Fall 2021

Grit in the Performing Arts: A Mixed-Methods Study of High School Theatre Student Perceptions of Grit

Kelsey Gibson
Gardner-Webb University, kgibson7@gardner-webb.edu

GRIT IN THE PERFORMING ARTS: A MIXED METHODS STUDY OF HIGH SCHOOL THEATRE STUDENT PERCEPTIONS OF GRIT

By
Kelsey Gibson

A Dissertation Submitted to the
Gardner-Webb University College of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2021

Approval Page

This dissertation was submitted by Kelsey Gibson under the direction of the persons listed below. It was submitted to the Gardner-Webb University College of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

_____	_____
Jennifer Putnam, EdD Committee Chair	Date
_____	_____
Mitch Porter, PhD Committee Member	Date
_____	_____
Peter Duffy, EdD Committee Member	Date
_____	_____
Prince Bull, PhD Dean of the College of Education	Date

Acknowledgements

"Because I knew you, I have been changed for good." – Stephen Schwartz

I believe Stephen Schwartz said it best in the musical *Wicked*, for without those around you and their impact, we remain the same. To all those who encouraged me along the way, I thank you.

To my committee: Thank you for the hours spent reading, conferencing, and encouraging me along the way while also reminding me that I cannot do this alone and that independence will get me nowhere.

To my family: Thank you for your love and support to get me to where I am today. You are some of the best role models and strongest support systems a girl could ask for.

To Derek: Thank you for the dinners cooked, the dog walks, and the encouragement along the way. Thank you for making sure I took time to take care of myself, whether it be by time in nature or a good movie.

To Patch: Thank you for encouraging me to always take breaks when needed, reminding me to take in the fresh air while writing, and for the emotional support.

To Kayla: Thank you for the encouragement in the form of cat pictures, the support along the way, and the copy edits with incredibly quick turnarounds.

To Shanda: Thank you for speedy replies to text messages and phone calls of panic, the many edits, and words of encouragement along the way. Thank you for always being a friend who supported the process and kept me sane through long class weekends and night meetings on zoom. We did this!

To my school family: Thank you for the times you watched my classes when I

had no sub on writing days and for managing rehearsal when I had a meeting to attend or a deadline to accomplish. For lending a listening ear to the rants and comforting words for tears when things got rough. Thank you to my students for fueling my coffee addiction that kept me energized through hours of rehearsal followed by hours of writing. Thank you for the celebrations and the cheers as each new milestone was reached.

Abstract

GRIT IN THE PERFORMING ARTS A MIXED METHODS STUDY OF HIGH SCHOOL THEATRE STUDENT PERCEPTIONS OF GRIT. Gibson, Kelsey, 2021: Dissertation, Gardner-Webb University.

Previous grit research has not yet studied how the performing arts may have an impact on student grit scores and perceptions of grit. Grit is defined by two main characteristics: consistency of interest and perseverance of effort. Continued participation in an extracurricular theatre production requires students to maintain interest and sustain effort throughout the rehearsal and performance period. This mixed methods interpretivist research study examined how high school students from three groups (performing arts, non-performing arts, and non-arts) measured on Duckworth and Quinn's (2009) Grit-S scale, as well as how performing arts students perceived their own grit after participation in a semester-long extracurricular theatre rehearsal and performance period. Findings of the study show that performing arts students who participated in extracurricular performance perceived that their grit increased due to lessons and experiences learned through the process. The mean grit scores of performing arts students place them below non-arts students and above non-performing arts students on the Grit-S scale.

Keywords: grit, theatre, performing arts, rehearsal, extracurricular

Table of Contents

Page

Chapter 1: Introduction

The collaborative and interactive nature of theatre can push students to enhance their creative problem-solving skills through interaction with peers and instructors; however, little research exists on student levels of grit and their willingness to audition for a performance or even to continue involvement in the production and see it through to the closing night. Duncan (2009) stated, "the arts can help students become tenacious, team-oriented problem solvers who are confident and able to think creatively" (p. 1). In extracurricular theatre programs, students are encouraged to become creative problem solvers within the realm of performance, being required to make split-second decisions to keep a show moving even if a scene partner drops a line or a cue is missed. Students often dedicate themselves to hundreds of hours in rehearsal from the initial audition to the final performance, a choice that is not easily made without a passion for the process or persistence to succeed. Duckworth et al. (2007) introduced the theory of grit, or how passion and perseverance influence an individual's success, in their research on positive psychology. Through researching this topic, I hoped to determine if students participating in an extracurricular performing arts program increased their perception of grit throughout the rehearsal process. I also wanted to determine if the students who choose to participate in extracurricular theatre programs have a higher level of grit than their non-performing and non-arts peers.

Within this chapter, I introduce both the research problem and where there is a lack of data in the currently existing content. Next, a series of definitions of terms used within the research study is presented to the reader. Then, a description of the conceptual and theoretical frameworks used is followed by a presentation and explanation of the

three research questions the study explored. Finally, I present a discussion of the significance of the study, followed by the purpose of the study.

Statement of the Problem

High school students who choose to dedicate so much of their time to a production with only one or two final performances set themselves apart from their peers with their dedication to the craft. Over the course of her research, Duckworth (2016) investigated the grit scores of a variety of individuals, from adolescents to adults and students to professionals. From the analysis of these scores, in combination with the examination of various cognitive abilities and determinants of success, such as self-control, Duckworth (2016) determined that perseverance and passion were the defining factors that determine an individual's grit. When Duckworth (2016) examined a sample of West Point cadets utilizing her Grit-S scale, she found that "regardless of specific attributes and advantages that help someone succeed in each of these diverse domains of challenge, grit matters in all of them" (p. 12). Like West Point cadets, performing arts students face a unique set of challenges when performing in front of audiences, often comprised of their family and peers; however, the work that occurs behind the scenes of a performance often remains unseen.

The Research Problem

Participation in performing arts has been shown to develop students' critical-thinking skills, personal skills, and creativity. Students who participate in theatre develop interpersonal skills that extend from the stage to real life. Stager-Jacques (2012) determined, "Not only do actors require human behavior skills in their work lives, but additionally actors have to understand how to enact interpersonal skills in the roles they

portray to audiences" (p. 247). McCain (2017) stated, "the ambiguity of non-academic skills has made measuring them a challenge" (p. 5). This ambiguity is due to non-academic traits not being measured by test scores. Grit can closely relate to a student's participation in theatre performance. Students spend hundreds of hours before the performance perfecting their roles and focusing on developing their characters' physical and vocal traits. "Actors must be aware of and trained in the use of their bodies and voices to communicate the message of the playwright" (Stager-Jacques, 2012, p. 250). These trainings take time, with 2- to 3-hour rehearsals after school multiple days a week. Without a vested interest and passion for the subject, students would not dedicate that much time to the production. McCain stated, "grit is a non-academic, non-cognitive skill that takes into account the importance of interest and perseverance in reaching attainable goals" (p. 10). Grit may be demonstrated by students who participate in an extracurricular production and enter the audition with a goal and passion for the art of theatre. Grit encompasses two main components: a consistency of an individual's interest and the perseverance of effort (Duckworth & Quinn, 2009). When choosing to enter the time-consuming rehearsal process, a student showcases a passion and interest in the craft. By remaining involved throughout the many hours associated with creating the final performance, a student showcases perseverance of effort.

Similarly, the art of theatrical performance challenges students to grow as performers. Students enter theatre auditions with a passion for performing. Ravitch (2016) described passion as not "easily defined or measured" (para. 7). Passion "can be nurtured, but rarely taught or created" (Ravitch, 2016, para. 7). According to Duckworth (2016), passion can also be a strong indicator of grit. Individuals who are passionate

about a subject will spend more of their time pursuing it. For example, students who are passionate about theatre will spend more extracurricular time on a performance than the student who is not passionate about the subject. The passionate student may spend time outside of class on audition material, learning lines and practicing blocking. Zenyuh (2017) stated, “Those who maintain consistency over time are those who have a passion, which is what sets someone who has grit apart from merely having perseverance” (p. 22). While theatre students often showcase all the measures of grit in their participation in an extracurricular performance, we do not yet understand how their grit differs from their peers or if it changes over the course of a production.

Purpose Statement

This mixed methods study addresses the perceived connection between high school student involvement in theatre arts courses and their level of grit as perceived by the Grit-S scale. This mixed methods research includes both qualitative and quantitative measures to explore student perceptions of their own grittiness. The purpose of this exploratory sequential design was to first explore the extent performing arts students’ levels of grit change qualitatively over the course of a performance period, as well as how their initial grit score may differ from their peers who do not choose to participate in an extracurricular performing arts program. Initially, the survey was administered to students who had auditioned and been selected to participate in an afterschool theatre production, as well as a sample of their non-performing peers, both students who are participating in the non-performing arts and those students who do not participate in any arts programs. After the first survey was complete, performing arts students were administered a second survey with open-ended items that measured the students’

perceptions of grit over the course of the rehearsal period.

Definition of Terms

Throughout the following chapters, I further explain the research study process and findings. To clarify the jargon used to explain the research, the following terms have been defined to provide the reader with a clearer explanation of the study.

Extracurricular

Extracurricular activities that take place entirely after the completion of the regular school day and on the weekends.

Grit

A non-cognitive, non-academic trait that is rooted in positive psychology (McCain, 2017). Rooted in the understanding that an individual's passion and propensity for perseverance will increase their opportunity for success when completing tasks.

Gritty Traits

Further explained through Duckworth's (2016) research, individuals who exhibit gritty traits are those who are passionate about a particular topic, practice their skills repeatedly, have a sense of purpose in the work they are completing, and have hope throughout the entire process.

Likert Scale

Developed by Rensis Likert (1932), the Likert scale consists of five to seven items that are scored among a range. Commonly used in psychology and social sciences, the Likert scale allows responders to read through a list of individual items and select the answer that is most appropriate to their own understanding.

Rehearsal Process

Defined by me as the entire period in which a theatre performance is rehearsed and created before being presented to the audience. This process includes auditions, practice, dress rehearsals, technical rehearsals, and performance.

Zone of Proximal Development

The zone of proximal development (ZPD) refers to the theory developed by Lev Vygotsky (1978) that describes the area where a learner is close to mastering a new skill. ZPD is the area between where the learner can complete a task with help and where they can achieve a task with guidance or encouragement from a teacher or partner.

Conceptual Framework

The research was completed using Duckworth's (2016) conceptual framework of grit as a predictor of success. Through a series of studies examining perceived levels of grit among National Spelling Bee finalists, West Point cadets, and teachers, Duckworth (2016) determined that the secret to achievement is not talent but grit. Grit is defined as "trait-level perseverance and passion for long-term goals" (Duckworth & Quinn, 2009, p. 166). Duckworth (2016) suggested four traits of gritty individuals: interest, practice, purpose, and hope. These individuals enjoy a continued interest in their passion and continue to engage in deliberate practice to improve their skills in that domain. They believe their work matters and they can achieve their goals despite setbacks.

Through the development of the Grit-S scale, Duckworth and Quinn (2009) created a simpler self-actualizing assessment for individuals from every level of education, career, or walk of life. The survey was developed to help individuals see where they fall on the scale and make choices to develop their own abilities. The Grit-S

scale utilizes eight items to ensure a more effective measure of grit than the previously published 12-item Grit-O scale (Duckworth et al., 2007). These eight items measure perseverance with both facets of grit: consistency of interest and perseverance of effort (Duckworth & Quinn, 2009). Questions designed to measure the consistency of interest pertain to how long an individual works on a project or focuses on a specific idea before losing interest and moving on to a new interest, while the questions designed to measure perseverance of effort focus on when the individual typically quits a project. A breakdown of each question in the Grit-S scale and its related facet of grit is shown in Table 1.

Table 1

Grit-S Measures

Survey item	Measurement of grit
I often set a goal but later choose to pursue a different one.	Consistency of interest
New ideas and projects sometimes distract me from previous ones.	Consistency of interest
I have been obsessed with a certain idea or project for a short time but later lost interest.	Consistency of interest
I have difficulty maintaining my focus on projects that take more than a few months to complete.	Consistency of interest
I finish whatever I begin.	Perseverance of effort
Setbacks don’t discourage me.	Perseverance of effort
I am diligent.	Perseverance of effort
I am a hard worker.	Perseverance of effort

As shown in Table 1, there are four items to measure consistency of interest and another four to measure perseverance of effort. These items were extracted from the Grit-

O scale for their predictive validity and ability to replicate the 2-factor structure of Grit-O. This study was completed across four different samples of children and adults (Duckworth & Quinn, 2009), and the eight strongest representations of grit were combined to create the short grit scale (Grit-S).

Theoretical Frameworks

This research study was completed utilizing an interpretivist framework. Butin (2010) defined such a framework as one where the researcher is "already part of the story about the truth because she is the one examining it and describing it" (p. 60). The possibility of a study not having one specific answer but many different perspectives served as a strong option for the theoretical framework of this dissertation. Denzin's (1978) theory of interpretivism revolves around the central idea that qualitative research on humans is often subjective. By triangulating methods, in the case of this research study, quantified grit scores and qualitative open response data, a less-biased story was told. Butin emphasized the importance of interpretivism is to find meaning behind the research, using multiple perspectives. An interpretivist approach focuses on the story being told by the research group at that particular point in time (Butin, 2010). This approach serves as a more humanistic examination of actors by observers who are completing the research.

I utilized research from my students as well as others, and this framework best supports the style of research and study. This study was completed using the Grit-S survey created by Duckworth (2016). Duckworth's (2016) Grit-S survey has readers select where they fall on a Likert scale when presented with a sentence that describes gritty traits. Open-ended survey items added to the end of the survey also allowed for

qualitative analysis of common themes among students. Through the coding of these themes, I developed a deeper understanding of how students perceive their own grit and how the rehearsal process impacted those perceptions.

This study was also be completed utilizing the theoretical framework of self-perception theory. Developed by Bem (1972), self-perception theory centers around how individuals interpret their actions in the same way they interpret the actions of those around them. These actions are influenced by social surroundings, but not entirely by one's own free will (Bem, 1972). The theory of self-perception was developed in contrast to Cognitive Dissonance Theory (Pepitone & Festinger, 1959), which focuses on the assumption that individuals maintain consistency among their beliefs until they are faced with new beliefs that are inconsistent with their own. At this point, the individual experiences a state of cognitive dissonance (Pepitone & Festinger, 1959). Bem's theory of self-perception is grounded in two assertions: (a) individuals are aware of their inner states, such as attitude and beliefs, and assess their own behaviors within these states; and (b) individuals who do not understand their own internal states are in the same positions as the external observers who depend on behavioral clues to infer one's internal state. Because the Grit-S survey relies on each individual's own self-perception to complete the responses, this conceptual framework guided the research into how individual students view their own grittiness. This self-perception may have impacted how a student responded to the survey responses. Students who are aware of their inner states should have been more likely to answer honestly on the Grit-S survey, while those who are not as in tune with their internal states may have turned to social desirability bias when responding to the survey.

Research Questions

Despite many studies having been completed on the various traits that coincide with and make up grit, as well as studies on how individuals' grit scores can predict their academic success, GPA, or job dedication, there are no published studies on how grit scores can be impacted by time spent participating in a performing arts program. This study is designed to provide a starting point for research on the perceived connections between grit and the performing arts. The research questions explored in this study were

1. Is the factor structure of the Grit-S scale functioning for the research group?
2. How does participation in an extracurricular theatre performance develop student perceptions of grit?
3. How does the grit level of auditioning performing arts students differ from their non-performing peers?

Research Methodology

To determine how participation in the performing arts impacts a student's grit score, two surveys were administered to students at the high school level. The first survey, consisting of eight Likert scale items, measures where an individual falls on the grit scale. Individuals who score closer to 5 on the scale are the grittiest, while those who score closer to 1 on the scale are the least gritty. This survey was used to see how performing arts students' grit scores compare to those of their peers. After the completion of the grit survey, students who participated in the spring theatre production were provided with 10 open-ended survey items that measured their perceptions of grit throughout the rehearsal process.

Significance of Study

Grit is a fairly recent concept, developed alongside the theory of personality traits in 2007 (Duckworth & Quinn, 2009), and not much research has been completed to assess how students in the performing arts persevere. Throughout multiple studies of grit among various populations, there have been few studies on performing arts students, even though their dedication to an art for an extended period aligns with the tenets of grit. Zenyuh (2017) called for more research into student achievement in comparison with grit levels across specific subject areas. Students who participate in the arts are hard-working individuals, dedicating many hours to a performance or show, but there is little research dedicated to how gritty these students are.

Limitations

Limitations are defined as "potential weaknesses that are usually out of the researcher's control" (Theofanidis & Fountouki, 2019, p. 156). The limitations of this research study existed within the lack of previous research on the topic. Additionally, I completed the research within my own school and among the students in my own afterschool theatre program. These factors may have impacted the change in grit scores from the beginning of the study to the end in a manner different from that in other classrooms or rehearsal environments.

Researching drama presents its own limitations for research. Practice as research (Kershaw & Nicholson, 2011) presents its own fundamental challenges as the researcher becomes the "practitioner-researcher" and new ways of blending art and scholarship are developed. The practitioner-researcher role requires the individual to combine their creative being with their reflexive self, connecting their practice to the current research

(Kershaw & Nicholson, 2011). This can present challenges as the practitioner-researcher must manage the duality of their roles to maintain the success of the research design.

Delimitations

Theofanidis and Fountouki (2019) defined delimitations as "the limitations consciously set by the authors themselves" (p. 157). The delimitations of this study laid within the way it was designed. The study took place at one high school among students in three different programs. Students from other programs or schools were not part of this study.

Summary

This chapter presented the purpose and framework of this research study. Using Duckworth's (2016) research on grit and the implementation of the afterschool rehearsal process in the secondary school setting, I gained an understanding of the differences between performing arts and non-performing arts students' perceived levels of grit, as well as how grit levels may change throughout an extracurricular theatre performance.

In Chapter 2, I present a review of the literature pertaining to grit and resilience, as well as the literature surrounding theatre education and rehearsal processes. Chapter 3 introduces the methodology of the study, while Chapter 4 presents the findings from the study's implementation. Finally, Chapter 5 discusses the findings in collaboration with the hypotheses formed during the development of the study. Recommendations for future research on this topic are also presented in this final chapter.

Chapter 2: Literature Review

This chapter presents an in-depth literature review of the conceptual and theoretical frameworks, the critique of grit and self-efficacy, and theatre practice in both the classroom and extracurricular contexts. This literature review was used to frame the methodology and research decisions throughout the research study.

Grit

Duckworth (2016) stated that "grit predicts success" (p. 8). Examining how resilient and hardworking an individual is in various circumstances is only one predictor of success. Duckworth (2016) determined that these individuals must also have passion and direction. Collaco (2018) predicted that grittier individuals will remain focused and stay the course toward their goals even when setbacks occur. To maintain this focus, individuals need to find a purpose in their passion. McCain (2017) found that while individuals do not have difficulty following their passions, they may be challenged with finding a passion in which they find enough purpose to persevere. It can be argued that students who actively participate in upper-level arts courses have developed a passion for the subject that shows a willingness to persevere despite any odds that may come up against them. Clark et al. (2019) determined that students who report high social support from their teachers, but not other sources such as their classmates or parents, have a stronger relationship between grit and achievement.

Ruiz-Alfonso et al. (2018) linked passion with student persistence, or how much time is spent daily or weekly on the passionate activity, as well as the student's own academic engagement. Hope and Munro (2019) determined the difference between passion and perseverance when they stated, "Passion involves a consistency of interest

over time and commitment to long-term goals; perseverance involves a steadfastness and dedication to working toward those goals over time" (p. 334). They also stated, "Passion is the bedrock of grit, while perseverance is what gives grit its staying power" (Hope & Munro, 2019, p. 335). However, Bauer-Wolf (2018) argued that passions are not simply inherent, but rather, they are cultivated.

Duckworth and Quinn (2009) defined grit as a "trait-level perseverance and passion for long-term goals" (p. 166). Their research showed that an individual's grit score can predict their achievement in challenging situations greater than their talent. (Duckworth & Quinn, 2009). If the school or classroom context uses effective learning strategies and assists students in developing positive mindsets, all students are more likely to demonstrate perseverance (Tough, 2016). Grit differs from leadership potential because the two measure different domains. Gritty individuals may not demonstrate their stamina in areas that require organizing and managing others (Robertson-Kraft & Duckworth, 2014). Mindset research, on the other hand, is compatible with grit. Dweck (2006) has dedicated much of her research in attempts to discover why some overcome setbacks and adversity and others waste their potential. In other words, when a gritty individual meets a challenge in the domain where their passionate interest lies, the unfeasible goals or actions result in an active search for or creation of an alternative path or method towards success (Duckworth & Gross, 2014).

It is the schools' job to "prepare graduates with the knowledge to navigate the larger society outside school walls" (McLeod & Shareski, 2018, p. 10). If being successful is grounded in grit, assisting students towards understanding and developing their passions and perseverance skills is one job a school must undertake. To achieve

mastery of an activity, “deliberate practice and initial failures have to be tolerated and, while this process can take months or even years, the initial interest needs to be kept salient” (Schmidt et al., 2019, p. 436). Without a constant interest or passion for the interest, students become bored; however, if high achievers are rarely challenged, they eventually hit a wall when faced with a task that is too difficult and may not understand how to best progress and persevere (Sinclair, 2017). Classroom engagement and work persistence, both of which can be referred to as task perseverance, are key elements of the practical application of grit in the classroom (Sinclair, 2017).

Grit is often classified as a psychological strength and may be especially culture-bound because it is a concept that is embedded within the values and beliefs of a culture (Disabato et al, 2018). Individualistic western cultures are particularly preoccupied with the concept of grit, while eastern cultures that have more collectivist ideals do not focus as strongly on the individual’s own perseverance and success. Herold (2015) also posited that grit is culture-biased and is racially constructed. Grit has also been shown to be hardier as a person ages, with older individuals having higher grit scores than younger people (Caza et al., 2020).

Grit and Self-Control

The terms grit and self-control are often used interchangeably (Duckworth & Gross, 2014). While self-control improves from infancy to adulthood, “parallel with the maturation of prefrontal brain areas and metacognitive sophistication” (Duckworth & Gross, 2014, p. 3), grit does not necessarily improve in such a linear fashion. Self-control, originally defined by Galton (2006) as *self-denial*, is described as the ability to inhibit strong impulses that are ultimately undesirable in favor of more desirable impulses

(Fujita, 2011). Galton suggested that self-control is a surprisingly poor predictor of high achievements (Duckworth et al., 2007, p. 1089). He also proposed that talent was insufficient for eminent achievement (Eskreis-Winkler et al., 2014, p. 2).

