

CHARACTER IDENTIFICATION AND MINDSET:
AN EXPERIMENTAL DESIGN
USING DISNEY'S *FINDING NEMO*

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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Abstract

Mindset is defined as an individual's view of intelligence or ability. Mindset research began in the 1970s at Stanford University with Carol S. Dweck, who coined the terms "fixed mindset" and "growth mindset." A fixed mindset believes intelligence and abilities are limited and static. Each individual has a certain quantity, and no amount of risk-taking, effort, or perseverance will increase the amount of intelligence currently possessed. A growth mindset sees intelligence as something that can grow, transform, and change. Individuals with growth mindsets believe hard work pays off and are eager to learn new ideas, concepts, and theories to move forward in their learning journeys. Grit is defined by Angela Duckworth as passion and perseverance for long-term goals and closely aligns with the concept of a growth mindset. Mindset and grit are highlighted by academic and classroom challenges and can be identified in individuals as early as elementary school. The way students respond to challenges and failures significantly impacts their development. While there are assessments to help determine mindset and grit, creative-arts therapies may also be able to help identify them. Cinematherapy is a target intervention often used in academic and clinical settings to teach complex concepts and theories. This study examined the relationship between mindset/grit and character identification, using Disney's *Finding Nemo*. In other words, does a growth mindset relate to the growth-minded characters, while a fixed mindset relates to the fixed-minded characters? The study also used an independent between-groups experimental design to determine if the order of exposure to video case vignettes, using Disney's *Finding Nemo*, made a difference in a participant's level of identification with mindset/grit. It was hypothesized that exposure to the video case vignettes, prior to taking the mindset/grit assessments, would influence responses toward identification with growth mindset characters. The results showed that a significant relationship existed

between mindset and grit, but no significant correlations existed with the film characters of Nemo, Dory, Crush, or Marlin. There were significant positive correlations between the growth-minded characters of Dory and Crush, and negative relationships between Marlin and Dory, Marlin and Crush, and Marlin and Nemo. This was consistent with our study's hypothesis since Marlin was the only character holding a fixed mindset, and the others, a growth mindset.

Exposure to the video case vignettes did promote identification with the growth-minded characters of Dory and Crush, and decreased identification with the fixed-minded character of Marlin. Implications, applications, limitations, and suggestions for future research are discussed.

Keywords: growth mindset, fixed mindset, grit, cinematherapy, implicit theory, entity theory; incremental theory, counseling, counselor education, clinical practice, creative-arts therapy

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Dedication

This manuscript is dedicated to my husband Jeff, who has cheered me on and held me up every step of this journey. To my three boys, Nash, Kade, and Jett, thank you for your love and grace for a mom who spent countless late nights working until the wee hours of the morning, so that I didn't miss out on your daily lives. This degree is for you. It has taken real grit on all of our parts; we've grown so much in this process and earned this degree together. Words fail to express the deep, deep love I have for each of you. May Jesus be glorified in whatever happens next!

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CHAPTER ONE: INTRODUCTION

From the early 1970s, mindset research, the way someone views intelligence and ability, has been at the forefront of how students process, interpret, and respond to academic challenges in the classroom (Dweck, 1975). A student's core beliefs about the static or malleable nature of intelligence, gifts, or abilities are predictive of an entire psychological foundation (Dweck, 2017). Mindset research offers wisdom into why some students are open and interested in being challenged to learn new concepts and why others seem closed and disengaged when given an opportunity to learn something new. It offers insight into why certain students are excited to take risks in the classroom and why others seem paralyzed when given the opportunity to do so.

When students from elementary school to graduate school are open to taking on academic challenges, they also open themselves up to the possibility of failure (Dweck, 2007). Mindset research suggests that it is not so much a student's response to academic success that demonstrates their mindset, but their response to *perceived* academic failure. "Perceived" is highlighted because it is a hallmark term related to a fixed mindset perspective. Mueller and Dweck (1998) found that elementary-aged children who received positive feedback about their abilities, such as "you're so smart" or "you're so gifted," tended to adopt more of a fixed mindset and attributed failure to their limited quantity of intelligence or competence. To say it another way, when this group of children did not perform well and "failed," the messages they told themselves consisted of statements like "I'm just not smart enough" or "I'm just not good at that subject." These researchers also found that children who received effort-based feedback, based on how hard they had to work to receive a good score, tended to adopt a growth mindset and attribute failure to the level of work they had or had not put into the project. From their

perspective, they failed because they did not put in enough time and effort to perform at a higher level. Research suggests that students who face challenges and hold a growth mindset view these “failures” as opportunities for growth and therefore perform at a higher academic level (Meuller & Dweck, 1998; Dweck, 2006).

Dweck (2007) defines a growth mindset as one that believes intelligence is something that can grow and change. It is not a static quality, but one that can transform and flourish. Individuals with a growth mindset believe hard work pays off and are willing to wrestle with new concepts and theories to move forward in their academic journey. According to Duckworth, Peterson, Matthews, and Kelly (2007), this is part of the definition of grit: a “gritty” individual has the passion for overcoming immediate adversity while maintaining a vision for long-term perseverance. The concepts of grit and growth mindset are symbiotic in nature and hold contrasting values to a fixed mindset.

A fixed mindset is one that believes intelligence or ability is limited and static. In this perspective, each person has a certain quantity, and no amount of risk-taking, effort, or perseverance will increase or advance the amount of intelligence they currently possess (Dweck, 2007; Polirstok, 2017). They are either smart enough, or they are not. They are talented enough, or they are not. When these students encounter academic challenges, they become anxious and intimidated, choosing to misbehave in class and be labeled as having behavioral problems, versus appearing to fellow students as one who struggles academically (Polirstok, 2017). Ehrlinger, Mitchum, and Dweck (2016) found that individuals with fixed mindsets made up the majority of those displaying overconfidence, partly because their focus was on tasks that did not demand much effort, instead of tasks that required hard work. This begs the question of how to further address student mindset in academic settings.

To date, changes to improve educational institutions have focused on an increase in academic rigor, yet without addressing a student's mindset, this reform may be for naught. Referencing Dweck's research in the area of mindset, Hochanadel and Finamore (2015) write that a student's belief about their brain's ability to grow plays a significant role in their willingness, or unwillingness, to learn (p. 49). When students are given the knowledge that brain composition can change, it promotes a growth mindset. Professors and teachers that educate their students about brain composition and equip them with skills to persevere in the face of challenge assist in developing a growth mindset and fostering academic grit among students (Hochanadel & Finamore, 2015). It is in the face of adversity that a student's mindset is most clearly revealed (Yeager & Dweck, 2012). Practical strategies for identifying specific mindsets in the classroom could assist educators in meeting the needs of their students.

Limited research exists on whether creative interventions, specifically the use of film, can help to identify a person's fixed or growth mindsets. Some existing creative interventions include the use of "learning stories," where students discuss problems, challenges, actions, and successes through case studies; the use of literature; and several online brain and mindset-focused curriculums (Polirstok, 2017). These interventions can be considered "creative," but are not born from traditional creative therapies like art, music, drama, and cinema. Because of this, a gap in the literature exists as to whether creative interventions can help identify mindsets. Sometimes concepts that are difficult to articulate are better explained through themes found in films (Pierce & Wooloff, 2012).

Cinematherapy (CT) is a creative-arts therapeutic intervention that uses the themes and relationships in films to encourage a client's self-reflection, recovery, and growth (Egeci & Gençöz, 2017). Watching movies is a common form of entertainment and CT is a positive,

therapeutic reframe of that activity. CT uses metaphorical content and emotion activation through meaningful narratives to help clients access their underlying thoughts, feelings, and emotions (Sharp, Smith, & Cole, 2002). Clients find films can be motivational and can provide a “corrective emotional experience” (Lampropoulos & Spengler, 2005, p. 50). Borrowed from Narrative Therapy (NT), CT employs the concept of “externalization,” teaching that problems exist outside of the person (Turns & Macey, 2016). There is no diagnosing in NT, so the person is the person and the problem is the problem. An example of this would be the always-fearful Marlin, Nemo’s clownfish father in Disney’s *Finding Nemo*. In NT and CT, Marlin would not be labeled a “fearful fish,” he would simply be a fish that struggles with fear. The beauty of non-diagnosing and the externalization of the problem is that everyone in the room can discuss the problem (in this case, fear) without discussing the person (in this case, fish).

The core constructs of CT can be used to identify mindsets in many realms, including academic settings. In one example, Higgins and Dermer (2001) used films with master’s level counseling students and found them to be uniquely practical and productive when compared to traditional didactic methods in communicating the necessary skills to work with families and couples. “Integrating movies into counselor education assists students in acquiring the essential observational, perceptual, and executive skills necessary for working with couples and families” (Higgins & Dermer, 2001, p. 184). While these students seemed to embrace and enjoy a more creative approach to learning, research is limited in using creative interventions to research students’ mindsets in the classroom.

As mentioned above, educating students of all ages that change is possible is a crucial step to promoting a growth mindset. With careful film selection by professors, students not only have the opportunity to identify with certain characters in a film, but they also have a front row

seat to the character's journey. The externalization of their problems gives a safe distance to discuss these issues with professors and fellow students. According to Carl Jung (1931), "The cinema, like the detective story, enables us to experience, without danger to ourselves, all the excitements, passions, and fantasies which have to be repressed in a humanistic age" (Porterfield, Polette, & Baumlín, 2009, p. 112).

Using the concepts of CT when students face challenges in academic settings, educators have the opportunity to select a film that addresses the theme of overcoming a challenge, identify students' mindsets through character identification, and discover more specifically what challenges their students are facing. If character identification and mindset are linked, educators could then potentially facilitate the process of moving students toward a growth mindset as they model their journeys after that of the character/s in the film.

Problem Statement

From early elementary ages, students show signs of either a fixed or growth mindset (Dweck & Reppucci, 1973). This mindset impacts a person's overall level of academic grit and is particularly highlighted when confronted with an academic challenge (Duckworth et al., 2007). The way a student handles academic obstacles and failure in the classroom showcases their mindset and whether they will give up (fixed mindset) or continue to move forward (growth mindset; Dweck, 2007). The way students respond to challenges and feedback about perceived failures is critical to their development. Cinematherapy (CT) is a target intervention whose approach has been used to teach complex concepts and theories (Toman & Rak, 2000). With that said, a gap exists in the CT literature as to whether or not these interventions can help to identify and impact mindset. If character identification and mindset are related, this could help pinpoint someone's mindset and give them a window of insight on how to help address and

overcome academic and life challenges. There are no studies to date addressing this specific area of research.

Justification of Purpose and Significance

The first purpose of this study is to use Cinematherapy (CT), a creative-arts therapeutic intervention, to determine if specific character identification reflects a specific mindset -- either fixed or growth -- in adults who have all come through some level of the education system. The second purpose is to determine if the order of exposure to the film clips, using Disney's *Finding Nemo*, affects an individual's mindset. The assessments used in this study are Dweck's Eight Item of Implicit Theory Inventory, which uses a 6 point Likert-scale to measure levels of fixed and growth mindset, and Duckworth's Grit-S Scale, which measures a participant's level of grit (passion and perseverance for long-term goals). To account for personality confounds, the Mini-IPIP20 will be used to measure the Big Five personality traits: Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. The goal of this study is to determine if identification with a specific character in Disney's *Finding Nemo* reflects a particular mindset, and if placement of the Video Case Vignettes, either before or after the mindset and grit measures, influences participants to identify more closely with characters who display a growth mindset.

Research Questions

The first research question is exploratory and seeks to determine if a relationship exists between character identification and mindset/grit. By selecting a film with an "overcoming/persevering" theme, mindset and grit concepts are activated and can be more easily identified. After watching each of the four Video Case Vignettes, the participants will be asked a series of questions about character identification, mindset, and grit. The hypothesis is that a

relationship exists between identification with specific growth-minded characters (Nemo, Crush, or Dory) in Disney's *Finding Nemo* and a growth mindset, and a relationship exists between identification with the fixed-minded character (Marlin) and a fixed mindset. A detailed description of each of these characters is provided in Chapter Three.

The second research question reflects an independent between-groups experimental design and asks, "does the order of exposure to the film clips, using Disney's *Finding Nemo*, cause a change in mindset?" Does the placement of the film clips, before or after the assessments, cause a change in mindset and influence participants to identify more closely with characters who display a growth mindset? The hypothesis is that exposure to the Video Case Vignettes, prior to taking the mindset assessments, will influence the participants' responses toward identification with a character that holds a growth mindset.

Relevant Assumptions and Limitations

Mechanical Turk (MTurk) is a crowdsourcing Internet marketplace set up through the Amazon company, which is how participants will take part in the survey. Some of the advantages to using MTurk are the rapid speed at which data can be collected, the large pool of participants available, and the relatively small cost for the data compared to other external data collection services (Johnson & Borden, 2012). Research suggests that MTurk samples offer a more diverse sample in terms of age and multiculturalism. The external reliability of MTurk samples are higher, due to the availability of the Internet to most of the world's population (Buhrmester, Kwang, & Gosling, 2011). The psychometric properties (e.g., test-retest reliability) of using MTurk also seem to adhere to the same guidelines for other methods of data collection (Buhrmester, Kwang, & Gosling, 2011). One limitation of MTurk is the self-report measures used to collect data; it is possible some level of error exists because of social desirability and/or

trying to please the researcher.

Threats to Internal Validity

It is important to discuss internal validity to determine if this study shows strong evidence of causality. There are no extraneous variables that pose any significant threat of competing with our independent variable of the Video Case Vignettes (CT). Personality was a potential confound, so administering the Mini-IPIP20 to all participants controlled this. Because of the design of the study with two groups, history and maturation were not threats. Statistical regression was controlled for by the inclusion criteria of being in the survey for 600+ seconds, eliminating any statistical outliers. All of the participants were randomly assigned into groups, giving each person equal chance of being in the pre-video or post-video groups. Because of this, selection was not a threat to internal validity. There was no pre-test/post-test effect, and participants did not know which condition they were assigned, therefore testing and instrumentation were not threats. Each participant in the study received the exact same payment from Amazon's Mechanical Turk for taking part, so compensatory rivalry posed no threat to internal validity. There are no significant threats to internal validity.

Threats to External Validity

It is important to consider the threats to external validity because this affects the generalizability of this study's results to the broader population. Population validity is high as the sample contained participants from varied ages, genders, racial identities, and educational backgrounds. There was no threat to the interaction effect of testing because a pre-test was not present. There was no threat to the interaction of selection biases because the groups were randomly selected. Because of the representation in diversity, it is easier to generalize these findings to the overall population. There are no significant threats to external validity.

Definition of Technical Terms

Mindset is defined by Yeager and Dweck (2012) as “implicit theories about the malleability of human characteristics” (p. 302). The term “mindset” was first coined by Carol S. Dweck (1975) in her seminal research on the subject and can be found in academia and the media. The inaugural studies focused on the outcomes when students of varying ages faced some type of academic challenge and whether they would give up or persevere. Their beliefs and responses to this challenge determined their individual mindsets.

Fixed Mindset is one that believes “intelligence and other traits are relatively stable” (Macnamara & Rupani, 2017, p. 52). Every individual has a certain amount of intelligence or talent which will never grow or diminish. Those with fixed mindsets attribute failure to their lack of ability and are more likely to “avoid challenges, assume failure is attributable to ability that cannot be changed, be debilitated by failure, fall into a helpless pattern, and lost their desire to learn” (Macnamara & Rupani, 2017, p. 52).

