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## **True Grit: How Important is the Concept of Grit for Education? A Narrative Literature Review**

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Date of publication: February 24th, 2021

Edition period: February 2021 - June 2021

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**To cite this article:** Allen, R.E., Kannangara, C. & Carson, J. (2021). True Grit: How important is the Concept of Grit for Education? A Narrative Literature Review. *International Journal of Educational Psychology*, 10(1), 73-87.  
<https://doi.org/10.17583/ijep.2021.4578>

**To link this article:** <http://dx.doi.org/10.17583/ijep.4578>

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# **True Grit: How Important is the Concept of Grit for Education? A Narrative Literature Review**

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## **Abstract**

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An abundance of literature exists that explores the potential applications of grit in predicting several academic outcomes. Regardless, the concept of grit has been heavily criticised due to the number of inconsistencies among current research. Fully understanding the usefulness of grit in an educational context is a worthwhile pursuit and could yield incredibly influential implications. The current narrative review aimed to address and explore these inconsistencies to determine the true impact of grit on the academic outcomes of school students. Such that, it aimed to establish whether grit was useful in improving outcomes such as academic achievement, attendance and retention. Research posits that grit is a strong predictor of academic outcomes for many, but not all, students. Furthermore, it seems that the predictive abilities of grit can be enhanced by concentrating on the perseverance of efforts component of grit, rather than overall grit. While the importance of grit's perseverance component has been confirmed; there are several recommendations for future research. Likewise, a number of inconsistencies are discussed relating to grits practical applications within an educational context. Cultivating grittiness, specifically perseverance of efforts, in student populations would reap huge rewards. Indeed, the educational rewards for students would be substantial, as well as the financial benefits for schools and educating institutions. The usefulness of cultivating a perseverance of efforts in students is discussed.

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**Keywords:** academic achievement; grit; education; retention; success.

# **La Verdadera Determinación: ¿Qué Importancia Tiene el Concepto Determinación Para la Educación? Una Revisión Narrativa de la Literatura**

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## **Resumen**

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Existe una gran cantidad de literatura que explora las aplicaciones potenciales de la determinación en la predicción de varios resultados académicos. Sin embargo, el concepto de determinación ha sido muy criticado debido a la cantidad de inconsistencias entre las investigaciones recientes. La presente revisión de literatura aborda y explora estas inconsistencias para determinar el verdadero impacto de la determinación en los resultados académicos de los estudiantes. De este modo, se pretende establecer si la determinación es útil para mejorar resultados como el rendimiento académico, la asistencia y la permanencia. La investigación postula que la determinación es un fuerte predictor de los resultados académicos para muchos estudiantes, aunque no para todos. Además, parece que la capacidad de predicción del este puede mejorarse concentrándose en el componente de perseverancia de los esfuerzos, en lugar de en el general. Aunque se ha confirmado la importancia del componente de perseverancia, son varias las recomendaciones para futuras investigaciones. Asimismo, se discuten varias incoherencias relacionadas con las aplicaciones prácticas de la determinación en el contexto educativo. Cultivar la tenacidad del alumnado, concretamente la perseverancia en los esfuerzos, supondría un gran beneficio. Las recompensas educativas para los estudiantes serían sustanciales, así como los beneficios financieros para las escuelas y las instituciones educativas. Se discute la utilidad de cultivar la perseverancia de los esfuerzos en los estudiantes.

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**Palabras clave:** rendimiento académico; determinación; educación; retención; éxito.

It was originally believed that intelligence was of crucial importance in determining which students will be successful at school and which will not (Allen & Bond, 2001; Kidd & Latif, 2003). It was not until the 1970's when psychologists were challenging this idea and found that academic achievement goes above and beyond IQ (Poropat, 2009). Henceforth, researchers identified that certain qualities and characteristics, such as grit, equate to greater academic achievement. Initially articulated by Angela Duckworth in 2007, the concept of grit has exploded in terms of attracting the attention of psychology researchers across the globe (Duckworth, Peterson, Matthews & Kelly, 2007; Duckworth, 2016). Defined as expressing a passion and perseverance for pursuing long-term goals, grit provides individuals with the ability to strive towards achieving their long-term goals while persisting in the face of adversity (Duckworth, 2016). Subsequently, researchers began to investigate the potential applications of grit, including the potential usefulness of grit in predicting academic outcomes such as engagement, motivation, performance and achievement. As a result, grit was exposed as a characteristic that is strongly associated with academic outcomes. For instance, students who express a passion towards their schoolwork and persevere with their studies despite of academic and social challenges are most likely to experience academic success. Regardless, grit has been heavily criticized by many researchers and inconsistencies among current research need to be addressed and explored.

### **Method**

This narrative literature review aims to provide up-to-date knowledge about the concept of grit and its importance in education. As there was no predetermined research question, no specific search strategy or criteria were applied. This narrative literature review was conducted over a period of several years and contributed towards the authors continued grit research in higher education. Over a period of time, literature was collected, including empirical and commentary papers, which played an important role in continuing education, feeding into the development of an academic tenacity measure and furthering grit research in higher education.