Individual differences in self-control were first measured through Rorschach tests and other projective tests, such as those developed by Singer and Sugarman (1955). Later measures, like the marshmallow test (Mischel et al., 1972), provided face validity to the concept of self-control. Duckworth and Kern's (2011) conceptualization of self-control emphasized "'top-down' processes that inhibit or obviate impulses, and thus implicitly assumes 'bottom-up' psychological processes that generate these impulses" (p. 260). Because we assume everyone is motivated by something, it is understood that those aforementioned psychological processes drive that motivation, while the top-down processes allow an individual to exhibit control over an immediate need to satisfy an impulse.

Duckworth and Gross (2014) suggested that both self-control and grit have similarities and differences that are best highlighted using a hierarchical goal framework like that shown in Figure 1.

Figure 1

Hierarchical Goal Framework (originally published in Duckworth & Gross, 2014).

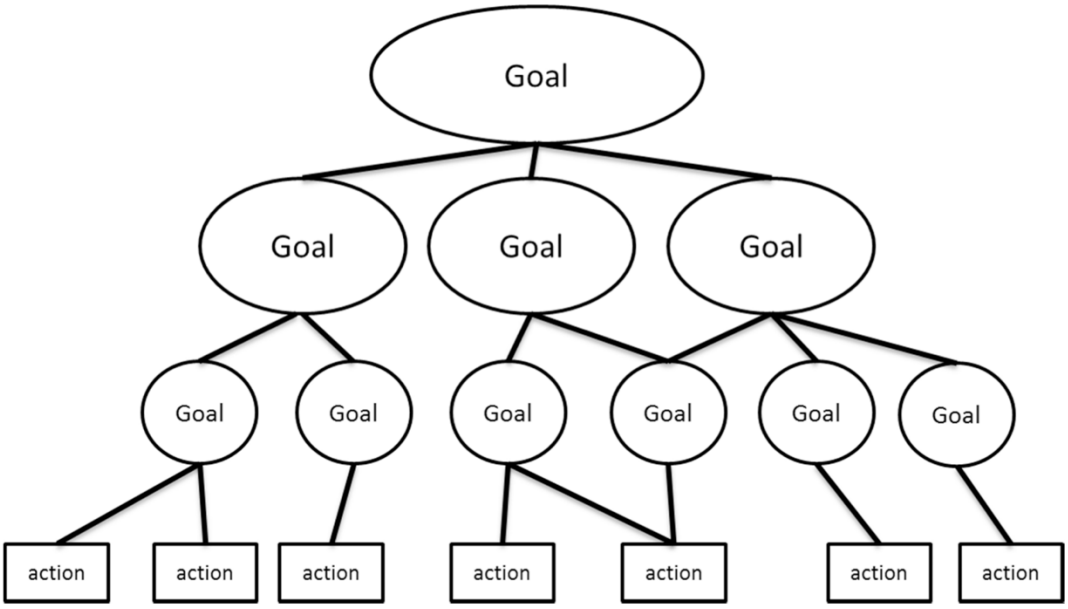


Figure 1.
Hierarchical goal framework. Goals are typically organized hierarchically with fewer high-level goals and more numerous low-level goals; the latter are associated with action tendencies, here broadly construed to include attention, emotion, and behavior.

As shown in Figure 1, the hierarchical goal framework consists of an overarching higher-level goal that is then broken down into consistently smaller goals. These smaller goals are then completed by a series of actions. Self-control is necessary for an individual to differentiate between lower-level goals with conflicting actions (Duckworth & Gross, 2014). However, when people are mistaken about the cost and benefits of their choices, self-control is irrelevant (Duckworth et al., 2018, p. 102). Vazsonyi et al. (2019) determined the individuals who strive for long-term goals often exercise more effort and planning toward their goals, rather than avoiding distractions and interruptions to achieve a lower-level risk. In an analysis of the current theory on self-control, Steinberg (2017) suggested that risky behaviors often peak in adolescence. This is due to self-control processes continuously maturing, while reward-related impulses become stronger during

this stage of development.

Grit Versus Resiliency

King et al. (2018) stated that resilience alone is not a necessary condition for one to achieve academic success. Similarly, resiliency is often listed alongside grit; however, while the two work similarly, grit and resiliency have different defining features. Resiliency is defined by Merriam-Webster (n.d.) as the "ability to recover from or adjust easily to adversity or change" (sense 2). Grit, on the contrary, refers to the ability to predict one's success beyond their IQ and conscientiousness (Collaco, 2018, p. 1). Kannangara et al. (2018) reminded readers that "Duckworth stresses the importance of stamina in grit and describes a 'gritty' individual as somebody who treats their success and achievement as a marathon, rather than a sprint" (p. 2). To complete a lengthy goal, there is a need for adjustment and change along the way. Eskreis-Winkler et al. (2014) maintained that grit is about more than working hard on a particular task at hand, but instead about working diligently toward the same goals over long stretches of time. Whitson and Consoli (2009) discussed how a teacher's influence on lessons impacts students. By increasing the challenge level of a task to meet a student's high-level skills or assisting a student to reach the level of the challenge, the teacher is developing student resiliency.

Duckworth et al. (2007) stated, "Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress" (pp. 1087-1088). Through this definition, it is better understood how grit coincides with the concept of resiliency. In their research on resiliency that measured how high school and college students' scores on the Grit-S scale predicted later

grades, Muenks et al. (2017) found that perseverance of effort served as a strong predictor of student grades; however, once the other variables (conscientiousness, self-control, self-regulation, effort regulation, behavioral engagement, and behavioral disaffection) were added, only effort regulation retained predictive power of student success. Meanwhile, the research of Meriac et al. (2015) concluded that work ethic and grit were distinct concepts, much like resiliency and grit.

Critiques of Grit and Growth Mindset

The implementation of grit and growth mindset research traveled far and fast. As quickly as the research spread, new perspectives and critiques emerged. Dweck and Yeager (2019) concluded that there is much still to learn about how to best implement growth mindset and the nuances of its implementation matter greatly. Dweck admitted that there is still much to learn about how best to utilize growth mindset in the classroom and much depends on how the theory is translated into education (Severs, 2020). Grit research has been further boiled down to a strong emphasis on passion, where previous research on the subject focused mainly on perseverance through challenges and setbacks. Inconsistent reporting measures of grit throughout research have further proven Duckworth's theory that grit is domain-specific (Direito et al., 2019). Not only is grit domain-specific, but it may also be race-specific. In an era where the cultural stories of individuals are being reexamined, research must examine the institutional barriers that may impact the perception of grit (Love, 2020). Critiques of both grit and growth mindset research revolve around a deficit model of thinking, anticipating that the individual is an empty vessel that needs to be filled and that grit or growth mindset cannot grow without it being cultivated (Tewell, 2020).

Big Five Personality Traits

Grit is often compared against Goldberg's (1990) big five personality traits. These traits were determined by Goldberg to represent the personality stability across an individual's lifespan. These traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) are used to determine an individual's pattern of thinking, feeling, or behavior over time. In Goldberg's research, extraversion is representative of how an individual engages socially, their assertiveness and their overall energy level. Agreeableness focuses on the individual's respectfulness, acceptance of and compassion for others. Conscientiousness represents how productive, organized, and responsible the individual is, while neuroticism (or emotional stability) looks at how often an individual changes from positive to negative emotions, as well as the intensity of those changes. Finally, openness to experience (or intellect) focuses on the individual's imagination, intellectual curiosity, and aesthetic sensitivity.

The big five inventory has been researched and refined multiple times (John & Srivastava, 1999; Soto & John, 2009); though the traits remain the same, the understanding of their facets improves. Soto and John (2009) discovered that each trait can be broken further into two facets. Extraversion can be broken into assertiveness and activity, agreeableness into altruism and compliance, conscientiousness into order and self-discipline, neuroticism into anxiety and depression, and openness to experience into aesthetics and ideas. Jirásek and Sudzina (2020) found that openness to experience is the trait most likely to be linked with creativity, while extraversion also weakly increased creativity. Because creativity is necessary for success in the arts, it is important to understand how the big five influence it. The big five may change during adolescence

and young adulthood but often improve steadily after that point (Soto, 2018).

Adolescent Development

Piaget (2001) described four stages of development in his theory of intellectual development of individuals from birth through adulthood. These stages (sensorimotor, preoperational, concrete operational, and formal operational) describe how an individual's cognitive functions change over the course of their lifespan. As an individual gains new skills and understanding of the world around them, they advance through the four stages. Piaget defined the sensorimotor stage as occurring between 18 and 24 months; the preoperational stage from toddlerhood through early childhood; and the concrete operational stage from around age 7 to age 11, when an individual reaches puberty. The formal operational stage occurs in adolescence and remains through adulthood. Individuals who function at a formal operational stage can understand possibilities and develop theories, including those about abstract concepts that may not be black and white.

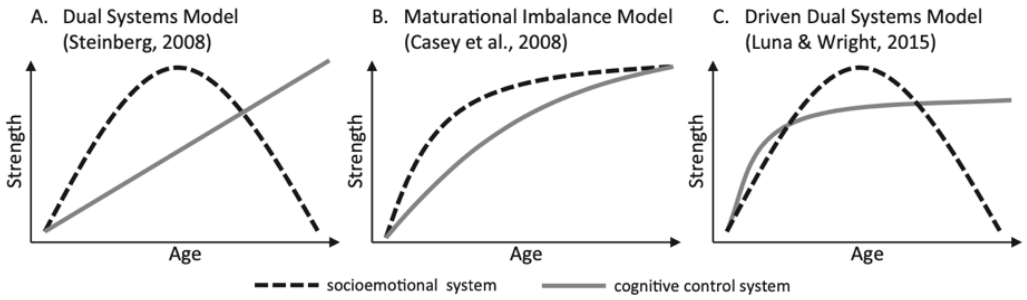
Adolescence is defined as the period from age 10 to 19 (Sacks, 2003), but individuals may reach adolescence at different times. The period of adolescence begins with puberty and ends when a person reaches a full adult identity. This time period may be delayed for individuals with adverse childhood experiences such as a history of abuse or neglect, broken or violent home lives, and community influences (Aviles et al., 2006). Adverse childhood experiences may affect an individual by delaying their social-emotional growth throughout their childhood and into adolescence and adulthood.

During adolescent development, the prefrontal cortex is in the process of developing, reaching full development in the mid-20s (Ernst et al., 2005), and neural

connections are strengthening (Dosenbach et al., 2013). This development may result in the adolescent's affect system maturing early on while their cognitive control matures at a slower rate (Ernst et al., 2005). Steinberg (2008) introduced the Dual Systems Model to explain how brain development impacts adolescent risk-taking. Casey et al. (2008) presented a similar model, the Maturational Imbalance Model, that studies the same socioemotional growth in comparison to cognitive control. Finally, Luna and Wright (2016) introduced a third model, the Driven Dual Systems Model, examining the same two constraints of adolescent development. These three models are shown in Figure 2.

Figure 2

Theoretical Models of Adolescent Socioemotional and Control Systems (originally published in Schulman et al., 2016)



As shown in Figure 2, both Steinberg's (2008) and Luna and Wright's (2016) models present age as an inverted U, representing an individual's socioemotional processes (being driven by reward) peaking at mid-adolescence. Casey et al.'s (2008) model presents the same socioemotional reward process increasing rapidly in early adolescence and then plateauing at mid-adolescence and remaining there through adulthood. Both Steinberg (2008) and Casey et al. determined that cognitive control increases at a near-steady rate throughout adolescence. Meanwhile, Luna and Wright determined that cognitive control instead plateaus in mid-adolescence and does not

increase into adulthood. Adolescent risk-taking studies suggest that these behaviors occur as an adaptive means to impressing potential mates and establishing independence (Ellis et al., 2012). Impressing peers, whether romantic or otherwise, is often documented by adolescents as a means for risk-taking, as social context is a driving factor of such behaviors (Chein et al., 2011). Alarcón et al. (2017) discovered that adolescent risk-taking can be attributed to the maturation of reward systems in the brain, which are directly related to the sex hormones testosterone and estradiol that are being produced at higher levels during puberty and through adolescence. These hormonal changes impact the adolescent's dopamine systems, providing them with rewarding stimuli that increase sensation-seeking activities.

Adolescent Social-Emotional Development

Social-emotional development and academic achievement are interrelated areas that are necessary for individuals to be successful in school and a variety of other contexts (Klein, 2002). An adolescent's social environment may also influence their risk-taking and behavior (Willoughby et al., 2013). Boykin McElhaney and Allen (2001) found a direct correlation between adolescent autonomy and their relationship with their parents. Individuals who reported a positive parent-adolescent relationship were considered to be low risk. These low-risk individuals were able to present and maintain their positions confidently and clearly in disagreements. Friends of these low-risk individuals also described those low-risk individuals as being more socially accepted and successful at forming peer relationships.

Adolescence is the critical period in which individuals establish habits that will affect them as they enter adulthood. While the experiences of adolescents differ across

various social classes and cultures, the previously discussed pubertal and cognitive changes continue to drive the importance of social relationships in adolescence (Ozer, 2017). In a study on early adolescents in China, Lan (2020) found that adolescents who often switch activities based on passions and interests are less likely to maintain standing in their peer group. Maintaining perseverance and consistency in activities proved important to maintaining peer relationships. Peer relationships in adolescence can also be directly attributed to feelings of hopefulness and optimism (Fletcher & Kim, 2018).

As individuals mature into adolescence and beyond, their autonomy continues to increase and their reliance on social relationships with parental figures changes to a reliance on peer relationships and one's own personal satisfaction (Spear & Kulbok, 2004). Sessa and Steinberg (1991) defined autonomy as "a sense of self-reliance, a belief one has control over his or her life, and subjective feelings of being able to make decisions without excessive social validation" (p. 42). Many adolescents begin to express autonomy over their choice of friends, clothing, and personal preferences (Daddis, 2011). Daddis (2008) identified friends and peer relationships as significant influences over an adolescent's personal choices. Peer behaviors also serve as a measurement tool for adolescents to gauge their own behaviors (Prinstein & Wang, 2005). School and community-based initiatives that promote positive development of social and emotional behaviors help adolescents to develop individual competencies and improve their well-being (Kendziora & Osher, 2016). The concept of peer contagion, or the mutual influence of an individual on a peer regarding behavior and emotions (Dishion & Tipsord, 2011), was referenced in literature before the term was coined. Though often discussed in a negative light, peer contagion may also describe the positive influences an individual

may have on their peers, reinforcing and rewarding positive behavior with friendship and interactions.

Adolescence is often seen as a period of opportunity and vulnerability (Dahl, 2016). Adolescents experience a wide fluctuation of daily emotional states and often experience these emotions as being deeply personal (Larson & Brown, 2007). However, as aware as the individual may be of their emotions, they need to understand the social, psychological, and physiological processes that influence them (Fischer et al., 1990). In research on adolescent sociopolitical interest and values, it was discovered that school environments have as strong of an influence as the home in forming an individual's sociopolitical beliefs (Wanders et al., 2020). Teachers and peer conversations can influence an adolescent's interest and awareness of societal issues like politics and civic duties. Participation in extracurricular and organized activities may also influence an adolescent's understanding of these concepts. Oosterhoff et al. (2014) examined adolescent participation in a variety of organized activities (sports, religious activities, community and school clubs, arts, and music) and determined that participation in different activities influenced the adolescents' societal values in a unique manner. Each activity influenced adolescents' values differently, with arts and music participation having a high association with nonconformity (Oosterhoff et al., 2014).

Benefits of Theatre Arts

Bolton (1980) described the significance of theatre as an expressive form of thinking and feeling within one's personal engagement with the objective world. For students to be engaged with the art, they must be involved, which requires attracting their attention to the content (Heathcote & Herbert, 1985); then the exploratory learning that

encompasses theatre arts may begin. Bower (2004) linked arts education with better visual thinking, problem-solving, language, and creativity. Goldstein et al. (2020) examined the beliefs of acting teachers about the skills learned in theatre class that transfer to outside activities. This research compiled a list of 27 activities that occur in the theatre classroom, and teacher perspectives on those activities impact other academic areas. All the skills were determined by the theatre teachers to be applicable to other academic areas, but social interaction and perspective taking games, discussion of characterizations, performance in class, and reflection were the highest ranked of the 27. When examined further, Goldstein et al. determined that the most statistically significant skills learned in theatre classes are communication and interpersonal skills, confidence, imagination/creativity, and empathy. Theatre is a social art form, relying on both verbal and nonverbal communication; therefore, the statistical significance of each of these skills is a logical progression. Confidence in oneself is particularly important for students because student self-expectations can influence their academic performance and expectations over time (Kaplan et al., 2005).

The expressive nature of theatre could provide adolescents with more opportunities to take on new perspectives (Best, 1978) and develop emotionally (Wright, 2006). Larson and Brown (2007) determined that the community surrounding a theatre program, including the school and families of drama students, largely shaped student experiences. Participating as part of a larger community creates an internal culture. Oftentimes, this culture promotes high expectations of students, expecting them to create new characters in novel settings and interact with new people during a rehearsal or production. Students will change their behavior to meet their teacher's expectations,

raising it to meet high expectations or lowering it to match lower views (Kramer, 1992). Bronfenbrenner's (2009) ecological systems theory also supports the idea that as an individual matures, their interaction with their environment becomes more complex, influencing choices through positive interactions and reactions. The culture and community of theatre can also promote an ethos of care and concern, where strong emotions are felt, expressed, and supported (Larson & Brown, 2007). These community-like features resemble those of a positive family environment, facilitating positive emotional development in participants (Denham et al., 2004). Larson and Brown provided examples of the various emotions students involved in a theatrical production may experience and learn to manage: disappointment with casting, satisfaction, and elation from doing well, anger and stress with interpersonal obstacles, anxiety, and stage fright. Each of these emotions is handled differently, but through learning to express and manage such emotions, theatre students are developing in their social and emotional awareness and autonomy.

Vandenbroucke (2016) argued that theatre is that "rare human pursuit that can use every piece of knowledge and talent its practitioners possess" (p. 357). Often seen as a process of handing down information from teacher to student, then student to student, the craft of theatre may take on the style of a medieval apprenticeship (Vandenbroucke, 2016). This style of learning, alongside the study of a script from a different time or world, can help to create empathy for others. Theatrical curriculum is grounded in multiculturalism, stemming from rituals and cultures all over the world and changing with the times. The understanding of and appreciation for other cultures that occur with involvement in the arts and music may foster an appreciation for those other cultures

while also reducing one's attachment to their own (Spry & Hornsey, 2007).

Duma and Silverstein (2014) stated that the study of theatre can increase long-term memory functions through rehearsal, enactment, emotional arousal, and pictorial representation. Crystallization of meaning occurs through both ritual and reflection. Morgan and Saxton (1987) described ritual as a highly structured binding of meaning for the group, while reflection provides opportunities for the group to extract experience and meaning in relation to their own life experiences. Teachers may lead students into the story using a ritual. Reflection may come in the form of writing, reading, listening, and speaking both within the context and out of the context of the role.

Participation in theatre activities may also improve an individual's self-concept (Daykin et al., 2008), bettering their understanding of themselves and improving behavior. Bamford (2006) stated that a quality arts education may improve student attitudes to both school and learning while enhancing one's cultural identity and sense of personal satisfaction. O'Toole (1994) also suggested that self-concept is developed through drama, with personal discoveries being made while exploring new roles. Wright (2006) described the development of empathy and self-concept when he stated, "Drama has at its essence a person taking on a role and interacting with others as if the person was someone else" (p. 43). Through role-playing, students expand their humanistic understanding of others. Tackling unique problems and finding solutions can create a cohesive group or community. While classroom drama is different from school theatre, in that it solely exists within the walls of school-day education instead of after the normal school day and that the latter focuses on theatrical production, the benefits of each are similar. Involvement in theatrical programs can also increase an individual's content

knowledge of the topic on which the performance focuses (Daykin et al., 2008), increasing content literacy. Lasic and Kenny (2002) found that drama teachers in Melbourne, Australia reported improved student-teacher relationships and academic and social benefits from student participation in their programs. Tabone and Weltsek (2019) described theatre classrooms as rich with "social interaction and verbal interplay" (p. 173) that promote creative and high-level thinking that will benefit students outside of the drama classroom. They also discussed how participation in theatre programs can build student reading comprehension skills when interacting with a script, a concept further described by Booth (1985) and Kukla (1987).

Booth (1985) linked reading and drama through their common links between the printed word and experience. Drama provides an active entry into the story for individuals that allows for a deeper connection to the plot and theme. Utilizing dramatic techniques to build a 3-dimensional (physical, emotional, and intellectual) concept surrounding the story can assist students in comprehension of the story (Kukla, 1987). Within the imaginary concepts and situations of the story, students can explore, invent, and take risks within a safe space (Kukla, 1987). This freedom of expression aids in the discovery and exploration of creativity in drama students. While participation in theatre classes has proven to be an effective method of improving reading comprehension, dramatic activities in the classroom have also proven to be effective tools for learning a second language (Chin Su, 2014). Process drama has also been proved to reduce student anxiety when learning a new language (Piazzoli, 2011). By utilizing a script in a foreign language as a guide, students were able to improve their language ability through imagination, characterization, interpretation, and visualization of the situations within the

invented world of the play. Consistent rehearsal with the foreign language script promoted confidence and fluidity with the new language, as well as pronunciation and comprehension of the meaning (Valverde, 2002). Wright (2006) considered that most conceptions of role are mediated through language, making it a crucial component in theatre, self-concept, and language acquisition. Kelner and Flynn (2006) determined that drama offers similar strategic knowledge to reading activities, helping them to better understand the text with which they are working.

