they mature in their thinking and experiences, therefore, their perceptions will change over time as the individual and their circumstances change. It is thus not possible to refer to only one artwork to establish how the group of student participants perceived creativity. This study only examined the thinking that took place in the moment that they were faced with a specific activity or instruction.

I consequently found that in order to understand or identify how an individual perceives creativity, it is important to broaden the focus of the research in the same way that the literature was added to. Creativity should be perceived as a way of thinking and not just creating, as identified by the three theorists discussed in this study. This can be done by observing or interacting with an individual over a longer period of time during which the individual would be faced with various challenges and situations. This process would enable me to get a more holistic view of how one individual or group perceives creativity. Another approach could be to identify how a group of individuals perceive creativity while facing the same activity or challenge, in a similar manner to this study. I found that most of the participants relied on their emotions and interests to identify a source of inspiration in the first place. The participants described what they enjoyed doing and what they had a passion for, and it showed in their artwork, even though there was a variety of objects to choose from as inspiration. Some of the participants did not pay much attention to the object used as inspiration, but rather to the message that they wanted to convey or to the art style that they loved. To delve more deeply into my research question, my focus would need to change. In other words, instead of focusing on how the participant might perceive creativity overall, the focus would be placed on a specific situation or moment in time in a specific context. My findings are consistent with the fusion of horizons, a theory developed by Gadamer (1967) (in Human 2015). Despite the participant's intention, it is the intersection of their horizon with the interpretation of the viewer that determines the meaning that is created. Therefore, I found that the participants' perception would continue to change due to changing circumstances. Throughout the study, limitations that influenced the outcome of the study were identified. These limitations as well as recommendations for future studies are discussed in the next section.

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6.3 Research limitations and recommendations

Certain limitations that influenced the outcome of the study were identified during the course of the study. I believe that addressing these would contribute to a more holistic study, with more comprehensive data to better understand how individuals perceive creativity.

Table 6. 1: Limitations and recommendations

Limitation	Description	Recommendation
Time	The participants were initially approached at the beginning of 2022, at the start of their visual arts journey. After meeting with the students again later in the year, I realised that they had matured in the way they described their skills, their views, and their creativity. They were able to describe their creativity and choices in more detail than at the beginning of the year. When comparing their answers to the second questionnaire with the answers to the first questionnaire, a clear difference could be seen. This indicated that they had either become more confident regarding their own skills and abilities or they had developed a better understanding of their own creativity. It is, therefore, concluded that not enough time was spent with the participants, as I only had two face-to-face meetings with them.	To create a better understanding of how an individual perceives creativity, the individual should be observed and interacted with over a longer period. Creating a timeline over a specific period will enable the researcher to see how the individual perceives creativity in various situations, which will provide a more comprehensive view of the creativity of the individual.
Questionnaires	Using only one approach to gather data has proved to be somewhat limiting. In the first questionnaire the participants did not answer in enough detail for me to gather the data that I needed. In the	To better understand the thought process behind the decisions of the participants, a group discussion, or face-to-face interviews will be a

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	second questionnaire I was able to word the questions differently, which generated more detail as the participants were able to provide more substantial, detailed answers. However, some of the answers were unclear and would have been better explained during an interview or group discussion.	better approach. This will enable the researcher to ask a question in a different way if the participant did not understand, or to ask the participant to elaborate if the researcher is unsure of what was said or would like to examine a specific response further.
Activity	Asking the participants to complete one activity only showed their perception of creativity during the completion of that activity. It did not show how they would have approached the activity in a different setting, when they were slightly more confident or perhaps more comfortable with the media provided.	Using various activities in various situations or circumstances will provide a more holistic view and interpretation of how an individual perceives creativity, enabling the researcher to get an overall understanding. The researcher therefore suggests that creativity is not only tested based on a visual arts activity, but by looking at a variety of activities related not only to creative arts but to real-life challenges and situations as well.
Students	The literature refers to all individuals being able to experience creativity, however, I only approached Visual Arts students who already saw themselves as creative or able to create. The study, therefore, focused on a fairly similar group of individuals and did not indicate how a variety of people would perceive creativity.	Approaching a more diverse group of individuals, including individuals who are not in a creative environment like an arts class, will provide a better perspective on how individuals perceive creativity.