Growth Mindset is one that believes “abilities are changeable with effort” (Macnamara & Rupani, p. 52). According to mindset theory, a growth mindset is preferable as it leads to targeted attempts to struggle with challenges and one that attributes failures to opportunities to improve and grow. Growth mindsets believe “they can develop their abilities through hard work, good strategies, and instruction from others” (Haimovitz & Dweck, 2017, p. 1849). Those with growth mindsets are not likely to give up in the face of adversity, but to attack it head-on in hopes of learning new concepts and gaining new skills.

Implicit Theories, in the realm of mindset research, are the “core assumptions about the malleability of personal qualities” (Yeager & Dweck, 2012, p. 303). They are different from scientific theories because they refer more to a practical interpretation for common, daily events.

Because of this, implicit theories are sometimes called “lay” or “naïve” theories (Molden & Dweck, 2006). Implicit theories help us to make meaning out of our experiences.

Entity Theory is an implicit theory characterized by the belief that intelligence is “fixed and unchangeable” (Ehrlinger et al., 2016, p. 95). Those with a fixed mindset subscribe to entity theory. Those with an entity view of intelligence spend time attempting to validate their intelligence by engaging in activities and experiences where failure is unlikely, and risk is minimal. Research suggests individuals who subscribe to entity theory are “motivated to maintain positive views of their intelligence, engage in acts that make them feel (over)confident,” and will go to great lengths to avoid negative feedback (Ehrlinger et al., 2016, p. 95).

Incremental Theory is also an implicit theory characterized by the belief that intelligence is “something that can be grown or developed over time” (Yeager & Dweck, 2012, p. 303). Those with a growth mindset subscribe to the incremental theory. Those who employ an incremental view of intelligence are more open to both positive and negative feedback and therefore, are more likely to view themselves realistically. They are also willing and eager to embrace risks and “adopt learning goals in which they strive to improve their abilities” (Ehrlinger et al., 2016, p. 95).

Grit is defined by Angela Duckworth (2009) as “passion and perseverance for long-term goals” (p. 166). Grit is striving to overcome adversity while maintaining a vision for perseverance. A growth mindset sees intelligence as malleable and is willing to embrace adversity. Grit is persisting with a growth mindset to accomplish long-term goals. Grit goes hand in hand with, and fuels, a growth mindset.

Cinematherapy (CT) is a derivative of bibliotherapy. It is “a therapeutic technique

involving the selection of films for the client to view that will have a direct therapeutic effect or be used as a stimulus for discussion and examination in future therapy sessions” (Wedding & Niemiec, 2003, p. 208). CT can be used to address personal issues in counseling, as well as an educational tool for a student struggling to understand another person’s point of view. CT has been found to be useful for clients dealing with grief, loss, death, disaster, anger, anxiety, depression, sexuality issues, family problems, relationship issues, PTSD, autism, self-esteem issues, and eating disorders (Wedding & Niemiec, 2003). Film is used as a catalyst for clients and students to identify with characters and discuss topics and issues that would otherwise be avoided. Clients and students can view problems or issues “metaphorically,” without confrontation (Powell & Newgent, 2010, p. 44). CT can be used in academic settings for instruction (Toman & Rak, 2000) and across all counseling modalities of individual, group, couples, family, child and adolescent, and adults as an addition to modular therapy to most evidence-based treatments (Wedding & Niemiec, 2003).

Significance of the Study

It is anticipated that this study will further the research to discover if mindset relates to character identification, potentially help counselors and educators identify and influence students’ mindsets in the classroom, and advance the evidence base of CT. Because there are no studies to date using character identification in CT and mindset exposure among adults, this study has the potential to offer integrative concepts for educators and clinicians. For clinicians, this research can help to validate the power of creative-arts therapies and mindset education with clients. For educators, this research combining mindset and CT can encourage and broaden the approach to instruction, demonstrate how to measure mindset in the classroom, and give practical examples to assist students in overcoming challenges and processing feedback as they

move forward in their development. For adults, identifying a fixed or growth mindset can mean a new perspective on learning, academic, and occupational success.

Chapter Summary

Mindset research has changed the way scholars, educators, and students approach intelligence and abilities. A fixed mindset sees intelligence as having a limited quantity where each person is allotted a certain amount of unchangeable intelligence. Because of this belief, when an individual with a fixed mindset encounters an obstacle, some type of adversity, or failure, they attribute their lack of knowledge to the fact that they just are not smart enough. They do not have what it takes to overcome the problem, and the messages they tell themselves are self-deprecating and filled with shame. On the other hand, a growth mindset sees intelligence as something that can change and grow. Each person can work hard and grow in their knowledge, and because of this belief, when an individual with a growth mindset encounters a challenge or makes a mistake, they see this as an opportunity to add to their skills and overall knowledge. The messages they tell themselves are things like, “I can learn from this” and “next time I’ll know how to handle that situation.” Their internal dialogue encourages them to keep moving and persevere toward their goals, demonstrating grit.

Limited research exists about using creative interventions to identify mindset across settings (academic, occupational, and spiritual). While some research exists using film to teach particular concepts, there is a gap in the literature when it comes to using the creative intervention of film to identify specific mindsets. Cinematherapy (CT) is the therapeutic use of film, but its concepts can also be adapted to academic settings. This study exists to determine if there is a relationship between mindset and character identification, and if the placement of the film clips through CT, using Disney’s *Finding Nemo*, influences participants to identify more

closely with characters who display a growth mindset (Nemo, Crush, or Dory). The next chapter will be an in-depth literature review on mindset, grit, and using CT with students.

CHAPTER TWO: REVIEW OF THE LITERATURE

How Mindset Relates to Character Identification

The purpose of this study is to determine if there is a relationship between mindset and character identification, using CT, and if pre-exposure to the four video case vignettes influences participants to identify more closely with growth mindset characters in Disney's *Finding Nemo*. The intention of the study is to contribute to the evidence bases of CT and mindset research by determining if the concepts are related and, if they are, to determine whether the order of exposure to film clips and mindset assessments influences participants to relate more to a growth mindset character versus a fixed mindset character. Does identification with a specific character reflect a fixed mindset, while identification with another character reflects a growth mindset? Is it possible to use mindset exposure and film to educate, enlighten, and equip people to be gritty and persevere through life's challenges with the tools of growth versus fixed mindset? If so, these concepts may be effective for use in academic settings to help educators identify and equip students, and to provide tools for students who are facing challenges or failure. This study has the potential to contribute significantly to clinical, educational, and occupational realms.

To be specific, the first research question is exploratory and seeks to determine if identifying with a certain character reflects identification with a specific mindset, either fixed or growth. After viewing selected film vignettes from Disney's *Finding Nemo*, participants will answer the Video Case Vignette Survey questions to specify which character reminds them most of themselves. The hypothesis is that there is a relationship between character identification and specific mindsets.

The second research question reflects an independent between-groups experimental design and seeks to determine if the placement of the film clips, within the Video Case Vignette

Survey, influences participants to identify more closely with characters who display a growth mindset, measured by the mindset assessments. Participants will be randomly assigned to one of two groups: Group 1 will take Dweck's 8 Item Implicit Theories of Intelligence Questionnaire (1999), the mini-IPIP20, and Duckworth's Grit-S Scale (2009) before viewing the Video Case Vignettes and answering the survey questions. Group 2 will take the assessments after viewing the vignettes and answering the survey questions. The hypothesis is that viewing the Video Case Vignettes prior to taking the mindset assessments will influence participants' responses toward identification with a character that holds a growth mindset (Nemo, Crush, or Dory).

Chapter Two will investigate the origin and history of mindset research, exploring the roots of Carol Dweck's inaugural studies. It will then establish the relationship between intelligence and mindset while highlighting the importance of mindset education in academic settings, referencing some strategies suggested as effective in promoting a growth mindset in the classroom. Grit will be highlighted next, exploring its origin and history, the significance of parental influence, and its relationship to growth mindset. After that, the history and more recent research about CT will be investigated, and the relationship between CT and education will be considered, citing studies that suggest the effectiveness of using film to help students embrace concepts and ideas. Finally, the gap in the literature between film character identification and mindset will be addressed.

Mindset Research

At some point in their academic career, every student who enters into formalized education will face challenges related to educational standards or relationships. The way that a person responds in the face of these challenges is key to their ability to succeed in the classroom and in life. Will they give up or will they overcome? Parents and teachers play key roles in

helping students navigate these demanding years; teaching study skills or establishing social boundaries are not enough to help students persevere in the face of adversity. People do not need self-esteem training or more activities to succeed; they need research-based strategies to tackle these challenges. Educating people about mindset research and the ways their time, effort, learning goals, endurance, and willingness to ask for and accept guidance can help them succeed both inside and outside the classroom.

History of Mindset Research

1970s

Mindset research began with the work of Dweck in the 1970s. Dweck defines mindset as the “core assumptions about the malleability of personal qualities” (Yeager & Dweck, 2012, p. 303). Her research began in a laboratory with animals, where she studied how animals learned and what motivated them to learn (Dweck, 2017). From this, the concept of “learned helplessness” intrigued Dweck (2017) so deeply that she moved from studying this quality in animals to studying it in children, in order to better understand their learning and motivation. She sought insight into why some students who face challenges and obstacles give up and quit trying, while others seem to thrive in this environment. Dweck (1995) built on the attribution work of Weiner (1970) and discovered that it was not a child’s internalization of success that influenced their learning and motivation, but their internalization of failure. When children connected their missteps to their abilities, they showed more “helpless” qualities and lacked the motivation to continue. They did not believe they had what it took to succeed, and they seemed ashamed because of it. When children connected those missteps to their level of effort, they had positive attitudes and were motivated to work harder and perform at a higher level on the next challenge (Dweck, 2006).

1980s

Dweck's (2006) research in the 1980s centered on children and their demonstration and development of intelligence and abilities. She found that children who wanted, but failed, to showcase their intelligence had a helpless response and attributed failure to some limited innate level of ability, believing that their ability could not be increased. She also discovered that children who invested in growing their intelligence did not internalize helplessness like the first group when faced with failure (Dweck, 2017). These children saw failure as a part of the learning process and adopted a "mastery-oriented" focus; working harder versus giving up. Dweck was not satisfied to end her research there; she wanted to know more about the differences between these two groups.

Mid 1980s to Now

Albert Bandura's daughter, Mary, conducted her dissertation at Penn State with Dr. Dweck, where together they examined the conceptualization of ability (Dweck, 2017). One group of children wanted praise over and over for showcasing their abilities, and the other group wanted to grow their abilities. The first group seemed to be demonstrating a static quality and the second group seemed to be demonstrating a malleable quality; from this, mindset research was born. "We now understood that a basic belief - in whether intelligence, talents, or abilities are fixed traits or are qualities you can develop - could create a whole psychological framework for achievement" (Dweck, 2017, p. 140). This helped to answer Dweck's questions as to why children with similar abilities had such drastically different responses to challenges and led to the creation of the terms *fixed mindset* and *growth mindset*.

Fixed and Growth Mindsets

Fixed Mindset

A fixed mindset sees intelligence as a static quality, where each person is given a certain amount, and there is no way to increase or decrease it (Haimovitz & Dweck, 2017). When confronted with a challenge or failure, a fixed mindset attributes the lack of success to limited level of ability. They are just not smart enough, clever enough, fast enough, creative enough, etc. Some researchers believe that being labeled “gifted” at a young age can potentially halt growth and cause a student to spend their time promoting appearances versus facing challenges (Davis, 2016). Presumably, if superior ability is present, then superior effort is unnecessary (Murphy & Dweck, 2015).

Those with fixed mindsets are likely to avoid situations where failure might occur, become paralyzed by failure, blame lack of ability for their failures, and eventually lose motivation and ambition for learning (Macnamara & Rupani, 2016). This mindset most often results in learned helplessness. One of the main questions that can predict mindset is, “is failure motivating or demotivating?” Fixed mindsets are demotivated by failure, cause people to put forth less effort, and to avoid any circumstances where risk-taking occurs. A fixed mindset leads to students studying less and avoiding areas where they have not easily excelled (Dweck, 2006).

It is important to determine the origin of a fixed mindset and how has it become a part of our educational landscape. Dweck (2008) suggests that the self-esteem movement of the 1990s may well be the source of our current students’ need for constant praise and their inability to receive constructive criticism. It is also, perhaps, the source of the fragile nature and sense of entitlement that exists among today’s youth (Dweck, 2008). Research suggests that person-centered praise (you are so smart; you are so talented, etc.) is not effective at instilling self-

esteem, as the movement promised. Sadly, it produced the opposite effect, and children's self-esteem became weak and delicate, impairing their desire to learn. This illustrates a fixed mindset. These children spend their time continually comparing themselves to others and wondering who is smarter than they are, and who is not as smart as they are.

Keeping up appearances of being smarter than others and having a firm grasp of control is of primary importance to those with a fixed mindset. Dweck (2008) states, "in their world, every performance holds their intelligence up for judgment, so that learning takes a back seat to looking smart" (p. 56). Appearances mean everything and can even lead to students being willing to cheat on tests or exams to avoid looking less intelligent than others. Those with fixed mindsets have difficulty admitting to mistakes because that ultimately creates shame, believing they are just not good enough or smart enough. Because of this, these individuals lose motivation to overcome challenges and tend more toward avoiding them: opting instead for tasks that are more familiar where success is guaranteed. Effort is not valued in a fixed mindset, because trying hard means you were not smart enough to do it the first time, and because of this, research suggests that this group of people does not excel in the classroom or the professional realm. They are simply unwilling to put in the effort it takes to learn and grow.

Entity Theory

Those with fixed mindsets are said to subscribe to entity theory, believing that intelligence and abilities are unchangeable (Ehrlinger et al., 2016). This group spends their time working hard to validate their intelligence by receiving praise versus working hard to improve their knowledge. They will typically only engage in activities where failure is unlikely and their abilities shine. When they experience failure, they are more likely to feel defeated, discouraged, and give up (Tseng, 2016).

Growth Mindset

A growth mindset sees intelligence as a malleable quality where each person has the ability to increase their knowledge or ability through working hard, having an action plan, and being taught by others (Haimovitz & Dweck, 2017). Those with growth mindsets welcome challenges and are willing to do what it takes to work their way through them. These individuals will not give up easily because they see obstacles and failure as parts of the learning process (Macnamara & Rupani, 2016). Because of this willingness to persevere, Dweck (2006) suggests those with growth mindsets are willing to set goals for learning, therefore experiencing higher levels of academic success.

Within the growth mindset, struggle is praised and linked to development (Davis, 2016). As with a fixed mindset, one of the main questions that can predict it is, “is failure motivating or demotivating?” (Haimovitz & Dweck, 2016). Davis (2016) states that those with a growth mindset have a “hunger for learning versus a hunger for approval” (p. 12). Growth mindsets are motivated by failure, willing to take risks, and have even more resolve for future challenges. A growth mindset sees the world as full of opportunities and possibilities (Yeager & Dweck, 2012).

In a study conducted by Yeager et al. (2016), an intervention was designed, using “expert tutors” in whatever academic area was posing challenges and obstacles for students. Growth mindset messages from the tutor, such as, “I’m proud of your hard work on that” and “See the progress that you’re making” showed large effects, i.e. higher GRIT scores, for 9th graders transitioning to high school (Yeager et al., 2016).

Those with growth mindsets are not consumed with performance or how their intelligence measures up to everyone else’s. When they encounter an obstacle to be overcome, they willingly embrace the process, believing that facing a challenge is an opportunity for growth

(Dweck, 2008). Completing a task with ease is not the measure of intelligence, and those with growth mindsets feel accomplished when they have wrestled with a concept and struggled through it to gain some level of knowledge or insight. When facing the aftermath of failure, a growth mindset revels at the opportunity to work harder or study in a different way the next time. Their misstep opens the door for wisdom and fits perfectly within incremental theory.