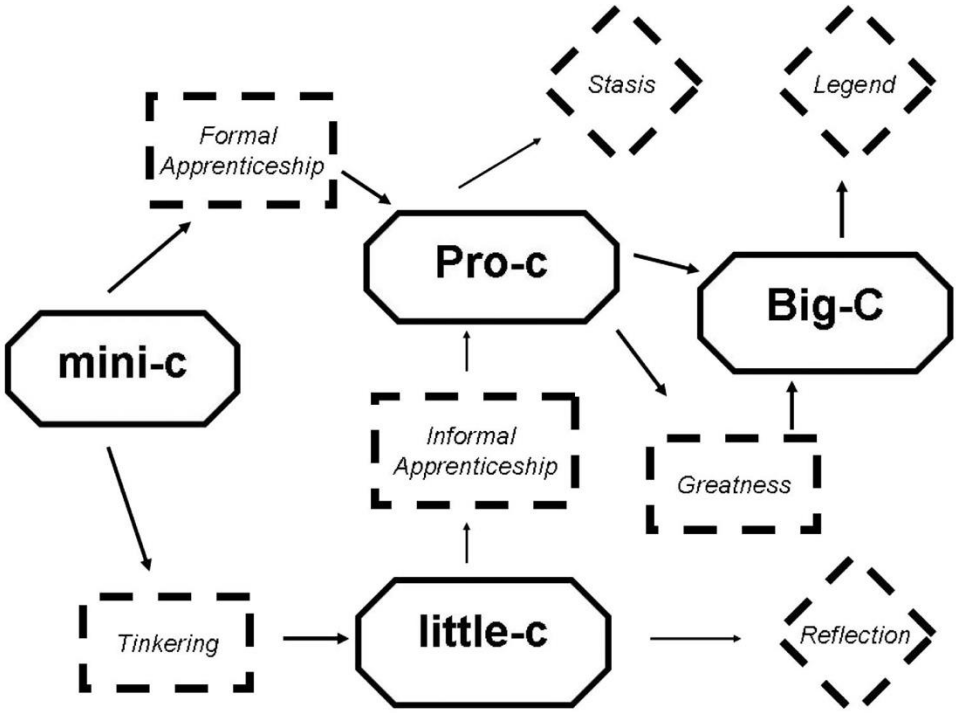
Participation in youth theatre programs has also shown significant changes in attitudes towards marginalized individuals and religious groups, as well as an improved respect for diversity (Koukounaras-Liagis, 2011). In this research, participation in a 3-month applied theatre program impacted the development of student socio-ethical values and improved student attitudes towards those different from them. Best (1978) supported this phenomenon by providing that the major consequences of arts in education are that they can help students feel stronger about certain moral, social, and emotional issues that they may not have been aware of before experiencing the arts. Theatre of the real is a style of theatre that aims to blend reality with theatre to present personal, social, historical, or political stories in a new light, allowing viewers to process and question the real (Martin, 2012).

Creativity in Theatre

Schmidt and Charney (2018) dove deeper into the exploration and assessment of creativity in theatre education utilizing the Four C Model proposed by Beghetto and Kaufman (2009). This concept, shown in Figure 3, separates creativity into four classifications.

Figure 3

The Four C Model of Creativity (originally published by Beghetto & Kaufman, 2009)



The Four-C model of creativity (Beghetto & Kaufman, 2009) is comprised of four classifications of creativity: mini-c, little-c, Pro-c, and Big-C. Each of these classifications may occur within an individual's own creative exploration and influence their future impact within the creative field or art. Mini-c is the initial stage of creativity, focusing on the individual self and one's own intentions and discretions. This may influence a theatre student to try new things in class or take risks (Schmidt & Charney, 2018). Little-c refers to one's everyday creativity and what theatre teachers often expand on in the classroom when they have students design an original costume or set or develop a script.

The areas of Pro-c and Big-C are often exhibited by fewer students in the secondary theatre class, but it is imperative that the theatre teacher recognizes and

cultivates these levels of creative development for students to obtain the highest manifestation of creativity possible (Schmidt & Charney, 2018). Pro-c refers to professional expertise in creativity. While it takes a long time to develop, the development process should be cultivated in students who exhibit Pro-c qualities to allow them to reach the potential of Big-C. Pro-c cultivation and development need to be dedicated and experimental. It may also take years of practice and exploration, finding what works and what does not (Gardner, 2011). This dedicated exploration in the realm of theatre would be spent on meaning-making activities in the classroom, learning about theatrical design, or through the play production process. Big-C creativity represents creative works that reach the status of universal recognition and status of time (Schmidt & Charney, 2018). Famous playwrights and theatre practitioners like William Shakespeare, Constantin Stanislavski, and Stella Adler represent a few examples of Big-C individuals in theatre. If creativity is one of the major components of theatre education, a complete method of assessment and understanding of its practices must occur.

Methods of Teaching Theatre

Theatrical education has been implemented in a variety of formats throughout the past century, from the raw instruction of the artform to integration with other subjects. Within the last 20 years, the education system has seen an influx of teachers trained specifically to teach theatre and the need to rely on English teachers with an interest in theatre to teach the subject declined (Omasta, 2013). With this increased understanding of the craft came an exploration in a variety of teaching formats based on the works of theatre education practitioners.

The first idea that comes to mind when discussing theatre education is often the

performance study or implementation of the play rehearsal process in a school. However, many theatre education practitioners focus more on the process of learning than the product of the final performance. These differences in practice have resulted in the development of two terms to describe theatre educations: Theatre in Education (TiE) and Drama in Education (DiE). TiE refers to the process of communicating with the audience through performance, while DiE refers to the experience of the learner during the dramatic process (Schonmann, 2005). Omasta and Chappell (2015) posited that if the study of performance has indeed broadened to include new styles of performance, there is no reason why the way theatre is taught in the educational setting (DiE) should not be considered as worthy of the same capacity of research as the full performance. However, many theatre practitioners argue that the influx of DiE concepts comes at the expense of losing the artistic roots of the original artform (Schonmann, 2005). A brief review of each of the currently implemented formats of theatre education is discussed in the next sections.

Theatre for Performance

The strongest example of TiE, theatre for performance, focuses on the entire process of staging a play through a traditional casting and rehearsal process. With rehearsals often taking place outside of the regular school hours, student performers are focused on the product of a final performance. The process of theatre for performance focuses on teaching students skills not only in acting but also in stagecraft: costuming, set building, lighting, and prop making. In the K-12 educational setting, theatre teachers serve in all capacities of the teacher, director, set, costume, sound, lighting, and media designers, among other theatrical roles filled by many parties in a professional aspect

(Omasta & Chappell, 2015). These teachers embody the apprenticeship aspect of theatre (Vandenbroucke, 2016) by teaching students these skills and leading them in teaching other students once mastery has been achieved.

Theatre Integration

Like the ways in which creative drama allows students to explore the content and concepts of new ideas through dramatic play, theatre integration also utilizes theatrical concepts to teach students new concepts across varied curriculum. Integration of theatre with other subjects has shown an increase in student success and attendance while decreasing behavior problems (Kariuki & Black, 2016). By allowing students from all demographics to access and present information in a variety of ways, theatre opens the door to the upper levels of Bloom's taxonomy (Bloom et al., 2001). Taylor (2008) argued for the integration of the arts in social studies and history by stating that art should be taught alongside the cultures that created it instead of isolating it into a field on its own. This concept echoes what Best (1978) stated in his argument on how individuals learn through the arts, that many of the reasons people give for the appreciation and interpretation of a certain work of art are derived from the culture and social traditions from which the art is derived.

By experiential learning, theatre unites both the intellectual and emotional sides of the brain (Dragović & Balić, 2012). To teach new concepts to students, integration of theatre allows the teacher to go beyond rote memorization and into a world of physical and verbal exploration of the subject. Theatre integration is often seen in language arts courses, due to its immediate connection of script to story, but studies show that students learn concepts from all curriculum areas better through performance arts (Snyder et al.,

2014). Heffner and Beckerman (1970) referred to theatre as a window through which we see aspects of life. Through the exploration of the theatrical world, we can discover more about ourselves and the subjects within, with a direct correlation to many educational concepts taught in core curriculum classes.

Applied Theatre

The use of theatre process to interact with and bring together a community of people for the betterment of the group and social justice awareness falls under the category of applied theatre, which constitutes the forms of DiE most found in current theatre education. These applications of theatre education have proven to be a powerful way for individuals to negotiate personal and social issues through performance (Koukounaras-Liagis, 2011). Applied theatre relies on reflective listening and interacting with actors as they tell their own stories through a series of dramatic activities. Multiple areas of applied theatre exist, stemming from Theatre of the Oppressed (Boal, 2018) to more modern interpretations of theatre as an agent for change (Hughes & Nicholson, 2016). Traditionally, applied theatre allowed the participant to dramatize past events and distance themselves from the event to process it (Boal, 2018; Brecht & Willet, 1964); however, a more modern approach to applied theatre is to use the artform for meaning making, taking a less representational approach (Hughes & Nicholson, 2016). When applied theatre is used as meaning-making, it features many similarities to creative drama (Heathcote & Herbert, 1985; O'Neill, 1985), where a teacher in role facilitates student processing of a text within the world of dramatic play and exploration.

Theatre of the Oppressed. Focusing on the concept of the "actor," the performer, and the "spect-actor" (the audience), Theatre of the Oppressed becomes a

pedagogical process of consciousness (Tolomelli, 2016). In this process, the actor may make changes to their story based on the response of the spect-actors. This change process encourages processing and exploration of new meanings and experiences that allow the actor to process the original information through theatrical processes like forum theatre and games, taking control of their own learning. Boal's (2018) concepts were based on Freire's (2017) pedagogy of the oppressed, which focused on the hope for and ideologies of change present in educating the oppressed, as well as transformative research that is action-based and reflective to liberate. Theatre of the Oppressed has become an important influence on theatre education (Valverde, 2002).

Creative Drama. Creative drama is used as an overarching term for the type of dramatic play that is initiated by and led by a dramatic leader, or teacher. This concept, sometimes referred to as process drama (O'Neill, 1995), uses a teacher-in-role to facilitate and lead students through the context of the game and creation of the world in which the dramatic play exists. In process drama, the teacher is not the only expert on the subject being explored. By using the "mantle of the expert," the teacher provides their students with the expertise and knowledge of the field that is being explored (Heathcote & Herbert, 1985). Process drama is often used to teach new concepts outside of the theatre classroom to students using dramatic play. Through stories, acted scenarios, and improvisation, the teacher-in-role and the student actors move in and out of various roles to discover new sides of the story and subsequently new information that can lead them to new discoveries about the world in which their play exists. This duality of space is referred to as *metaxis* (Boal, 2018; Bolton, 2010), describing the state of being in two worlds at once and existing within the space of "I am making it happen" and "It is

happening to me."

Perceptions of Theatre Education

If truly "the arts are a study on what it is to be human; they tap into our subjective experience of the world and help us to make sense of our lives" (Robinson, 2017, p. 89), one must assume that the literature on the benefits surrounding arts education would be plentiful. Robinson (2017), an arts educator himself, argued that the enrichment provided by an arts education remains "difficult to quantify and by trying we reduce the very art we wish to protect" (p. 89). It is challenging to pinpoint exactly what drives each individual artist, but a deep connection between the performing arts and empathy, behavior, and self-confidence has been measured over time. Aden (2014) related the theatre artist's ability to impact their own emotions and develop pro-social behavior through accurately portraying the quick emotional changes in a script, while Lampert (2007) determined that learning through the arts fosters the ability to understand multiple perspectives. Through providing a dramatic arts education in schools, a safe space is created where students can learn these skills while having their voices and concerns heard (Robinson, 2017).

The comprehensive study of TiE, which is designed to explore the entirety of theatre from history and theories to rehearsals and performance, has been an accepted part of the humanities curriculum in universities in Europe and North America for nearly a century, with increasing prominence in the last 50 years (McAuley, 2008). In the more recent past, it has been added to the elementary and secondary curriculum but at drastically unequal levels. Only 4% of public elementary schools reported having dedicated theatre programs from 2009-2010 and 45% of public secondary schools

reported dedicated programs from 2008-2009 (National Center for Education Statistics, 2012). O'Toole and O'Mara (2007) described drama as a "unifying paradigm" where the learning framework encompasses making, performing, and appreciating the art form. The humanities have the potential to create new ways of viewing what has become routine, answering the question of what it is to be human, while also providing a counter to the dysfunctional aspects of modern life (Starkey et al., 2019).

A comprehensive theatre education relies on the theories of Grotowski (2012), Hagen (2009), Stanislavski (1989), Meisner and Longwell (2012), and Adler (Kissel, 2000), among the work of many other theatre theorists and practitioners. In a comprehensive study on theatrical rehearsals, Rawlins (2012) discovered that theatre practitioners

> tend to mix their approaches and influences in an eclectic way--and it is therefore often hard to identify whence exactly a particular technique or philosophy derives, particularly if the practitioner does not attach any great importance to the recording of such things. (p. 432)

After all, as Brecht and Willett (1964) stated, theatre "is not magic, but work, my friends" (p. 425), and the director must find the combination of theories that puts the best performance product in front of the audience.

The Rehearsal Process

Though the art form now known as drama was established through many different cultures and traditions from around the world, the format established by the Ancient Greeks is what is commonly produced in today's theatre. Conkie (2012) described this process for the actor as developing a familiarity and contentment with the script and

movement through repetition, learning first the content of their role and how it fits into the play, and then developing a sureness with actions of what to do when and where, as well as how and why to do those actions. This sureness and familiarity lead to the heart of the rehearsal process, where they can experiment with characterizations within the blocking and direction of each scene. Bento-Coelho (2018) regarded rehearsal as "a ground for dynamic encounter with performers: safe spaces, where their perceptions, ideas, and thoughts can be transferred to the work through a process of active attentiveness" (p. 70), further describing the same space where actors can explore and create while building on technical theatre skills. Conkie (2012) subsequently argued that rehearsal may exceed performance as a means of imaginative, affective, and interpretive engagement.

Stager-Jacques (2012) deduced that it is challenging, or even impossible, to find a comprehensive and summative list of skills for the actor, because learning acting is entirely about skill building. Because of this, each actor has their own approach and unique terminology they use within the rehearsal process. One skill that is necessary for any successful scene performance is listening. While "sharpened listening enhances a performer's sense of self-confidence in being able to receive, react, and respond in a manner of seconds" (Stager-Jacques, 2012, p. 256) while in performance, it also allows the actor to adjust at the director's behest, adjusting the scene to fit the vision. Listening is a strategy used by actors to enhance understanding of the world of the play (Bento-Coelho, 2018). In the dramatic arts, listening is also used during the notes and critique process, where a discussion is had on strengths and weaknesses and areas for improvement in future rehearsals. Student understanding of notes is shown in subsequent

rehearsals by students adjusting their performances based on the feedback they received. This process often occurs at the end of the rehearsal and leaves performers with time to internalize and process the new information before returning to the rehearsal space.

All the hard work, processing, and critique that goes into the rehearsal period lead up to the culminating performance(s). According to Goffman (1975, as cited in Bergman Blix & Wettergren, 2014), "The task of stage actors is the presentation per se, and the theatre and actors' work with presenting roles is an effective simile for the study of every day role playing" (p. 2). A successful performance is created through the entire artistic team collaborating on a shared vision, incorporating the viewpoints of all players, actors, and creative teams alike into the work.

ZPD

Vygotsky (1978) introduced the theory of ZPD in the early 20th century. ZPD is the area between what a learner already knows and what they can achieve with help from a teacher or supervisory adult. Podolskiy (2012) suggested that children can do much more in an activity that is collective or under the guidance of adults than they can by themselves. This guidance can be achieved by scaffolding the student's learning. Scaffolding is the process of building on student prior knowledge and aiding as needed for that student to improve their learning, as introduced by Wood et al. (1976). As students increase in their learning, the teacher's supports may decrease and even fade away with a transfer of responsibility and action that moves from the teacher to the student (Margolis, 2020).

Individuals begin to explore within their ZPD as young children through the act of role-playing and imaginative play (Hakkarainen & Bredikyte, 2019). This may expand

through adolescence as teachers use scripts, storytelling, and role-playing to model learning for students in their classrooms. Theatrical performance follows similar concepts of role-playing, with actors entering their first rehearsal with very little knowledge of their roles and the story but building upon their knowledge and confidence with the assistance and side-coaching from the director throughout the rehearsal process. Side-coaching, a concept developed by Spolin and Sills (1999), focuses on the director as another actor, a teacher, and a director all at once. Through empowering words, the director prompts the actor toward the discovery of a new concept or action within their performance. Finally, during the final weeks of rehearsal, performance success is dependent on the actors and crew to showcase their knowledge and understanding of their roles and to complete the performance without the scaffolding from their teacher. By providing the appropriate scaffolding and side-coaching along the way, the director or theatre teacher is providing students with the tools necessary to approach mastery of the content. Gutmann et al. (2018) suggested that finding the right amount of help to offer students may be a challenge, as more support along the way may leave students unable to fully perform when it is removed but less may not help them to develop the necessary skills to be successful.

Vygotsky himself studied theatre before moving into social sciences, focusing on the cultural and social aspects of the learning process (Davis et al., 2016). Early Vygotskian research on the whole context of learning (the active and physicalized techniques of training) attributed the implications of the material environment on an individual's learning (Davis et al., 2016). This concept can be explicitly linked to later theories on ZPD and the space in which one moves from guided to autonomous learning.

Summary

This literature review addressed the current understanding of grit and its relationship to self-control and resiliency, adolescent brain development, and the benefits of theatre arts, as well as current perceptions of theatre education and an overview of the rehearsal process. Grit research reveals that while grit has been associated heavily with self-control in the past, the two are separate concepts that influence each other. Individuals with higher grit often exhibit more self-control over their own actions. Similarly, resiliency and grit have been combined throughout grit literature; however, many researchers have discussed how the two concepts instead work together to create the concept of perseverance of effort, one of the two facets of grit.

Adolescent brains are at a novel stage of development, characterized by the heavy pull of emotional influences and the reforming of cognitive functions. Individuals in this stage of life are heavily influenced by peer relationships, which may lead to heavy risk-taking and new experiences. Previously formed relationships with parents and caregivers may greatly influence the choices adolescents make during this period of cognitive growth. While these factors may impact the grittiness of an individual, the possibility remains that participation in other activities may be as strong of an influence on grit (Mandelbaum, 2018).

When reviewing the theatre literature, there is comparatively little to be found about the educational detriments of the art, though a strong number of articles point to theatre's benefits in social emotional learning, reading, and foreign language acquisition. While theatre has been practiced for thousands of years, theatre programs in public education are relatively recent. Research found that theatre educators use a variety of

teaching methods to create a safe, inclusive learning environment for students that is often more focused on the process of learning rather than the product of a theatrical production. These methods, often denoted under the separate terms of TiE and DiE, focus on the various methods of theatre training found in the public education system. Like the classroom environment, rehearsal practices that allow actors to explore their own perceptions of the piece and work within a shared, collaborative vision are often those that are most recorded and celebrated within the literature as representative of exemplary rehearsal standards.

Chapter 3: Methodology

This research study was completed using a mixed methods approach. Participants from three student groups were surveyed using close-ended and open-ended response questions to determine if participation in an extracurricular performing arts program increases student perceptions of their own grit. The research methods utilized in this study are outlined in the following sections: setting, research design, role of the researcher, methodology, threats of validity and credibility, and ethical procedures. The methodology section discusses participant selection, instrumentation, and procedures for data collection and analysis.

Mixed Methods Research

Mixed methods research design is comprised of both qualitative and quantitative studies that allow the researcher to collect a wider array of data and create a stronger and more valid conclusion to their research (Butin, 2010). Though it can be described by many other names, such as multimethod (Brewer & Hunter, 2006) or mixed research (Doyle et al, 2009), current research designates it under the name of mixed methods research. Creswell and Creswell (2017) provided that this research methodology arose in the late 20th century, originating in the 1980s and evolving through present research. Denzin (1978) introduced the theory of between-method triangulation, the process of using multiple research methods to greatly eliminate bias. The prominence of mixed methods research in social and behavioral sciences, specifically in the fields of psychology, nursing, and education (Timans et al., 2019), place it as a logical choice for this research study. In this research study, the qualitative and quantitative methods have equal status, with each method answering the research questions differently. The

quantitative research provides a statistical understanding of the differences in grit scores among high school students, while the qualitative research provides a narrative to better paint the picture of students' own perceptions of grit. By combining both qualitative and quantitative methods, I was able to discover a more thorough understanding of how the grit of performing arts students differs from their peers.

Setting

This study was completed at a small, rural high school in the upstate of South Carolina. The school is centrally located between many buzzing arts hubs and communities, where students have opportunities to participate in and encounter art in various forms. South Carolina students must pass at least one fine arts course to graduate, but that course may be in visual or performing arts. Many students enroll in multiple arts courses throughout their high school careers to fulfill their elective credits and to fill their course schedules. In lower-level theatre courses, participation in afterschool rehearsals and production is voluntary and not tied to academic achievement; however, advanced-level theatre courses are required to participate in the production for a required number of hours to receive course credit. The number of students participating in the program non-academically versus academically likely had an impact on this study, as well as the other commitments of students after school such as sports or work.

Research Design and Rationale

This study intended to examine how performing arts students' perceptions of their own grit change over the course of an extracurricular performance through the following research questions:

1. Is the factor structure of the Grit-S scale functioning for the research group?

2. How does participation in an extracurricular theatre performance develop student perceptions of grit?
3. How does the grit level of auditioning performing arts students differ from their non-performing peers?

These research questions were studied using the methods shown in Table 2.

Table 2

Research Alignment Table

Research question	Tools/instruments	Data collected	Methods of analysis
Is the factor structure of the Grit-S scale functioning for the research group?	2-factor analysis of perseverance of effort items and consistency of effort items	Grit-S survey items	Factor analysis of Grit-S items using JASP software
How does participation in an extracurricular theatre performance develop student perceptions of grit?	Open-ended questions designed to measure student perceptions of their own grit score	Student responses from the open-ended responses	Deductive coding using nVivo software
How does the grit level of auditioning performing arts students compare to their non-performing peers?	Grit-S survey with Likert scale	Individual grit scores and demographic data from students in performing arts, visual arts, and non-arts groups	3-Way ANOVA analysis of gender, grade, and Grit-S scores completed using JASP software

The research was conducted through an exploratory, mixed methods design that examined the difference in grit scores among theatre students and their non-performing peers. For this research, I utilized Duckworth's (2016) Grit-S scale. This survey (Appendix A) was first administered to theatre students participating in the extracurricular theatre production as well as two other sample groups comprised of non-

performing arts students and non-arts students. An additional open-ended survey (Appendix B) that focused on their experience throughout the rehearsal process and how their perceptions of grit changed over time was administered to the performing arts participants at the end of the first survey.

The collection of grit scores from a wide variety of students allowed for a comparison between both non-performing arts students and performing arts students, as well as between non-arts students and arts students. The Grit-S scale determines a total grit score for students that can be utilized to understand where a student falls on a scale measuring persistence of effort and consistency of interests. These scores were then compared to each other across groups and over time to make inferences about the perceived grit of students in each program. Open-ended survey items allowed for analysis of trends that are recognized by the students who were surveyed. These questions related to student experiences throughout the semester regarding perseverance, follow-through, motivation, and how grit may impact these traits. Finally, a confirmatory factor analysis (CFA) was performed to determine if the Grit-S score is an appropriate measure for the students participating in the research study.