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6.4 Closing remarks

The main objective of the study was to identify how the first-year Visual Arts education students perceived creativity while employing the different theories, namely Herrmann's (1996), whole brain model, Sternberg's (2010) triarchic theory of human intelligence, and de Bono's (1995) six thinking hats and lateral thinking. Using these models as a framework, I examined the types of creativity and creative thinking, the process of creativity taking place in an individual, and Williams' (1986) thinking levels to create a broad spectrum of creativity. Referring to these theories and literature enabled me to identify what creativity is, aside from the brain dominance approach. It has led me to both agree and disagree with the dominance approach to creativity. Left- and right-brain approaches can still be used to identify some factors that make an individual unique, enabling me to identify specific characteristics of an individual. However, the theories discussed in this study have also led me to believe that creativity cannot be located in only one area of the brain, or even one type of thinking. Creativity mostly influences an individual's thinking but it also influences their behaviour. The information also enabled me to understand how individuals might experience creativity due to the influences that they encounter.

Sternberg's (2010) triarchic theory of human intelligence inspired me to appreciate and understand creativity as more than merely the ability to create. Sternberg's view regarding the importance of three intelligences (practical, analytical, and creative) in cognitive development led me to understand that there is more to creativity than is generally understood. De Bono's (1995) development of lateral thinking employing the six thinking hats demonstrated the relevance of Sternberg's (2010) theory in a more practical way. The HBDI allowed me to move away from the brain-dominance approach to better comprehend the role that creativity plays in all facets or areas of thinking.

This study has shown that creativity is more complex than I initially thought and that a gap in our knowledge and understanding exists regarding the creative process. It has also shown that the lack of understanding and knowledge of creativity leads to the belief that an individual might not be creative or able to complete certain tasks. The lack of understanding has also influenced educators and the way they approach their classrooms. Nonetheless, the study has addressed the gap in understanding creativity by looking at how certain individuals perceived creativity. It concluded that these individuals perceived creativity did not remain the same due to the changing circumstances in which the individual might have encountered themselves. Influences can also change the way in which the individual perceives or applies creativity in a given situation.

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To form a better understanding of how individuals perceive creativity on the whole, I recommend that an approach that allows more interaction with the participants to be followed in future research in this regard. Nonetheless, through this study I was able to identify how the first-year Visual Arts education students of 2022 at the University of Pretoria perceived creativity during the creation of their artworks in a specific context.

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Appendices

Appendix A: Questionnaire Responses

Participants' responses to Questionnaire 1

Response to questionnaire: Participant 1	
1.	Name of the artworks for the purpose of the study. *The Dancing Figures.* The artwork contains three figures moving around in a planting pot. It looks like they are dancing.
2.	Please indicate if you want to participate in the study. Yes
3.	Is this your first time taking art education at university? Yes
4.	Why did you decide to enrol for art education? I have an interest in art
5.	With which gender do you identify? Female
6.	How did this influence your perspective on life? (Referring to question 4). Made me more creative with all aspects of my life
7.	What is your age? 19
8.	Describe the culture in which you were raised and with which you identify. Sotho
9.	Please elaborate on your current environment of residence. Suburban
10.	How would you describe your thinking? 'Right-brain thinker' or 'Left-brain thinker'? Why?

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	Right brain but highly influenced by left brain.
11.	Do you have any background in visual arts? If yes, please specify. Only from Grade 4 until Grade 9
12.	How would you describe creativity? Expressing your mind and thoughts
13.	What, do you think, is the importance of creativity? Understanding where your creativity comes from
14.	What is your favourite 'creative' activity? Why? Scribbling and drawing because I am able to draw but at the same time I can not really draw.
15.	How would your peers, family or friends describe you? Why? Happy, calm, serious at time, Quiet yet noisy and weird
16.	What inspires you to be creative? Emotions and ideas I am not able to express or images in my head that make sense only to me
17.	How would you describe your artistic style? Loose and young
18.	Why do you prefer the above-mentioned style? I can not really follow artistic rules because they are overwhelming and leave me with rigid work so I just go with the flow of my hand and what it does and young because it is still in development
19.	Compare your first and last artwork of this term. Do you see any difference? What is different? Why do you think it is different? They are slightly different