### **The Relationship between Grit and Academic Outcomes**

Since 2007, when Angela Duckworth pioneered research into the concept of grit, an abundance of researchers around the world have begun to explore its

potential within education. After decades of research, it became clear that there were many inconsistencies among findings. Indeed, some research highlighted the usefulness of measuring and monitoring grittiness in students when predicting academic outcomes (Duckworth et al., 2007; Datu, Yuen & Chen, 2018; Cross, 2013); while other studies have presented evidence to suggest that it is of no significant importance to students (Bazelais, Lemay & Doleck, 2016; Palisoc, Matsumoto, Ho, Perry, Tang & Ip, 2017; Dixson, Robertson & Worrell, 2017). Much research demands the crucial importance of grit in determining which students will excel in their academic studies and which students will struggle. Moreover, it has been documented that grittier students are increasingly likely to be engaged in their academic studies (Datu et al., 2018) and are subsequently increasingly likely to experience academic achievement as a result (Lee & Sohn, 2017; Cross, 2013). That is, students who reported achieving a “D” or “F” in their exams possessed a reduced level of grit (Pate, Payakachat, Harrell, Pate, Caldwell & Franks, 2017). Grittier students were also shown to spend more time studying (Cross, 2013). Therefore, students with high levels of grit are more likely to exert effort and time into their studies which will, in turn, have a great impact on their educational success. Also, gritty students are more likely to express a higher sense of self-efficacy. That is, their perseverance of efforts to continue in the pursuit of their academic goals resulted in a heightened belief in their own academic abilities – which too, will increase their chances of achievement (Oriol, Miranda, Oyanedel & Torres, 2017).

Nonetheless, research has surfaced that does not advocate the significance of grittiness in school students. Such that, grit was not found to be a significant predictor of academic achievement or course success; rather it was prior academic performance that best predicted academic achievement (Bazelais et al., 2016). These findings were supported by a group of researchers that also found no significant relationship between grit and academic success (Palisoc et al., 2017). This study concentrated on students in America and can therefore only be generalized to similar students from a similar institution. The research that denies the significant impact of grit on academic achievement imply that screening for grit is not sufficient in attaining useful information about student’s success.

### **Is Grit an Important Characteristic for All Students?**

Furthermore, research has posited that grit is not a culturally diverse trait and that it is not a beneficial trait for all students. Such that, grit was reported to be a poor predictor of academic achievement for African-American students (Dixson et al., 2017). Thus, programs and interventions that are designed to increase the grittiness of African-American students may not be useful in the attempt to raise their grades. However, it is difficult to generalize these findings as this study was conducted in one institution with a small sample of African-American students. Rather than cultivating grittiness, it could be worthwhile to ensure the students have a sense of belonging and reduced feelings of isolation. Perhaps there are more relevant and suitable psychological traits that should be of focus when uplifting the academic achievement of African-American students, but this needs to be further explored. While grit does not seem to be influential for African-American students, it has proved effective in Mexican-American adolescents. Indeed, academic achievement was positively predicted by grit in a sample of Mexican-American students (Piña-Watson, Lopez, Ojeda & Rodriguez, 2015). Evidently, culture is clearly an important factor to consider when determining what the most effective and suitable interventions are to enhance academic outcomes in students of varying backgrounds. Little research has directly investigated the usefulness of grit in different cultures. Furthermore, cross-cultural literature into grit has revealed that Asian and Asian-American cultures are more likely to exert effort into academic tasks and present task persistence compared to Americans (Hsin & Xie, 2013; Jose & Bellamy, 2012). In contradiction to this, one study found that students from New Zealand declared higher levels of the perseverance of effort component of grit than students from Thailand (Raphiphathana, Jose & Chobthamkit, 2018). However, Asian cultures are known to be influenced by social norms such as self-criticism (Eaton & Dembo, 1997) which could result in Thai students under-representing their hard work and determination and ultimately impact on their self-reported grit scores. As little research has been carried out that explores cultural differences in grittiness, it is difficult to draw solid conclusions. Therefore, more research needs to investigate the cultural sensitivity of grit as a construct. Perhaps an adapted version of the grit scale, or even a new scale should be developed – that considers cultural values and experiences. This would help multicultural schools to apply grit interventions

- if necessary and suitable - to their students, as well as aid schools all around the world.

### **The Importance of Grit on the Retention of School Students**

The retention and dropout rates of students have long been a concern for educating institutions and organizations all over the world (Brown, 2012). Consequently, early research into grit demonstrated that levels of grit could greatly predict the retention of military cadets in an extensive training program (Duckworth, 2007; Eskreis-Winkler, Shulman, Beal & Duckworth, 2014; Maddi, Matthews, Kelly, Villarreal & White, 2012). In addition, it has also been proposed that grit is a major contributing factor towards the effectiveness and retention of novice teachers in challenging education environments (Robertson-Kraft & Duckworth, 2014; Duckworth & Quinn, 2009). More recent research has also suggested that grit can greatly impact the retention of students in schools, colleges and universities (Bazelaïs et al 2016; Eskreis-Winkler et al., 2014). Moreover, research presented that the identification and awareness of long-term goals and the early identification of their course of interest are imperative to student retention (Hagedorn, Maxwell & Hampton, 2001). More specifically, primary and high school students with enhanced levels of grit were increasingly likely to graduate from high school and with higher rates of attendance (Saunders-Scott, Braley & Stennes-Spidahl, 2017). As grit predicts retention in school students above and beyond characteristics such as cognitive ability and grades, it could prove to be crucial in schools. For instance, student attendance and retention tend to be a common issue among high schools and measuring and monitoring grit will provide educators with the opportunity to direct at-risk students to support services. Therefore, interventions that are designed to increase students level of grit will ultimately improve attendance and retention.