Incremental Theory

Those with growth mindsets are said to subscribe to incremental theory, believing that abilities and intelligence are adaptable and can change in “increments” with effort (Macnamara & Rupani, 2016). Embracing incremental theory means being open to both positive and negative feedback while setting goals to improve ability and/or intelligence. A more realistic view of self is another positive consequence of holding this theoretical perspective (Eherlinger et al., 2016). Those with incremental mindsets are willing to set lofty goals, view success or failure as elements within their control, and willing to risk failing at something because the long-term goals are learning and growth. Some researchers also call this “grit.”

Grit and Mindset

“Grit” is a term coined by Angela Duckworth (2007) as “perseverance and passion for long-term goals” (p. 1087). Gritty students are those that never give up, despite obstacles, failures, and challenges over extended periods of month or years (Duckworth et al., 2007). Whatever comes their way, gritty individuals stay the course and never stop pursuing their passions; they strive to overcome immediate adversity and maintain a vision for the future (Hochanadel & Finamore, 2015). In her inaugural study on grit, Duckworth et al. (2007) examined the success rate of 4,000 cadets at West Point in New York. In the face of challenge, grit, more than talent or any other factor, allowed these cadets to achieve their goals (Duckworth

& Quinn, 2009).

Duckworth and Dweck recognized that their research went hand in hand and joined forces to examine why some students persist academically in the face of challenge while others do not. In their collaborative research, Dweck concluded that developing grit helps move students toward a growth mindset, and Duckworth concluded that having a growth mindset developed grit. “It appears that when teachers teach students how to persist, a growth mindset develops, thus improving grit to overcome any challenges” (Hochonadel & Finamore, 2015, p. 49). Teaching students about mindset is key to their development.

Mindset Education

In 2014, President Obama identified “improvement in education outcomes as one of the highest domestic priorities in the United States” (Paunesku, Walton, Romero, Smith, Yeager, & Dweck, 2015, p. 784; U.S. Department of Education, 2014). Much of the research in academia about improved outcomes for students is focused on curriculum planning, academic rigor, teacher experience, class size, and the number of hours in a school day. Though none of those factors are inherently negative, research suggests when the focus is shifted to mindset education and long-term grit, students ultimately become more effective in the classroom and potentially more successful in life (Yeager & Dweck, 2012).

Research suggests that instructors’ comments to students, articulating either a fixed or growth mindset, have been established as a significant predictor of students’ views of their own intelligence (Smith, Brumskil, Johnson, & Zimmer, 2018). Instructors who hold a fixed mindset are more likely to have classrooms that lack positive culture, view student failure as a by-product of their fixed ability, and develop patterns to avoid students who are struggling with academic tasks (Deemer, 2004). In four individual blind studies, Yeager et al. (2013) found that “wise

feedback” from a teacher had significant effects and promoted a growth mindset on students’ academic performance on a writing assignment. Every student received feedback from their teacher communicating high expectations for him or her, but in addition to the teacher’s feedback on the essays, the researchers added this “wise” statement to half of the papers: “I’m giving you these comments because I have very high expectations and I know that you can reach them” (Yeager et al., 2013, p. 809). This simple statement had a significant effect on future student performance because the feedback communicated to them that they had the ability to grow and change. This study suggests that even minimal feedback put forth by a teacher can have significant effects on students’ beliefs about intelligence and mindset.

These concepts can also extend to application outside the traditional academic classroom. In an article by Davis (2016), he suggests that within the music classroom, reflection must be taught and practiced, and deliberate practice must take place to master areas of deficiency, thus promoting a growth mindset in the area of musical ability. Teachers and parents play the most significant roles in teaching these concepts.

Parental Influence

Contrary to popular belief, children do not need to hear that they are “smart” or “talented” and in fact, research suggests that this type of “person praise” contributes to the development of a fixed mindset and a limited view of learning and ability (Polirstok, 2017). Dweck (2017) noticed that children were initially excited to receive this type of praise, but when they encountered any type of challenge, that static ability backfired, and they attributed their struggle to the fact that they just were not smart or talented enough. In turn, their performance collapsed. A hyper-focus on a child’s talent can sabotage their motivation and willingness to learn (Haimovitz & Dweck, 2017).

“Process praise” is more beneficial: recognizing and encouraging a child’s effort, planning, goals, and perseverance helps children to move more toward a growth mindset and develop grit (Polirstok, 2017). Dweck (2017) also noticed that children who received praise for their success because of their hard work and learning goals were excited to tackle new challenges and obstacles, and their performance soared. “Problems that were hard to solve simply meant more effort or different strategies were needed, not that the child was incompetent or unworthy” (Dweck, 2017, p. 141).

For years, researchers have hypothesized that a child’s mindset develops from the type of praise they receive from a parent or parental figure. More recent research suggests it is not simply the praise children receive, but the way their parents respond to failure that helps to predict a child’s mindset (Haimovitz & Dweck, 2017). If a parent conveys failure as a part of the process of developing and learning, the child is more likely to develop a growth mindset. If a parent conveys failure as the ultimate disappointment, the child is more likely to develop a fixed mindset (Haimovitz & Dweck, 2017). Finding ways to communicate to children that challenges are normal and that struggles enhance learning are some of the best ways parents can promote learning and growth in their children.

Neuroscience and Beyond

Research suggests mindset can be taught and changes in the brain, due to learning new information, is convincing evidence (Schroder, Fisher, Lin, Lo, Danovitch, & Moser, 2017). In a study by Mangels, Butterfield, Lamb, Good, and Dweck (2006), undergraduate students who were identified as having fixed or growth mindsets and willing to undergo future EEGs were asked a set of basic knowledge questions across the domains of U.S. and world history, religion, literature, geography, natural and physical sciences, and art and music history (p. 77). After the

answers were compiled, the students were given performance feedback and learning feedback. According to the data, there was not much brain activity change when the performance feedback was given. However, when the learning feedback was given, those with a growth mindset sustained left brain activity for an extended period of time (Mangels et al., 2006). The authors suggested that this activity was indicative of the processing of the learning feedback. They were not surprised when given a spontaneous retest of the information; the growth-mindset group performed better. The researchers attribute their better scores to those with a growth mindset paying more attention during the learning feedback portion of the testing.

Research also suggests that teaching students how the brain can grow when it is “exercised,” just like a muscle in the body, has been linked to better grades and performance in the classroom (Dweck, 2008). A significant finding by Shroder, Moran, Donnellan, and Moser (2014) revealed that brain activity and cognitive control can be heightened by reading a short article about the brain’s ability to change. Neurological education is one strategy that has the ability to negate the belief “I’m just not smart enough” (Yeager et al., 2016, p. 374).

Strategies

Identifying students’ mindsets in the classroom is critical to helping them succeed academically and professionally: this research is proposing a unique tool for the identification of mindset in this setting. As previously stated, one of the best ways to promote a growth mindset is to teach students that their brains are capable of learning new information. Even a minimal amount of education about the neuroplasticity of the brain gives students the confidence and motivation to address obstacles and face challenges. Working hard does not indicate weakness, but indicates the belief that new connections in the brain can be formed and developed, thus causing the brain to grow and the individual to learn new information and skills.

Additional Mindset Strategies

In an article by Barnes and Fives (2016), they suggest some other strategies that teachers can use to identify mindset, including promoting risk-taking and the processing of mistakes in the classroom. A teacher that is willing to admit a mistake (such as a grading error) encourages students that mistakes are a part of the learning process and not the end of their academic career, or the world. Providing process praise and process feedback are significant ways that teachers can promote a growth mindset, while encouraging the modification of approaches to learning and conceptualizing ideas (Barnes & Fives, 2016). Students who underperform in tasks do not need comfort feedback, also known as coddling; this fosters helplessness and further solidifies a fixed mindset. Instead, these students need to be encouraged to implement a better action plan and more effective strategies for learning (Barnes & Fives, 2016).

Giving students multiple attempts and submissions of a paper or project can also help to promote a growth mindset. This indicates to students that they are not expected to get it right the first time and that it is acceptable to modify and revise their work. Helping students narrate their own “learning stories,” where they identify ways they have been successful or unsuccessful in overcoming challenges, is an excellent strategy to help students identify their mindset, according to Polirstok (2017). Giving students the opportunity to see themselves as “overcomers” who face and conquer challenges is key to their academic and occupational success. Perhaps one of the most critical and underused strategies for developing a growth mindset is learning to ask for help (Polirstok, 2017). This simple task requires admitting that there are concepts in which others are more experienced and knowledgeable, but can be taught to someone less knowledgeable. Not only are these concepts relevant in the academic world, they are also applicable to the business world.

Mindset in Business

In an article by Johnston (2017), he suggests that companies who are willing to investigate and admit their mistakes demonstrate a growth mindset and typically outperform those that are unwilling to do so. When upper-level management is willing to educate about fixed and growth mindsets and exemplify growth and change, the whole company will benefit. Those with a fixed mindset in this setting refuse to see the negative parts within themselves and often present as over-confident. Those with growth mindsets in business are willing to look at their negative characteristics, as well as positive ones, and move toward a more accurate view of their employees and companies (Johnston, 2017).

Gap in the Literature

It is clear that mindset plays a significant role in families, education, and business. In all of the strategies listed to discover mindset, no creative interventions were mentioned. Can creative techniques like art, music, dance, drama, or film help to identify fixed and growth mindsets? The next section will explore the roots and implications of Cinematherapy and its potential to do so.

History of Cinematherapy

Cinematherapy (CT) is a creative-arts therapeutic intervention, used by a counselor or educator, to explore the relationships and symbolism in films to promote self-analysis, healing, restoration, and to teach specific concepts. Powell and Newgent (2010) compare CT with prehistoric cave paintings; an archaic method of teaching and telling stories. The first documentation of film being used for something other than entertainment was in the 1940s when the Navy used film to instruct, equip, motivate, and rehabilitate soldiers in psychiatric hospitals (Katz, 1945).

As a prominent psychologist in 1946, Berman used 16mm films as incentives and rewards for psychiatric patients who adhered to the institution's hygiene standards and relationship boundaries (Powell & Newgent, 2010). These patients displayed calm moods during the showing of the films and displayed reformed social interactions after viewing the films. Berman witnessed patients becoming more emotionally activated and willing to take part in counseling sessions after viewing films (Powell & Newgent, 2010). The United States military continues to use film therapeutically, reaching out to soldiers who have suffered wartime emotional and physical injuries.

Duncan, Beck, and Granum (1986) conducted a study using film for a group of inpatient adolescents who were struggling with fears and anxieties about re-entry into typical culture after psychiatric hospitalization. Using the film *Ordinary People*, these adolescents were able to identify with Conrad Jarrod's character as he exited treatment and returned home. This helped to minimize clients' defense mechanisms, promote therapeutic dialogue between the client and counselor, and help prepare the adolescents for re-entering their home environments (Duncan et al., 1986). After several studies like these, Berg-Cross, Jennings, and Baruch (1990) officially coined the term "Cinematherapy" in 1990 and since that time, the evidence base has continued to advance.

Empirical Support

Measuring the efficacy of creative interventions is challenging, yet to date, six studies offer empirical support for CT. In the first study, a baseline pain threshold was established two weeks prior to the study so Adams and McGuire (1986) could measure the effect of CT on the pain levels of elderly patients with chronic pain conditions. After the administration of CT, using a comedic film, patients reported a decreased need for pain medications and showed a

statistically significant improvement in effect (Adams & McGuire, 1986).

A second study by Jurich and Collins (1996) used a pre-test/post-test model to examine the effects of CT on the self-concept of adolescents involved in 4H: a youth organization with a mission of promoting personal development, where the 4 “H”s represent head, heart, hands, and health (p. 863). Movies containing themes facing adolescents, like drugs, sexuality, alcohol, friendships, suicide, and family, were carefully chosen (p. 868). From the pre-selected group of films, one film per week was shown to both parents and adolescents for seven weeks in a row, with 10 discussion questions for post-viewing dialogue each session. The adolescents completed the Tennessee Self-Concept Scale both before and after the seven weeks, and every adolescent that participated in the study reported a significant rise in their overall Total Self-Concept (Adams & McGuire, 1996, p. 871).

Powell, Newgent, and Lee (2006) conducted the third study to determine the effect that CT had on a group of 16 adolescents with mental health diagnoses participating in a six-week coping skills group (p. 250). Three groups were formed and the film, *Fat Albert* was shown at the beginning of one group, the middle of the second group, or not at all to the third (control) group. Then, the Rosenberg Self-Esteem Scale was used to assess the three groups. While there were no statistically significant differences within or between the groups, the group that received the CT treatment at the onset of the group showed a significant positive change in specific areas of self-esteem (Powell et al., 2006).

A dissertation study by Powell (2008) at the University of Arkansas gathered data from a depressed client three weeks before the study, during the 11 weeks of the study, and three weeks after the study had concluded. The Beck Hopelessness Scale and an adapted version of a sentence completion task were used (Powell, 2008). The results of this single subject study

suggest the use of CT with depressed clients can improve their overall levels of optimism and hope.

Finally, in a fifth study by Egeci and Gençöz (2017), CT was used with five women with self-proclaimed relationship problems to see if they passed through the traditional stages of CT (identification, catharsis, insight, and universalization; p. 64). Results indicated that the participants did not pass through each stage of CT, but the researchers attributed this to CT being assigned as homework and not an in-session activity. Although participants did not pass through all of the stages, the research still suggested that CT assisted clients with moving through the phases required for a positive change in their relationships (Egeci & Gençöz, 2017).

The empirical base for CT includes five studies and suggests that CT helps to reduce pain symptoms in the elderly, enhance the self-concept of adolescents, positively affect the self-esteem of adolescents with mental health diagnoses, improve symptoms for clients with depression, and assist clients with relationship issues with taking the steps required to achieve healthy changes.

CT Roots

CT was born from bibliotherapy and shares concepts with narrative therapy. Bibliotherapy (BT) is the therapeutic use of written texts to help clients connect their personal narratives to that of literary characters or concepts to achieve growth and healing (Zacks, 2015). Narrative therapy (NT) is a therapy whose hallmarks include the non-diagnosing of clients and viewing clients as experts on their own lives. Both of these approaches have the goal of helping clients see themselves, their circumstances, and potential outcomes in a different light. With CT, the therapeutic goals remain the same, but the experience of watching a film or film clips engages the brain and the emotions at a deeper level (Zacks, 2015). Zacks (2015) emphasized

that while BT and CT share many commonalities, one significant distinction is in the lack of creative minutiae found in books, yet detailed in films (p. 5). His article suggests the more intricate the details are in the narrative, the more captivating and potentially instructive it becomes.

The primary idea borrowed from NT is the technique of externalization. Because NT does not diagnose clients, a client with a drug problem is not diagnosed as an addict, but rather a person who has a problem with drugs. A client that habitually lies is not a compulsive liar, but someone who has a problem with lying. The person is the person, and the problem is the problem. This provides an opportunity for both the counselor and the client to discuss the “problem” indirectly from a safe distance, allowing for the opportunity to increase health and decrease shame (Sharp et al., 2002).

BT and CT both contain four phases: identification, catharsis, insight, and universalism (Sharp et al., 2002). Identification in CT is the emotional or situational connection a client makes with a character seen on film. Seeing and experiencing that character’s processing of emotions in the film is called catharsis. Insight is achieved when a client recognizes the similarities, and potential solutions depicted by a character, to their own challenges. Universalism is the fourth and final stage of CT and happens when the client identifies themselves as having a common human experience and no longer feels singled out or alone in the world. While BT and CT share concepts, CT is growing beyond its BT roots.