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20.	Thank you for taking the time to answer my questions. Please share a quote you live by! You are your own worst enemy

Response to the questionnaire: Participant 2	
1.	Name of the artworks for the purpose of the study. *The Moon and Stars.* The artwork contains a moon and coloured specs, considered to be stars.
2.	Please indicate if you want to participate in the study. Yes
3.	Is this your first time taking art education at University? No
4.	Why did you decide to enrol for art education? I have a passion for art and want to be able to teach others how to do art and find something to release their emotions
5.	With which gender do you identify? Female
6.	How did this influence your perspective on life? (Referring to question 4). I am more used to art but still growing and finding my passion
7.	What is your age? 20
8.	Describe the culture in which you were raised and with which you identify. Christianity
9.	Please elaborate on your current environment of residence. Residence on Groenkloof campus

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10.	How would you describe your thinking? 'Right-brain thinker' or 'Left-brain thinker'? Why? Both. I have very different types of thinking depending on the subject at hand.
11.	Do you have any background in visual arts? If yes, please specify. Yes, I did visual arts from Grade 10 in high school
12.	How would you describe creativity? The ability to create something out of the ordinary
13.	What, do you think, is the importance of creativity? You can express yourself as an artist with creativity
14.	What is your favourite 'creative' activity? Why? Painting, I feel more free and I can experiment a little more
15.	How would your peers, family or friends describe you? Why? Basically like Dory, because I have a bubbly personality and I'm quite forgetful
16.	What inspires you to be creative? I don't really know
17.	How would you describe your artistic style? Realistic
18.	Why do you prefer the above-mentioned style? I'm a bit of a perfectionist so I need things to look the same but I am trying to go outside this
19.	Compare your first and last artwork of this term. Do you see any difference? What is different? Why do you think it is different?

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	My first artwork is this class was the activity of drawing a hand from real life, it was strong with lines and wasn't shaded properly but my front cover drew hands and they don't have outlines and are looking more realistic. Time helped me to draw more
20.	Thank you for taking the time to answer my questions. Please share a quote you live by! Jesus replied, "You don't understand now what I am doing, but someday you will." John 13:7 NLT

Response to the questionnaire: Participant 3	
1.	Name of the artworks for the purpose of the study. The artwork contains shapes in different places, caught in what seems to be a storm. It reminded me of a scene from Alice in Wonderland, therefore it was named the Whimsical storm.
2.	Please indicate if you want to participate in the study. Yes
3.	Is this your first time taking art education at University? Yes
4.	Why did you decide to enrol for art education? I wanted to learn more about art, understand how to interpret it and learn how to make it.
5.	With which gender do you identify? Male
6.	How did this influence your perspective on life? (Referring to question 4). I have learnt that there is more to art than what meets the eye – art pieces usually have deeper meanings
7.	What is your age?

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	19
8.	Describe the culture in which you were raised and with which you identify. My family is not very cultural so I do not really know much about my culture
9.	Please elaborate on your current environment of residence. I stay in Hatfield, near the campus
10.	How would you describe your thinking? 'Right-brain thinker' or 'Left-brain thinker'? Why? I would like to think I am both. As much as I enjoy problem-solving, I hate math and as much as I enjoy art and music, I am not very expressive
11.	Do you have any background in visual arts? If yes, please specify. No
12.	How would you describe creativity? How unique you are relating to your imagination and thinking
13.	What, do you think, is the importance of creativity? It makes each and every person unique and gives others a fresh perspective on things
14.	What is your favourite 'creative' activity? Why? Writing poems. As a person who is always alone and never really has anyone to express themselves to, poetry gives me a chance to do so
15.	How would your peers, family or friends describe you? Why? As a quiet person who is always in their own head or loves listening to music
16.	What inspires you to be creative? Feelings and experiences
17.	How would you describe your artistic style? Both light-hearted and dark

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18.	Why do you prefer the above-mentioned style? Because I can be either positive or negative depending on how I feel
19.	Compare your first and last artwork of this term. Do you see any difference? What is different? Why do you think it is different? Yes, I do. My drawing has improved and is more precise
20.	Thank you for taking the time to answer my questions. Please share a quote you live by! Be yourself.