Research Question 1

To determine if the Grit-S scale was an appropriate tool for measurement, a CFA was completed to determine if the factor structure of the scale was appropriate for the demographics researched in this study. The Grit-S scale consists of eight questions that measure two areas: perseverance of effort and consistency of interest. The CFA was accomplished by loading the four perseverance of effort items on one factor loading and the four consistency of effort items on a second factor loading. I then estimated and

evaluated each of the variables using the following equation:

$$Y = \Lambda\xi + \epsilon \quad (8)$$

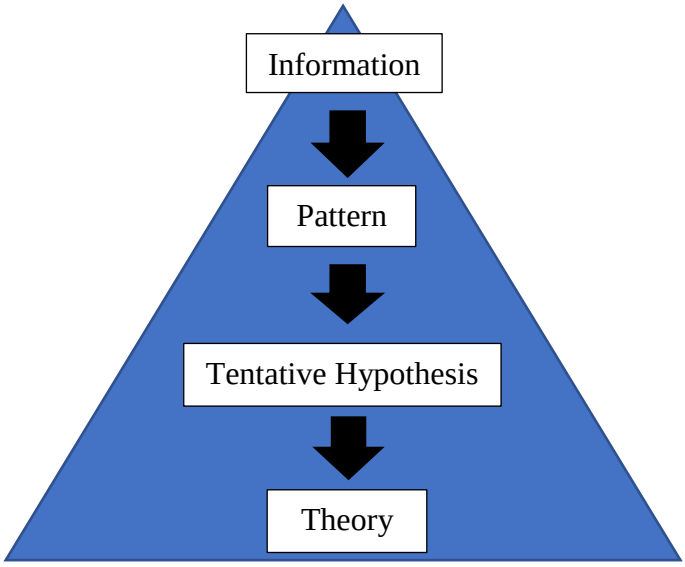
In this formula, Y is the $p \times 1$ vector of observed random variables, while ξ represents the unobserved latent variables, and Λ is a $p \times k$ matrix where k equals the number of latent variables. To determine if the best factor structure was being used, multiple fit indices were investigated (e.g., RMSEA, GFI, and CFI values).

Research Question 2

Open-ended research questions were coded using deductive coding. Deductive coding begins with the collection of responses from survey participants that are then read and analyzed for common themes across participant answers. Some of the themes, labeled as a priori themes, are selected in advance of the coding process. These themes were pulled from grit concepts and literature and are common themes that I expected to find within the open-ended survey responses. The a priori themes (dedication, passion, effort, and self-control) were selected due to their frequent occurrence in grit literature. The open-ended responses were also coded for other themes that occurred outside of the a priori, and these themes were categorized. From the collection and analysis of these thematic categories, a story about the rehearsal process and individual perceptions of grit was formed. Further explanation of deductive coding is shown in Figure 4.

Figure 4

Deductive Coding Process



As seen in Figure 4, the deductive coding process follows from an initial collection of information, in this case, research on the study of grit. This information is then broken into patterns. These patterns, in turn, inform a tentative hypothesis, described above as the a priori themes, that are used to determine the story, or theory, regarding the research subject. In this case, a new theory will be formed around the perceptions of grit in performing arts students at the high school level.

Research Question 3

To study how the grit level of auditioning performing arts students compares to their non-performing peers, the Grit-S survey (Duckworth & Quinn, 2009) was administered to performing arts students cast in the extracurricular production, non-performing arts students, and non-arts students. It is hypothesized that the performing arts students would have higher grit scores than their non-arts peers, but similar grit scores to

their non-performing arts peers. Students participating in all arts curricula demonstrate many of the big five traits that are commonly associated with grittier individuals, which contributed to this hypothesis.

This research question was answered using a 3-way ANOVA. Designed to determine if there is an interaction effect between three independent variables, the 3-way ANOVA provided an answer to how the total grit score of performing arts students compares to their non-performing and non-arts peers, as well as if gender and age group affect these scores. The 3-way ANOVA tests the difference between research groups by utilizing the following equations to calculate the F value for each sum of squares (SS):

$$F = \frac{MS_b}{MS_e}, \quad (1)$$

$$MS_b = \frac{SS_b}{k-1}, \quad \text{and} \quad (2)$$

$$MS_e = \frac{SS_e}{n-k}. \quad (3)$$

To determine the differences between the three groups of survey responses, an F value must be determined using Equation 1. The F value is determined by finding the ratio of the mean square between (Equation 2) and the mean square error (Equation 3). The mean square between is the average amount of variation that is found between the research groups, while the mean square error is the average amount of variation within each of the samples. Both Equations 2 and 3 are calculated using the sum of squares, with Equation 2 calculating the sum of squares between and Equation 3 calculating the sum of squares error. In both Equations 2 and 3, k represents the number of groups in the study. N represents the number of cases combined across all research groups. The F ratio is then used to calculate the significance of the hypothesis.

To calculate the 3-factor ANOVA, each factor is provided a letter to represent it

within the equation. Gender is represented by SS_A, age is represented by $SS_B$and research groups are represented by SS_C. Once the SS of each independent variable is found, the following equations are calculated to determine how each factor interacts with the others:

$$SS_{A\times B} = SS_{AB} - SS_A - SS_B \quad (4)$$

$$SS_{A\times C} = SS_{AC} - SS_A - SS_C \quad (5)$$

$$SS_{B\times C} = SS_{BC} - SS_B - SS_C \quad (6)$$

$$SS_{A\times B\times C} = SS_{ABC} - SS_A - SS_B - SS_C. \quad (7)$$

The hypothesis of results for the 3-factor ANOVA to determine how each of the three samples compare to each other is as follows: $H_{\emptyset}: \mu_1 = \mu_2 = \mu_3 = \mu_\kappa$ and $H_{\mathrm{A}}: \mu_1 \neq \mu_2 \neq \mu_3 = \mu_\kappa$. In this formula, μ represents the group interaction and k represents the number of groups that are being measured. The null hypothesis is that there is no difference in the means between groups, while the alternative hypothesis states that the means are not equal. If the alternative hypothesis holds true, follow-up analyses will need to be completed to determine the statistical differences between the mean scores.

Role of the Researcher

I serve as the only theatre teacher in the building, which could have impacted the study as the performing arts students involved in the study are directly impacted by my instructional and directing style. De Loof et al. (2019) found that students who experience secure relationships with their teachers at the start of the school year show improvements in engagement throughout the year. There exists a dual-role bias due to my position as both the teacher and the researcher. While teacher effect within the research study is an unavoidable outcome, it was addressed through maintaining a neutral stance throughout the research study and ensuring participants that their responses would remain

anonymous to me throughout the process. I also reduced design bias by checking the format of my open-ended response items and avoiding leading or confusing question structure. By utilizing nVivo software to code the open-ended responses thematically, I reduced my own bias with selecting themes through analyzing entire participant responses through multiple runs of the program. Through researching students from my own program, I was able to reflect on my own practice at the end of the research study to improve my understanding of grit in theatre performance and participation in the arts.

Through keeping the surveys anonymous, I was able to avoid adding my own bias into the research. This bias had the potential to arise in the form of reminders to students who had not submitted their surveys. Another research concern came from students sharing their selected answers or scores with one another during the research process. One student bragging about how high their grit score is may have convinced another to answer dishonestly on their surveys. By providing a directive to answer honestly for the specific measure in time in which the student took the survey and by not telling students their grit score, I was able to counter this self-report bias. Social desirability bias comes into play when a respondent wants to appear prosocial in their survey response (Brenner & DeLamater, 2016). However, because the survey was administered one time after the completion of the rehearsal period, it was less likely to inspire social desirability bias and respondent lying.

Rilke et al. (2016) discovered that individuals are more likely to lie in their responses to many small surveys than one large, encompassing survey. To reduce self-report bias, it is recommended that the survey is structured clearly with easily understandable questions (Aprameya, 2019). Surveys should measure items that are

familiar to the respondents and provide specific answers that allow the respondents to answer as honestly as possible (Hughes, 2019). The Grit-S survey is designed to decrease self-report biases by providing clear, concise response options to universally encountered situations.

Methodology

The research study was implemented using the following methods of participant selection, instrumentation, and data collection and analysis procedures. Each subsequent section below explains how I implemented each portion of the research study and maintained ethical procedures throughout the research.

Participant Selection

This study consisted of 61 students, one-third from each of the researched criteria. Twenty students were selected from the performing arts program, 20 from the non-performing arts program, and 20 from the non-arts program. These students were selected at random from the various programs in which they participate. With 610 students currently enrolled at the school, a sample of 61 students represented 10% of the school's population. By utilizing a sample size that is about 10% of the population, this sample size was representative of the larger population by providing a 6.7% margin of error and 90% confidence level in the results of the survey representing the larger population, while maintaining a .5 standard deviation. The calculations for sample size are shown in Figure 5.

Figure 5

Sample Size Determination

$$\frac{(\text{z} - \text{score})2 \times \text{StdDev} \times (1 - \text{StdDev})}{(\text{margin of error})2} = n$$

$$\frac{(1.645)2 \times 0.5 \times (1 - 0.5)}{(0.067)2} = n$$

$$61 = n$$

According to *Two Tails of Z* (2007), the *z* score for a 90% confidence level is 1.645. Qualtrics (n.d.) recommended using a .5 standard deviation to represent the potential differences in survey responses. The margin of error was determined through a reverse calculation solved by entering the desired sample size. This equation was then calculated again to ensure accuracy. The 10% condition in statistics states that a sample size should not exceed 10% of the population unless that population is over 1,000. Therefore, a sample size of 61 meets these qualifications while also providing an equal amount of survey responses from each research group. Each year, the fine arts department, comprised of both performing arts and non-performing arts subjects, at the research site teaches nearly two thirds of the school's population (Appendix C). The performing arts group and non-performing arts group represent these students, while the non-arts control group represents the students who do not enroll in an arts course during the academic year.

Research participants were selected to best represent the current student body population at the research site. The current demographics at the research site are shown in Table 3.

Table 3

Research Site Demographics

Category	Demographic	Population
Gender	Male	53%
	Female	47%
Grade	9th	151
	10th	152
	11th	138
	12th	169
Ethnicity	Asian	<1%
	Hispanic	4.4%
	Black	3.0%
	White	89.3%
	American Indian/Alaskan	<1%
	Two or More Races	2.6%

Note. Information received from current NCES data representing the 2019-2020 school year.

As shown in Table 3, the current gender breakdown of students is 52% male and 48% female. Enrollment in ninth and 10th grades are very similar at 151 and 152 students respectively; 11th grade is the smallest class with 138 students and 12th grade has 169 students, making it the largest class. Broken into percentages, ninth grade represents 24.8% of the population, 10th grade represents 24.9%, 11th represents 22.6%, and 12th grade represents 27.7%. Finally, the racial demographics of the school are overwhelmingly White at over 89% of the population. The other populations are represented as follows: 4.4% Hispanic, 3% Black, 2.6% identifying as Two or More Races, and finally, <1% Asian and <1% American Indian or Alaskan Native. Through the addition of demographic identification items on the survey, I was able to select participants who represent the larger student body as a whole.

Students from each group were selected at random from the survey recipients using demographic questions that allowed students to select the category that best represented their participation in arts courses. Performing arts students were selected from those participating in the extracurricular theatre performance during the spring semester. Consent forms were accessible via the link emailed to parents, and students were asked to complete an electronic consent form before continuing onto the survey. A reminder email was be sent out after a week, and a physical letter was sent home after 2 weeks when the research groups were not full.

Instrumentation

The study was completed utilizing the Grit-S scale developed by Duckworth and Quinn (2009). This scale was developed over the course of multiple studies and has been determined to be psychometrically stronger than the similar Grit-O scale, as it provides a "more efficient measure of trait-level perseverance and passion for long-term goals" (Duckworth & Quinn, 2009, p. 172). The Grit-S scale is available for non-commercial use by researchers through a public use copyright (Duckworth, 2020). I reached out to Duckworth to confirm that dissertation publishing fell within her copyright requirements and was granted permission to use the scale on November 23, 2020 (Appendix D).

The final survey administered to performing arts students was developed using open-ended items created by me. This survey consisted of 10 open-ended response items and was designed to measure how student perceptions of their own grit had changed over the course of the rehearsal process.

Data Collection Procedures

Data in this mixed methods research study were collected through surveys. Two

surveys were distributed to students at the end of the semester. The Grit-S survey was distributed among students in each of the three research groups. The performing arts students who participated in a series of rehearsals for the extracurricular production they auditioned for were administered a second survey that included open-ended survey items that were used to measure individual perspectives of how the individual's perception of grit may have changed over the course of the rehearsal process.

Students were recruited through a brief introduction to the study and a letter emailed to parents at the research site. This email included a link to the survey that included the information pertaining to research participation and a place for both parent and student consent. Five demographic questions at the end of the Grit-S survey allowed students to select their arts participation during high school, placing them into the non-arts, non-performing arts, or performing arts research group, and if they participated in the Spring theatre production. If the student participated in this production, the survey continued with 10 open-ended survey items. Upon completion of the survey, a thank you response was sent to participants. At any point, a student or their parent held the right to remove themselves from the study by contacting me through the methods listed on the consent forms.

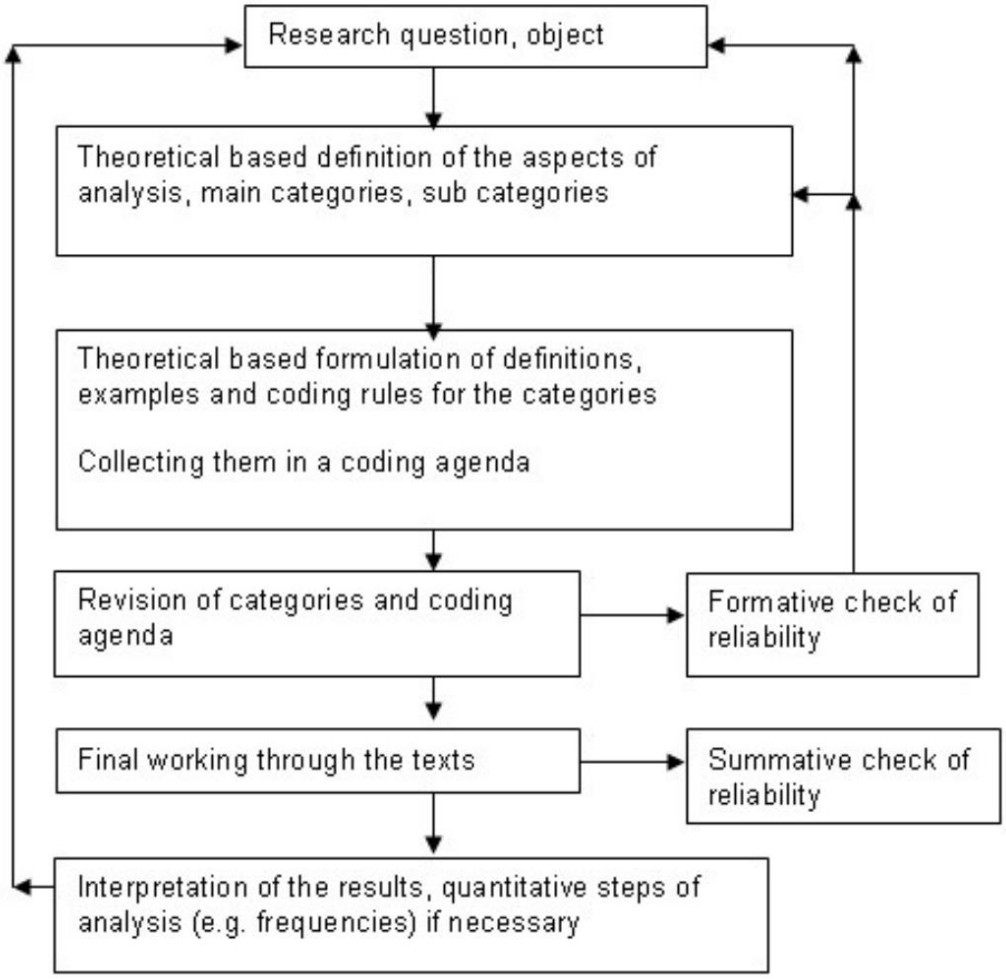
Data Analysis Plan

Surveys were collected from participants using Qualtrics software. This software allowed students to remain anonymous throughout the survey process. It also allowed me to import the survey results directly into the JASP software that was used for statistical analysis of the results. Results from the surveys were analyzed on JASP using a 3-way ANOVA, deductive coding, and a CFA. A 3-way ANOVA was used to compare how the

grit scores of performing arts students compared to those of their peers in the non-performing arts and non-arts programs, as well as across the demographic areas of age and gender. A 2-way ANOVA was used after the 3-way ANOVA due to the lack of survey response from the upperclassmen females in the non-arts group. The CFA was utilized to determine if the appropriate factor structure was being used for the selected research group, while the qualitative analysis was structured as an open-ended survey used to determine how performing arts students' perceptions of grit have changed over the course of the rehearsal period. Answers to the open-ended survey items were coded for common themes across the survey responses using deductive coding. The deductive coding process is shown in Figure 6.

Figure 6

Deductive Coding Process (originally published in Mayring, 2000)



The common themes found within the responses to open-ended survey items helped me to understand where student perceptions of grit are similar to their peers' perceptions and how their understanding of their own grit changed over the course of the study. By deducing the thematic schema across the open-ended survey results, I hoped to gain a better understanding of the perceptions performing arts students have about theatre rehearsals and grit. These themes and schema were checked for reliability against the research question after the initial and final reviews of the texts. The results of each of

these surveys are presented in tables and narratives in the research results found in Chapter 4.

Threats to Validity

There is some threat to validity with the use of the Grit-S scale. Duckworth and Quinn (2009) stated in their research, "it is possible that respondents answered positively to items on the Grit-S in anticipation of future achievement" (p. 173). Students may have felt pressure to answer the questions on the survey in a manner that made them appear grittier than their peers. This is an uncontrollable outcome of a self-response survey. I attempted to address this with research participants through the directions of the survey, stressing that an honest answer be recorded. However, there is no way to know if an individual's own bias influenced their survey results. In other studies utilizing this scale, the individual's own bias was addressed through the addition of other survey measures to the research study. By adding open-ended survey response questions to the secondary survey, I provided participants a third opportunity to showcase their understanding of their own grit in a manner that added more detail than the Likert scale found in the Grit-S.

Credibility

Through accounting for my own personal biases within the classroom and understanding that individual response bias may occur in the survey process, I attempted to ensure complete credibility in my research. Through the classification of student identification data by anonymity and personal integrity, I was able to avoid allowing my own dual-role bias as the students' instructor and the researcher to impact the study. By adding a third layer of response protection to account for student perceptions of grit

through the addition of open-ended survey items, I accounted for the possibility that students may answer the questions in a certain way to appear gritter or with a future self in mind.

Ethical Procedures

Permissions was received from parents/guardians and students before the start of the research study. Permission forms were sent home with students that detailed the impact of the study and intended results, as well as the perceived risks that may come to students if they participate. These forms also stressed that anonymity would be kept throughout the course of the study and that the student could withdraw from the study at any point with an email to me. Because the surveys were kept anonymous, there was little to no perceived risk to students. Anonymity was kept by not collecting any identifying information outside of demographic data. Data were collected using Qualtrics software and stored electronically on my personal computer. Files were password protected. These will be kept for 3 years after the completion of the study. Because personal information outside of student participation in each research group and demographics was not collected, the threat to students remained minimal. Parents and students were also informed that choice of participation in this research study would not affect their grades in any way. Student grades were not positively or negatively affected based on their participation, or lack of participation, in this research study.

Summary

Chapter 3 defined the research methodology utilized for the mixed methods research completed in this work. The hard work and dedication of performing arts students often go unappreciated when the end product is the only piece presented to the

public. Through utilizing these research methods, I hoped to analyze and create an understanding of the grit of performing arts students in comparison to their peers in both the non-performing arts and non-arts programs. In Chapter 4, the results of the research study are presented through the analysis and interpretation of the data collected from the two surveys outlined in this chapter in the form of tables and narratives.

Chapter 4: Results

Introduction

Grit research has focused on a variety of research groups differing in age, economic status, and individual interests. Little research has been completed around the grit level of students participating in performing arts at the high school level. Theatre challenges students to explore their passions and persevere through challenges to create a final performance for an audience. Oftentimes, the dedication and hard work that happens in rehearsal go unseen and unappreciated, as the final product gains the most attention. By examining student perceptions of grit using a mixed methods research study consisting of the Grit-S survey (Duckworth & Quinn, 2009) and additional open-ended survey items, the following research questions were answered:

1. Is the factor structure of the Grit-S scale functioning for the research group?
2. How does participation in an extracurricular theatre performance develop student perceptions of grit?
3. How does the grit level of auditioning performing arts students differ from their non-performing peers?

The survey was administered at the end of the 2020-2021 school year. All parents on the school email server were emailed a common introductory letter inviting them to participate in the survey with their child. After a week, a hard copy of the letter was also sent home with students in the school to collect more responses. By the last day of school, 94 complete survey responses were compiled. From these survey responses, I randomly selected 20 surveys from both the non-performing arts and non-arts research groups and 21 surveys from the performing arts research groups. These surveys were

randomly selected by assigning a random number to each result in a research group using Microsoft Excel. The results were then organized chronologically, and the first 20 results in the non-performing arts and non-arts responses and 21 results from the performing arts responses were used for the research study. The demographics of the 61 survey respondents are shown in Table 4.

Table 4

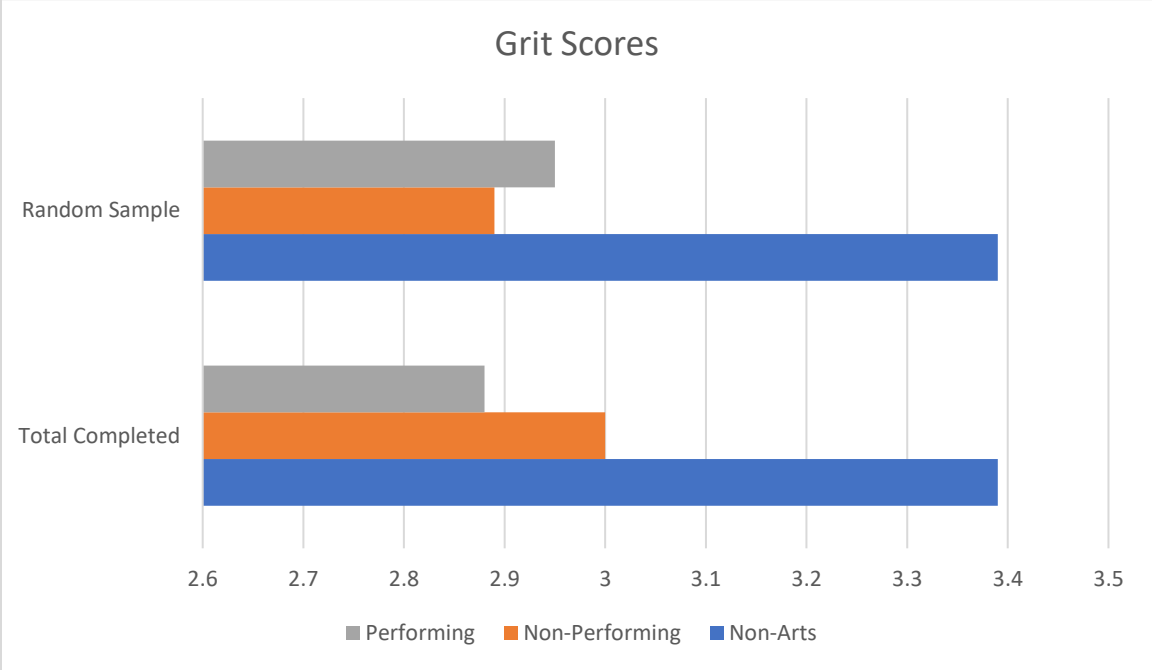
Survey Demographics

		Non-performing arts	Performing arts	Non-arts
Academic Year 2020-2021 enrollment	9-10 Grade	16	13	17
	11-12 Grade	4	8	3
Gender	Male	12	10	10
	Female	8	11	10
Ethnicity	White/Caucasian	18	20	18
	Black/African American	0	0	0`
	Hispanic	1	1	0
	Asian/Pacific Islander	0	0	0
	Hawaiian	0	0	0
	Two or More Races	0	0	2
	Other	1	0	0

Grit scores were then recorded for each participant in the research study. These scores were averaged to determine a total grit score for each group. These grit scores are shown in Figure 7.