Beyond BT

CT has grown to have several advantages compared to its rudimentary origin in BT (Sharp et al., 2002). First, client compliance within the counseling session is much higher with CT as compared to BT (Sharp et al., 2002). Clients exhibit increased compliance and decreased

resistance because they enjoy film "homework" as an emotionally engaging activity. Clients who were used to reading hard-copy books in BT found the technologically advanced techniques of CT to be more engaging and emotionally fulfilling (Ballard, 2012). Secondly, counselors have found that it is problematic to achieve therapeutic objectives when they see their client only one hour each week. CT makes therapeutic use of, and positively reframes, a pastime that clients are already enjoying in their daily lives. Follow-up is completed with an in-depth discussion of the designated "homework." Research suggests a positive relationship between an increase in engaged senses and the learning and retaining of information (Pitts, 2012).

CT has gained enough traction to stand on its own therapeutic legs, yet the effectiveness of both BT and CT hinges upon the processing of the specific intervention (Sharp et al., 2002). Ballard (2012) suggests we are moving away from books and toward technology. While that sounds daunting, it also paves the way for creative-arts interventions to stand in the gap and lead educational and counseling development.

Theoretical Foundation of CT

As discussed above, CT has evolved from BT and NT. It also has roots in the research of Milton Erickson, an American psychiatrist (Zachs, 2015). Unique to CT, the use of these powerful metaphors to externalize a client's problem/s allows them to address painful and challenging issues in an indirect manner (Dantzler, 2015). This minimizes resistance in counseling and promotes the formation of a strong therapeutic alliance; from this position, CT has the potential to encourage development and health in the therapeutic context.

Course of CT

CT can be a stand-alone intervention or a modular therapy added to an evidence-based treatment (Sharp et al., 2002). CT can be a first-line or last-line treatment and has been

identified as beneficial in case studies where clients are resistant or at a therapeutic impasse (Wedding & Niemiec, 2002). Being a creative therapeutic intervention, CT does not have an inflexible protocol; a basic structure is in place, where treatment goals are driven by the individual needs of a client. Experiencing that feeling of universalism while viewing a film helps clients to be fully invested in the process; and this deep commitment to a film and its characters is the first step of CT and the reason film selection is so crucial (Ryan, 2001).

Film Selection

As previously stated, not all films are fitting for CT, and metaphorical content must be a significant consideration when addressing the challenges in clients' lives. For example, a client dealing with substance abuse may not respond well to a film like *28 Days*, where Sandra Bullock plays the part of an addict. The content is not metaphorical, but a candid view of the problem, which feels like confrontation and generally evokes client defensiveness and resistance (Sharp et al., 2002). *Interview with a Vampire* would be more appropriate, where blood is the metaphor for addiction and highlights the catastrophic ramifications of its consumption in the lives of every character in the film (Sharp et al., 2002). It is also common for counselors to choose films that have had an impact on them personally.

The overarching theme of the film must be considered along with its potential influence on the client (Ballard, 2012). For example, *Fight Club* with Brad Pitt might not be worth all of the violence that has to be witnessed simply to get to its messages about possessions and consumerism. Films act as mirrors to the innermost motivations of clients, and careful attention is required of counselors when selecting films for clients (Yazici, Ulus, Selvitop, Yazici, & Aydin, 2015). The age, intellectual ability, emotional maturity, and cultural background should be considered when selecting a film for a client (Ballard, 2012). A positive aspect of

technological advancement is that films are easily accessible to counselors and clients through services like Netflix, Redbox, Roku, Hulu, Apple TV, and YouTube. CT can also assume several different treatment modalities.

Modality of Treatment

CT has the power to be a stand-alone therapy or a modular addition to most evidence-based treatments. It can be used with any counseling modality and has been shown to promote therapeutic strides with individuals, groups, couples, families, children, adolescents, and adults (Wedding & Niemiec, 2003, p. 211). CT is compatible with several theoretical perspectives including psychodynamic, psychoanalytic, cognitive-behavioral, humanistic, and family systems (Wedding & Niemiec, 2003, p. 211). “Cinematherapy is a nondiscriminatory intervention that can be applied to couples and families, regardless of race, gender, ethnicity, or sexual orientation” (Ballard, 2015, p. 146).

Cinematherapy, Creativity, and Education

While CT has been used primarily in clinical settings, the classroom is quickly becoming its second home. Lawrence, Foster, and Tieso (2015) suggest in an age of such rapid intellectual and technological advancement, creative thinking skills are the key to maintaining a “voice” in such a seemingly complicated society. These authors suggest that creativity is born from impasse. When it comes to the field of counseling, Samuel Gladding (2008) stated, “The helping strategies of yesterday are not always appropriate today. If counseling is to continue to be on the forefront of the helping professions, it must continue to promote creativity” (p. 103). With this in mind, it is simple to see why creative interventions, like CT, are beneficial for students to experience and learn to implement. In order to teach students to think creatively, these strategies must be infused and practiced within the academic curriculum. Creativity is often held as a

value, but no formal training exists to help students incorporate it into their academic or clinical identity.

Benefits of Creativity for Students

Much of academia tends to overlook creativity in general, but according to Carson and Becker (2004), teaching creativity within academic curriculum helps to increase levels of closeness among students, heightens the influence of the content, and sheds light on the learning process. When it comes to counseling students, Lawrence et al. (2015) suggest that creativity become an overarching approach to teaching, versus a toolbox full of specific counseling interventions and techniques.

Creativity requires implementing non-traditional strategies of instruction and learning. According to Shuler and Keller-Dupree (2015), one example of these creative strategies is called a “transformational learning experience” and helps students express feelings and understand the meaning they make of life experiences (p. 152). In this experience, students participate in some type of creative intervention to enhance a specific concept. This experience could be hearing a story, seeing a film clip, or creating something with their hands. After this, students write in their “reflective journals” about the experience and what they learned from it. Incorporating creative arts is a great way to reframe and give depth to a student’s understanding and can give students opportunities to remember their current and former struggles (Shuler & Keller-Dupree, 2015). Allowing students to experience these things in a classroom setting reminds them of the universal truth that all people face challenges and expands their knowledge to personal, in addition to book, knowledge. After a qualitative analysis of the students’ reflective journals, Shuler and Keller-Dupree (2015) discovered that students acknowledged personal challenges from the past and in the present; they expressed a deeper desire for change, self-exploration, and

growth, thus reflecting a growth mindset (p. 157-158).

Literature Gap: CT and Mindset

Some students enter school with fixed mindsets, wanting to know the “right” answers and “correct” way to respond to challenges. To fixed-minded individuals, this seems much easier than taking risks while learning to embrace ambiguity and creativity. Anytime a professor or a student steps into creativity, risk-taking is required. In a study by Matson (1991), he designed a course specifically to promote creativity in students by rewarding them based on their willingness to take risks in their coursework. Matson created a safe academic environment where risk might lead to success, or risk might lead to failure. The students’ abilities to accept failure as part of the process of creativity, was key to their perseverance and willingness to learn from their experiences, i.e., grit. This gritty growth mindset was most often observed in the skill of immediacy within the classroom (Matson, 1991).

CT can move individuals toward insight, while simultaneously letting them undergo a corrective emotional experience (Hesley & Hesley, 2001). CT can potentially help people identify with film characters in an environment that accepts their current life or academic challenges, and CT indirectly activates emotions, gives the opportunity to encounter emotions, and the potential to achieve catharsis (Hesley & Hesley, 2001). CT promotes a growth mindset by giving individuals an opportunity to see their challenges and identify possible solutions from a different perspective, reflected in the lives of the film’s character/s. CT offers the tools and motivation to help clients move ahead in their healing and help students cultivate a growth mindset and grit.

Many growth mindset interventions are criticized because they are not scalable on a broader level (Paunesku et al., 2015). The use of CT is scalable with some minimal training of

the instructor or counselor. To date, there is a gap in the research determining if CT character identification relates with specific mindsets, and if the use of CT can influence the outcome of an individual's mindset.

CHAPTER THREE: METHODS

This chapter investigates the methodology used to examine the relationship between mindset research and educational settings, along with assessing whether mindset relates to character identification using Cinematherapy (CT). This chapter will review the purpose of the study, list the research questions, and suggest hypotheses that correspond with each question. The process of recruiting participants and a list of measures used for the study are discussed next. Finally, a detailed report of the research process and the statistical tests used to analyze and interpret data, corresponding with the research questions and their hypotheses, are discussed.

Research Purpose

The first purpose of this study is to determine if identification with a specific character in Disney's *Finding Nemo* reflects a particular mindset, either fixed or growth. The second purpose of the study is to determine if exposure to CT, using Disney's *Finding Nemo*, influences participants to identify more with the growth-minded characters in the film. The goal of this study is to investigate the impact of the order of exposure to CT on mindset measures.

Research Questions and Hypotheses

Research Question 1: What is the relationship between character identification and mindset as measured by Dweck's 8 Item Implicit Theories of Intelligence Questionnaire and Duckworth's Grit Scale?

Hypothesis 1: Identification with a specific character will relate to either a fixed or a growth mindset.

Null Hypothesis: There is no relationship between character identification and mindset.

Research Question 2: Does the order of exposure to CT, using Disney's *Finding Nemo*, effect measures on mindset?

Hypothesis 2: Exposure to the Video Case Vignettes will influence the participants' responses on mindset measures toward identification with the growth-minded characters of Nemo, Crush, or Dory in the film.

Null Hypothesis: The order of CT exposure has no effect on mindset measures.

Research Design

This was an independent between-groups experimental design. Participants were recruited through Amazon's Mechanical Turk, an online Internet-based crowdsourcing platform. Because of the mindset implications for education, business, and clinical practice, this sample guaranteed that every person who received the survey was at least 18 years old. Communicating through this online platform gave the opportunity for large-scale sampling and small-scale research expenses. The fact that the survey is completely anonymous aided in making it less likely to be influenced by social desirability effects and free from coercion (Notko, Kimmo, Malinen, Harju-Veijola, & Kruonen, 2013). The online communication increased the number of survey responses and allowed an extensive collection of data ($N = 304$).

The request for participation informed individuals that this was a volunteer study for a doctoral dissertation and the data would be actively used soon after it was gathered. Participants were briefed about the purpose of the study and given the opportunity to opt in or out. If they opted in, they were taken directly to the informed consent page (Appendix A), giving the researcher/s the right to use their data in this dissertation research study. If the student completed the informed consent, they clicked on the link to connect them to the survey on the MTurk site. After consenting to the study, students were randomly assigned into one of two groups. Each participant only took part in one condition of the independent variable during the research experiment. In this study the Independent Variable was the CT film clips from Disney's

Finding Nemo, while the Dependent Variable was the mindset measures.

Group 1 completed the demographic section of the survey and then moved on to take the mini-IPIP20, Dweck's 8 item Implicit Theories of Intelligence Questionnaire (1999), and Duckworth's Grit-S Scale (2009) before viewing the Video Case Vignettes and answering the survey questions. Group 2 also completed the demographic information and the mini-IPIP20, but then moved on to the Video Case Vignettes Survey. After they had completed the survey, they took Dweck's 8 item Implicit Theories of Intelligence Questionnaire (1999) and Duckworth's Grit-S Scale (2009). After participants completed their survey, the data was coded and downloaded into the IBM SPSS Statistics program for analysis. This data analysis is described in more detail in the following sections.

Selection of Participants

Recruitment took place after IRB permission was granted for the study. An announcement went out on Amazon's Mechanical Turk site, asking people to consider participating in the research per their agreement with Amazon. Inclusion criteria consisted of those 18 years and older who were willing to agree to the consent form and complete the demographic information. Anyone who had not seen the film, Disney's *Finding Nemo*, was excluded from the study.

Research Instruments

Demographic Information. The demographic questionnaire asked if the student had seen the film, Disney's *Finding Nemo*. The questionnaire also included the age and gender of the participant, their level of education, current GPA, race, and familiarity with the concept of

mindset. The demographic information is listed in Appendix B. The next section is the battery of assessments that each participant took, either prior to the Video Case Vignette Survey, or after it.

Dweck's 8 item Implicit Theories of Intelligence Questionnaire (ITIS). This assessment is a revised edition of Carol S. Dweck's original measurement and contains two subscales with four items relating to Entity Theory and beliefs about self, reflecting a fixed mindset, and four items relating to Incremental Theory and beliefs about self, reflecting a growth mindset (Cook, Castillo, Gas, & Artino, 2017). An example of a fixed mindset and Entity Theory item is "I don't think I personally can do much to increase my intelligence." An example of a growth mindset and Incremental Theory item is "With enough time and effort I think I could significantly improve my intelligence level." Participants chose from a 6-point Likert-scale ranging from *Strongly disagree*, *Disagree*, *Mostly disagree*, *Mostly agree*, *Agree*, or *Strongly agree*.

Dweck's measure began as a three-item assessment for use with children, to measure fixed mindset beliefs. It later expanded to be used with adults in its present, eight-item format, with the addition of one fixed mindset question and four growth mindset belief items (Cook et al., 2017). This measure has been widely used, and factor analyses have given credibility to both one and two-domain versions. The "between-domain correlations have been moderate to large (r ranging from -0.42 to -0.74), and internal consistency reliability has been high (Cronbach's alpha ≥ 0.77) for each domain" (Cook et al., 2017, p. 1068). The assessment also has high internal consistency with a Cronbach's alpha = 0.80 for growth mindset beliefs and 0.85 for fixed mindset beliefs.

International Personality Item Pool (IPIP)-BFM 20. The IPIP 20 is a condensed version of the International Personality Item Pool created by Goldberg (1999) to assess the Big Five personality traits in adults: Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to experience. This measurement was normed on adults, which made it appropriate for this study (Ypofanti et al., 2015). This assessment is available at no cost to researchers at <http://ipip.ori.org/newQform50b5.htm>. The measure has an equal number of positively worded items and negatively worded items (Goldberg, 2006). “To be sure, brief scales may not capture all facets of the Big Five with equal fidelity; however, our four-item scales did not seem remarkably deficient when compared to their parent scales,” with a Cronbach alpha over .60 (Donnellan, Oswald, Baird, & Lucas, 2006, p. 196). The mini version of the IPIP rivals its 50-item predecessor in both reliability and validity, was normed on adults, and determined to be a psychometrically valid and effective measure of the Big Five personality traits (Donnellan et al., 2006).

Duckworth’s Grit-S Scale. The Grit-O was the original scale created by Angela Duckworth (2007) to measure passion and perseverance for long-term goals, i.e., “grit,” with adults. The Grit-O was originally 12 items, and the Grit-S (short version) has 8 -items. The Grit-S has been found to be more attractive to researchers and research participants due to its shorter length and psychometric strength, compared to its 12-item predecessor (Duckworth & Quinn, 2009). There were no changes in predictive validity when the 8-item scale was used in place of the 12-item scale. The Grit-S also performed better in confirmatory factor analyses. “Confirmatory factor analyses supported a two-factor structure of the self-report version of Grit-S in which Consistency of Interest and Perseverance of Effort both loaded on grit as a second-order latent factor. Both factors showed adequate internal consistency and were strongly inter-

correlated, $r = .59, p < .001$ " (Duckworth & Quinn, 2009, p. 171).

Video Case Vignettes. Case studies have long been used in the areas of psychology and counselor education to equip and train students on how to respond to and assist their clients. They are meant to tell a story with some type of message (Pai, 2018). A video case vignette simply uses video to tell that story. In our movement toward a post-literary society, video case vignettes are becoming more and more commonplace and effective (Pai, 2018). In this study, clips from Disney's *Finding Nemo* are used to depict characters in the film; Marlin, Nemo, and Crush.

