

# STUDENT GRIT AS AN IMPORTANT INGREDIENT FOR ACADEMIC AND PERSONAL SUCCESS

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## ABSTRACT

*This paper explores grit as a contributor to student success at a variety of age levels. First, grit is described for its value in workforce development (Allen & Lewis, 2006,) as a predictor of achievement (Duckworth, 2006,) and in various capacities relevant to teacher effectiveness and student learning (Duckworth, et al, 2009). Then, grit is considered as a factor in adult achievement including, but not limited to, West Point Cadets (Kelly, et al, 2014). Grit is compared to other aspects of individual behavior, such as agency (Kundu, 2014), and it is investigated as an aspect of character and/or personality. Finally, means of incorporating grit into students' personal and professional lives are discussed. Ways student learning can be enhanced and engagement and retention can be increased are considered. Suggestions for ways faculty can improve course presence and delivery, and support students with grit are offered.*

## INTRODUCTION

Why do some individuals accomplish more than others? Is intelligence the sole predictor of success? Why do some high IQ individuals quit on the way to accomplishing their goals? Can it be that grit is one way to explain commitment to overcoming obstacles? Can individuals change their 'grit quotient'? Grit is defined as the passion and perseverance essential for achievement of long-term goals; it can involve working through challenges, over a period of years, against tremendous odds, and despite periods of plateaued progress (Duckworth, et al, 2007). Grit provides the individual with the ability to see a goal through to the end even though that may take years and entail experiencing disappointments and setbacks. Grit has been found to be a contributor to individual success in a variety of settings, as well as throughout an individual's life span. Grit can be developed and is distinct from behaviors such as agency. Grit is often perceived as an aspect of one's character or personality.

This paper explores grit as a component of student's personal and professional life. Specifically, we consider grit as a valuable component of workforce development, but also as a predictor of achievement and success. We cite examples of unlikely heroes and discuss whether grit can intentionally be developed in individuals. We compare grit to agency, talent, skill, and examine the value of effort as a component of grit and of personality development.

Next we consider ways of incorporating grit into students' personal and professional lives in a time when technological conveniences abound. We consider ways student learning can

be enhanced by the incorporation of grit in assignments and other aspects of higher education. We survey student engagement in extracurricular activities including student clubs, internships, and other appointments with professionals in the student's field of study. We survey grit as a component of student/teacher interaction, mentoring, and leader/follower dynamics such as role modeling.

Finally, we investigate ways faculty members can improve course presence and delivery through tactics such as project based, experiential, and/or competency based learning as ways to support student development of grit.

## GRIT AND ITS VALUE IN WORKFORCE DEVELOPMENT

Grit encompasses behaviors and traits often desirable in the workforce where knowledge management and competitive advantage are increasingly important competencies and capabilities. For example, motivation or a strong will to achieve goals can be invaluable in the workplace where employees are focused on problem solving and/or innovation. Similarly, goal-directedness or "knowing where to go and how to get there" and self-control, "the ability to avoid distractions and focus [sic] on the task at hand" can take both an employee and an organization far (Goodwin & Miller, 2013) toward achieving personal and organizational objectives. However, grit is not merely work ethic, it is an aspect of character that can influence all areas of an individual's life. A positive mindset can enable an individual to embrace change and challenge, as well as to continue to learn from failures, in a time when learning is essential for innovation and creativity in organizations.

## GRIT AS A PREDICTOR OF ACHIEVEMENT

Some synonyms for grit are tenacity, persistence, resilience, stamina, and perseverance. Each of these by itself could certainly be considered as a predictor of achievement, but the combination of qualities can "create[s] a whole that is greater than the sum of its parts." (Goodwin & Miller, 2013, p. 74). For example, the famous "marshmallow experiments" conducted by Walter Mischel during the 1960s and 1970s, engaged preschoolers in a test of self-regulation versus instant gratification, but follow up studies with the same students when they reached the age of SAT completion in high school, revealed an average of 210 points higher scores for those students who self-regulated (Goodwin & Miller, 2013).

## THE RESEARCH ON GRIT

*Grit* is comprised of motivation, self-control, a positive mindset, and goal-directedness and researchers have realized that each of these qualities can be influential in student success. Why is it important to consider grit as related to student learning? For one thing, although first generation college students have often had a difficult time feeling as though they ‘fit in’ on college campuses (Guerra, 2015), that problem may be further exacerbated by their perception of a lack of supportive community while earning a degree online. Teachers can make students aware that supports are in place to assist first generation learners in navigating the waters of higher education.