Figure 7

Grit Scores Across Research Groups



From the random sampling, performing arts students (n=21) had an average grit score of 2.95, non-performing arts students (n=20) had an average grit score of 2.89, and non-arts students (n=20) had an average grit score of 3.39. From the total surveys completed (N=94), performing arts students averaged 2.88; non-performing arts students averaged 3.0; and non-arts students averaged 3.39. I also examined the grit scores of performing arts students who participated in the spring production of *Radium Girls* and completed the survey (n=18). These students averaged a total grit score of 3.09. Because the number of performing arts students who responded to the survey outweighed the number of students who participated in the spring production, it was important to extract these data to see how this subset of performing arts students' grit scores compared to their peers.

Research Question 1

To determine if the Grit-S scale was an appropriate measure for the research sample, I first conducted a CFA and used Chi-square ($\mathcal{X}^2$) to see if the model fit. This was completed by loading all the completed survey results (N=94) into JASP and loading the four consistency of effort survey items onto Factor 1 and the four persistence of interest survey items onto Factor 2. The results of the $\mathcal{X}^2$ test showed that the data from the research study did fit the model, $\mathcal{X}^2$=19.143, df=18, p=0.383. The results of the CFA model fit and fit indices test are shown in Figure 8.

Figure 8

Model Fit and Fit Indices

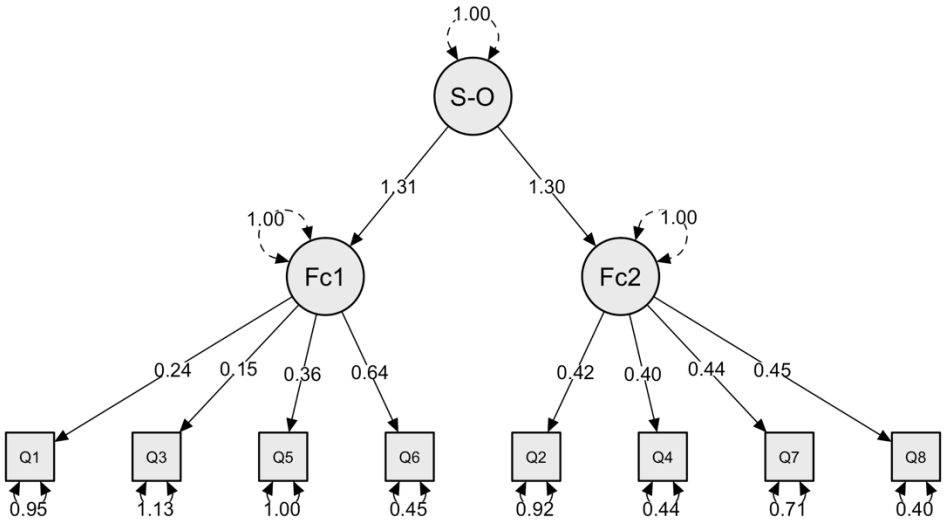
Chi-square Test	**Model**	**X²**	**df**	**p**
	Baseline Model	167.957	28	
	Factor Model	19.143	18	0.383
Fit Indices	**Index**		**Value**	
	Comparative Fit Index (CFI)		0.992	
	Bollen's Relative Fit Index (RFI)		0.823	
	Root mean square error of approximation (RMSEA)		0.026	
	Goodness of Fit Index (GFI)		0.951	

As seen in Figure 8, the *p* value of the $\mathcal{X}^2$ test is 0.383, and confirmatory statistics accept that a *p* value above 0.05 is acceptable and the $\mathcal{X}^2$/df should be less than 2 (Cole, 1987). In this test, the factor model registered at 1.06. After completing the $\mathcal{X}^2$ test for the survey, I then checked the scale against multiple fit indices to determine if this would be a good fit for the research subjects. CFI, RMSEA, RFI, and GFI fits were used to find the most parsimonious model. As shown above, CFI=0.992, RFI=0.823, RMSEA=0.026, and GFI=0.951. All fit indices were compatible with the data from the research study.

The interactions and covariances between the two factors are represented by the structural equation in Figure 9.

Figure 9

Structural Equation



As shown in Figure 9, the original factor structure as designed by Duckworth and Quinn (2009) was retained, with Survey Items 1, 3, 5, and 6 loaded onto Factor 1, interest, and Survey Items 2, 4, 7, and 8 loaded onto Factor 2, effort.

After completing the fit indices, I ran a single-test reliability analysis to determine the scale's reliability utilizing Cronbach's alpha. Alpha levels of .70 or higher are considered acceptably reliable (Field, 2017). The alpha for this set of survey items is 0.735, falling above the range that is considered acceptably reliable.

Research Question 2

Students who participated in the spring theatre production of *Radium Girls* were asked to respond to 10 additional open-ended survey items detailing their experiences throughout the rehearsal process in terms of grit. Survey items were designed around a

priori themes found throughout grit research: dedication, passion, effort, and self-control. Student responses to these survey items were analyzed using deductive coding, with responses first being coded for the a priori themes previously mentioned, and then another coding process completed to determine if any other themes were revealed through student responses. Themes determined throughout the coding process are shown in Table 5.

Table 5

Themes Found in Open-Ended Response Items

A priori themes	Deductive themes
Dedication	Teamwork
Passion	Courage
Effort	Growth
Self-control	Setbacks

As shown in Table 5, four new themes were deduced through the coding process: teamwork, courage, growth, and setbacks. These themes were mentioned consistently throughout student responses to the open-ended survey items. Mentions of dedication occurred 23 times in student responses, teamwork occurred 22 times, setbacks occurred 18 times, effort occurred 13 times, growth occurred seven times, passion occurred six times, self-control occurred six times, and courage occurred three times. Further explanation of student responses to each of the eight themes is found in the subsequent sections.

Dedication

The open-ended survey asked students to describe grit, and many responses centered on a dedication to the task at hand: in this case, the rehearsal and performance of a full-length play in front of a paying audience. Students described grit as being able to

"stick with what you started despite challenges" and the "ability to maintain focus and motivation through a time of difficulty," as well as a "willingness to finish" and "never giving up or accepting defeat." These definitions align with Duckworth et al.'s (2007) definition of grit as one's sustained interest in and effort toward long-term goals.

Dedication was the code most referenced throughout the open-ended responses in the survey, with answers ranging from "showing up" every day and consistent practice to "get everything right" and "not letting the others down" to a "determination to make the show happen," "seeing our final work and hearing how we did," and "wanting to see this show through as a finished product." Multiple students mentioned the setbacks, like COVID-19 and cast members being removed from the production due to disciplinary action at the last minute, as items that helped them to persevere to finish the play and show that they could be dependable to their peers as they saw the show to its final form as a fully realized production. As one student described it, they felt they had to be "consistent with participating, even when problems happened" because they had agreed to participate in the play.

Passion

Multiple students described their passion and enjoyment of the rehearsal process, with one student directly stating that "acting and theatre are passions of mine," while another wrote, "I knew this was something I loved to do." When describing why they stuck with rehearsal despite challenges and setbacks, other students responded, "I stayed because I really enjoyed the play" and "I truly enjoyed it," while another said, "I love the overall process and it would take more than a tough day or even a tough week to make me leave that behind." Finally, one student described the feeling behind the culminating

production when everything "comes together and we create magic on stage for ourselves and our audience."

Effort

Over half of the students who responded to the open-ended response items mentioned that the rehearsal process taught them about hard work and effort. Many students set out with an improvement goal for their roles and performances, while others entered the rehearsal process with the goal of having a good time with friends who were also participating. One student summed up the challenges faced and the effort required to persevere when they stated, "problems come, sometimes larger problems than expected, but we still have to keep pushing and stay positive and in the end, it will all end up working for good."

One of the students who was quarantined during the rehearsal process wrote that they "came back and got to work and pulled through" even when they were struggling with the improvements the cast had made in their absence. Another response discussed how they had made the play their priority and knew they had to push through various trials to accomplish their goal of final performance, or as they also called it, "success." A third response noted that they felt they showed effort by being consistent with participation, even throughout the challenges and struggles that occurred. Finally, a fourth student described the process of working through self-doubt and showing dedicated effort when they wrote, "I was able to push myself and achieve my goal even though at first I didn't know I would be able to."

Self-Control

Students described the rehearsal process as requiring self-control and patience.

One student stated that one of their biggest challenges was trying to "avoid distraction and stay focused" throughout the rehearsal process, while another wrote about how staying late after school built endurance they did not have before. A third student stated that they had to "work hard and rehearse as much as possible." They went on to describe rehearsing at school and practicing lines outside of rehearsal as well.

Teamwork

Teamwork was a common theme throughout students' open-ended survey responses. Many students responded that they often tried to keep a positive attitude throughout the tough times to encourage new participants in the program and to help the new students feel welcome in the community. They did not want to let the others working on the production down. One student showed awareness of their impact on the production when they responded, "I know that what I'm doing effects [sic] everyone else, too," while another stated that "respect for each other and the process is key" to a successful performance. Making connections and helping others were also mentioned four times throughout student responses.

Multiple students described the comradery of the cast as a unit they could depend on throughout the challenging moments in the rehearsal process. "I had a group of people who I could rely on and helped me as I helped them" and "I knew I had people to lean on and who believed in me, even when I didn't believe in myself" were two descriptions of the rehearsal process that stood out among the others. Another student stated, "I knew I had people counting on me and who would support me through my struggles," while three other students mentioned that they were aware that others were counting on them to do their part correctly and efficiently for the performance to be successful. Ultimately,

students did not want to let those around them down, including the other actors, the crew working on the production, and the director. Learning to depend on others to create a final product was a lesson one student mentioned as their biggest takeaway. They stated, "No one can do everything by themselves" and the "community we have in the rehearsal process helps you overcome setbacks," while another stated, "a lot of my strength came from my castmates." Of all the codes found throughout the open-ended survey responses, teamwork was one of the most-mentioned aspects of the production for the students participating.

Courage

An unexpected code found throughout the deductive coding process was that of courage. Three students directly described courage or getting over fear during the rehearsal process, both to peers and with performing. One student responded that the rehearsal process was defined by their "having the courage to stand up when no one else will" when there was a problem that occurred. A second student discussed overcoming setbacks when they stated, "we braved through it and just came over it." Finally, a third student discussed their strengths during rehearsal as, "I had a lot less fear this year than in previous years, my confidence helped me a lot."

Growth

Growth during the rehearsal process was mentioned six times throughout student responses. One student mentioned that rehearsal "is an environment that both requires grit and encourages it to grow." Another stated, "I learned how to be more diligent and attentive," while a third said the rehearsal process "helped me learn to be fast under pressure." A few students mentioned growing in their acting skills, but one student

described the growth among different groups in the rehearsal process by stating,

> I think this rehearsal process is one where almost every single cast member had to grow. The seniors had to grow in their leadership skills, we wanted to be role models and leave the theatre program in good hands. We also had a bunch of new people, who had to grow in their skills and their abilities.

A final student stated, “the show and those rehearsals helped me immensely” when discussing their growth over the rehearsal process.

Setbacks

No rehearsal process is complete without a few setbacks; however, the impact of performing during COVID-19 added a new variant of setbacks in the form of quarantines and necessary blocking choices to allow actors onstage to social distance. Setbacks were mentioned many times throughout student open-ended responses with five students directly mentioning COVID-19 protocols and others describing problems that are more commonly associated with the rehearsal process, such as memorization, patience, and technical issues with equipment.

Students described their personal setbacks as embracing the role they were assigned after auditions; dealing with personal issues outside of rehearsal with family members; self-described “senioritis”; becoming distracted; and staying calm throughout the rehearsal and performance process. Multiple students also mentioned working with students who they normally would not associate with or get along with and the learning process that accompanied that. One student described the “many different energies” of the people involved and having a diverse group coming together to create one final product.

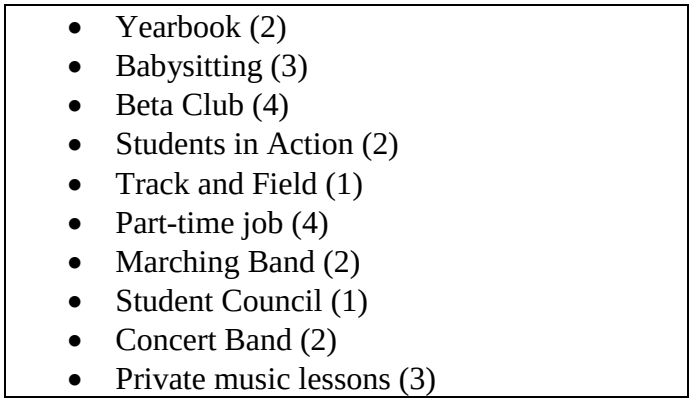
The setbacks associated with the COVID-19 pandemic easily could be summed up by one student's response: "Mentally, it was a tough year and semester for everyone." Students were dealing with new challenges pertaining to the pandemic that were unlike anything seen before in their educational careers. Attendance was not being counted as it usually was, and having students quarantined due to contact tracing caused many students to miss weeks of rehearsal at a time and was not something that would normally impact a student's ability to continue with a show. This factor impacted multiple students in the production, with four students listing "attendance" or "missing rehearsals" as setbacks they perceived during the rehearsal period. One student stated that their biggest setback was being quarantined for 2 weeks and getting behind with lines and blocking.

Extracurriculars

Students who participated in the spring production also found the time to participate in other extracurricular activities outside of play rehearsal. The activities shown in Figure 10 were completed by students throughout the rehearsal process from February through April 2021.

Figure 10

Extracurricular Activities and Occurrences



Multiple students in the production also worked with the school yearbook committee, Beta Club, student council, and marching band. Four students who completed the survey held part-time jobs outside of the rehearsal period and three others babysat after the end of rehearsal multiple days a week.

Students were asked during the open-ended responses to describe the rehearsal process in a few words. Table 6 shows the words students chose to describe the process and the number of times each word, or a variation of that word, was used in responses.

Table 6

Terms Used to Describe the Rehearsal Process

Term	Times used
Fun	9
Educational	4
Challenging	3
Hard work	3
Memorable	3
Rewarding	2
Interesting	2
Life lesson	2
Growth	1
Informative	1
Welcoming	1
Engaging	1
Occasionally frustrating	1
Friends	1
Family	1
Team	1
Enjoyable	1
Creative	1
Dedication	1
Repetition	1
Perseverance	1
Characterization	1
Hands-on	1
Fast-paced	1

As shown in Table 6, students most often described the rehearsal process as fun,

educational, challenging, hard work, and memorable.

Research Question 3

To determine how age, gender, and research group differ in grit scores, a 3-factor ANOVA was completed. The results of this analysis are shown in Table 7.

Table 7

3-Factor ANOVA

ANOVA				Alpha	0.05	
	SS	*df*	*MS*	*F*	*p value*	η^2
A	3.261	2	1.630	8.558	0.001	0.259
B	2.336	1	2.336	12.259	0.001	0.200
C	0	1	0	0.001	0.980	1.328E-05
A x B	6.621	2	3.311	17.377	1.978E-06	0.415
A x C	2.749	2	1.375	7.216	0.002	0.228
B x C	0.060	1	0.060	0.314	0.578	0.006
A x B x C	2.541	2	1.270	6.668	0.003	0.214
Within	9.335	49	0.191			
Total	26.903	60	0.448			

Note. A=Group, B=Age, C=Gender.

As shown in Table 7, Factor C (gender) was unable to be measured because there were no survey responses from non-arts upperclassmen females. Therefore, a 2-factor ANOVA was completed focusing on the group and age data. These results are shown in Table 8.

Table 8

2-Factor ANOVA

Cases	Sum of squares	df	Mean square	F	p	η^2
Group	2.790	2	1.395	3.454	0.038	0.105
Age	0.605	1	0.605	1.499	0.226	0.023
Group ∗ Age	0.653	2	0.326	0.808	0.451	0.024
Residuals	22.614	56	0.404			

Note. Type 3 Sum of Squares.

As shown in Table 8, the *p* values vary across the ANOVA, showing that there is an interaction between the factors, allowing for a rejection of the null hypothesis ($H_{\emptyset}: \mu_1 = \mu_2 = \mu_3 = \mu_\kappa$). With the alternate hypothesis ($H_{\mathrm{A}}: \mu_1 \neq \mu_2 \neq \mu_3 = \mu_\kappa$) proven true, post hoc tests needed to be completed to determine the statistical differences between the mean scores of each factor. Because the *p* value of the factor group is below 0.05, it remains statistically significant. Post hoc tests proved that this factor is practically significant.

Post Hoc Tests

After analyzing the results of the 3-factor ANOVA, I ran a Tukey post hoc test for each of the outlying ANOVAs, A x B using the Tukey-Kramer method. These ANOVAs were considered statistical outliers because of their high *F* values. The results of the Tukey test are shown in Table 9.

Table 9

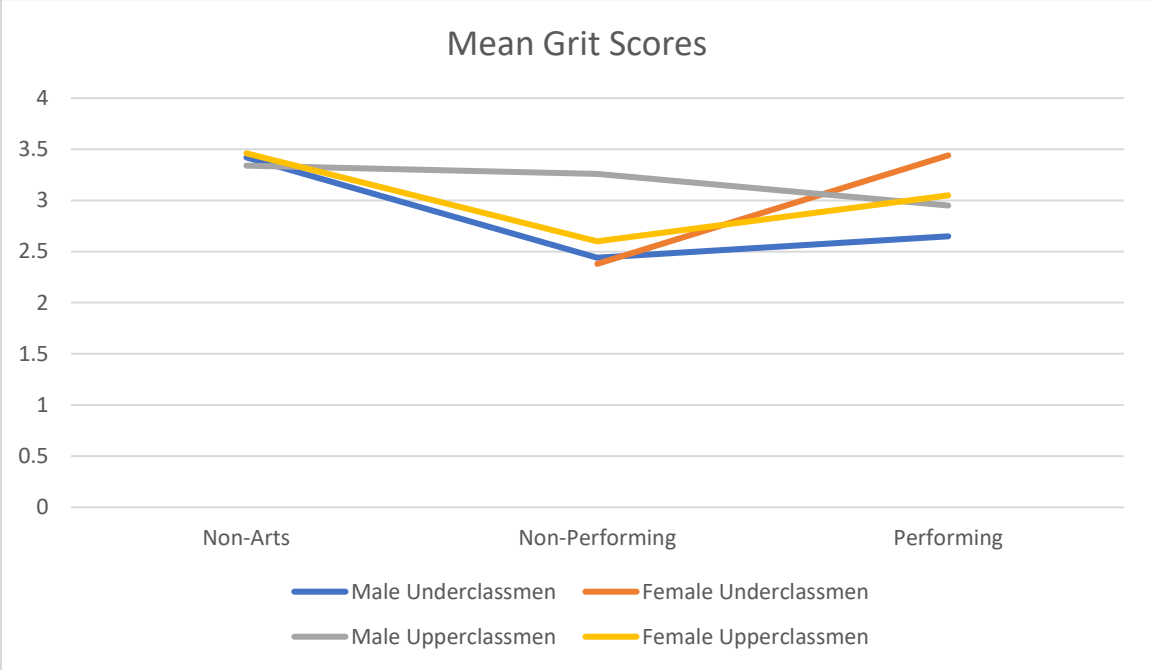
Descriptive Statistics

Group	Grade	Gender	Mean	Standard deviation	Variance	N
Performing arts	Upperclassmen	Male	2.95	0.67	0.55	5
		Female	3.05	0.60	0.42	8
	Underclassmen	Male	2.65	0.79	0.75	6
		Female	3.44	0.69	0.95	2
Non-arts	Upperclassmen	Male	3.34	0.95	0.42	7
		Female	3.46	0.44	0.22	10
	Underclassmen	Male	3.42	0.51	0.38	3
		Female	0.00	0.00	0.00	0
Non-performing arts	Upperclassmen	Male	3.26	0.42	0.27	10
		Female	2.60	0.50	0.22	6
	Underclassmen	Male	2.44	0.25	0.95	2
		Female	2.38	0.69	0.13	2

Mean grit scores for each research group were charted on a line graph to visually interpret the differences. This chart is shown in Figure 11.

Figure 11

Group x Gender Interactions



Note. No reported scores for female underclassmen in the non-arts category.

As shown in Figure 11, male upperclassmen in the non-performing arts category had a significantly higher average grit score than their peers (0.66 points). The female upperclassmen who participated in the performing arts have a higher mean grit score than their non-performing peers (1.06 points). Underclassmen and upperclassmen performing arts females also had a higher mean grit score than their male peers.

Tukey post hoc analyses work by determining the minimal difference between means. The results showed that the Tukey post hoc analyses were statistically significant, with the non-arts research group having a higher mean grit score than the non-performing arts group.

The Tukey post hoc comparison was completed analyzing the group factor from the 2-factor ANOVA completed in the previous section. The data as determined in JASP

are shown in Table 10.

Table 10

Post Hoc Comparisons - Group

		Mean difference	SE	t	p
Non-arts	Non-performing	0.688	0.266	2.586	0.033
	Performing	0.473	0.244	1.936	0.138
Non-performing	Performing	-0.215	0.228	-0.945	0.615

Note. p value adjusted for comparing a family of three. Results are averaged over the levels of age.

As shown in Table 10, the significance of the non-arts group when compared with the mean of the non-performing arts group is significantly different (p=0.033), while the other comparisons were not significantly different.

Conclusion

As found through the analysis of the three research questions, non-arts students who were surveyed had, on average, higher grit scores than the non-performing and performing arts students who completed the survey. This finding counters my original hypothesis that performing arts students would have higher grit scores than their non-performing peers. Through the CFA, I determined that the Grit-S survey was an accurate test for this age group and group of students.