Response to questionnaire: Participant 4	
1.	Name of the artworks for the purpose of the study. The artwork is of a lady dressed in a stylish outfit and top hat.
2.	Please indicate if you want to participate in the study. Yes
3.	Is this your first time taking art education at University? Yes
4.	Why did you decide to enrol for art education? I have loved art and have been making art for a long time and it is something I wanted to continue. One of my two reaching subjects is also art, so being a art teacher is one of my two choices once I graduate.
5.	With which gender do you identify? Female
6.	How did this influence your perspective on life? (Referring to question 4). I have learnt that there is more to art than what meets the eye – art pieces usually have deeper meanings
7.	What is your age?

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	18
8.	Describe the culture in which you were raised and with which you identify. I was raised duel medium, English and Afrikaans, so with that also came the two cultures.
9.	Please elaborate on your current environment of residence. I like being at the university residence, which I have very much enjoyed. It also comes with a amazing support structure in place for me.
10.	How would you describe your thinking? 'Right-brain thinker' or 'Left-brain thinker'? Why? I don't really believe in left vs. right brain. I believe we all have some talents that apply both left and right brain element. Art might be considered more of one side, but when you draw you need math and timing etc.
11.	Do you have any background in visual arts? If yes, please specify. Yes, my dad whule not formally qny sort of artist can draw quite well, I took art classes when I was little, and also matriculated with visual arts.
12.	How would you describe creativity? Odd. Its difficult for me to think creatively, but sometimes it only takes a second to come up with some outrages ideas. I.e. painting with concrete.
13.	What, do you think, is the importance of creativity? It is nice to have creativity and be creative, but I feel like its also ok to live and do art without it. Ym
14.	What is your favourite 'creative' activity? Why? Yoga dancing. Reading?
15.	How would your peers, family or friends describe you? Why?

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	Academic, artistic, unique. I have always been very clear that I am not one to follow traditions. In any aspect of life.
16.	What inspires you to be creative? I am going to die, I may only have one life on this planet. I have had some rock bottom moments and they inspired me to live, even if you live irresponsibly, just do what makes you happy.
17.	How would you describe your artistic style? As not having a specialization. With matric art we were exped to use the years leading up to matric finding our style, meduim etc. I chose to rather every project try something different, start from scratch on a new meduim, style, etc. It was difficult sometimes because my peers had chosen their meduim/style and worked towards mastering it. But this also meant that i experienced everything. A jack of all trades is a master of none, but always better than a master of but one.
18.	Why do you prefer the above-mentioned style? Because how can you know its your favorite if you haven't tried them all.
19.	Compare your first and last artwork of this term. Do you see any difference? What is different? Why do you think it is different? Yes, not exactly by choice, but they are different. This last project had somewhat of a limitation in drawing style, as we are supposed to be being taugt how to draw. My style in the beginning was very different and more stylized.
20.	Thank you for taking the time to answer my questions. Please share a quote you live by! Hahaha, i am the quote queen. Not all those who wander are lost. Art is to console those who are broken by life. We've got to live, no matter how many skies have fallen. Catpe diem, sieze the day boys, make your lives extrodinary.

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Response to questionnaire: Participant 5	
1.	Name of the artworks for the purpose of the study. The artwork seems to portray the virus, Covid-19.
2.	Please indicate if you want to participate in the study. Yes
3.	Is this your first time taking art education at University? Yes
4.	Why did you decide to enrol for art education? I decided to enrol because I was once a person who loved art and randomly stopped and I decided to pursue it again because I missed the feeling of creating a piece that is original and sentimental to you.
5.	With which gender do you identify? Female
6.	How did this influence your perspective on life? (Referring to question 4). I've had the privilege of having art in my life since I was very young, as well as art education, so coming into university I felt a lot more confident than perhaps peers who had no prior experience.
7.	What is your age? 19
8.	Describe the culture in which you were raised and with which you identify. So I was raised in the Hindu culture. It was a culture of colour and light. And every outfit that we had to wear had some type of gorgeous design, which also made me fall in love with fashion and I realises this year that I can use art to create fashion through the different patterns and techniques explored. I now however identify as a Christian, but I also still stay true to my roots.
9.	Please elaborate on your current environment of residence.