Lu (2013) declared that “once enrolled, first-generation students are four times more likely to drop out than peers whose parents have college degrees”. One of the factors that can determine success of first-generation, as well as other, college and university students is grit. In a recent study grit and hardiness were found to be predictors of academic success in West Point cadets (Kelly, et al, 2014). In the same study, grit was found to be a non-cognitive predictor of cadet persistence in Cadet Basic Training (Kelly, et al, 2014). In a follow-up to the now famous marshmallow studies, researchers learned that student environment “plays a crucial role in children’s ability to self-regulate” (Goodwin & Miller, 2013, p. 75). The resultant learning was “grit can be developed through an emerging battery of evidence-based techniques” (Goodwin & Miller, 2013, p. 76). When examined in relation to character education, it was found that grit “doesn’t depend just on what’s inside of us, but on being in the right circumstance with people we trust” (Pappano, 2010, p. 6).

When describing grit’s relationship to creativity, and passion, Tomlinson (2013) observed, “It’s rare that individuals exercise creativity in domains that don’t interest them or for which they feel no personal connection – except perhaps in figuring out how to avoid those areas.” Tomlinson (2013) further detected that some “moments in the creative process seem to come from beyond us, almost magically. Those moments, however, are almost always preceded by long periods of sweat and grit”. This is consistent with the old adage attributed to Thomas Edison, an inventor who held over a thousand patents and is most known for his contributions to development of electricity as a publicly accessible utility, that success is 10% inspiration and 90% perspiration (ThinkExist.com, 2016)

Finally, and notably, Kundu (2014) cautioned that “overemphasizing grit oversimplifies the problems facing education and what it takes for students to achieve” (p. 80). For example, a student’s underachievement might be attributed to another characteristic, such as laziness. Agency, combined with grit, might be a more plausible basis for study of student achievement as “agency requires action but considers one’s ability to act and create change, without glossing over structural inequalities” (Kundu, 2014, p. 80). Kundu advises that agency can empower students to learn that education can change their lives for the better. As this happens, students “come to view knowledge as a source of power, they become invested in learning and [are] able to see the relevance of school in shaping their future” (Kundu, 2014, p. 80). This can even lead to consideration of knowledge sharing in virtual learning communities.

## GRIT AS RELEVANT TO TEACHER EFFECTIVENESS AND STUDENT LEARNING

Duckworth (2016) shares that as a child she heard the term genius frequently, but it was most often in the context of her dad telling her what she was not. A few years ago, Duckworth became a recipient of the prestigious MacArthur Fellowship, for which one cannot apply and which is often referred to as the genius grant. Duckworth coined the term grit after the young girl (played by Kim Darby) in the famous John Wayne movie by the same name *True Grit* (Hathaway, 1969, remake 2010), but grit itself has been around since the dawn of humankind. Darby’s character epitomizes ‘true grit’ as she helps a Marshal (played by John Wayne) and Texas Ranger (Glen Campbell) track down the murderers of her father. Duckworth (2016), like Darby’s character, confirms that intelligence without effort is unmet potential.

In a study of participants in the National Spelling Bee, Duckworth and Ericsson “found that deliberate practice was likely to help participants advance to further stages of the competition than other kinds of preparation” (Duckworth, 2016, Loc 249). That is not to say that Bee spellers enjoyed the practice more than other prep activities, such as Scrabble playing. The practice was effortful and rewarding in terms of achieving their greatest potential toward their goals.

In other studies, Pappano (2013), found that “how students approach learning may be as critical as what they learn”, thereby demonstrating that intellectual performance may be “more malleable than we thought” (p. 5). According to Kidd, Palmeri, and Aslim (2013), researchers who created the marshmallow experiments found that children who were assigned to reliable experimenters (e.g., adults whom they could trust to keep their commitments) were likely to wait up to four times longer than their counterparts who were assigned to unreliable experimenters (who did not keep their word). Notably, Kundu (2014) cautions that we can overemphasize grit and thereby oversimplify problems pertaining to student achievement and assume that underachievement is always related to laziness; this is simply not the case in every instance. Although largely beyond the scope of this paper, agency is among the other ways to empower learners to take control of their life situations through education and a support system (Kundu, 2016, p. 80).

Grit can be cultivated by stakeholders including parents, teachers, mentors, and employers when the four psychological assets found in really gritty people (purpose, practice, interest and hope) are present (Duckworth, 2016).