Though they did not score as high on the Grit-S survey as the non-arts group, performing arts students provided many examples of how the rehearsal process in the spring semester of the 2020-2021 school year impacted their perceptions of grit. Performing arts students felt that the rehearsal and performance process taught them new things while allowing them to be dedicated to a process that impacted something larger

than themselves. Through the rehearsal process, performing arts students felt they were able to grow and improve their teamwork and leadership skills.

In Chapter 5, a summary of the research findings and final conclusions of the research study are presented. Discussion of the implications of the research and suggestions for future research are also presented.

Chapter 5: Discussion

Introduction and Overview

Research in the performing arts shows that participation can encourage student development of critical-thinking skills, creativity, and personal and interpersonal skills (Goldstein et al., 2020). In educational theatre, these skills are developed through collaboration and cooperation with peers through the rehearsal and performance process, often comprised of hundreds of hours in practice before a culminating performance period to showcase their hard work and efforts. Through a consistent interest in the process and sustained passion for the dramatic arts, students often demonstrate the two factors of grit: consistency of effort and perseverance of interest. This study was designed to measure how the grit of performing arts students in an extracurricular performing arts program compared to their non-performing arts and non-arts peers.

Grit serves as a strong predictor of success, but passion and direction also attribute to an individual's success (Duckworth, 2016). Through examining how resilient and hardworking an individual is throughout various circumstances, one can predict an individual's success in a particular area of interest. Grit, the persistence of effort and sustained interest over a period, is only one of the characteristics that influence student learning. Duckworth (2016), the originator of grit research, stated that grit alone is not the only skill needed by an individual to grow up and live a happy life, but it does encourage that individual to learn from mistakes and build personal strength.

Summary of Findings

Through a mixed methods study, I measured the grit score of three student groups at a small, rural high school in South Carolina. These groups (performing arts students,

students who were in the arts but were non-performing, and non-arts students) were all administered the 8-item grit survey, or Grit-S scale (Duckworth & Quinn, 2009). Performing arts students who participated in the rehearsal and performance process for the extracurricular theatre production in the spring semester were also asked to complete 10 open-ended survey items relating to their experience and perceptions of grit over the course of the process. The instruments were utilized to answer the following research questions:

1. Is the factor structure of the Grit-S scale functioning for the research group?
2. How does participation in an extracurricular theatre performance develop student perceptions of grit?
3. How does the grit level of auditioning performing arts students differ from their non-performing peers?

The individual results of these research questions are discussed in the previous chapter. The subsequent sections contain an analysis of the research data and a conclusion of findings from the research.

Interpretation and Analysis of Research Question 1

"Is the factor structure of the Grit-S scale functioning for the research group?" The Grit-S scale was an appropriate research tool for the selected research group. This was determined by using a CFA. Duckworth and Quinn (2009) proposed a 2-factor latent structure for the Grit-S scale, with four items loaded on each factor. Confirmation of this structure was performed using JASP software to determine the most parsimonious fit between multiple factor structures. The CFA needed to be completed before moving forward with the research to determine if the research instrument was a valid

measurement for the research group selected for this study.

Knekta et al. (2019) explained that it is appropriate to use CFA to determine if the data an instrument is collecting are appropriate for the research model. It was accomplished using the $\mathcal{X}^2$ test on the hypothesized model followed by using multiple other model fit indices tested for parsimony (RMSEA, GFI, RFI, and CFI). The $\mathcal{X}^2$ test (p=0.383; $\mathcal{X}^2$/df=1.06) confirmed that the a priori model was appropriate for the research group (N=94). The confirmatory tests to find the most parsimonious fit for the structure (GFI=0.951; RMSEA=0.026; RFI=0.823; CFI=0.992) confirmed that the test was appropriate for the research sample. Once the CFA was completed, validating the use of the Grit-S scale for the research project, I began further analysis of the collected data to answer the research questions. Through the completion of the CFA, it was determined that the Grit-S scale is a valid measurement for this research group.

Interpretation and Analysis of Research Question 2

"How does participation in an extracurricular theatre performance develop student perceptions of grit?" Student perceptions of grit changed over the course of the rehearsal period, with students recognizing that hard work and sustained effort through challenges and setbacks would result in a feeling of success at the end of the rehearsal process. It has been predicted that grittier individuals remain focused on their goals despite setbacks (Collaco, 2018). There were 13 performing arts students in the production who had not participated in an extracurricular performance at the research site in previous semesters. These students were simultaneously learning the rehearsal and performance processes while also adjusting to working with a director and teacher for the first time. Many of these students were underclassmen and were cast alongside older students who would

help to guide them through rehearsal expectations and the performance process.

Previous research has concluded that the most statistically significant skills learned in theatre classes are communication and interpersonal skills, confidence, imagination/creativity, and empathy (Goldstein et al., 2020). In fact, rehearsal may be a stronger means of imaginative, affective, and interpretive engagement than the performance itself (Conkie, 2012). Participants in this study discussed the rehearsal process more frequently than the final performance in their open-ended responses, mentioning how the determination and process behind the production served as the motivation to make it to the end of the final performance. The codes “teamwork” and “a refusal to let down the other members of the cast and crew” occurred 22 times throughout the student responses. In the same way, being dedicated to the process and showing up every day was mentioned seven times. This daily dedication to rehearsal time became a ritualistic habit for many cast members, providing a repetitive routine where they could focus and grow in the arts they were passionate about. Ritual in the theatre space serves as a way for the group to bind to the script and cast, while reflection on the rehearsal process provides an opportunity for the group to extract meaning from the process that connects to their personal experiences (Morgan & Saxton, 1987).

Throughout the rehearsal period, multiple students were placed on a mandatory quarantine in response to the COVID-19 pandemic (SCDHEC, 2021), requiring them to miss rehearsal for weeks at a time. These extended absences created new challenges with attendance at rehearsals unlike any I have seen before in the theatrical process. For the participating students, these challenges were amplified as they struggled to catch up when they returned and/or had to fill in for others who were absent. Scenes could not be fully

realized when multiple actors were absent, yet quality arts education has the potential to improve student attitudes about school and learning while enhancing one's sense of personal satisfaction (Bamford, 2006). Two students mentioned in their open-ended survey responses that participation in rehearsal became their motivation for attending school. When things became rough at home or with classmates, they were able to forget about it and focus on portraying their character in the play.

Implications

The findings of Research Question 2 provide an interesting look into the way performing arts students perceive their own grit. Duckworth and Quinn (2009) stated that because the Grit-S scale is self-reporting, one's own perceptions may factor into their response. It is the responsibility of the survey administrator to provide the respondent with the directions to consider a certain time or event to reference as they respond. Duckworth and Quinn called for further research into domain-specific and domain-general contexts of grit, having respondents answer items with different contexts in mind. This process was completed in the directions for both the initial and follow-up survey sent to students at the research site. The directions for the initial survey asked the respondent to answer with the current moment and situation in mind, while the follow-up survey, intended only for the students who participated in the extracurricular theatre program, was given to answer the open-ended items with a view of the entire rehearsal and performance processes in mind. The open-ended responses performing arts students provided strongly correlated with grit research.

Grit is often researched alongside motivation, self-control, resiliency, and passion. Because one of the two leading facets of grit is persistence of interest, passion has played

a strong role in the research surrounding why some students are grittier than others as it provides an individual with the focus to reach their goals (Duckworth, 2016; Duckworth & Kern, 2011). Student responses mentioned that they knew that this is what they loved to do and that they would not let anything stand in the way of their performance. Another student mentioned that their passion grew over time, as it was their first experience with theatre, but they loved it and could not wait for the next show so they could participate. Student excitement and passion can be one of the driving forces behind the rehearsal process. When moods are down and students are unmotivated, I found that having a passionate student involved can make all the difference to group morale, especially during setbacks.

Self-control and resiliency are often considered alongside grit research pertaining to the consistency of effort. As one of the open-ended responses stated, “theatre is a passion of mine.” For a student to remain focused on the area in which they are passionate, they need to exhibit behaviors in the areas of self-control and resiliency. Grit retention is not just about working towards higher-order goals for an extended amount of time but about the stamina to remain focused on an area of interest (Eskreis-Winkler et al., 2014). Performing arts students who responded to the survey mentioned many areas in which they had to exhibit self-control and resiliency throughout the rehearsal process, while other student responses mentioned different areas in which self-control was an important part of their rehearsal experience. One student mentioned how they had to convince themselves that staying at rehearsal for the entire time was the correct decision, even after a long day of classes. Two other student responses discussed needing to maintain patience with those around them, especially younger cast members who were

learning the process. In another response, a student described the process of needing to remain focused on the performance and not on their phone or their friends who were also in the cast.

However, there were often times when students did not exhibit self-control and either dropped out of the show or made decisions that were not in the best interest of the rehearsal process. These situations were referenced by the other students in the open-ended responses as challenges throughout the rehearsal process. Having to learn another student's part close to show time was mentioned, as was having to fill in for actors who missed many rehearsals due to other activities. A few individuals' lack of resiliency affected those around them in such a way that others in turn felt more resilient during the process and recognized how valuable each person was to the success of the show. Duckworth et al. (2018) provided a series of strategies for individuals to utilize to reduce failures of self-control and change behavior. Active participation in and utilization of these strategies could have potentially reduced the number of setbacks and self-control failures that occurred during the rehearsal process.

Motivation is also a strong determinate factor within grit research (Muenks et al., 2017). Students who participated in the open-ended survey items were candid about their motivation for completing the performance process. One student mentioned that they knew they still needed to come to rehearsal on days when they would rather stay home and nap, while another two students did not want to let their castmates down by not coming to rehearsal when it was expected of them. While these areas are different, each student was able to find their own motivation to attend rehearsal daily, whether that motivation was due to internal or external factors. In adolescent development, peers have

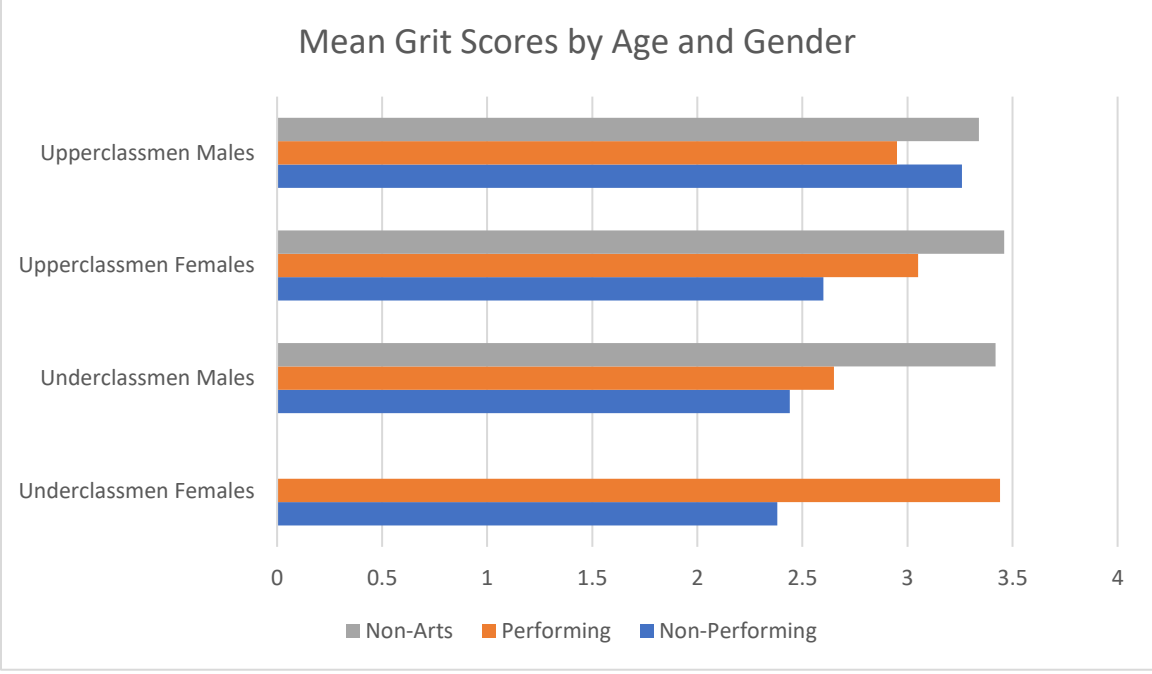
a strong influence on behavior and motivation (Willoughby et al., 2013). Student emails and attendance notes from the rehearsal process showed that students whose peers encouraged them to miss rehearsal instead of a fun activity would choose to skip rehearsal more often than those whose friends were also involved in the rehearsal process and remained the entire time.

Interpretation and Analysis of Research Question 3

"How does the grit level of performing arts students compare to their non-performing peers?" Performing arts students at the research site had lower grit scores, on average, than their non-arts peers; however, their average score was higher than their peers who were in the arts but were non-performing. These mean grit scores are shown in Figure 12.

Figure 12

Mean Grit Scores by Age and Gender



Note. Upperclassmen refers to students in Grades 11 and 12; underclassmen refers to

students in Grades 9 and 10.

When disaggregated for gender and age, male upperclassmen (11th and 12th grades) in the non-performing arts showed a higher average than their underclassmen peers (ninth and 10th grades). They also had a higher average than both all upperclassmen and female underclassmen who were in the arts but were non-performing. Female performing arts underclassmen had higher mean grit scores than female upperclassmen and male performing arts students. Non-arts students of both genders and age groups presented similar mean grit scores across the research groups. However, no female underclassmen in the non-arts group responded to the survey, leaving the question open as to how that research group might compare to their peers. A 2-factor ANOVA and post hoc Tukey test revealed that the non-arts and non-performing arts groups presented a statistically significant difference between mean grit scores (non-arts=3.41; non-performing arts=2.67).

Sigmundsson et al. (2020) determined that there is a strong gender difference in passion, grit, and growth mindset in young adults. Student motivation also plays a strong role in their success (Linnenbrink & Pintrich, 2002), and while students may be motivated to attend school or rehearsals due to a passion for the material, it is not always enough to hold their interest for a sustained period. Participation in organized activities may uniquely influence adolescents' societal values (Oosterhoff et al., 2014). Student participants mentioned 19 times throughout their open-ended responses that the social aspects of the rehearsal and performance process motivated them to continue with the play, even when the process became challenging. Most of these responses were related to not letting the entire group down and being a part of a team working towards a common

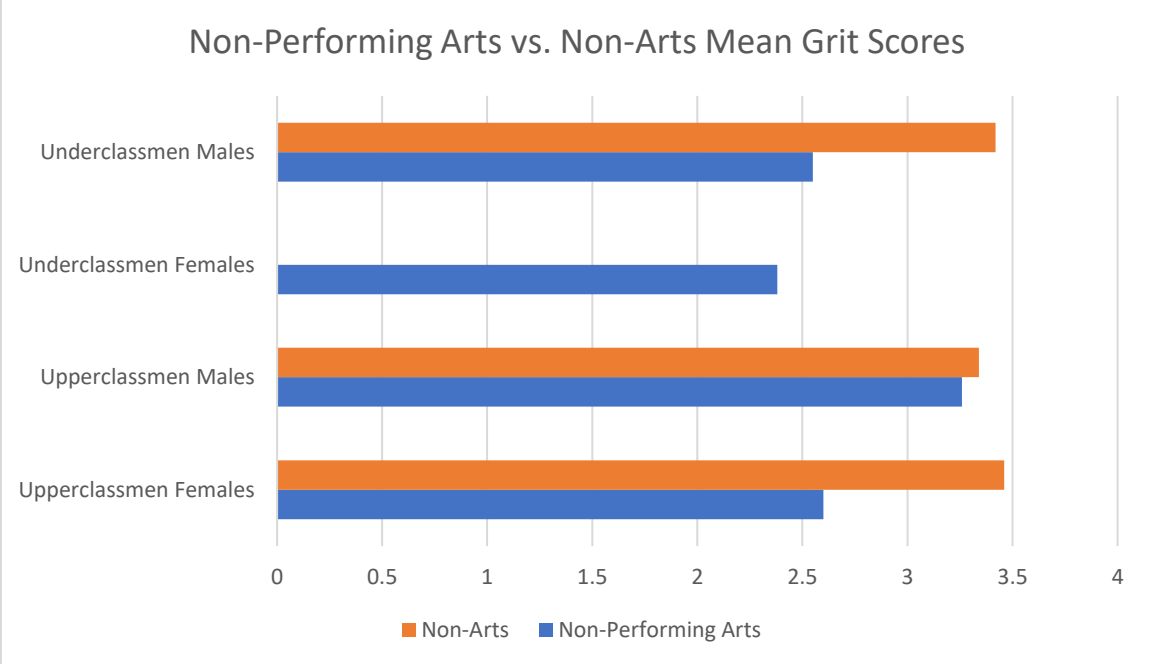
goal, while others mentioned the sense of community and growing respect for others who have different viewpoints than their own.

Implications

Students who did not participate in the arts had a higher mean grit score than their peers who participated in the arts. The mean grit scores of the students who participated in the non-performing arts were considerably lower than their non-arts peers, this was confirmed as statistically significant through a Tukey test. The comparison between each group's grade level is shown in Figure 13.

Figure 13

Non-Performing Arts vs. Non-Arts Student Mean Grit Scores



Note. Upperclassmen refers to students in Grades 11 and 12; underclassmen refers to students in Grades 9 and 10.

Ninth- and 10th-grade males in the non-arts research group showed the most difference between mean grit scores when compared to their peers who participated in the

arts but were not performing. Eleventh- and 12th-grade males showed the least difference between mean grit scores when compared to their arts-participating peers. This finding leads me to hypothesize that there may be another factor that influences grit in male students in the arts that occurs throughout high school, such as self-control. Self-control has been shown to improve with age (Kannangara et al., 2018). Kannangara et al. (2018) also determined that higher grit scores coincided with greater self-control. Because no female underclassmen responded to the survey in the non-arts group, there is no way to make a similar comparison and determine if females have a similar change in grit over their years in high school. Meanwhile, among all the research groups, underclassmen in the non-performing arts had the lowest scores of all, further strengthening my hypothesis that age has a strong correlation with self-control and grit in adolescents.

Triangulation of Research Data

While the quantitative data do not show that performing arts students have higher grit scores than their non-arts peers, it does show that their combined grit scores average higher than their peers who were in the arts but were non-performing. This data led to the conclusion that of the students surveyed at this research site, the performing arts students are grittier than their peers who were in the arts but were non-performing but are not gritter than their non-arts peers. This finding could be due to a variety of factors. Without other identifiers, it is impossible to know if the non-arts students who responded to the survey belonged to a separate subcategory, such as athletes or members of the JROTC; both extracurricular activities that might also improve student grit through building on student passions and perseverance (Duckworth, 2016). Especially in a small school where many students participate in multiple extracurricular activities throughout the course of

their high school career, it is possible that other extracurricular factors could provide students opportunities to grow their grit score over time.

Students who participated in the open-ended survey believed that rehearsal allowed them to become grittier individuals, and the qualitative data show that student understanding of grit grew over the rehearsal period as they explored the rehearsal process over the course of the spring 2021 semester. Without a prior grit score, it is impossible to know if student grit scores grew over the course of this semester. However, participant bias and self-perception of their own experience may also play into the student survey responses. Students who have a passion for the performing arts are more likely to think highly of the practice than peers who have never been involved or had a positive experience in the performing arts. This idea comes from the feeling of creativity and euphoria associated with doing something one is passionate about (Mohana, 2016). A passion for the subject may be more likely to result in a student providing biased answers about their experience to shine a positive light on the program in the eyes of others.

Connection to Theoretical Frameworks

This research study was completed using self-perception theory (Bem, 1972) and grit theory (Duckworth, 2016). These two frameworks guided the research process from the beginning. Because the Grit-S scale (Duckworth & Quinn, 2009) is self-reporting, Bem's (1972) self-perception theory was closely aligned with how students responded to the survey items, interpreting their own understanding of themselves at a given point in time.

Self-perception theory is connected to the way individuals interpret their own actions in a similar manner to how they interpret the actions of those around them (Bem,

1972). The theory of self-perception is grounded in two assertions: (1) individuals are aware of their own attitudes and beliefs and use these beliefs to assess their own behaviors, and (2) individuals who do not understand their own internal states function as external observers who depend on behavioral clues to infer their internal state (Bem, 1972).

By recording open-ended responses from the performing arts students who participated in the spring 2021 theatre production, a narrative was built around student perceptions of grit and their own growth during the rehearsal process. Students reflected on their time at rehearsal and throughout the final performance, making connections to how their actions impacted those around them and how others' actions influenced them. It was hypothesized that students would utilize self-perception theory (Bem, 1972) in their survey responses, thinking about their own understanding of self at the time they participated in the survey. Bem (1972) postulated that the individual responding to the survey may infer their behaviors as if they are free from the impact of those around them. Student reflections on their time during the rehearsal process focused frequently on other students' attendance and behavior, two large factors that impacted the show. Students often made connections in their responses with how their behavior influenced others and how others' behaviors influenced them. The reflective nature of these open-ended responses allowed students to further explore their self-perceptions of the rehearsal process as it pertained to their own actions and the actions of those around them.

Grit theory was developed with two main factors: consistency of interest and perseverance of effort (Duckworth et al., 2007). Originally consisting of a 12-item scale (Duckworth et al., 2007), the theory has evolved to a more simplified 8-item scale

(Duckworth & Quinn, 2009). The 8-item Grit-S scale is self-reported and comprised of four consistency of interest items and four perseverance of effort items, designed to measure an individual's grit level on a 5-point scale. The higher the score on the scale, the grittier an individual is. In subsequent research, grit has been compared against self-control (Duckworth et al., 2018), motivation (Muenks et al., 2017), passion (Duckworth et al, 2007; Sigmundsson et al., 2020), and resiliency (Collaco, 2018). It was hypothesized that students who participated in the performing arts would have a higher grit score than their peers who participated in the non-performing arts and peers who did not participate in the arts at all. While this study's results did not show this finding, as performing arts students scored in the middle of the other research groups, the performing arts students who completed the open-ended items in the research survey showed that their passion and motivation helped them to maintain resiliency and self-control throughout the rehearsal process. Student responses often referred to a motivation to put on a good show for the audience and to not let down their fellow cast and crew members throughout the rehearsal process. A passion for performing was mentioned five times throughout student responses, while references to self-control occurred six times. Dedication and motivation to succeed were discussed 21 times throughout the open-ended responses, and courage and growth throughout setbacks and challenges came up 28 times.