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	Its quite a diverse environment. We learn alot from each other and are able to somehow relate as well
10.	How would you describe your thinking? 'Right-brain thinker' or 'Left-brain thinker'? Why? I am a hybrid brain thinker. I use logic to figure out things and I am very expressive, together with using artistic means to express myself when I am unhappy or even happy
11.	Do you have any background in visual arts? If yes, please specify. Yes, I had formally taken art until Grade 9 the chose Geography over art, however I spent most of my time in the art class...hehe
12.	How would you describe creativity? It is the ability to create something out of nothing and that is a reflection of who are.
13.	What, do you think, is the importance of creativity? The importance of creativity is so that we do not live a bland life.
14.	What is your favourite 'creative' activity? Why? Painting and sculpting, I enjoy being able to feel my art not just see it. Thats also another reason why I use Texture Gesso when I paint.
15.	How would your peers, family or friends describe you? Why? Jovial, talkative and creative
16.	What inspires you to be creative? Alot of things, like; emotions, my mum, the outdoors just to name a few.
17.	How would you describe your artistic style? I like to use a textured artistic style and also I love shading and now recently tone
18.	Why do you prefer the above-mentioned style? Again I live to feel my art and not just see it

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19.	Compare your first and last artwork of this term. Do you see any difference? What is different? Why do you think it is different? My first artwork was one that I did for second year. So I take two year of art as a second year student and what I have seen is that I am starting to make ise of more tone and shading as well as figuring out ways of getting proportions right
20.	Thank you for taking the time to answer my questions. Please share a quote you live by! Im times of crises the wise build bridges wile the foolish build barriers, we must find a way to look after one another as if we were one single tribe - T'Challa; Black panther

Response to questionnaire: Participant 6	
1.	Name of the artworks for the purpose of the study. The artwork has a large monster in the middle of the artwork.
2.	Please indicate if you want to participate in the study. Yes
3.	Is this your first time taking art education at University? Yes
4.	Why did you decide to enrol for art education? I love art and should have taken it from first year. I also wanted the extra credits.
5.	With which gender do you identify? Female
6.	How did this influence your perspective on life? (Referring to question 4). I found that no matter if you are a talented artist or not, art is a sense of being and if you enjoy it your work will be spectacular!
7.	What is your age? 22

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8.	Describe the culture in which you were raised and with which you identify. I was raised in an English/British culture and I suppose that since that was how I was raised, that is how I will identify myself until I see otherwise.
9.	Please elaborate on your current environment of residence. I stay in residence on campus at house Zinnia.
10.	How would you describe your thinking? 'Right-brain thinker' or 'Left-brain thinker'? Why? I think I am a bit of both, as I am extremely logical in some instances to the point where people get annoyed, and then in other instances I am creative to the extreme where people find it comical when I come up with the weirdest things to say and do.
11.	Do you have any background in visual arts? If yes, please specify. Yes. I did art in high school as a subject and my mother was very creative with raising me.
12.	How would you describe creativity? I find that I have a very vast imagination, often where my mind travels and I daydream way too much. I find that I am able to create stories and write them down. I especially love Celtic fairytales as they have a dreamlike fantastical origin, while also having the most beautiful illustrations. So a lot of my creative art is inspired by these fairytales.
13.	What, do you think, is the importance of creativity? Where the creativity stems from and how it is applied to the artwork.
14.	What is your favourite 'creative' activity? Why? I love painting with water colour as it is subtle and beautiful. It is fun to mix and blend colours to create an art piece. I especially love creating my own characters in my stories.
15.	How would your peers, family or friends describe you? Why?