Movie Synopsis

Disney's *Finding Nemo*, directed by Stanton and Unkrich (2003), is a story about Marlin, an overprotective clownfish, and his son Nemo. Marlin and his wife Coral had hundreds of eggs hidden within an anemone on the Great Barrier Reef. When a larger fish attacks their nest, Nemo is the lone survivor along with his dad. From that moment on, Marlin vows to never allow anything bad to happen to Nemo, but is that realistic?

On Nemo's first day of school, his dad shames him in front of his new friends, insisting that Nemo was taking risks that he knew were dangerous. In defiance and embarrassment, Nemo accepts the dare to swim out and touch a boat that is far beyond the reef's drop-off. To all of their dismay, as Nemo swims back to the edge of the reef to join his father and friends, he is captured in a net by a scuba diver. Terrified, Marlin swims into the deep, chasing the boat where his beloved Nemo has been captured. After swimming to exhaustion, the boat disappears and Marlin is hopeless. Just then, a friendly blue Tang fish named Dory offers to help him find his son. Marlin quickly realized that something is not quite typical about Dory. She explains that she suffers from short-term memory loss and the two end up on adventures with menacing-

looking sharks, a smack of jellyfish, and a bale of sea turtles as they search for Nemo.

All this time, Nemo has been transported to a fish tank inside a dentist's office, where he waits to be the gift to the dentist's niece, Darla, for her birthday. All Nemo wants to do is get back to his father. With the help of other fish in the tank, Nemo finally succeeds in getting himself back into the ocean, where Dory finds him and escorts him back to his heartbroken father for a sweet reunion. Once they return home, the film ends with Nemo heading off to school with the admonition from his father to go and explore his deep blue ocean home.

Finding Nemo Characters

Marlin. Marlin is a clownfish, and he is the father of Nemo. Marlin is a very cautious fish overall and a very protective dad. At the beginning of the movie, he and his wife have just moved to a large new sea anemone, where she has laid what appear to be at least 100 eggs. A large aggressive fish attacks the anemone and Marlin's wife and all his "children" are eaten, except one, Nemo. In the film, both prior to and after the attack, Marlin displays a non-adventurous, fearful, practical, and risk-avoidant set of ideals. He is a devoted father and is determined to protect his son Nemo, at all costs. He consistently cautions his son and doubts that the world has much good to offer. These are all qualities of a classic fixed mindset. Marlin attributes the loss of his wife and children to the fact that he just did not have what it took to protect them. He is not interested in new environments or any type of adventure. He has become almost paralyzed by his perceived failure and has fallen into a cyclical pattern of helplessness. In Marlin's mind, he is what he is, and he will never be anything more.

For this study, Marlin displays the characteristics of a fixed mindset.

Nemo. Nemo is also a clownfish and the young adolescent son of Marlin. Though he has grown up sheltered and has knowledge of the death of his mom and siblings, he is curious

and interested in the world. Nemo was born with one typically sized fin and one smaller fin that he and his dad call his “lucky fin.” Marlin see this lucky fin as a handicap, while Nemo views it as something that will never hold him back. On Nemo’s first day of school, Marlin takes him to the teacher and informs the teacher of his son’s “special” condition and asks him to specifically keep an eye on Nemo because of it. Nemo tells his dad that he is not held back by his fin, nor will it ever hold him back, and to please let him have a normal school experience. Nemo is imperfect, adventurous, curious, excited about learning, and very determined. Nemo displays a classic growth mindset. He believes that if he works hard with his lucky fin, he will be as successful as any typical fish in the sea. He is excited to learn, constantly has questions that he wants answers to, and is always up for an adventure. Nemo seeks instruction from others and never backs down from a challenge.

As Nemo’s class swims away on his first day, his father slips away to follow them and make sure his son is not in any danger. Much to Marlin’s dismay, he finds Nemo and three friends at the drop-off where the coral reef ends and the deep ocean begins. Nemo has been forbidden to go there. The friends have seen a boat and are daring each other to swim closer to “the butt.” As Nemo says, “My dad says it’s not safe” (Stanton & Unkrich, 2003) Marlin comes rushing in scolding his son, who, at that point, had not left the ledge of the reef yet. When Marlin scolds him in front of his new friends, Nemo swims away to “touch the butt,” and upon his return is captured by a diver. This diver is a dentist in Sydney, Australia and places Nemo in a fish tank in his office. Thus begins Marlin’s search of “finding Nemo.”

For this study, Nemo displays the characteristics of a growth mindset.

Crush. Crush is a 150 year-old sea turtle. Marlin and Dory meet Crush while searching for Nemo and swimming in the Eastern Australian Current (EAC). Crush speaks with

stereotypical “surfer” language and uses the word “dude” in almost every sentence while talking with friends and family. Crush is very laid-back, relaxed, and has an adventurous outlook on risk-taking and life. It is easy to determine that he holds a growth mindset. Marlin and Dory first meet Crush when they enter the EAC in their search for Nemo. Dory plays hide and seek with a group of juvenile turtles, including Crush’s “offspring” Squirt, while Marlin asks Crush all kinds of questions about life. One significant topic the two discuss is parenting, and at one point Marlin asks Crush, “So how do you know when they’re ready?” Crush replies, “You never really know, but when *they* know, *you’ll* know, you know?” (Stanton & Unkrich, 2003) Crush encourages Marlin to let go as a parent and encourages his son toward taking risks and becoming more independent.

For this study, Crush displays the characteristics of a growth mindset.

Dory. Dory is a royal blue tang fish that suffers from short-term memory loss. Because of this issue, Dory provides endless amounts of comedic relief to the otherwise grave subject of searching for a child who has been taken away from its parent. Marlin meets Dory shortly after Nemo has been captured, and Dory agrees to show Marlin the way to Sydney, where Nemo is believed to be located. Along the way, Dory forgets several times where they are going and why Marlin is following her. She also manages to fearlessly navigate encounters with a scary anglerfish, a frenzy of hungry sharks, a smack of jellyfish, and an enormous blue whale. Dory is adventurous and optimistic, always willing to help others, regardless of the danger to herself. She trusts easily, is eager to learn more and more, and is constantly looking to extract fun from life’s challenges, displaying a growth mindset. Dory’s motto for life is “just keep swimming, just keep swimming, just keep swimming” (Stanton & Unkrich, 2003).

For this study, Dory displays the characteristics of a growth mindset.

Video Case Vignette 1: Marlin & Nemo

In this clip, Nemo has just started his first day of school where the teacher, Mr. Ray, has lost sight of four students, including Nemo. They all swim to the edge of the reef at the drop-off, where Nemo knows he is not supposed to go. There is a boat in the distance and Nemo curiously asks his friends, “Whoa! What is that?” They reply, “It’s a butt” (Stanton & Unkrich, 2003). His friends take turns swimming out into the open water, pretending they are going to touch the boat/butt and when they ask Nemo to go, he says, “My dad says it’s not safe” (Stanton & Unkrich, 2003). Just then, Marlin swims in and yells at Nemo for following his friends and swimming into the open water, when he had not. Marlin goes on to tell Nemo that because of his lucky fin - which Marlin sees as a gross limitation - he cannot swim well. Nemo replies that he can “swim fine!” (Stanton & Unkrich, 2003). Then Marlin yells at him saying, “You think you can do these things, but you just can’t Nemo!” (Stanton & Unkrich, 2003). Nemo becomes angry at his dad and says, “I hate you” (Stanton & Unkrich, 2003). Mr. Ray swoops in to investigate the situation while Nemo slips away and spitefully swims out into the deep ocean toward the boat. One of his friends remarks, “Oh my gosh, Nemo’s swimming out to sea!” (Stanton & Unkrich, 2003). After Nemo has touched the boat in the deep ocean and is swimming back to the reef, Marlin yells this at him in front of his entire class: “That’s right! You are in BIG trouble young man!” (Stanton & Unkrich, 2003). Then, as everyone looks on, Nemo is captured by a scuba diver and taken away on the boat.

Video Case Vignette 2: Marlin & Crush

In this clip, Marlin and Dory have entered the Eastern Australian Current (EAC) and are swimming along with a group of sea turtles. The father sea turtle is Crush, and his young son is Squirt. Squirt is exploring and swimming back and forth and in and out of the EAC, and Marlin

is very stressed and anxious that Crush is not taking good care of his son. At one point, Squirt is playing and is tossed out of the current, causing Marlin to respond frantically, scared that Squirt is in danger. Crush leans over as Marlin lurches to rescue Squirt and says, “Hey, kill the motor dude. Let us see what Squirt does flying solo!” (Stanton & Unkrich, 2003) After a bit more discussion, Marlin asks Crush this question about children having more independence: “So how do you know when they’re ready?” Crush replies, “You never really know, but when *they* know, *you’ll* know, you know?” (Stanton & Unkrich, 2003) Marlin is skeptical and unsatisfied with this answer.

Video Case Vignette 3: Marlin & Dory

In this clip, Dory and Marlin have been swallowed by a whale, and Marlin tells Dory that he sees himself as a failure because he had told himself when his wife and children died that “I’d never let anything happen to [Nemo]!” (Stanton & Unkrich, 2003). While still inside the whale, water is rushing out, and Dory and Marlin are holding onto the whale’s tongue, trying not to end up in the whale’s belly. Dory suggests that they will be alright if they let go, and Marlin yells the same phrase at her that he said to Nemo earlier in the film: “You think you can do these things, but you can’t, Nemo!” (Stanton & Unkrich, 2003). He accidentally calls her Nemo and is confronted with his fixed mindset beliefs. Eventually, he is forced to let go, but is skeptical of the outcome until the very last moment.

Video Case Vignette 4: Nemo & Marlin

In this clip, Nemo has escaped the fish tank and has landed back into the ocean. He has been reunited with his father Marlin, and Dory is in trouble. She is trapped inside a fishing net with a huge bunch of larger fish. Marlin believes that it is a lost cause and there is no hope of saving Dory. Nemo assures him that he can help and asks his father to tell the fish to swim

down. Marlin argues “I am not going to lose you again!” but Nemo insists that he can help (Stanton & Unkrich, 2003). Finally, Marlin tells the fish to listen to Nemo and swim down. As they all follow Nemo’s instructions, the net breaks and Dory is released. Nemo’s idea works perfectly.

Research Procedures

Before data collection could begin, approval was sought from the Institutional Review Board (IRB). After IRB approval for the research was granted, the Video Case Vignette Survey and assessment measures were implemented online in Amazon’s Mechanical Turk, and an invitation to join the study was posted on the main MTurk page. This page contained a brief purpose statement for the study and if people chose to participate in the study, they clicked on a link that took them to the informed consent document where they could agree or disagree to participate. If they chose to agree to become a participant, another link was provided to begin the survey and the assessments. After the survey was completed, those participants willing to share their email addresses were entered into a drawing for one of five \$20 Amazon gift cards.

Ethical Considerations

Institutional Review Board approval was attained prior to any data collection. In addition, potential participants were given a description of the study and its purpose on Amazon’s Mechanical Turk page. If people were interested, they clicked on a link that took them to the informed consent page. If they agreed to become a participant in the study, they were directed to the film case vignettes and the assessments. If they did not agree with the informed consent, they were not allowed to become part of the research study.

In this study, participants remained anonymous for their own protection. Only very general demographic information was gathered, making the identification of a subject

exceptionally difficult. With this type of data collection, there is minimal risk of adverse effects to the participants in the study. If any emotional dysregulation or distress after watching the film case vignettes or completing the assessments arose, local counseling resources were supplied.

Chapter Summary

This chapter began with a detailed summary of the research questions and the research hypotheses, and then the research design for this independent between groups experimental study was outlined. Participant selection was then discussed, along with a detailed description and evaluation of the research instruments and measures used in in the study. Finally, data processing and analysis, and ethical considerations were discussed. This completes Chapter Three: Methods.

CHAPTER FOUR: RESULTS

The first purpose of this study was to use Cinematherapy (CT), a creative-arts therapeutic intervention, to determine if specific character identification reflected a specific mindset, either fixed or growth, in participants. The second purpose was to determine if the order of exposure to the film clips, using Disney's *Finding Nemo*, affected an individual's mindset. The research was designed to explore the possibility of a relationship between identifying with specific characters in Disney's *Finding Nemo* and a specific mindset, either fixed or growth, and to determine if seeing the film clips before or after taking the assessments had any effect on the participant's results. This study suggested a research model that considered two hypotheses when looking at the relationships between these variables. The first hypothesis suggested that a relationship exists between identification with specific growth-minded characters (Nemo, Crush, or Dory) in Disney's *Finding Nemo* and a growth mindset, and a relationship exists between identification with the fixed-minded character (Marlin) and a fixed mindset. The second hypothesis posited that exposure to the Video Case Vignettes, prior to taking the mindset assessments, would influence the participants' responses toward identification with a character that holds a growth mindset.

Since the Cinematherapy film component plays a significant role in the research, it was important only to include those participants that remained in the survey for more than 600 seconds. Taking that into consideration, 179 of the 304 respondents made up our sample population. Participants were given demographic items including questions regarding their gender, age, race, level of education, and whether or not they had seen the film, *Finding Nemo*. After giving their consent, participants entered into one of two conditions where both conditions began with the mini-IPIP personality screening. Next, the participants either received the Video

Case Vignettes first (Primed Video) or they received the assessments first (No Primed Video).

This chapter describes the research processes used to examine whether the hypotheses supported the data. This is a summation of the study's findings.

Data Screening

The sample was gathered from Amazon's Mechanical Turk, where 305 participants volunteered to take the survey and were compensated \$2 each for taking it. Participants were asked if they had seen the film, Disney's *Finding Nemo*; originally, this was the only inclusion criteria. Once the Video Case Vignettes Survey was complete, the researcher also determined the length of time spent in the survey needed to meet or exceed 600 seconds, or at least 10 minutes. After the initial screening of these criteria, 126 participants' data were excluded from analysis, leaving the study with $N=179$.

Prior to the start of the statistical analyses, any variables in the study were tested for normal distribution, missing data, and statistical outliers in SPSS Version 24. Also computed were Pearson correlation coefficients, the means, standard deviations, skewness, and kurtosis of each of the variables found within the MTurk sample population.

Participant Demographics

Of the 179 participants who were included in the analysis ($N = 179$), 52.5% were male, and 47.5% were female. Participants ranged from ages 21 to 67 years old ($M = 36.6$, $SD = 9.91$), and all participants disclosed their age. The majority of participants identified as Caucasian/White (77.7%), with 8.9% identifying as African American; 1.7% as American Indian or Alaska Native; 5.6% as Asian; 5.6% as Hispanic, Latino, or of Spanish origin; and .6% identifying as "other." All participants were willing to disclose their race. Most participants had earned either a bachelor's degree (41.9%) or a master's degree (11.2%); a professional degree

(2.2%); some type of trade/technical/vocational training (8.4%); and 1.7% currently completing a doctorate. High school diplomas or GED equivalents made up 18.4% of participants, while .6% never completed high school. Of those with specialty degrees, the three highest percentages were computer science at 3.9%, business degrees at 2.8%, and accounting degrees at 2.8%. All participants chose to disclose their highest level of education. Out of 179 participants, 137 (76.5%) said they had seen Disney's *Finding Nemo*, 12 (6.7%) said they might have seen it, and 30 (16.8%) said they had not seen the film (see Table 4.1).