## GRIT AS A FACTOR IN ADULT ACHIEVEMENT

There are many expressions such as, ‘do what you love to do for a living and you will never work a day in your life’ and ‘do what you love and money will come to you’. Either of these could have been written by Duckworth (2016) if they were popularized in the twenty-first century. In an elaboration of the four psychological assets of which she frequently speaks in her book, Duckworth (2016, Loc 208) delineates:

- **Interest** requires an amount of passion. The grittiest of people are passionate about something that they do.
- **Practice** pertains to continuous improvement, regardless of the level of proficiency one has achieved. Challenging oneself aids in personal mastery through exceeding one’s

own skill levels.

- **Purpose** is essential to carrying on. It is meaningful work that enables one to carry on. One's purpose makes the effort worthwhile as it pertains to the wellbeing of others, as well as of oneself.
- **Hope**, although listed last here, is ever present. It helps one to endure, to rally after setbacks, and to see one's goals through to the end.

These characteristics combined with hard work are formidable. Incidentally, according to Duckworth (2016, Loc 92), "While hiring, employers looked for hardworking employees five times as often as they looked for intelligent" ones. Grit clearly can have tangible benefits for both employee and employer.

## GRIT COMPARED TO OTHER ASPECTS OF INDIVIDUAL BEHAVIOR

Although some of the characteristics of grit may be hereditary, others are developed as a result of growing up in an environment wherein experiences are filtered in such a way that grit is cultivated. Although person A might be far more talented than person B, person B can do as well or better than person A if B is gritty and determined. In fact, at times talent can distract us from such things as effort. Duckworth (2016) reminds us that talent + skill produce achievement, but when varying amounts of effort are added into the mix, grit becomes a huge factor of achievement. Then, Skill x Effort = Achievement (Duckworth, 2016, Loc 149).

## INCORPORATING GRIT INTO STUDENTS' LIVES

Goodwin and Miller (2013) assert that grit can be developed in several ways. Educators should start early and help students to develop self-regulation and self-control through learning to stay focused on one activity. Teaching students the power of achieving their goals, from the start through envisioning the possibility of success to the finish from learning through stories of others, can help students plan ways to overcome any obstacles that stand in the way of their progress both personally and professionally. It can also demonstrate to the students that others have overcome obstacles and achieved success before them.

Teaching students to develop a growth mind-set through academic achievement, as well as through extra-curricular activities and personal success, is an important tactic too. In a randomized control study with 7<sup>th</sup> grade low achieving students who were taught growth mind-set, participants raised their GPA by 3/10 of a point more than control group students (Blackwell, Trzesniewski, & Dweck, 2007). Further, in a review of the literature, Snipes, Francsali, and Stoker (2012) learned that mindsets "influence students' academic behaviors and strategies, which in turn facilitate academic success" (p. 8).

## WAYS STUDENTS CAN BE ENGAGED, STUDENT LEARNING ENHANCED: TEACHER PRESENCE AND COURSE DELIVERY

According to Duckworth (2016), structured extracurricular

activities that both challenge participants and encourage them to have fun can foster grit. Research shows that children who participate in such activities as piano, ballet, and sports typically "get better grades, have higher self-esteem, and are less likely to get in trouble" (Duckworth, 2016, Loc 331). In higher education institutions, such activities might include engagement with:

- **Student Clubs** that afford a safe and well chaperoned, supportive environment for learning, as well as for networking with like-minded individuals in a community wherein multi-directional mentoring is the norm (see Reed, et al, 2015).

Teacher presence and course delivery can foster student grit through the following:

- **Internships and/or other Experiential Learning Opportunities** that offer prospects to practice skills while fostering interest, discovering one's purpose, and instilling hope in the learner, as well as the provider of the opportunity.
- **Engagement with Professionals** in a mentoring setting, whether one or multi-directional. Notably, all of these activities are intended to offer structure, purpose, practice, and hope for the students and they are all supervised by adults who are neither the employer nor the parent of the learner.
- **Project Based Learning (PBL)** is a learner-centered instructional method that affords learners the venue to explore meaningful research that can result in goal-oriented achievement through problem solving and autonomy. The PBL approach is supervised and structured, but learners are given the authority to lead and to run with their ideas. Practice, purpose, hope, and interest are essential for success. A project based learning model case can involve: 1) setting the stage, 2) a task or research question, 3) investigation that results in creation of an artifact or other deliverable, 4) research/resources, 5) scaffolding through guidance, 6) collaboration, such as team work, peer review, and/or engagement with content specialists, and 7) opportunities for knowledge transfer and reflection (Grant, 2002, p. 3). For the gritty learner, this could be a dream assignment.
- **Experiential Learning** in the tradition of Kolb's concrete experience, reflective observation, abstract conceptualization, and active experimentation involves ongoing social learning, problem solving, and knowledge development. When conducted with the guidance of a mentor, it can also incorporate *deep smarts* or implicit knowledge transfer from subject matter experts who can share their experience in an exchange of ideas (see Reed, 2010).
- **Competency Based Learning (CBL)** has recently gained renewed traction higher education. The CBL model stresses learner preparation for employability through mastering meaningful learning objectives that "include application and creation of knowledge, along with the development of important skills and dispositions" (American Institute for Research, 2013).

Consistently, each of the examples in this section engages students through the guidance of an adult other than parent or employer, involves hope, purpose, practice, passion, and

interest, the essential characteristics of grit when combined with a growth mindset.

## STUDENT RETENTION

Since 2004, the Fisk-Vanderbilt Masters-to-PhD Bridge Program in Nashville, Tennessee, has been dedicated to helping minority students succeed in earning degrees in the under-represented science disciplines including, but not limited to, astronomy, chemistry, biology, materials science, and physics. The program started with only four students and it has morphed into one of the most powerful vehicles for developing minority scientists in the United States. Not only has the program been a successful measure in retaining students, it appears to contain a formula for student success where there was recently very little. As recently as 2010, African Americans were only awarded about 3% “of all science and engineering doctorates; Hispanics received 3.6% and Native Americans 0.3%” (Powell, 2013). Some of the greatest obstacles these students faced were financial (scholarship monies and other funding were found for students who had already been accepted into the graduate programs. The bridge aspect of the program is also in that the strategy provides students with options for taking additional courses, training or research to complete their Ph.D. Throughout the process the students still need to be highly motivated.

(Fisk-Vanderbilt Masters to PhD Bridge (2016) *How the Program Works*. Retrieved from <http://fisk-vanderbilt-bridge.org/>

The Fisk-Vanderbilt initiative also includes intensive mentoring of students; the initiative initially removed the barrier of standardized high stakes testing for admission. In 2009, the first PhD was awarded and between 2004 and 2013, 67 students were admitted and eight PhDs were granted. Powell (2013, p. 473) reports that “other universities are taking note of the Fisk-Vanderbilt success”. For example, the University of Michigan has implemented master’s degree programs based on the model as has The Ohio State University and the University of South Florida. In each of these examples grit is evident, as is guidance of adults (and peers) other than parents or employers. The involvement of hope, purpose, practice, passion, and interest are evident as student success again.

## WAYS TO SUPPORT STUDENTS WITH GRIT

Throughout this paper, grit and its development have been discussed. Clearly, educators can assist students in developing grit – from pre-school going forward. This is done through being mindful to the tasks that students are given and the commitment to integrity that the teacher and other educators model in the classroom and beyond. Students develop grit in and out of the classroom. The findings in both the National Spelling Bee study, as well as in the study with West Point Cadets demonstrate that students with grit can and should be supported. Further, Duckworth, Peterson, Matthews, and Kelly (2007, p. 1087) learned that grit “demonstrated incremental predictive validity of success measures over and beyond IQ and conscientiousness” among the West Point Cadets. Educators and mentors need to remember that the diamond is formed and refined by the pressures and high temperatures on carbon. Removing the stress and pressures on students can truncate the growth and grit of the student thus prohibiting the persistence and tenacity needed to be successful in life. Likewise, our students need to know that the grit demonstrated through the process of learning will result in a personal product of success.

## CONCLUSION

In short, although grit is not the only predictor of student success in both personal and professional contexts, it is certainly one predictor that should not be overlooked. Similarly, if one thinks of a butterfly in its cocoon, one is not inclined to open the cocoon to let the insect out. Rather, one knows that the struggles inherent in the experience of the larvae breaking free of its shell are essential to its development and its potential to soar. The butterfly, like the student, might have mentors and evidence before it of other butterflies that have achieved the same goal. We will probably never know if it receives instruction from ‘mentors’, but it undoubtedly heeds the potential inherent in its heredity and environment. Undoubtedly, this image demonstrates the involvement of hope, purpose, practice, passion, and interest that can also be evidenced in people as student success.

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