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	My family lovingly describes me as insane and obnoxious. My friends describes me as energetic, imaginative and in some cases too forward and honest. I have difficulty with my impulsive urges to just talk out of bat and make noises.
16.	What inspires you to be creative? Definitely seeing other artists create art work so beautifully and meaningfully, that I myself want to be recognised for my art.
17.	How would you describe your artistic style? I do a lot of realism I think.
18.	Why do you prefer the above-mentioned style? It's because I can understand what I see and do on a logical sense. It is difficult for me to break rules and stray from what I understand and am used to. I hope to change that as I have great potential.
19.	Compare your first and last artwork of this term. Do you see any difference? What is different? Why do you think it is different? I find that my art has improved in this short time because I'm working my talent like a muscle.
20.	Thank you for taking the time to answer my questions. Please share a quote you live by! Do not care about what others think of you. You are the only one is going to get you to your dreams. Society needs to grow up.

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Response to questionnaire: Participant 7	
1.	Name of the artworks for the purpose of the study. The entire artwork was folded into geometric shapes, and more geometric shapes was drawn over it.
2.	Please indicate if you want to participate in the study. Yes
3.	Is this your first time taking art education at University? Yes
4.	Why did you decide to enrol for art education? I have always had a passion for art because I grew up in a home that was filled with art. My mom is an art teacher at our local high school in kzn so she created the passion for it all.
5.	With which gender do you identify? Female
6.	How did this influence your perspective on life? (Referring to question 4). It really has an influence because you are introduced to looking deeper into the life we live ourselves, not just in our work for art education. You see the beauty in everything and end up analysing it as well.
7.	What is your age? 20
8.	Describe the culture in which you were raised and with which you identify. I was raised as a Christian and I identify as one as well.
9.	Please elaborate on your current environment of residence. I live in res on the Groenkloof campus. It has been an interesting experience.

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10.	How would you describe your thinking? 'Right-brain thinker' or 'Left-brain thinker'? Why? I'm definitely a right brain person because I have a creative and artistic side which is way more dominant over everything else
11.	Do you have any background in visual arts? If yes, please specify. Yes I do, I took art in high school
12.	How would you describe creativity? The exploration of your imagination
13.	What, do you think, is the importance of creativity? I think without creativity life would be so boring and dull and there wouldn't be excitement. With creativity life is filled with joy and new ideas.
14.	What is your favourite 'creative' activity? Why? I love pencil drawing but weird abstract things and taking pictures while going for walks and runs on our farm. I also love watching videos of up coming artists work because they all so different. I also love just scrolling on Instagram and seeing the differences of people with outfits, living and just the odds of everyone.
15.	How would your peers, family or friends describe you? Why? They would describe me as a soft soul, because I love looking at only the good in everything and just enjoy all the little things in life
16.	What inspires you to be creative? My mum always inspires me because she is a free and happy soul that focuses on herself
17.	How would you describe your artistic style? Abstract
18.	Why do you prefer the above-mentioned style? I love the weirdness and imagination that you can explore

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19.	Compare your first and last artwork of this term. Do you see any difference? What is different? Why do you think it is different? I think there is a difference because I believe with every artwork you do improve in some way.
20.	Thank you for taking the time to answer my questions. Please share a quote you live by! Do not take life too seriously, you will never get out of it alive

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Participants' responses to questionnaire 2:

Response to questionnaire: Participant 1	
1.	When referring to your artwork, what was your inspiration to create this specific artwork? A certain object in my surroundings. I just imagined something looking at it
2.	(Refer to your answer in question 1) Why were you inspired by this? My lecturer showed us inspiration showing different ways to visualise objects in our surroundings
3.	Why were you drawn to use the paper you chose to complete the artwork on? I just thought an earthy background would work well with the charcoal sticks and the chalk with highlight and tone variation compared to a white paper
4.	Why were you drawn to the medium you chose to complete your artwork? I had never used it
5.	Why did you use the colour(s) you chose to complete your artwork with? I have seen people use white mediums to create depth with highlights
6.	What is the story behind your artwork? (Please explain what your artwork is about or what it is portraying.) Three people in a pot doing a variation of things and depicting different emotions - from sadness, determination and curiosity
7.	Would you change anything of this artwork? (If you answered yes, please explain why.)