Recommendations for Practice

Theatre educators who wish to grow gritty students in their programs may choose to focus on new student buy-in to the program through relatable script choices, retention of passionate students, and an emphasis on student attendance as a path toward the

overall success of the show. Duckworth (2016) emphasized practice as one of the major factors to grow grit. Students who do not attend rehearsal are missing out on that practice. Students who wish to become grittier should spend time practicing and focusing on an area where they are passionate, honing and improving their skills over time. Teachers who want to grow gritter classroom practices should include materials and lessons that are relatable to students and their passions and provide real-life examples and lessons in perseverance. When seeing others in similar situations persevere, hope is built. Building hope is another tenet of fostering grit in an individual (Duckworth, 2016). Bashant (2014) stated that schools that wish to develop grit in students need to spend dedicated time teaching students how to develop and achieve goals.

Grit research can be utilized to grow compassionate and dedicated patrons of the arts, even if passionate students do not go on to participate in the preferred arts after high school. Through nurturing gritty students who can explore their areas of interest and consistently build skills in those areas, we are building lifelong artists. The applicable soft skills learned throughout a performing arts program that are applicable in a variety of other areas (cooperation, collaboration, communication, etc.) make student participation in the arts a step on the path to success. As we grow gritty and resilient learners, we improve the long-term success of students (Datu et al., 2016).

Limitations

This research was completed over a short time at the end of an academic school year. Due to the small enrollment number and the high number of available activities, students at the research site often participate in multiple academic and extracurricular programs at one time, and the crossover between programs is high. Student survey

participation was encouraged by the arts and JROTC program instructors after they learned about it, leading to many students in these programs participating in the research who may have otherwise ignored the invitation to participate. It might be that the majority of the non-arts student participants came from this group. As such, the study's findings might have been influenced by this particular grouping,

COVID-19 protocols strongly affected the attendance and level of participation of students in the theatre program. With students frequently rotating between in-person learning and quarantine, I had to maintain a strict list of who missed which rehearsals and what was covered that day to guarantee that students learned the material when they returned. To combat this issue and to maintain the integrity of the study, the process of video calling into rehearsal was attempted; however, this solution was unsuccessful due to the high noise pollution of many students in one room at the same time and multiple activities occurring (set building, running lines, practicing cues, and scene rehearsing). As such, it is possible that issues surrounding COVID-19 impacted the results of this study.

When multiple students were quarantined throughout the rehearsal process, other students needed to step in to fill the role of the missing actor or crew member. With the small cast size, there were no understudies (an individual cast to take over for an actor if they are absent) assigned. This issue became a major setback when one of the lead actors was disciplined by school administration on the day before the show, resulting in their removal from the cast. The remaining cast and crew had to pull together to fill the roles and ensure that the audience received the final performance for which they had paid. These experiences were highly documented throughout the open-ended responses

provided by the performing arts research group, and many students mentioned that their dedication to the show and the cast was also tied to the contract they made with me at the beginning of the rehearsal process when they accepted their role.

Being the director and theatre teacher, I was closely involved in the research process and understand that this involvement may have influenced student dedication to the performance differently than if they were involved in a different production under a different director where the prior teacher-student relationship did not exist. Serving in a role as a practitioner-researcher (Kershaw & Nicholson, 2011) provided me with the unique ability to see and feel the impact alongside my students, knowing that my own reactions to the setbacks may influence student experiences in the show and potentially their understandings of grit in the theatrical context. Because of my involvement as both director and researcher, I had a front-row seat to the narrative, as it was being built around my students.

Recommendations for Future Research

Recommendations for future researchers are to expand this study to encompass a larger research group beyond the one small school community that was surveyed in this research study. Expanding the study would allow for students from a larger variety of backgrounds and demographics to respond to the survey and encompass the experience of performing arts students who participated under the guidance of different directors and teachers.

Another recommendation for future researchers is to expand the age groups encompassed by the study. Seeing how students who participate in each activity at lower and higher education levels may provide a unique understanding of the true impact of arts

education. Also, examining how long students have participated in the art form may also allow for the researcher to understand the impact of performing arts participation on grit over time.

Finally, I recommend that future researchers examine the grit scores of a group of students over the course of the rehearsal period. By examining how an individual's grit score changes over time, future researchers may gain new insights into the full impact of participation in an extracurricular theatre program.

Conclusion

Ultimately, this research study did not conclude if participation in an extracurricular performing arts program impacts student grit scores. Findings were impacted, in part, by the small research sample that represented only a small community, as well as the COVID-19 pandemic. While the students who participated in the performing arts research group did measure higher than their non-performing arts peers, they still measured lower on the Grit-S scale than their non-arts peers. This study provides an understanding of how the students who participate in those programs perceive themselves and those around them as important members of something larger; in the case of this study, a final weekend of theatrical performances. The impact of theatre participation expands further than just a student's grit score; and the passion, willingness, and determination to remain focused on delivering a final performance remains a main takeaway from the study. Students who can grow as collaborators and communicators throughout the rehearsal process remain the strongest focus of directors and theatre teachers in the public education system, and these skills will carry them beyond the theatre classroom and performance space into any career or area they wish to pursue.

Grit research pertaining to the arts is still in its early stages, with very few studies having been completed on how participation in various arts forms may impact adolescent grit, though many researchers call for a deeper exploration into grit in different contexts (Duckworth et al., 2007; Schmidt et al., 2019; Zenyuh, 2017). This study aimed to provide a starting point for research into the impact of extracurricular performing arts programs on student grit scores and perceptions of one's own grit. There are still many more art forms and educational levels to be researched to better understand how arts education can impact the grit of students in schools. Because grit relies on two factors, passion and perseverance (Duckworth & Quinn, 2009), it is up to the individual and those around them to provide opportunities to explore ways to increase these factors in their lives.

References

Aden, J. (2014). Theatre education for an empathic society. *International Conference on Performing Arts in Language Learning*. https://doi.org/10.13140

Alarcón, G., Cservenka, A., & Nagel, B. J. (2017). Adolescent neural response to reward is related to participant sex and task motivation. *Brain and Cognition*, *111*, 51-62. https://doi.org/10.1016/j.bandc.2016.10.003

Aprameya, A. (2019, July 15). *Are you following these 6 steps to avoid response bias in your survey?* Atlan | Humans of Data. https://humansofdata.atlan.com/2015/11/following-6-steps-avoid-response-bias-survey/

Aviles, A. M., Anderson, T. R., & Davila, E. R. (2006). Child and adolescent social-emotional development within the context of school. *Child and Adolescent Mental Health*, *11*(1), 32-39. https://doi.org/10.1111/j.1475-3588.2005.00365.x

Bamford, A. (2006). *The WOW factor: Global research compendium on the impact of arts in education.* Waxmann Verlag.

Bashant, J. (2014). Developing grit in our students: Why grit is such a desirable trait, and practical strategies for teachers and schools. *Journal for Leadership and Instruction, 13*(2), 14-17. https://files.eric.ed.gov/fulltext/EJ1081394.pdf

Bauer-Wolf, J. (2018, July 24). *Study: Creating your passions more effective than finding them*. Inside Higher Ed | Higher Education News, Career Advice, Jobs. https://www.insidehighered.com/news/2018/07/24/study-creating-your-passions-more-effective-finding-them

Beghetto, R. A., & Kaufman, J. C. (2009). Broadening conceptions of creativity in the classroom. *Nurturing Creativity in the Classroom*, 191-205. https://doi.org/10.1017/cbo9780511781629.010

Bem, D. J. (1972). Self-perception theory. *Advances in Experimental Social Psychology, 6*, 1-62. https://doi.org/10.1016/s0065-2601(08)60024-6

Bento-Coelho, I. (2018). Listen to the others: The rehearsal process as a constant act of care. *Scottish Journal of Performance*, *5*(1), 63-81. https://doi.org/10.14439/sjop.2018.0501.06

Bergman Blix, S., & Wettergren, Å. (2014). The emotional labour of gaining and maintaining access to the field. *Qualitative Research*, *15*(6), 688-704. https://doi.org/10.1177/1468794114561348

Best, D. (1978). Emotional education through the arts. *Journal of Aesthetic Education*, *12*(2), 71. https://doi.org/10.2307/3332047

Bloom, B. S., Airasian, P., Cruikshank, K., Mayer, R., Pintrich, P., Raths, J., & Wittrock, M. (2001). *A taxonomy for learning, teaching, and assessing: A revision of bloom's taxonomy of educational objectives*. Prentice Hall.

Boal, A. (2018). *Theatre of the oppressed*. Theatre Communications Group.

Bolton, G. (1980). Philosophical perspectives on drama and the curriculum. In J. Nixon (Ed.), *Drama and the while curriculum*. Hutchinson.

Bolton, G. (2010). Re-interpretations of Heathcote's "living through" drama. In D. Davis (ed.) *Gavin Bolton: Essential writings.* Trentham Books.

Booth, D. (1985). “Imaginary gardens with real toads”: Reading and drama in education. *Theory Into Practice, 24*(3), 193-198. https://doi.org/10.1080/00405848509543172

Bower, S. (2004). Developing a yearning for primary learning: A focus on literature and the creative and practical arts. *Australian Art Education, 7*(2), 21-8.

Boykin McElhaney, K., & Allen, J. P. (2001). Autonomy and adolescent social functioning: The moderating effect of risk. *Child Development*, *72*(1), 220-235. https://doi.org/10.1111/1467-8624.00275

Brecht, B., & Willett, J. (1964). *Brecht on theatre: The development of an aesthetic*. Macmillan.

Brenner, P. S., & DeLamater, J. (2016). Lies, damned lies, and survey self-reports? Identity as a cause of measurement bias. *Social Psychology Quarterly*, *79*(4), 333-354. https://doi.org/10.1177/0190272516628298

Brewer, J., & Hunter, A. (2006). Foundations of multimethod research. https://doi.org/10.4135/9781412984294

Bronfenbrenner, U. (2009). *The ecology of human development*. Harvard University Press.

Butin, D. W. (2010). *The education dissertation: A guide for practitioner scholars*. Corwin.

Casey, B., Getz, S., & Galvan, A. (2008). The adolescent brain. *Developmental Review*, *28*(1), 62-77. https://doi.org/10.1016/j.dr.2007.08.003

Caza, A., Barker Caza, B., & E. Baloochi, M. (2020). Resilient personality: Is grit a source of resilience? *Research Handbook on Organizational Resilience*, 25-38. https://doi.org/10.4337/9781788112215.00009

Chein, J., Albert, D., O'Brien, L., Uckert, K., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. *Developmental Science*, *14*(2), F1-F10. https://doi.org/10.1111/j.1467-7687.2010.01035.x

Chin Su, S. (2014). The advantages, the disadvantages, and the obstacles from students' perspectives on a short-term university drama play as a service participation. *International Journal of Humanities and Cultural Studies*, *1*(3). https://www.ijhcs.com/index.php/ijhcs/article/view/62

Clark, K. N., Dorio, N. B., Eldridge, M. A., Malecki, C. K., & Demaray, M. K. (2019). Adolescent academic achievement: A model of social support and grit. *Psychology in the Schools*, *57*(2), 204-221. https://doi.org/10.1002/pits.22318

Cole, D. A. (1987). Utility of confirmatory factor analysis in test validation research. *Journal of Consulting and Clinical Psychology*, *55*(4), 584-594. https://doi.org/10.1037/0022-006x.55.4.584

Collaco, C. M. (2018). *What do we really know about grit? A multivariate statistical analysis investigation on the construct validity of grit* (Order No. 10928203) [Doctoral dissertation, University of San Francisco]. ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection.

Conkie, R. (2012). Rehearsal: The pleasures of the flesh. *Shakespeare Bulletin*, *30*(4), 411-429. https://doi.org/10.1353/shb.2012.0077

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications.

Daddis, C. (2008). Influence of close friends on the boundaries of adolescent personal authority. *Journal of Research on Adolescence*, *18*(1), 75-98. https://doi.org/10.1111/j.1532-7795.2008.00551.x

Daddis, C. (2011). Desire for increased autonomy and adolescents' perceptions of peer autonomy: "Everyone else can; Why can't I?" *Child Development*, *82*(4), 1310-1326. https://doi.org/10.1111/j.1467-8624.2011.01587.x

Dahl, R. E. (2016). The developmental neuroscience of adolescence: Revisiting, refining, and extending seminal models. *Developmental Cognitive Neuroscience*, *17*, 101-102. https://doi.org/10.1016/j.dcn.2015.12.016

Datu, J. A., Valdez, J. P., & King, R. B. (2016). The successful life of gritty students: Grit leads to optimal educational and well-being outcomes in a collectivist context. *The Psychology of Asian Learners*, 503-516. https://doi.org/10.1007/978-981-287-576-1_31

Davis, S., Ferholt, B., Clemson, H. G., & Marjanovic-Shane, A. (2016). *Dramatic interactions in education: Vygotskian and sociocultural approaches to drama, education and research*. Bloomsbury Publishing.

Daykin, N., Orme, J., Evans, D., Salmon, D., McEachran, M., & Brain, S. (2008). The impact of participation in performing arts on adolescent health and behaviour. *Journal of Health Psychology*, *13*(2), 251-264. https://doi.org/10.1177/1359105307086699

De Loof, H., Struyf, A., Boeve-de Pauw, J., & Van Petegem, P. (2019). Teachers' motivating style and students' motivation and engagement in STEM: The relationship between three key educational concepts. *Research in Science Education*. https://doi.org/10.1007/s11165-019-9830-3

Denham, S. A., Meyer, M. G., Toborg, M. A., & Mande, M. J. (2004). Providing health education to Appalachia populations. *Holistic Nursing Practice, 18*(6), 293-301. https://journals.lww.com/hnpjournal/Abstract/2004/11000/Providing_Health_Education_to_Appalachia.5.aspx

Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods*. McGraw-Hill Companies.

Direito, I., Chance, S., & Malik, M. (2019). The study of grit in engineering education research: A systematic literature review. *European Journal of Engineering Education*, *46*(2), 161-185. https://doi.org/10.1080/03043797.2019.1688256

Disabato, D. J., Goodman, F. R., & Kashdan, T. B. (2018). Is grit relevant to well-being and strengths? Evidence across the globe for separating perseverance of effort and consistency of interests. *Journal of Personality, 87*(2), 194-211. https://doi.org/10.1111/jopy.12382

Dishion, T. J., & Tipsord, J. M. (2011). Peer contagion in child and adolescent social and emotional development. *Annual Review of Psychology*, *62*(1), 189-214. https://doi.org/10.1146/annurev.psych.093008.100412

Dosenbach, N. U., Petersen, S. E., & Schlaggar, B. L. (2013). The teenage brain. *Current Directions in Psychological Science, 22*(2), 101-107. https://doi.org/10.1177/0963721412474297

Doyle, L., Brady, A.-M., & Byrne, G. (2009). An overview of mixed methods research. *Journal of Research in Nursing, 14*(2), 175–185. https://doi.org/10.1177/1744987108093962

Dragović, S., & Balić, D. (2012). Drama pedagogy: a way of learning through experience and doing. *Croatian Journal of Education*, *15*(1), 191-209.

Duckworth, A. (2016). *Grit: The power of passion and perseverance*. Scribner.

Duckworth, A. (2020). *Research*. Angela Duckworth. https://angeladuckworth.com/research/

Duckworth, A., & Gross, J. J. (2014). Self-control and grit: Related but separable determinants of success. *Current Directions in Psychological Science, 23*(5), 319–325. https://doi.org/10.1177/0963721414541462

Duckworth, A. L., & Kern, M. L. (2011). A meta-analysis of the convergent validity of self-control measures. *Journal of Research in Personality*, *45*(3), 259-268. https://doi.org/10.1016/j.jrp.2011.02.004

Duckworth, A. L., Milkman, K. L., & Laibson, D. (2018). Beyond willpower: Strategies for reducing failures of self-control. *Psychological Science in the Public Interest*, *19*(3), 102-129. https://doi.org/10.1177/1529100618821893

Duckworth, A., Peterson, C., Matthews, M., & Kelly, D. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 9*, 1087-1101. http://www.sas.upenn.edu/~duckwort/images/Grit%20JPSP.pdf

Duckworth, A., & Quinn, P. (2009). Development and validation of the short grit scale (Grit-S). *Journal of Personality Assessment, 91*(2), 166-174. http://dx.doi.org/10.1080/00223890802634290

Duma, A., & Silverstein, L. (2014). A view into a decade of arts integration. *Journal for Learning through the Arts: A Research Journal on Arts Integration in Schools and Communities*, *10*(1). https://doi.org/10.21977/d910119197

Duncan, A. (2009). *A letter to school and education leaders on the importance of arts education.* https://www2.ed.gov/news/pressreleases/2009/08/08182009a.pdf

Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House Digital.

Dweck, C. S., & Yeager, D. S. (2019). Mindsets: A view from two eras. *Perspectives on Psychological Science*, *14*(3), 481-496. https://doi.org/10.1177/1745691618804166

Ellis, B. J., Del Giudice, M., Dishion, T. J., Figueredo, A. J., Gray, P., Griskevicius, V., Hawley, P. H., Jacobs, W. J., James, J., Volk, A. A., & Wilson, D. S. (2012). The evolutionary basis of risky adolescent behavior: Implications for science, policy, and practice. *Developmental Psychology*, *48*(3), 598-623. https://doi.org/10.1037/a0026220

Ernst, M., Pine, D. S., & Hardin, M. (2005). Triadic model of the neurobiology of motivated behavior in adolescence. *Psychological Medicine*, *36*(3), 299-312. https://doi.org/10.1017/s0033291705005891

Eskreis-Winkler, L., Shulman, E. P., Beal, S. A., & Duckworth, A. L. (2014). The grit effect: Predicting retention in the military, the workplace, school and marriage. *Frontiers in Psychology*, *5*. https://doi.org/10.3389/fpsyg.2014.00036

Field, A. (2017). *Discovering statistics using IBM SPSS statistics: North American edition*. SAGE Publications.

Fischer, K. W., Shaver, P. R., & Carnochan, P. (1990). How emotions develop and how they organise development. *Cognition & Emotion*, *4*(2), 81-127. https://doi.org/10.1080/02699939008407142

Fletcher, J. M., & Kim, J. (2018). Learning hope and optimism: Classmate experiences and adolescent development. *Applied Economics Letters*, *26*(5), 409-412. https://doi.org/10.1080/13504851.2018.1486009

Freire, P. (2017). *Pedagogy of the oppressed*. Penguin Classics.

Fujita, K. (2011). On conceptualizing self-control as more than the effortful inhibition of impulses. *Personality and Social Psychology Review*, *15*(4), 352-366. https://doi.org/10.1177/1088868311411165

Galton, F. (2006) *Hereditary genius: An inquiry into its laws and consequences.* Prometheus. (Original work published 1869).

Gardner, H. (2011). *Creating minds: An anatomy of creativity seen through the lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Ghandi*. Civitas Books.

Goffman, E. (1975). *Frame analysis: An essay on the organization of experience*. Northwestern University Press.

Goldberg, L. R. (1990). An alternative "description of personality": The big-five factor structure. *Journal of Personality and Social Psychology, 59*(6), 1216-1229. https://doi.org/10.1037/0022-3514.59.6.1216

Goldstein, T. R., Young, D. L., & Thompson, B. N. (2020). It’s all critical: Acting teachers’ beliefs about theater classes. *Frontiers in Psychology, 11*. https://doi.org/10.3389/fpsyg.2020.00775

Grotowski, J. (2012). *Towards a poor theatre*. Routledge.

Gutmann, B., Gladding, G., Lundsgaard, M., & Stelzer, T. (2018). Mastery learning in the zone of proximal development. *2017 Physics Education Research Conference Proceedings*. https://doi.org/10.1119/perc.2017.pr.034

Hagen, U. (2009). *Respect for acting*. John Wiley & Sons.

Hakkarainen, P., & Bredikyte, M. (2019). The zone of proximal development in play and learning. *Cultural-Historical Psychology, 2008*(4), 2-11.

Heathcote, D., & Herbert, P. (1985). A drama of learning: Mantle of the expert. *Theory Into Practice*, *24*(3), 173-180. https://doi.org/10.1080/00405848509543169

Heffner, H. C., & Beckerman, B. (1970). Dynamics of drama: Theory and method of analysis. *Educational Theatre Journal*, *22*(3), 330. https://doi.org/10.2307/3205557

Herold, B. (2015, January 24). *Is "grit" racist?* Education Week. https://www.edweek.org/leadership/is-grit-racist/2015/01

Hope, A. A., & Munro, C. L. (2019). Understanding and improving critical care survivorship. *American Journal of Critical Care*, *28*(6), 410-412. https://doi.org/10.4037/ajcc2019442

Hughes, J., & Nicholson, H. (2016). *Critical perspectives on applied theatre*. Cambridge University Press.

Hughes, K. (2019, April 18). *How to prevent response bias when conducting surveys*. ProjectManager.com. https://www.projectmanager.com/blog/prevent-response-bias-surveys

Jirásek, M., & Sudzina, F. (2020). Big five personality traits and creativity. *Quality Innovation Prosperity*, *24*(3), 90. https://doi.org/10.12776/qip.v24i3.1509

John, O. P., & Srivastava, S. (1999). *The big five trait taxonomy: History, measurement, and theoretical perspectives.* In L. A. Pervin, & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 102–138). Guilford Press.

Kannangara, C. S., Allen, R. E., Waugh, G., Nahar, N., Khan, S. Z., Rogerson, S., & Carson, J. (2018). All that glitters is not grit: Three studies of grit in university students. *Frontiers in Psychology, 9*. https://doi.org/10.3389/fpsyg.2018.01539

Kaplan, D. S., Liu, R. X., & Kaplan, H. B. (2005). School related stress in early adolescence and academic performance three years later: The conditional influence of self expectations. *Social Psychology of Education, 8*(1), 3-17. https://doi.org/10.1007/s11218-004-3129-5

Kariuki, P., & Black, L. (2016, November). *The effects of integrating theatre-arts strategies and traditional strategies on student performance in an English classroom at a selected high school* [Paper presentation]. Mid-South Educational Research Association, Mobile, Alabama. https://files.eric.ed.gov/fulltext/ED572006.pdf

Kelner, L. B., & Flynn, R. M. (2006). *A dramatic approach to reading comprehension: Strategies and activities for classroom teachers*. Heinemann Drama.

Kendziora, K., & Osher, D. (2016). Promoting children's and adolescents' social and emotional development: District adaptations of a theory of action. *Journal of Clinical Child & Adolescent Psychology, 45*(6), 797-811. https://doi.org/10.1080/15374416.2016.1197834

Kershaw, B., & Nicholson, H. (2011). *Research methods in theatre and performance*. Research Methods for the Arts and Humanities.

King, L., Lauzon, E., Duceppe, B., & Nicholson, M. (2018, June 11). *The problem with grit*. The Art of Learning. https://www.taolearn.com/the-problem-with-grit/

Kissel, H. (2000). *Stella Adler: The art of acting*. Hal Leonard Corporation.