Table 4.1

Participant Demographics

	<i>N</i> or Range	% or <i>M</i>
Overall Age	21–67	36.6
Age (Male)	21–67	52.5
Age (Female)	23–62	47.5
Gender		
Male	94	52.5
Female	85	47.5
Racial Identity		
Caucasian/White	139	77.7
African American	16	8.9
American Indian or Alaska Native	2	1.7
Asian	10	5.6
Hispanic, Latino, or of Spanish Origin	10	5.6
Educational Background		
Less Than High School	1	0.6
High School Diploma or Equivalent (e.g., GED)	33	18.4
College Freshman	8	4.5
College Sophomore	10	5.6
College Junior	6	3.4
College Senior	4	2.2
Trade, Technical, or Vocational Training	15	8.4
Bachelor's Degree	75	41.9
Master's Degree	20	11.2
Professional Degree	4	2.2
Doctorate	3	1.7
Missing	15	11.1
Seen Disney's <i>Finding Nemo</i>		
Yes	137	76.5
Maybe	12	6.7
No	30	16.8

Sample Means

The minimum score, maximum score, mean, and standard deviation were calculated for each of the measures used in the study.

Table 4.2

Descriptive Statistics of All Measures Used in this Study

Measure	Minimum Score	Maximum Score	<i>M</i>	<i>SD</i>
IPIP Extroversion	1.0	5.0	11.22	4.117
IPIP-Agreeableness	1.0	5.0	15.10	3.656
IPIP-Conscientiousness	1.0	5.0	15.63	3.264
IPIP-Neuroticism	1.0	5.0	9.81	3.770
Intellect/Imagination	1.0	5.0	11.91	1.546
Dweck Fixed Mindset 1	1.0	3.0	2.31	0.819
Dweck Growth Mindset 1	1.0	3.0	2.58	0.663
Dweck Fixed Mindset 2	1.0	3.0	2.24	0.848
Dweck Growth Mindset 2	1.0	3.0	2.59	0.687
Dweck Fixed Mindset 3	1.0	3.0	2.28	0.761
Dweck Growth Mindset 3	1.0	3.0	2.63	0.619
Dweck Fixed Mindset 4	1.0	3.0	1.91	0.719
Dweck Growth Mindset 4	1.0	3.0	2.65	0.556
Grit 1 Distraction	1.0	5.0	3.31	1.169
Grit 2 Setbacks	1.0	5.0	3.65	1.214
Grit 3 Goals	1.0	5.0	3.41	1.172
Grit 4 Hard Work	1.0	5.0	4.21	1.068
Grit 5 Focus	1.0	5.0	3.63	1.139
Grit 6 Finish	1.0	5.0	3.93	1.034
Grit 7 Interest	1.0	5.0	3.20	1.156
Grit 8 Diligence	1.0	5.0	3.85	1.064
Grit 9 Obsession	1.0	5.0	3.34	1.170
Grit 10 Overcoming	1.0	5.0	4.05	0.922

After reverse coding had taken place, Cronbach's alpha coefficients were computed for each scale to determine reliability. Composite variables were calculated for each scale, determining their mean scores. Correlations, means, and standard deviations are displayed in Table 4.3.

Data Analysis

Data analysis was performed through IBM's SPSS Statistics program, Version 24. Participants who did not remain in the survey for 600+ seconds or were not 18 years or older were excluded from analysis. Correlations were calculated between the No Primed Video and

Primed Video subscales, and subsequent *t*-tests were performed for the two groups and conditions. The remaining pages of this chapter contain these analyses.

Statistical Findings

Pearson's *r* correlations were run to determine relationships between variables, and an independent samples *t*-test was run to compare the No Primed Video condition to the Primed Video condition across variables. This section begins with Pearson's *r* correlations by highlighting Mindset and Grit, describing the relationship between them. Next, there is a Pearson's *r* Correlation Table (4.3), displaying all of the correlations in the study. Table 4.3 is followed by a description of the findings for each character in the film: Nemo, Marlin, Crush, and Dory. Next, the relationships between the Mini-IPIP20 Personality measure, Mindset, and Grit measures are described.

Mindset and Grit

A statistically significant relationship exists between Mindset and Grit in the No Primed Video condition (.226*) and, while the relationship is still positive in the same direction, it is no longer significant in the Primed Video condition (.130). Participants saw Mindset and Grit to be more closely related prior to exposure to the film clips. After seeing the Video Case Vignettes, the relationship between the two variables was still positive, but no longer statistically significant. Among participants, the relationship between Mindset and Grit became weaker in the Primed Video condition.

Table 4.3

Pearson's r Correlation Table

	1	2	3	4	5	6	7	8	9	10	11	12
Marlin ID (1)	1	-.264*	-.701**	-.319**	-.009	-.186	-.093	.382**	-.192	-.131	-.222*	-.166
Nemo ID (2)	-.267	1	-.009	-.288**	.176	-.154	-.099	-.125	-.098	-.103	-.040	-.107
Crush ID (3)	-.649**	-.219*	1	-.188	.016	.157	.015	-.184	.040	.045	.033	.177
Dory ID (4)	-.258*	-.156	-.082	1	-.131	.116	.120	-.217*	.190	.154	.283**	.043
IPIP (5) Extroversion	-.345**	.504**	.031	.051	1	.192	.095	-.314**	.051	-.093	.123	-.051
IPIP (6) Agreeableness	-.148	.114	-.061	.056	.157	1	.433**	-.273*	.200	.259*	.444**	.024
IPIP (7) Conscientiousness	.019	.064	.012	-.108	.026	.030	1	-.370**	.241*	.139	.649**	.302**
IPIP (8) Neuroticism	.245*	-.167	-.184	-.106	-.263*	-.262*	-.479**	1	-.183	-.197	-.474**	-.333**
IPIP (9) Intellectual Imagination Mindset (10)	-.129	.170	-.071	.098	-.025	.117	.117	.506	1	.190	.235*	-.009
Grit (11)	-0.133	.260*	.066	-.189	.316**	.149	.554**	-.581**	-.081	.226*	1	-.265*
Age (12)	0.136	.116	-.203	.066	-.031	.012	.157	-.167	.137	.152	.174	1
Mean	18.73	19.46	16.78	16.82	11.22	14.98	15.63	9.79	11.88	2.40	36.59	
SD	3.10	6.01	5.65	5.37	4.12	3.74	3.26	3.77	1.58	.462	7.51	
Range	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-3	1-5	
Cronbach's α	.719	.766	.801	.782	.815	.819	.711	.734	.797	.795	.867	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Correlations above the diagonal are for the Primed Video group and below the diagonal are for the No Primed Video group.

Nemo

Nemo identification is positively correlated with Grit (.260*) in the No Primed Video condition, but not in the Primed Video condition (-.040; see Table 4.3). In other words, in the Primed Video condition, participants saw Nemo as less gritty. While insignificant, Nemo moved

from no relationship with mindset (0.000) in the No Primed condition to a negative relationship in the Primed Video condition (-.103). Counter to Hypothesis 1, participants view Nemo as having a weaker relationship with both Mindset and Grit after viewing the Video Case Vignettes. These are interesting findings and are discussed in more detail in Chapter Five.

Nemo identification is the only significant correlation in the No Primed Video condition, meaning that before viewing the film clips, Nemo was the only character identified by participants as having a positive relationship with Grit (passion and perseverance for long-term goals). Nemo is one of the growth-minded characters, and Marlin is the fixed-minded character: in both conditions, their relationship is negatively correlated at No Primed Video (-.267*) and Primed Video (-.264*). It is consistent with Hypothesis 1 that these characters would be negatively correlated in both conditions as one represents a fixed mindset (Marlin) and the other a growth mindset (Nemo). That is, while the positioning of the scales in the experimental sequence changed some relationships (as noted above and below), this relationship behaved as expected, irrespective of the experimental sequence.

In terms of Nemo's relationship to the mini-IPIP20, the only significant correlation is between Nemo and Extroversion in the No Primed condition (.504**). The correlation is still positive in the Primed Video condition (.176), but not as strong and no longer significant. It was suspected that age might be a factor and covariate in participants' identification with Nemo, but when tested, there is no significant relationship between Nemo and age (.116). In fact, there are no significant correlations between any character and age.

One set of correlations that does not seem to support Hypothesis 1 is in relation to Nemo. Nemo is negatively correlated with Crush in the No Primed Video condition (-.219*) and still has a negative, yet insignificant, relationship with Crush in the Primed Video condition (-.009).

The negative correlation is unexpected because they are both growth-mindset characters, and conceptually, they would seem to align with one another. Nemo also has negative, yet insignificant relationship with Dory in the NP group (-.156), but in the Primed Video group, he has a statistically significant negative relationship with Dory (-.288**). Possible reasons for these results are discussed in detail in Chapter Five, and all of this information is found in Table 4.3.

Marlin

In the Primed Video condition, Marlin identification is negatively correlated with Grit (-.222*). In other words, after watching the video clips, Marlin was seen as having a negative relationship with Grit, therefore being less gritty according to participants (see Table 4.3). As mentioned above, Marlin's relationship with Nemo is negatively correlated in the No Primed Video condition (-.267*) and in the Primed Video condition (-.264*). It is consistent with Hypothesis 1 that these characters would be negatively correlated in both conditions as one represents a fixed mindset (Marlin) and the other a growth mindset (Nemo).

Marlin identification is also negatively correlated with the other growth-minded characters Crush (-.649** & -.701**) and Dory (-.258* & -.319**) in both conditions, which is also consistent with Hypothesis 1. This makes sense because Crush and Dory are growth-mindset characters, and Marlin is the fixed-mindset character in the film.

In terms of the mini-IPIP 20, the two statistically significant relationships for Marlin identification in the No Primed Video condition were a negative correlation for Extroversion (-.345**) and a positive correlation for Neuroticism (.245*). Exposure to the film clips did have an effect on participants' views of Marlin, as related to the IPIP scores. He was still negatively correlated with Extroversion (-.009), but also became negatively correlated with Neuroticism (-

.382**), meaning that Marlin was still not viewed as an extrovert, but was seen as less neurotic after exposure to the film clips.

To participants in the study, Marlin is seen as a character lacking in extroversion and grit after seeing the film clips. On a positive note, as his character development occurs in the Video Case Vignettes, Marlin is seen as less neurotic in the Primed Video condition. His negatively correlated relationships with Nemo, Crush, and Dory support Hypothesis 1 and behaved as expected, irrespective of the experimental sequence.

Crush

Crush only appears in one of the Video Case Vignettes, and that contributes to the small amount of statistical data that exists in the study about him and his relationships with other characters. In the No Primed condition, Crush identification is negatively correlated with Nemo (-.219*) and Marlin (-.649**). In the Primed Video condition, Crush and Nemo are still negatively correlated, but their relationship is no longer statistically powerful. The relationship with Marlin is still negatively significant (-.701**). Crush's relationship with Marlin supports Hypothesis 1, and while statistically insignificant, Crush is the only character to have a negative relationship with Age (-.203). This may be due, in part, to his portrayal of a laid-back, "surfer" dad, who potentially presents himself as more juvenile than adult. Crush identification does not have as much statistical data, due in part to him only appearing in one of the Video Case Vignettes and the lack of character development that takes place in the three-minute film clip.

Dory

In the No Primed Video condition, Dory identification is negatively correlated with Marlin (-.258*) and remains in the same direction for the Primed Video condition (-.319**). This is also consistent with Hypothesis 1 as Dory is a growth-mindset character and Marlin is a

fixed-mindset character. This relationship behaved as expected irrespective of the experimental sequence. Additionally, in the Primed Video condition, Dory is seen as having a negative relationship with Neuroticism (-.217*) and a positive relationship with Grit (.283**). To participants, she becomes less “neurotic” and more gritty. This may be due, in part, to deeper character development as she appears in three of the four Video Case Vignettes.

Mini-IPIP20, Mindset, & Grit Scales

Table 4.4

Mini-IPIP20, Mindset, & Grit Scales

	No Primed Video Mindset	No Primed Video Grit	Primed Video Mindset	Primed Video Grit
IPIP-Extroversion	0.024	.316**	-0.093	0.123
IPIP-Agreeableness	.354**	0.149	.259*	.444**
IPIP-Conscientiousness	0.170	.554**	0.139	.649**
IPIP-Neuroticism	-0.068	-.581**	-0.197	-.474**
IPIP-Intellectual Imagination	0.049	-0.081	0.190	.235*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Mindset and Grit correlations have already been discussed in terms of how they related to one another in the study, as well as character identification from Table 4.3, but comparing the mini-IPIP20 with the Mindset and Grit Scales is highlighted here. According to the data in Table 4.4, Mindset is positively correlated with Agreeableness in both the No Primed Video (.354**) and Primed Video (.259*) conditions.

Grit is positively correlated with Extroversion (.316**) and Conscientiousness (.554**) and negatively correlated with Neuroticism (-.581**) in the No Primed Video condition. In the

Primed Video Condition, Grit is positively correlated with Agreeableness (.444**), Conscientiousness (.649**), and Intellectual Imagination (.235*) and negatively correlated with Neuroticism (-.474**). Interestingly, both Mindset and Grit are negatively correlated with Neuroticism in both conditions.

Statistical Findings: Independent Samples *T*-test Results

An Independent Samples *t*-test examined the means, standard deviations, *t* values, *df*, and *p* values for all variables between the No Primed Video and Primed Video conditions. This section reports the findings across both conditions for Marlin, Nemo, Crush, Dory, Mindset and Grit, the Video Case Vignette Survey, and Age. Table 4.5 displays the *t*-test results.

Table 4.5

Independent-Samples T-Test Results

	<i>No Primed Video Mean</i>	<i>Primed Video Mean</i>	<i>No Primed SD</i>	<i>Primed Video SD</i>	<i>t</i>	<i>df</i>	<i>Sig (2 tailed</i>
Marlin*	19.25	18.00	2.919	3.220	3.058	166	.003*
Nemo	20.14	19.07	6.534	5.492	1.236	166	.218
Crush*	15.62	18.02	5.514	5.753	-3.046	166	.003*
Dory*	16.04	17.72	4.469	6.074	-2.282	166	.024*
IPIP- Extroversion	11.47	10.94	4.131	4.077	0.924	166	.357
IPIP- Agreeableness	15.05	14.96	3.713	3.814	0.340	166	.734
IPIP- Conscientious- ness	15.42	15.98	3.037	3.454	-1.034	166	.302
IPIP-Neuroticism	9.95	9.48	3.854	3.749	1.054	166	.293
IPIP-Intellectual Imagination	11.89	11.86	1.471	1.699	0.123	166	.902
Mindset	2.37	2.44	0.439	0.492	-0.961	166	.338
Grit	36.33	37.18	7.313	7.552	-0.742	166	.459
Feel same as Marlin-risks	3.64	3.87	1.772	1.583	-.895	166	.372
Feel same as Nemo-risks	3.91	3.96	1.810	1.714	-.213	166	.832
Parenting outlook same as Crush	4.06	3.78	1.591	1.608	1.117	166	.266
Parenting outlook same as Marlin	3.55	4.31	1.570	1.759	-2.957	166	.004
Whale scene- feel like Marlin	3.02	3.81	1.558	1.721	-3.095	166	.002
Whale scene-feel like Dory	4.33	4.01	1.686	1.700	1.215	166	.226
Take lead in challenges like Nemo	3.88	3.53	1.861	1.670	1.290	166	.199
Need to see results first like Marlin	3.40	3.88	1.663	1.790	-1.799	166	.052*

What is your age?	37.29	35.87	11.43	7.990	0.955	176	.341
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Note. * $p < .05$

Marlin, Nemo, Crush, Dory, Mindset, and Grit

The independent-samples t -test analysis suggests a significant difference between conditions 1 and 2 for Marlin identification ($t = 3.058, p = .003$). The relationship suggests participants identified with Marlin at a higher level before being exposed to the videos and at a lower level after seeing the videos. This supports Hypotheses 1 and 2.