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	Put the white tone in a better way, like portraying the roundness of the pot better or being realistic of where the light source is and how it highlights on the people
8.	How would you compare this artwork with your previous artworks? It's the same artwork
9.	What was your thought process when you created this specific artwork? Just to make it different and go with the flow. Follow the lines and see where it takes you
10.	How would you compare this artwork with your current artworks? My current artworks show a little more experience compared to my past one because of the amount of experience a probably gained
11.	What have you learnt about yourself (referring to your creativity)? I am pretty good with painting but i need to broaden my knowledge of art so i unlock more creativity with what art i can create and what stories I can tell

Response to questionnaire: Participant 2	
1.	When referring to your artwork, what was your inspiration to create this specific artwork? The sink because the sink was covered in paint and the drain reminded me of a night sky
2.	(Refer to your answer in question 1) Why were you inspired by this? The sink looked like a moon and stars in the evening but colourful stars

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3.	Why were you drawn to use the paper you chose to complete the artwork on? It was the first piece of paper that I found and I liked the texture.
4.	Why were you drawn to the medium you chose to complete your artwork? I was curious to see how well I could draw with Charcoal and then I used highlighters for the stars as I did not have other colourful pens with me
5.	Why did you use the colour(s) you chose to complete your artwork with? They reminded me of the colours in the sink
6.	What is the story behind your artwork? (Please explain what your artwork is about or what it is portraying.) My artwork is basically a night sky but with colour and not its usual black and white feel. It reminds me of a colourful evening, not every dark night is a dark night, there is always light.
7.	Would you change anything of this artwork? (If you answered yes, please explain why.) Yes the stars weren't very accurate and I didn't like my colour choice. It looks childish
8.	How would you compare this artwork with your previous artworks? I prefer my other artworks but I am proud of my innovation in creating an artwork that is different to what it actually looks
9.	What was your thought process when you created this specific artwork? I enjoyed the art piece, but I originally struggled to find something to draw. After I found something to draw I was passionate about my artwork.

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10.	How would you compare this artwork with your current artworks? My current artworks are better
11.	What have you learnt about yourself (referring to your creativity)? I underestimated my abilities in creativity but I do have creative thoughts, sometimes I just need to evaluate my thoughts.

Response to questionnaire: Participant 4	
1.	When referring to your artwork, what was your inspiration to create this specific artwork? For this artwork we had a prompt in art class, where we had to take something in class and use it as the basis of our drawing. I chose a lamp shade, that was the form of my final drawings dress.
2.	(Refer to your answer in question 1) Why were you inspired by this? The form remided me of an ild school dress skirt. I am a history fan and love old school fashion.
3.	Why were you drawn to use the paper you chose to complete the artwork on? It was the only option...
4.	Why were you drawn to the medium you chose to complete your artwork? It was a task to use charcoal. Though this is not my preferred meduim, and difficult to work with.
5.	Why did you use the colour(s) you chose to complete your artwork with? Monochrome is easy to use as it as it takes the need to choose.

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6.	What is the story behind your artwork? (Please explain what your artwork is about or what it is portraying.) The artwork portrays a Victorian era women.
7.	Would you change anything of this artwork? (If you answered yes, please explain why.) Yes, the hair definitely need refining, as it looks slightly rushed. I wish I could say I would properly draw the hands but I still wouldn't be able to.
8.	How would you compare this artwork with your previous artworks? I think this artwork is very well done considering that I spent a relatively short amount of time on it.
9.	What was your thought process when you created this specific artwork? I wanted something different, when you think aboutaterials in the classroom you dont neccesarily see a victorian woman.
10.	How would you compare this artwork with your current artworks? I think it is well done but could be refined.
11.	What have you learnt about yourself (referring to your creativity)? I was suprised by the ability tonform something so different from a lamp shade.