Klein, L. G. (2002). Introduction. *Set for success: Building a strong foundation for school readiness base on the social-emotional development of young children*, *1*(1), 1-5. http://earlychildhoodfunders.org/pdf/eex_brochure.pdf# page=6

Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. *CBE—Life Sciences Education*, *18*(1), rm1. https://doi.org/10.1187/cbe.18-04-0064

Koukounaras-Liagis, M. (2011). Can an educational intervention, specifically theatre in education, influence students' perceptions of and attitudes to cultural and religious diversity? A socio-educational research. *British Journal of Religious Education*, *33*(1), 75-89.

Kramer, L. R. (1992). Young adolescents' perceptions of school. In J. L. Irvin (Ed.), *Transforming middle level education: Perspectives and possibilities* (pp. 22-45). Allyn and Bacon.

Kukla, K. (1987). David Booth: Drama as a way of knowing. *Language Arts*, *64*(1), 73-78. https://www.jstor.org/stable/41961577

Lampert, N. (2007). Critical thinking dispositions as an outcome of undergraduate education. *The Journal of General Education*, *56*(1), 17-33. https://doi.org/10.1353/jge.2007.0011

Lan, X. (2020). Grit and peer relationships in early adolescence: A person-centered approach. *Journal of Social and Personal Relationships, 37*(7), 2250-2269. https://doi.org/10.1177/0265407520921557

Larson, R. W., & Brown, J. R. (2007). Emotional development in adolescence: What can be learned from a high school theater program? *Child Development, 78*(4), 1083-1099. https://doi.org/10.1111/j.1467-8624.2007.01054.x

Lasic, S., & Kenny, L. (2002). Theatre and peer education: An innovative approach to health promotion. *Australian Journal of Primary Health Interchange, 8*(3), 87-93.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology, 22*(140), 55.

Linnenbrink, E. A., & Pintrich, P. R. (2002). Motivation as an enabler for academic success. *School Psychology Review*, *31*(3), 313-327. https://doi.org/10.1080/02796015.2002.12086158

Love, B. L. (2020, December 2). *"Grit is in our DNA": Why teaching grit is inherently Anti-Black (Opinion).* Education Week. https://www.edweek.org/leadership/opinion-grit-is-in-our-dna-why-teaching-grit-is-inherently-anti-black/2019/02

Luna, B., & Wright, C. (2016). Adolescent brain development: Implications for the juvenile criminal justice system. *APA Handbook of Psychology and Juvenile Justice*, 91-116. https://doi.org/10.1037/14643-005

Mandelbaum, T. (2018). The relationships between attachment and grit in lower income adolescents. *Journal of Character Education, 14*(1), 59-74.

Margolis, A. (2020). Zone of proximal development, scaffolding and teaching practice. *Cultural-Historical Psychology, 16*(3), 15-26. https://doi.org/10.17759/chp.2020160303

Martin, C. (2012). *Theatre of the real*. Palgrave Macmillan.

Mayring, P. (2000). Qualitative content analysis. *Qualitative Methods in Various Disciplines I: Psychology, 1*(2). https://doi.org/10.17169/fqs-1.2.1089

McAuley, G. (2008). Not magic but work: Rehearsal and the production of meaning. *Theatre Research International*, *33*(3), 276-288. https://doi.org/10.1017/s0307883308003970

McCain, B. (2017). *Effects of teacher grit on student grit and reading achievement: A mixed-methods study* (Order No. 10269827) [Doctoral dissertation, Indiana University of Pennsylvania]. ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection.

McLeod, S., & Shareski, D. (2018). *Different schools for a different world: School improvement for 21st century skills, global citizenship, and deeper learning*. Solution Tree.

Meisner, S., & Longwell, D. (2012). *Sanford Meisne on acting*. Vintage.

Meriac, J. P., Slifka, J. S., & LaBat, L. R. (2015). Work ethic and grit: An examination of empirical redundancy. *Personality and Individual Differences*, *86*, 401-405. https://doi.org/10.1016/j.paid.2015.07.009

Merriam-Webster. (n.d.). Resiliency. In *Merriam-Webster.com dictionary*. Retrieved June 21, 2020, from https://www.merriam-webster.com/dictionary/resiliency

Mischel, W., Ebbesen, E. B., & Raskoff Zeiss, A. (1972). Cognitive and attentional mechanisms in delay of gratification. *Journal of Personality and Social Psychology*, *21*(2), 204-218. https://doi.org/10.1037/h0032198

Mohana, M. (2016, May 17). *The motivated mind: Where our passion & creativity comes from*. Psych Central. https://psychcentral.com/lib/the-motivated-mind-where-our-passion-creativity-comes-from#1

Morgan, N., & Saxton, J. (1987). *Teaching drama: A mind of many wonders*. Trans-Atlantic Publications.

Muenks, K., Wigfield, A., Yang, J. S., & O'Neal, C. R. (2017). How true is grit? Assessing its relations to high school and college students' personality characteristics, self-regulation, engagement, and achievement. *Journal of Educational Psychology*, *109*(5), 599-620. https://doi.org/10.1037/edu0000153

National Center for Education Statistics. (2012). *Arts education in public elementary and secondary schools 1999-2000 and 2009-2010*. National Center for Education Statistics (NCES), a part of the U.S. Department of Education. https://nces.ed.gov/pubs2012/2012014rev.pdf

Omasta, M. (2013). A survey of school theatre: A landscape survey of theatre education in United States high schools. *Teaching Theatre, 24*(*1*), 8-29.

Omasta, M., & Chappell, D. (2015). Theatre education in the academy: Major impacts of minor differences. *Theatre Topics, 25*(3), 185-197. https://doi.org/10.1353/tt.2015.0035

O'Neill, C. (1985). Imagined worlds in theatre and drama. *Theory Into Practice*, *24*(3), 158-165. https://doi.org/10.1080/00405848509543167

O'Neill, C. (1995). *Drama worlds: A framework for process drama*. Heinemann Drama.

Oosterhoff, B., Ferris, K. A., & Metzger, A. (2014). Adolescents' sociopolitical values in the context of organized activity involvement. *Youth & Society*, *49*(7), 947-967. https://doi.org/10.1177/0044118x14560528

O'Toole, J. (1994). In Australia drama is… *NADIE Advocacy Brochure.*

O'Toole, J., & O'Mara, J. (2007). Proteus, the giant at the door: Drama and theatre in the curriculum. In L. Bresler (ed.), *International handbook of research in arts education* (pp. 203-218). Springer.

Ozer, E. J. (2017). Youth-led participatory action research: Overview and potential for enhancing adolescent development. *Child Development Perspectives*, *11*(3), 173-177. https://doi.org/10.1111/cdep.12228

Pepitone, A., & Festinger, L. (1959). A theory of cognitive dissonance. *The American Journal of Psychology*, *72*(1), 153. https://doi.org/10.2307/1420234

Piaget, J. (2001). *The psychology of intelligence*. Psychology Press.

Piazzoli, E. (2011). Process drama: The use of affective space to reduce language anxiety in the additional language learning classroom. *Research in Drama Education: The Journal of Applied Theatre and Performance*, *16*(4), 557-573. https://doi.org/10.1080/13569783.2011.617104

Podolskiy, A. I. (2012). Zone of proximal development. *Encyclopedia of the Sciences of Learning*, 3485-3487. https://doi.org/10.1007/978-1-4419-1428-6_316

Prinstein, M. J., & Wang, S. S. (2005). False consensus and adolescent peer contagion: Examining discrepancies between perceptions and actual reported levels of friends' deviant and health risk behaviors. *Journal of Abnormal Child Psychology*, *33*(3), 293-306. https://doi.org/10.1007/s10802-005-3566-4

Qualtrics. (n.d.). *How to determine the correct survey sample size*. (2020, June 1). Qualtrics. https://www.qualtrics.com/experience-management/research/determine-sample-size/

Ravitch, D. (2016, March 4). *Testing true grit*. https://www.nytimes.com/roomfordebate/2016/03/04/testing-students-true-grit

Rawlins, T. (2012). "Disciplined improvisation" in the rehearsal and performance of Shakespeare: The alternative approach of Mike Alfreds. *Shakespeare Bulletin*, *30*(4), 431-447. https://doi.org/10.1353/shb.2012.0082

Rilke, R. M., Schurr, A., Barkan, R., & Shalvi, S. (2016). One-by-one or all-at-once? Self-reporting policies and dishonesty. *Frontiers in Psychology*, *7*. https://doi.org/10.3389/fpsyg.2016.00113

Robertson-Kraft, C., & Duckworth, A. L. (2014). True grit: Trait-level perseverance and passion for long-term goals predicts effectiveness and retention among novice teachers. *Teachers College Record (1970)*, *116*(3). http://www.tcrecord.org/Content.asp?ContentId=17352

Robinson, M. (2017). Drama. In A. Standish, & A. S. Cuthbert (Eds.), *What should schools teach? Disciplines, subjects, and the pursuit of truth* (pp. 89-102). UCL Institute of Education Press.

Ruiz-Alfonso, Z., Vega, L. S., & Beltran, E. V. (2018). What about passion in education? The concept of passion, why it is important and how teachers can promote it. *European Scientific Journal, ESJ*, *14*(1), 19. https://doi.org/10.19044/esj.2018.v14n1p19

Sacks, D. (2003). Age limits and adolescents. *Paediatrics & Child Health*, *8*(9), 577-577. https://doi.org/10.1093/pch/8.9.577

SCDHEC. (2021, Oct. 20). *COVID-19 Guidance for K-12 Schools: 2021 to 2022 Academic Year*. SCDHEC. https://scdhec.gov/sites/default/files/media/document/2021.2022-School-Guidance-Booklet-10.20.21.pdf

Schmidt, F. T., Fleckenstein, J., Retelsdorf, J., Eskreis-Winkler, L., & Möller, J. (2019). Measuring grit. *European Journal of Psychological Assessment*, *35*(3), 436-447. https://doi.org/10.1027/1015-5759/a000407

Schmidt, M., & Charney, M. (2018). Assessing creativity as a student learning outcome in theatre education. *Creativity Theory and Action in Education*, 271-287. https://doi.org/10.1007/978-3-319-78928-6_16

Schonmann, S. (2005). "Master" versus "Servant": Contradictions in drama and theatre education. *The Journal of Aesthetic Education*, *39*(4), 31-39. https://doi.org/10.1353/jae.2005.0047

Sessa, F. M., & Steinberg, L. (1991). Family structure and the development of autonomy during adolescence. *The Journal of Early Adolescence*, *11*(1), 38-55. https://doi.org/10.1177/0272431691111003

Severs, J. (2020, April 11). *Growth mindset: Where did it go wrong?* Tes. https://www.tes.com/news/growth-mindset-where-did-it-go-wrong

Sigmundsson, H., Haga, M., & Hermundsdottir, F. (2020). Passion, grit and mindset in young adults: Exploring the relationship and gender differences. *New Ideas in Psychology*, *59*, 100795. https://doi.org/10.1016/j.newideapsych.2020.100795

Sinclair, E. (2017). *Grit literature: Developing a grit-building curriculum to increase task perseverance* (Order No. 10617087) [Doctoral dissertation, Indiana State University]. ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection.

Singer, J. L., & Sugarman, D. A. (1955). A note on some projected familial attitudes associated with Rorschach movement responses. *Journal of Consulting Psychology*, *19*(2), 117-119. https://doi.org/10.1037/h0039854

Snyder, L., Klos, P., & Grey-Hawkins, L. (2014). Transforming teaching through arts integration. *Journal for Learning Through the Arts: A Research Journal on Arts Integration in Schools and Communities*, *10*(1). https://doi.org/10.21977/d910119308

Soto, C. J. (2018). Big five personality traits. In M. H. Bornstein, M. E. Arterberry, K. L. Fingerman, & J. E. Lansford (Eds.), *The SAGE encyclopedia of lifespan human development* (pp. 240-241). Sage.

Soto, C. J., & John, O. P. (2009). Ten facet scales for the big five inventory: Convergence with NEO PI-R facets, self-peer agreement, and discriminant validity. *Journal of Research in Personality, 43*(1), 84–90. https://doi.org/10.1016/j.jrp.2008.10.002

Spear, H. J., & Kulbok, P. (2004). Autonomy and adolescence: A concept analysis. *Public Health Nursing*, *21*(2), 144-152. https://doi.org/10.1111/j.0737-1209.2004.021208.x

Spolin, V., & Sills, P. (1999). *Improvisation for the theater: A handbook of teaching and directing techniques*. Northwestern University Press.

Spry, C., & Hornsey, M. J. (2007). The influence of blind and constructive patriotism on attitudes toward multiculturalism and immigration. *Australian Journal of Psychology*, *59*(3). https://doi.org/10.1080/00049530701449489

Stager-Jacques, L. (2012). *Borrowing from professional theatre training to build essential skills in organization development consultants*. SAGE Journals. https://journals.sagepub.com/doi/10.1177/0021886312460504

Stanislavski, C. (1989). *An actor prepares*. Routledge.

Starkey, K., Tempest, S., & Cinque, S. (2019). Management education and the theatre of the absurd. *Management Learning*, *50*(5), 591-606. https://doi.org/10.1177/1350507619875894

Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review*, *28*(1), 78-106. https://doi.org/10.1016/j.dr.2007.08.002

Steinberg, L. (2017). A social neuroscience perspective on adolescent risk-taking. *Biosocial Theories of Crime*, 435-463. https://doi.org/10.4324/9781315096278-19

Tabone, C., & Weltsek, G. J. (2019). A qualitative summative assessment for theater education. *Arts Education Policy Review*, *120*(3), 165-174. https://doi.org/10.1080/10632913.2019.1596854

Taylor, J. A. (2008). From the stage to the classroom: The performing arts and social studies. *The History Teacher*, *40*(2), 235-248.

Tewell, E. (2020). The problem with grit: dismantling deficit thinking in library instruction. *Libraries and the Academy, 20*(1), 137-159. https://doi.org/10.1353/pla.2020.0007

Theofanidis, D. & Fountouki, A. (2019). Limitations and delimitations in the research process. *Perioperative nursing (GORNA), 7*(30), 155-162. http://doi.org/10.5281/zenodo.2552022

Timans, R., Wouters, P., & Heilbron, J. (2019). Mixed methods research: What it is and what it could be. *Theory and Society*, *48*(2), 193-216. https://doi.org/10.1007/s11186-019-09345-5

Tolomelli, A. (2016). Theatre of the oppressed: Linking research, political commitment and pedagogical perspectives. *Revista Internacional Interdisciplinar INTERthesis*, *13*(3), 43. https://doi.org/10.5007/1807-1384.2016v13n3p43

Tough, P. (2016, May 16). *How kids learn resilience*. The Atlantic. https://www.theatlantic.com/magazine/archive/2016/06/how-kids-really-succeed/480744/

Two Tails of Z. (2007). San Jose State University. https://www.sjsu.edu/faculty/gerstman/StatPrimer/z-two-tails.pdf

Valverde, C. P. (2002). Theatre in education (TIE) in the context of educational drama. *Lenguajé y Textos, 20,* 7-20.

Vandenbroucke, R. (2016). What stays (in undergraduate theatre education). *Theatre Topics*, *26*(3), 357-361. https://doi.org/10.1353/tt.2016.0061

Vazsonyi, A. T., Ksinan, A. J., Ksinan Jiskrova, G., Mikuška, J., Javakhishvili, M., & Cui, G. (2019). To grit or not to grit, that is the question! *Journal of Research in Personality*, *78*, 215-226. https://doi.org/10.1016/j.jrp.2018.12.006

Vygotsky, L. (1978). Interaction between learning and development. In *Mind and Society* (pp. 79-91). Harvard University Press.

Wanders, F. H., Dijkstra, A. B., Maslowski, R., Van der Veen, I., & Amnå, E. (2020). The role of teachers, parents, and friends in developing adolescents' societal interest. *Scandinavian Journal of Educational Research*, 1-16. https://doi.org/10.1080/00313831.2020.1754901

Whitson, C., & Consoli, J. (2009). Flow theory and student engagement. *Journal of Cross-Disciplinary Perspectives in Education*, *2*(1), 40-49. https://mxtsch.people.wm.edu/Teaching/JCPE/Volume2/FlowTheoryandStudentEngagement_Whitson-Consoli.pdf

Willoughby, T., Good, M., Adachi, P. J., Hamza, C., & Tavernier, R. (2013). Examining the link between adolescent brain development and risk taking from a social–developmental perspective. *Brain and Cognition*, *83*(3), 315-323. https://doi.org/10.1016/j.bandc.2013.09.008

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, *17*(2), 89-100. https://doi.org/10.1111/j.1469-7610.1976.tb00381.x

Wright, P. R. (2006). Drama education and development of self: Myth or reality? *Social Psychology of Education*, *9*(1), 43-65. https://doi.org/10.1007/s11218-005-4791-y

Zenyuh, M. A. (2017). *Grit as a domain-general and domain-specific construct* (Order No. 10280471) [Doctoral dissertation, Hofstra University]. ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection.

Appendix A

Initial Survey

Short Grit Scale

Directions for taking the Grit Scale: Here are a number of statements that may or may not apply to you. For the most accurate score, when responding, think of how you compare to most people -- not just the people you know well, but most people in the world. There are no right or wrong answers, so just answer honestly!

1. New ideas and projects sometimes distract me from previous ones.*
   - ❑ Very much like me
   - ❑ Mostly like me
   - ❑ Somewhat like me
   - ❑ Not much like me
   - ❑ Not like me at all

2. Setbacks don't discourage me.
   - ❑ Very much like me
   - ❑ Mostly like me
   - ❑ Somewhat like me
   - ❑ Not much like me
   - ❑ Not like me at all

3. I have been obsessed with a certain idea or project for a short time but later lost interest.*
   - ❑ Very much like me
   - ❑ Mostly like me
   - ❑ Somewhat like me
   - ❑ Not much like me
   - ❑ Not like me at all

4. I am a hard worker.
   - ❑ Very much like me
   - ❑ Mostly like me
   - ❑ Somewhat like me
   - ❑ Not much like me
   - ❑ Not like me at all

5. I often set a goal but later choose to pursue a different one.*
   - ❑ Very much like me
   - ❑ Mostly like me
   - ❑ Somewhat like me
   - ❑ Not much like me
   - ❑ Not like me at all

6. I have difficulty maintaining my focus on projects that take more than a few months to complete.*
   - ❑ Very much like me
   - ❑ Mostly like me
   - ❑ Somewhat like me

- Not much like me
- Not like me at all

7. I finish whatever I begin.
   - Very much like me
   - Mostly like me
   - Somewhat like me
   - Not much like me
   - Not like me at all

8. I am diligent.
   - Very much like me
   - Mostly like me
   - Somewhat like me
   - Not much like me
   - Not like me at all

Scoring:

1. For questions 2, 4, 7 and 8 assign the following points:
   5 = Very much like me
   4 = Mostly like me
   3 = Somewhat like me
   2 = Not much like me
   1 = Not like me at all

2. For questions 1, 3, 5 and 6 assign the following points:
   1 = Very much like me
   2 = Mostly like me
   3 = Somewhat like me
   4 = Not much like me
   5 = Not like me at all

Add up all the points and divide by 8. The maximum score on this scale is 5 (extremely gritty), and the lowest score on this scale is 1 (not at all gritty).

Grit Scale citation

Duckworth, A.L, & Quinn, P.D. (2009). Development and validation of the Short Grit Scale (Grit-S). *Journal of Personality Assessment, 91,* 166-174. http://www.sas.upenn.edu/~duckwort/images/Duckworth%20and%20Quinn.pdf

Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 9*, 1087-1101. http://www.sas.upenn.edu/~duckwort/images/Grit%20JPSP.pdf

Please select your demographic(s).
White/Caucasian
Black/African American
Hispanic
Asian/Pacific Islander
Native American
Two or More Races
Other

What grade are you in?
9th
10th
11th
12th

Please select your gender
Male
Female
Non-binary/third gender
Prefer not to say

Please select the category that best suits your participation in arts Landrum High School.
I have not participated in any arts classes
I have mostly participated in non-performing arts (Media Arts, Visual Arts, etc.)
I have mostly participated in performing arts (Theatre, Chorus, Orchestra, Band)

Did you participate in the Spring 2021 production of Radium Girls as an actor or crew member?
Yes
No

Appendix B

Closing Survey

Please answer the following questions to the best of your ability and provide detail to your answers. Consider your entire time spent in rehearsal this semester, but not previous shows or semesters.

1. How do you define grit?

2. When you think about your time in rehearsal this semester, what words would you use to describe the learning process?

3. Do you think that participating in rehearsal made you a gritter person? How so?

4. Did you encounter any setbacks during the rehearsal process? Please describe them and how you overcame them.

5. What were your strengths during the rehearsal period?

6. What were your weaknesses during the rehearsal period?

7. What motivated you to continue rehearsing for the show?

8. Did you have a goal for yourself throughout the rehearsal process? Did this goal ever change?

9. Did you lose interest or want to quit at any point during the rehearsal process? Why did you stay involved in the production?

10. Please list the names of any other extracurricular programs (clubs, sports, etc.) you were involved in during the rehearsal process.

Appendix C

Fine Arts Course Enrollment

Student Enrollment Numbers by Program 2020-2021

Program	**Available Sections**	**Number of Students**
Band	Band, History of Popular Music (5 sections)	61
Chorus	Chorus, Chorus Honors	77
Media Arts	Media Arts, Media Arts 2	104
Orchestra	Orchestra, Orchestra Honors (4 sections)	23
Theatre	Theatre One, Theatre Two, Theatre Three Honors (4 sections)	70
Art	Art, Art 2, Art 3 Honors, Art Appreciation 4 Honors (13 Sections)	170
Total Students Enrolled		505

**Note. Numbers pulled from Enrich school enrollment software reflect the students initially enrolled in the course, but not the final numbers. Many students take multiple sections of the same course over a school year or are enrolled in multiple fine arts classes at once.*

Appendix D

Duckworth Correspondence

Hi Kelsey,

By way of quick introduction, my name is Cat and I am Angela's executive assistant. I hope you are keeping well! Thank you for your inquiry.

All researchers and educators are welcome to use the scales Dr. Duckworth developed for non-commercial purposes. See her personal website for details.

There are no restrictions for non-commercial uses for research, translation into other languages, or education as long as the work is cited properly. Note that these scales are copyrighted and therefore cannot be published or used for commercial purposes or wide public distribution. Journalists and book authors should not reproduce these scales nor any part of them.

On a cautionary note, these scales were originally designed to assess individual differences rather than subtle within-individual changes in behavior over time. Thus, it's uncertain whether they are valid indicators of pre- to post-change as a consequence of interventions. Generally, she also discourages the use of self-report scales in high-stakes settings where faking is a concern (e.g., admissions or hiring decisions). Please see the article Measurement Matters for more information.

With grit and gratitude,

Cat

Catriona O'Rourke
Executive Assistant
Character Lab
www.characterlab.org
Twitter
| Facebook
| LinkedIn