The t -test analysis did not reflect any significant differences in Nemo identification between the No Primed Video condition and the Primed Video condition. This result is unexpected and discussed in detail in Chapter Five.

The analysis suggests a significant difference between conditions 1 and 2 for Crush identification ($t = -3.046, p = .003$). Participants identified with Crush at a lower level before being exposed to the Video Case Vignettes and at a higher level after taking them. Crush identification also supports Hypotheses 1 and 2.

The independent samples t -test analysis suggests a significant difference between conditions 1 and 2 for Dory identification ($t = -2.282, p = .024$). Participants identified with Dory at a lower level before being exposed to the videos and at a higher level after seeing the videos. Dory identification supports Hypotheses 1 and 2.

The t -test analysis reflected positive results for Mindset and Grit, yet no statistically significant results between the No Primed Video condition and the Primed Video condition. These variables are correlated throughout the study, which is noteworthy, even though their relationship is not statistically powerful.

Video Case Vignette Survey

The independent-samples *t*-test analysis suggests a significant difference between conditions 1 and 2 for three items in the Video Case Vignette Survey. Each of these items involves the character of Marlin, Nemo's father. There was a significant difference when identifying with Marlin's outlook on parenting ($t = -2.957, p = .004$), his feelings when trapped in the belly of a whale ($t = -3.095, p = .002$), and his need to see results before taking risks ($t = -1.799, p = .052$). There were no other results from the Video Case Vignette survey that reflected significant differences between the Primed Video and No Primed Video conditions. This aligns with the data mentioned above about Marlin identification and supports Hypothesis 2.

Age

The independent samples *t*-test analysis did not reflect any significant difference in a participants' Age between the No Primed Video condition and the Primed Video condition.

These findings support both hypotheses, with the exception of one character, Nemo. Hypothesis 2 predicted that after being exposed to CT, using the Video Case Vignettes, participants would relate more to the growth mindset characters of Nemo, Crush, and Dory, and less to the fixed mindset character, Marlin. As displayed by Table 4.3, every character meets that condition with the exception of Nemo, whose character identification decreased instead of increased.

Chapter Summary

This chapter details the results of this study. The data screening procedures were highlighted, and the exclusion of participants was explained. Participant demographics were detailed, along with the minimum score, maximum score, mean, and standard deviation calculated for all measures used in the study. In conclusion, data analysis included reliability statistics, correlations, character identification, and *t*-test results. The next chapter will discuss the potential implications and applications of these findings.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study explored Cinematherapy and its effect on an individual's mindset in light of the extant literature. First, mindset is a term that was coined in the 1970s by a researcher out of Stanford named Carol Dweck (Dweck & Reppucci, 1973). One can either have a fixed mindset or a growth mindset. Dweck (2007) defines a growth mindset as one that believes intelligence and ability are things that can change and grow. They are not static qualities, but those that can transform and flourish. Individuals with a growth mindset believe hard work pays off, and they are willing to grapple with new theories and ideas in order to move forward in their academic journey and lives. According to Duckworth, Peterson, Matthews, and Kelly (2007), this explains the definition of grit, and an individual that is considered to be gritty has the drive to overcome immediate adversity while maintaining a vision for long-term perseverance. The concepts of grit and growth mindset are symbiotic in nature and hold contrasting values to a fixed mindset.

A fixed mindset believes intelligence and abilities are limited and static. From this point of view, each person has a certain amount, and no level of risk-taking, effort, or perseverance can increase the amount of intelligence they currently possess (Dweck, 2007 & Polirstok, 2017). They are either smart enough or not. They are talented enough or not. When this group faces challenges, they become anxious, intimidated, and begin to gravitate only toward areas where they know they can succeed, versus appearing to others as one who lacks ability in some area (Polirstok, 2017). Ehrlinger, Mitchum, and Dweck (2016) found that individuals with fixed mindsets made up the majority of those displaying overconfidence, partly because their focus was on tasks that did not demand great effort, instead of tasks that required hard work.

Secondly, research suggests that from an early elementary age, the way children handle

obstacles and failure in the classroom highlights their mindset and whether they will give up (fixed mindset) or continue to move forward (growth mindset; Dweck, 2007). The way people handle these challenges and feedback about perceived failures is critical to development.

Adversity is a reality in life, and when someone crumbles and gives up, this fosters the development of a fixed mindset. When adversity knocks someone down, yet they continue to get back up, learn from those mistakes, and persevere in the circumstance, a growth mindset begins to develop, and over time, they develop “grit.” Angela Duckworth defines grit as “passion and perseverance for long-term goals” (Duckworth, 2007, p. 1087).

Thirdly, research suggests that parents play a critical role in the development of a fixed or growth mindset in their children (Polirstok, 2017). Contrary to popular belief, children who receive “person praise,” or things like “you’re so smart” or “you’re so talented” are more likely to develop a fixed mindset (Polirstok, 2017). Some researchers even suggest that being labeled “gifted” at a young age can stagnate growth and cause students to spend their time keeping up the appearance of being smart, versus actually facing challenges and discovering how to overcome them (Davis, 2016). If superior ability is present, then superior effort is not required (Murphy & Dweck, 2015). Why study if you cannot learn beyond your natural ability? This mindset most often results in learned helplessness, and one of the main questions that can predict this mindset is, “is failure motivating or demotivating?” In the last few years, researchers have determined that it’s not only the type of praise that children receive that helps them to develop a fixed or growth mindset that matters, but it is also the way parents respond to failure (Haimovitz & Dweck, 2017). Is a failure the worst thing that can happen, or is a failure a stepping-stone to growth?

Cinematherapy (CT) is a creative-arts target intervention whose approach has been used

to teach complex concepts and theories in the classroom, among businesses, and in a counseling context (Toman & Rak, 2000). It is used by counselors and educators to explore the personal connection and symbolism in films in order to promote self-analysis, healing, and restoration. The first recorded instance of using film therapeutically was in 1946 by Berman with psychiatric patients (Powell & Newgent, 2010). CT has been used by the military to help soldiers who have experienced trauma and has been used with all ages, from children up to the elderly (Adams & McGuire, 1986; Powell et al., 2006). Whether CT is used in the classroom, a business meeting, or in a therapeutic context, “homework” compliance is high, partially due to the fact that watching a film for learning purposes is a positive reframe of an activity many people already enjoy in their daily lives (Sharp et al., 2002). As its evidence base grows, five clinical studies using CT have been found to help reduce symptoms of pain in the elderly, promote a healthy self-concept among adolescents, positively influence self-esteem levels of adolescents with mental health diagnoses, help depressed clients feel less alone, and promote healthier relationship patterns for those caught in the cycle of destruction (Egeci & Gençöz, 2017).

As previously mentioned, mindset plays an important role in families, education, and business, but can a creative intervention, like CT, be used to help identify someone’s mindset? This study fills in the gap in the literature of investigating whether CT can help to identify mindset, and if watching a film can help someone move further toward adopting a growth mindset.

Chapter Five will explore the potential applications of the study’s research discoveries. The findings from Research Question 1 and Research Question 2 will be discussed, and the chapter will detail the implications for education, clinical, occupational, and spiritual realms. Finally, the chapter will conclude with a discussion of the study’s limitations, possible areas for

future research, and applications of the research in the realms of education, clinical practice, business, and the church.

Summary of Findings and Implications

Participants were recruited through Amazon's Internet-based crowdsourcing tool, Mechanical Turk. Initially, 304 participants completed three assessments (mini-IPIP20, Dweck's 8 Item Mindset Scale, & Duckworth's Grit Scale) and one Video Case Vignette survey, which included four video clips from the film, Disney's *Finding Nemo*, with questions that followed. After applying the inclusion criteria of having to have seen the film, being 18 years or older, and being in the survey longer than 600 seconds (10 minutes), 179 participants were left. Of the 179, participants were between the ages of 21- 67 ($M = 36.6$, $SD = 9.91$), with 52.5% of those being male and 47.5% being female. The prominent race was White at 77.7% with 41.9% having completed a Bachelor's degree and 76.5% having seen the film.

Research Question One

The first research question was exploratory and sought to determine if a relationship existed between character identification and mindset? Character identification is a common theme in CT literature, but there is no indication in the current research that a relationship exists between character identification and having a fixed or growth mindset (Sharp, Smith, & Cole, 2002). In other words, if someone identified with a growth-minded character through watching the film, would they also identify as having a growth mindset on the assessments? Similarly, if a participant identified with a fixed-minded character, would they also identify as having a fixed mindset on the assessments? The hypothesis was that a relationship would exist between identification with specific growth-minded characters (Nemo, Crush, or Dory) in Disney's *Finding Nemo* and a growth mindset, and a relationship would exist between identification with

the fixed-minded character (Marlin) and a fixed mindset.

Surprisingly, while the mindset correlations moved in the predicted direction, there were no significant correlations between any of the characters and Dweck's Mindset measure. Mindset was implicit in the characters, but perhaps the mindset terms were new and unfamiliar to participants, and therefore, they did not score themselves high on the mindset measure. The Pearson's r correlations helped fill in the missing gaps in data and explore the relationships between variables, enabling a comparison of the No Primed Video group and the Primed Video group. A statistically significant relationship was found between Mindset and Grit in Group 1, but not in Group 2. Similarly, Nemo was seen as a gritty character in the No Primed Video condition, but not in the Primed Video condition. While Nemo was the only significant correlation in the No Primed Video condition, in the Primed Video condition, Marlin was considered less gritty and Dory was considered grittier. This helps to support the exploratory nature of Hypothesis 1.

As far character identification, Nemo was considered a growth-minded character and Marlin, a fixed-minded character and in both conditions, their relationship is negatively correlated. It is consistent with the study that these characters would be negatively correlated in both conditions as one represents a fixed mindset and the other a growth mindset. Marlin is also negatively correlated with the other growth-minded characters, Crush and Dory, in both conditions. In the No Primed group, Marlin and Crush were negatively related and Marlin and Dory were also negatively related. The way the growth mindset and the fixed mindset character related to one another supported Hypothesis 1.

One set of correlations that did not support Hypothesis 1 was in relation to Nemo. Nemo was negatively correlated with Crush in the No Primed condition and had no significant

relationship with Crush in the Primed condition. The negative correlation was unexpected as they are both growth mindset characters and conceptually, it is expected that they would align with one another. Additionally, Nemo had no significant relationship with Dory in the No Primed group, but in the Primed group, he had a negative relationship with Dory. The data from Nemo does not support Hypothesis 1.

Some of the possible explanations for the data on Nemo could be that the film clips featuring Nemo were not explicit enough in character development to be able to identify him as a growth-minded character. Though participants had seen the film, Disney's *Finding Nemo* came out on May 30, 2003, and it is possible that some saw it fifteen years ago and just could not remember much about Nemo's character, and the film clips did not jog their memories. It is also possible that Nemo was miscategorized as a growth mindset character, when he may have only shown signs of grit. Finally, only those who were 18 and older could participate in the study, so it is possible that participants related less to the kindergarten-aged child character in the film (Nemo) and more with the adult characters in the film (Marlin, Crush, & Dory). With the average age in both conditions being over 35 years, this is a plausible possibility.

In summary, for the exploratory nature of Research Question 1, Mindset had no significant correlations outside of its relationship to Grit. The Pearson's r correlations filled in the relationship gaps with both Nemo and Mindset still having a positive, yet weakened relationship with Grit after viewing the film clips. Similarly, after viewing the Video Case Vignettes, Marlin was considered less gritty, and Dory was considered grittier. These correlations supported the exploratory nature of character identification and the relationships between characters supported Hypothesis 1. Nemo's data did not support Hypothesis 1. Possible reasons were poor film clip selection, resulting in poor character development; the fact

that the film came out in 2003 and some may not remember all of the film's details; and that Nemo is the only adolescent character in a study where participants had to be 18 years or older. Perhaps participants related more to the adult characters in the film (Marlin, Crush, & Dory) and less to the kindergarten-aged child character (Nemo).

Research Question Two

The second research question reflected an independent between-groups experimental design and asked if the order of exposure to the film clips, using Disney's *Finding Nemo*, would cause a change in mindset. The hypothesis was that exposure to Video Case Vignettes (film clips) prior to taking the mindset assessments would influence the participants' responses toward identification with a character that holds a growth mindset.

Looking at the group statistics, there were some findings that supported the hypothesis, with the exception of the same, one character (i.e., Nemo). Experimental Hypothesis 2 predicted that after being exposed to CT, using the Video Case Vignettes, participants would relate more to the growth mindset characters of Nemo, Crush, and Dory, and less to the fixed mindset character, Marlin. According to the data, every character meets that condition except Nemo. His character identification decreased instead of increased. With the exception of Nemo, identification with the three other characters was affected by being "Primed" by the Video Case Vignettes prior to taking the assessments. The effect of the film was small but present.

Again, Nemo is the child character in the film, and perhaps the adult participants had a more difficult time relating to him than they did to the adult characters of Marlin, Dory, and Crush. With the film being older, it is possible that participants did not remember Nemo's character very well and/or the film clips, chosen for the Video Case Vignettes, did not adequately develop and showcase Nemo's character.

Limitations of the Study

Several limitations have been identified in this study. The mini-IPIP20 is a personality assessment that measures the “Big 5” personality traits. It is a stable measure with a Cronbach alpha of over .70, but it is also a “self-report” measure (Donnellan, Oswald, Baird, & Lucas, 2006). When self-report measures are used, there is always the possibility of false reporting for a number of reasons, including trying to impress the researcher and wanting to appear to have a more stable personality where mental illness might exist. There is a stigma attached to mental illness, therefore making social desirability a higher value than accuracy for some (Henderson, Evans-Lacko, Flach, & Thornicroft, 2012). A social desirability scale was not included in the study, rendering measuring this variable within the sample, impossible.

In creating the Video Case Vignette survey, there were questions about identifying with either Marlin’s parenting style or Crush’s parenting style, yet in the demographic portion of the survey, there was no question for participants about whether or not they were parents, themselves. This is a failure in the design and will be remedied in any future uses of the survey.

Because there was no identification with Nemo’s character, another limitation could be the categorization of the characters. Only one person decided who the fixed mindset character was and who the growth mindset characters were for the study. If this study were to be duplicated, it would be better to educate a panel of *Finding Nemo* experts about the concepts of Mindset and Grit and then ask them to label characters with fixed or growth mindsets. This could potentially bring about completely different results.

The sample came from Amazon’s Internet crowd-sourcing tool, Mechanical Turk. While the range of ages, genders, ethnicities, and educational backgrounds were diverse, the limitation is that each participant in the study was compensated \$2 to participate. Random assignment took

place for the conditions, but that does not take away from the fact that each person was paid to participate.

Additionally, one of the inclusion criteria was remaining in the survey for more than 600 seconds (10+minutes). The Video Case Vignette Survey on its own was 11 minutes, so even those who were in the survey for 10 minutes did not watch the full-length of the video clips. In addition to the 11-minute video clips, there were three assessments and the questions following the video vignettes. This creates a group of participants that did not watch the video clips in their entirety and who also completed the assessments in record time. Having taken the survey 20+ times, the average time to take the full survey was 22 minutes, with 20 minutes being the fastest time and 26 minutes being the slowest.