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Response to questionnaire: Participant 5	
1.	When referring to your artwork, what was your inspiration to create this specific artwork? I am an environmentalist, so I enjoy nature however I do not enjoy how it is being destroyed. We were also required to make an artwork by looking at certain objects in the class and manipulating their shapes to fit into our creative imagonation. I chose to look at a box and have a woman growing out of it, and then I saw paintbrushes and turned them into flowers and then looked outside and saw clouds and the sun and made the sun a covid molecule and then trapped all things great and small within the flower box as a form of protection with a skeletal hand powering poison onto it showing that the environment is in danger and one person cannot change it alone.
2.	(Refer to your answer in question 1) Why were you inspired by this? I was inspired by it becuase I wanted to create an awareness regarding the degradation of the environment we live in.
3.	Why were you drawn to use the paper you chose to complete the artwork on? I chose black paper becuase with degradation comes darkness, where there is no growth it is filled with darkness which changes the whole mood and thus creating this gloomy glum moodl
4.	Why were you drawn to the medium you chose to complete your artwork? I enjoy the black and white aesthetic thus I chose chalk on the paper to draw and then I also wanted colour so I tore up other pieces of paper to create flowers
5.	Why did you use the colour(s) you chose to complete your artwork with? I chose those colors well becuase those were the materials that were available but also becuase flowers have a fresh bright colour and I wanted to depict a fresh new day where we can continue to flourish healthily.

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6.	What is the story behind your artwork? (Please explain what your artwork is about or what it is portraying.) As stated in the first question, saving the environment and also acknowledging why the environment needs saving is an important aspect thus I chose to look at a box and have a woman growing out of it, and then I saw paintbrushes and turned them into flowers and then looked outside and saw clouds and the sun and made the sun a covid molecule and then trapped all things great and small within the flower box as a form of protection with a skeletal hand powering poison onto it showing that the environment is in danger and one person cannot change it alone.
7.	Would you change anything of this artwork? (If you answered yes, please explain why.) No
8.	How would you compare this artwork with your previous artworks? Well most of my artworks do revolve around nature, however they have more of a positive connotation. With this artwork it is more about the reality rather than the beauty of it.
9.	What was your thought process when you created this specific artwork? Save the world by trying to change and also see the good in the bad.
10.	How would you compare this artwork with your current artworks? I have started doing awareness artworks so it does follow the trend of creating an awareness, but this time round about the environment.
11.	What have you learnt about yourself (referring to your creativity)? I have learnt that if I focus on a certain theme I can manipulate any still life object to depict a message regarding the theme.

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Appendix B: Example of Informed Consent Form

Faculty of Education
Department of Humanities Education
INFORMED CONSENT FORM
Participants
I, …… hereby agree to participate in the research study: 'Exploring first-year education students' creativity in Creative Arts.

The purpose and nature of the study has been explained to me and I am participating voluntarily.

I understand that I can withdraw from participating in this project, without repercussions, at any time, whether before it starts or while I am participating. Should I wish to withdraw from this project, I comprehend that I still need to inform the researcher of my withdrawal and do not have to provide a reason.

In terms of my participation in the research study:
Should I wish not to participate in this project, I am aware that I will still have to inform the researcher of my withdrawal. Should I wish to withdraw, I am aware that I am still required to complete JKU 101 and all assessments required. The lecturer appointed to assess me in my assessments for JKU 101 will not be the researcher (Ms J. Willemse) for this project. I will inform the researcher immediately of my decision to no longer participate.

I understand that I have to attend various interviews and group sessions on an online platform, and complete or share some artworks that will not count for my final score in JKU 101.

I understand that my identity will be treated with confidentiality, and that my human and civil rights will be protected throughout the study. I will respect the community at all times and act ethically and morally towards my peers in this study.

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I understand that there are no medical risks involved in the study and that I am not obliged to continue with this study at any time when feeling uncomfortable.

I herewith give my consent that the researcher and the University of Pretoria may publish, distribute, or otherwise use all data collected during this project, including information regarding the project and all photographic materials of my work and progress.

I herewith agree that I have read and agreed to the above consent form, concur to all privacy and confidentiality clauses, and give my written approval to be participating in this project.

Participant:……. Signed……
Date…….
Student number:……

Researcher: Jean-Marie Willemse Signed……
Date…….

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