The design of the study left some things to be desired. Participants had to leave the survey and open up an additional window to watch the film clips, causing them to have to take one more step to complete the survey. Ideally, the film clips can be embedded directly into the survey without having to leave and open up additional windows in the browser.

Finally, one last limitation was in the film clips chosen from Disney's *Finding Nemo*. The data suggests that perhaps the film clips involving Nemo's character did not adequately showcase his personality or his character development. There was little to no identification with the adolescent fish, therefore suggesting possible error on the part of film clip selection.

Research Applications

Education and Counselor Education

The findings of this study suggest that using films in the classroom can be an effective tool in helping to determine students' academic identities and motivating them toward growth. Students who typically underperform in classroom activities do not need comfort feedback

because this can foster learned helplessness and further solidify a fixed mindset (Haimovitz & Dweck, 2017). Instead, these students need to be encouraged to implement a better action plan and more effective strategies for learning (Barnes & Fives, 2016). For counselor educators, using CT to educate new students about mindset and grit concepts could potentially help students who find themselves unable to comprehend and execute basic counseling skills. When learning and practicing counseling skills for the first time, many students face fears of failure and wonder if they will ever be able to perform these basic skills well (Pierce & Wooloff, 2012).

Clinical Settings

In a similar way that CT can be used to identify and educate about mindset in the classroom, the same can be true in the counseling office and through the counseling relationship. Films can be used to help improve depressed clients' overall level of optimism and hope (Powell, 2008). They can also be used to enhance self-concept in adolescents (Powell et al., 2006), decrease the need for pain medication in the elderly (Adams & McGuire, 1986), improve the self-concept of adolescents (Adams & McGuire, 1996), and help clients move toward healthier relationships (Egeci & Gençöz, 2017).

Business Settings

Johnston (2017) wrote an article where he suggested companies who are willing to identify and discuss failures demonstrated a growth mindset and often outperformed other companies that were not willing to admit struggle. Films can be used in these settings to help managerial teams identify dynamics that are occurring among supervisors and how those dynamics are affecting the teams they supervise. Applying these concepts occupationally means having businesses that are willing to identify, admit, and learn from their mistakes. In the end, this helps specific teams and the entire company move toward growth and a more accurate view

of what it takes to succeed (Johnston, 2017). A film like *Remember the Titans* can help employees identify with specific characters and mindsets and can promote group process and teamwork in a way that hours of lecture and training could never accomplish (Ballard, 2012). Films provide opportunities for employees to discuss problems in indirect ways, providing a safe distance with the potential to increase individual and company-wide health and decrease shame (Sharp et al., 2002).

Religious Settings

Using films to promote a gritty growth mindset spans many religions and religious settings. From the Christian perspective, Romans 5:3-5 says “Not only that, but we also rejoice in our sufferings, because we know that suffering produces perseverance; perseverance, character; and character, hope. And hope does not disappoint us, because God has poured out His love into our hearts through the Holy Spirit, whom He has given us.” At the core of Mindset and Grit research is the way that people handle adversity and suffering in their lives (Duckworth et al., 2007). To come face to face with hardship and challenge is not unique, but something that all humans will face. The main question is when those times arise, do people give up and walk away in defeat, or will they learn from those mistakes and difficult times, and press on in growth (Dweck, 2007)? Romans 5:3-5 suggests a path very similar to a growth mindset and grit. We will face suffering and if that suffering is reframed into an opportunity to learn and lean into Jesus for guidance, it has the potential to produce in us perseverance, character, and ultimately, hope. While these verses are from the Christian tradition, the basic premise of suffering applies to all people. CT can be used to promote this kind of positive reframing of suffering across all

belief systems (Sharp et al., 2002). Films that come to mind include *Remember the Titans* and *Unbroken*. A willingness to think a bit outside of a specific religious box is key to benefitting from the findings of this study.

Suggestions for Future Research

Future research should continue to build upon the evidence base of CT by using films in the classroom, in counseling, with businesses, and in the church. When thinking about using CT in counseling, Samuel Gladding (2008) states, “The helping strategies of yesterday are not always appropriate today. If counseling is to continue to be on the forefront of the helping professions, it must continue to promote creativity” (p. 103). CT is a creative-arts therapy with a growing evidence base (Adams & McGuire, 1986; Jurich & Collins, 1996; Powell et al., 2006; Powell, 2008; & Egeci & Gençöz, 2017). While creativity is a value held by professionals in many fields, the incorporation of creative interventions may be more widespread with a growing base of empirical data (Carson & Becker, 2004).

Since the Grit Scale had significant correlations with characters and Dweck’s Mindset Scale did not, it would be interesting to look at other mindset scales to see if there might be one that is a more effective tool with a higher Cronbach alpha. In the reliability tests about each measure, the Cronbach alpha went up in value from .751 to .810 and .817 when the last two items were removed. This seems like an issue inherent with the original scale and one that would need to be addressed by the creator of the assessment.

With the potentially positive implications of this research, it is almost impossible not to think of the potentially negative implications as well. In other words, if the medium of film is powerful enough to promote specific character identification and growth, is it not also powerful enough to promote the opposite? While research exists in the realm of film (and other on-screen

mediums, like video games) promoting violence, is film powerful enough to move someone to inspire a life of violence and/or despair (Gubler, Herrick, Price, & Wood, 2015)? This powerful tool must be used with caution. There is more work to be done in this area.

Conducting this study with Counselor Education students could explore whether CT can be used to effectively educate students about the concepts of mindset, and help to promote grit. A gritty, growth mindset is imperative to the ability to endure through any type of graduate program (Luthans, Luthans, & Chaffin, 2018). CT could potentially be used to educate and equip graduate students with mindset and grit concepts to promote perseverance in their programs. The same two conditions and groups could be present to determine if there is a difference with a more targeted group who are focused primarily on obtaining an education to promote growth in others.

Summary of the Study

Mindset is defined by Dweck as a person's view of intelligence or ability (Dweck & Reppucci, 1973). From as early as elementary school, people exhibit signs of either a fixed or a growth mindset developing. Mindset affects a student's overall level of academic grit and is showcased when the student faces some type of adversity (Duckworth et al., 2007). The way they handle adversity and failure indicates their mindset and whether they will stop trying (fixed mindset) or continue to take risks (growth mindset; Dweck, 2007). The way they respond to adversity is key to their overall development.

This study began by recruiting 304 adults through Amazon's Mechanical Turk online survey platform. With the inclusion criteria met, 179 participants were included in the data analyses. There was a significant relationship between mindset and grit, yet no characters had significant relationships with mindset. There were significant positive correlations between the

growth-minded characters of Dory and Crush, and negative relationships between Marlin and Dory, Marlin and Crush, and Marlin and Nemo. This was consistent with our study's character identification, with Marlin being the only character holding a fixed mindset, while the other three held a growth mindset. It makes sense that Marlin would be negatively correlated with them. The effect of being exposed to the Video Case Vignettes did promote identification with the growth-minded characters of Dory and Crush and lessened identification with the fixed-minded character of Marlin.

The implications of this study are vast, extending to the educational, clinical, occupational, and spiritual realms. Cinematherapy (CT) is a creative-arts intervention that is used to teach complex concepts and theories (Toman & Rak, 2000). The concept of using CT to encourage the development of grit and growth mindset among students, clients, and employees is a viable application from this study, with direct benefits to individuals as they enter into areas where they will face adversity and have to decide whether or not to persevere. The promotion of a growth mindset and grit through exposure to film is a potentially powerful tool and, if used thoughtfully, can help espouse overall growth and wellness to those who experience it.

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APPENDIXES

Appendix A: Invitation (Social Media Post)

Movies and Mindset
Ashlee Lakin
Liberty University
Counselor Education and Family Studies

You are invited to take part in a research study using Disney's *Finding Nemo* to investigate character identification and mindset.

The purpose of this study is to investigate the impact of mindset measures on character identification, using concepts from Cinematherapy with the Disney film, *Finding Nemo*.

If an effect is found, there are significant implications for the fields of education and counseling. Please consider becoming a part of this exciting study!

If you are interested, please click on this [link](#) to proceed. Thank you so much!

Appendix B: Informed Consent

Movies and Mindset
Ashlee Lakin
Liberty University
Counselor Education and Family Studies

You are invited to take part in a research study using Disney's *Finding Nemo* to investigate the impact of mindset measures on character identification. You were selected as a possible participant because you are a Behavioral Sciences student (online or residential) at Liberty University and because you are over the age of 18. Please read this form and ask any questions you may have before agreeing to be in the study.

Ashlee Lakin, a doctoral candidate in the Department of Counselor Education and Family Studies at Liberty University, is conducting this study.

Background Information: The purpose of this study is to investigate if a relationship exists between mindset and character identification, using Disney's *Finding Nemo*, and if it does, to determine the impact of the film exposure on mindset.

Procedures: If you agree to be in this study, you will be asked to complete each of the items listed below. Please note that because of the experimental conditions, the items may not appear in this exact order.

1. Complete the demographics questionnaire (1 minute)
2. Complete assessments that will ask your thoughts and opinions on mindset and personality (3-5 minutes)
3. Watch four video vignettes from Disney's *Finding Nemo* and answer questions about the characters (5-10 minutes)

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life. If any adverse psychological stress occurs, please contact Bedrock Ministries at (315) 652-0000 to obtain counseling.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include: For educators, this research has the potential to help them identify the impact of mindset measures and Cinematherapy on students' mindsets in the classroom. With this information, educators will be better able to equip their students for success and growth in the face of academic and life challenges. Additionally, this study may equip mental health professionals with the therapeutic use of film and mindset education for clients struggling with life's challenges.

Compensation: Participants will be asked to provide their email address upon the completion of the surveys in order to be entered into a raffle for Amazon gift cards. Five participants will be randomly selected to receive a \$20 Amazon gift card and one participant will be randomly selected to receive a \$100 Amazon gift card.

Confidentiality: The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records. No identifying information will be gathered and all data will be stored on a password locked computer. This data may be used in future presentations and will be deleted after three years. In the case where participants discuss their experiences with this study, I cannot assure that these discussions remain confidential.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or the NY Ministry Network. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study:

If you choose to withdraw from the study, please exit the survey and close your Internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Ashlee Lakin. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at 540.314.8252 and/or ashleelakin@comcast.net. You may also contact the researcher's faculty advisor, Fred Volk, PhD at fvolk@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

Signature of Participant

Date

Signature of Investigator

Date

Appendix C: Demographic Survey

1. Gender

Female
Male
Other

2. Age _____

3. Race

Caucasian/White African American
American Indian or Alaska Native
Asian
Native Hawaiian or other Pacific Islander
Hispanic, Latino, or of Spanish Origin
Other

4. What is your current educational level?

College Freshman
College Sophomore
College Junior
College Senior
Trade/technical/vocational training
Bachelor's degree
Master's degree
Professional degree
Doctorate Degree

5. What is your current GPA?

0.0-2.0
2.1-3.0
3.1-4.0

6. Have you seen the Disney film, *Finding Nemo*?

Yes
No

Appendix D: Video Case Vignettes Survey

For all 4 of the Video Case Vignettes, please follow the prompts and answer the questions that follow, selecting **Strongly Agree, Agree, Disagree, or Strongly Disagree** Once you've answered the questions, you may move on to the next vignette. Make sure to watch the entire video clip before moving on to answer the questions. This should take a total of 12-15 minutes.

Video Case Vignette 1:

Marlin & Nemo -

<https://www.dropbox.com/home/Ashlee's%20Nemo%20Video%20Case%20Vignettes%201-4>

Questions:

1. I feel the same way Marlin feels about taking risks.

Strongly Agree, Agree, Disagree, or Strongly Disagree

2. I feel the same way Nemo feels about taking risks.

Strongly Agree, Agree, Disagree, or Strongly Disagree

Video Case Vignette 2:

Marlin & Crush -

<https://www.dropbox.com/home/Ashlee's%20Nemo%20Video%20Case%20Vignettes%201-4>

Questions:

3. My outlook on parenting aligns more with Crush, the sea turtle.

Strongly Agree, Agree, Disagree, or Strongly Disagree

4. My outlook on parenting aligns more with Marlin, the clownfish.

Strongly Agree, Agree, Disagree, or Strongly Disagree

Video Case Vignette 3:

Marlin & Dory -

<https://www.dropbox.com/home/Ashlee's%20Nemo%20Video%20Case%20Vignettes%201-4>

Questions:

5. In this situation, I would feel the same way as Dory.

Strongly Agree, Agree, Disagree, or Strongly Disagree

6. In this situation, I would feel the same way as Marlin.

Strongly Agree, Agree, Disagree, or Strongly Disagree

Video Case Vignette 4:**Nemo & Marlin -**

<https://www.dropbox.com/home/Ashlee's%20Nemo%20Video%20Case%20Vignettes%201-4>

Questions:

7. Like Nemo, I prefer to take the lead in challenging situations.

Strongly Agree, Agree, Disagree, or Strongly Disagree

8. Like Marlin, it is difficult for me to trust that situations will end well, without being able to see the result ahead of time.

Strongly Agree, Agree, Disagree, or Strongly Disagree

Appendix E: Dissertation Defense Meeting Announcement

CHARACTER IDENTIFICATION AND MINDSET:

AN EXPERIMENTAL DESIGN

USING DISNEY'S FINDING NEMO

by

Ashlee Kirby Lakin

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Department of Counselor Education and Family Studies

Mindset is defined as an individual's view of intelligence or ability. Mindset research began in the 1970s at Stanford with Carol S. Dweck, who coined the terms "fixed mindset" and "growth mindset." A fixed mindset believes intelligence and abilities are limited and static. Each individual has a certain quantity, and no amount of risk-taking, effort, or perseverance will increase the amount of intelligence currently possessed. A growth mindset sees intelligence as something that can grow, transform, and change. Individuals with growth mindsets believe hard work pays off and are eager to learn new ideas, concepts, and theories to move forward in their learning journeys. Grit is defined by Angela Duckworth as passion and perseverance for long-term goals and closely aligns with the concept of a growth mindset. Mindset and grit are highlighted by academic and classroom challenges and can be identified in individuals as early as elementary school. The way students respond to challenges and failure significantly impacts their development. While there are assessments to help determine mindset and grit, creative-

arts therapies may also be able to help identify them. Cinematherapy is a target intervention often used in academic and clinical settings to teach complex concepts and theories. This study examined the relationship between mindset/grit and character identification, using Disney's *Finding Nemo*. In other words, does a growth mindset relate to the growth minded characters, while a fixed mindset relates to the fixed minded characters? The study also used an independent between-groups experimental design to determine if the order of exposure to video case vignettes, using Disney's *Finding Nemo*, made a difference in a participant's level of identification with mindset/grit. It was hypothesized that exposure to the video case vignettes, prior to taking the mindset/grit assessments would influence responses toward identification with growth mindset characters. The results showed that a significant relationship existed between mindset and grit, but no significant correlations existed with the film characters of Nemo, Dory, Crush, or Marlin. There were significant positive correlations between the growth-minded characters of Dory and Crush, and negative relationships between Marlin and Dory, Marlin and Crush, and Marlin and Nemo. This was consistent with our study's hypothesis since Marlin was the only character holding a fixed mindset, and the others, a growth mindset. Exposure to the video case vignettes did promote identification with the growth-minded characters of Dory and Crush and decreased identification with the fixed-minded character of Marlin. Implications, applications, limitations, and suggestions for future research are discussed.

Keywords: growth mindset, fixed mindset, grit, cinematherapy, implicit theory, entity theory; incremental theory, counseling, counselor education, clinical practice, creative-arts therapy

Open to the Public

January 21, 2019 at 9am

Carter 203