### **Is Grit the Best Possible Predictor of Academic Outcomes?**

Evidence has consistently presented grit as being highly correlated with other achievement-related characteristics. Moreover, findings have surfaced that highlight the considerable overlap between grit and other constructs. Research has posited that the grit scale is fundamentally measuring the same trait as that of the Big Five's conscientiousness (Rimfeld, Kovas, Dale & Plomin, 2016). Moreover, the intercorrelation between overall grit and conscientious is significantly higher than what is typical between two constructs (Pace &

Brannick, 2010). Consequently, it has been argued that grit has succumb to the jangle fallacy, which states that grit is simply a reconstruction of the concept of conscientiousness (Crede et al., 2016). Research found that conscientiousness predicted about 6% of variance in GCSE grades, while grit added little or no variance in scores. This suggests that, ultimately, grit and Big Fives conscientiousness are fundamentally the same trait (Rimfeld et al., 2016). Other research supports this notion by revealing that after controlling for other Big Five traits, it was found that academic outcomes were significantly predicted by conscientiousness and emotion regulation ability; but not grit (Ivcevic & Brackett, 2014). These findings argue for the importance of traits such as conscientiousness and self-regulation in determining the educational success of students; rather than focusing on grit. Nonetheless, it has been identified that two constructs can be intensely correlated with each other, but still manifest different relations with a further variable (McCornack, 1956). For instance, while grit and conscientiousness are heavily related, they hold differing predictive abilities in an educational context. Indeed, some research has found that grit is a construct that is distinct from any other. Indeed, grit was a predictor of career preparation behavior even when personality traits such as conscientiousness were controlled for (Lee & Sohn, 2017). However, overall grit regularly lacks in terms of predicting academic achievement as compared to other constructs.

While overall grit only moderately correlates with academic performance; characteristics such as cognitive ability (Sackett et al., 2012), study habits and skills (Crede & Kuncel, 2008) and academic adjustment (Crede & Neihorster, 2012) have reported a correlation that is nearly twice as strong. Regardless, considering variables that have small and moderate effects on academic outcomes could have huge implications for educating institutions around the world. Furthermore, the ability to predict the academic outcomes of a student population could yield huge benefits. Even minor improvements on students' academic achievement and the school's ability to retain students could mean useful and positive effects – not only on the students but the institution itself. For instance, boosting the academic achievement of school students by only one or two percent could result in higher grades for hundreds, if not thousands, of students (Crede et al., 2016). Similarly, increasing the retention rate of students in any school could have great financial benefits for the school (Hunter & Hunter, 1984). Nevertheless, perseverance of efforts – as opposed



to overall grit - explained greater variance in academic achievement over and above conscientiousness and other seemingly related constructs (Pace & Brannick, 2010). It could be worthwhile to focus on the perseverance component of grit as opposed to overall grit, as research advocates the strong relation between perseverance and academic outcomes.

### **A Perseverance of Efforts and a Consistency in Interests**

The construct validity of grit is in question as current evidence does not suggest that grit is a higher-order construct that is comprised of two lower-order facets (Crede et al., 2016). Indeed, it has been revealed that the measure of grit is comprised of two separate facets, a perseverance of efforts and a consistency of interests. Furthermore, it has been exposed that these two components of grit have different predictive abilities in terms of academic outcomes in schools. For instance, one piece of research has reported that although gritty students attained higher academic grades, further breaking the construct down into two parts has better benefits. Such that, a consistency of interests accounted for 3% of variance in student's academic achievement; while the perseverance of efforts component explained 9% of variance in scores (Mason, 2018). This suggests that the perseverance of efforts component of grit is more appropriate when determining which students will achieve higher academic marks, while the consistency of interests component is less useful (Mason, 2018). Some research supports these findings and similarly presented that grit, as an overall construct, was only moderately associated with academic achievement; while the perseverance of efforts is a strong predictor and consistency of interests was not (Wolters & Hussain, 2015; Weisskirch, 2016). Moreover, grit's perseverance of efforts was seen to predict all indicators of self-regulated learning including self-efficacy and procrastination; while the consistency of interests facet did not (Wolters & Hussain, 2015). Again, grit did not predict achieved final grade, but perseverance of efforts predicted estimated grade (Weisskirch, 2016).

Evidently, combining the two sub-components of grit into one overall grit score seems to significantly reduce its ability to predict academic outcomes such as achievement and performance (Crede et al., 2016). It has consistently been demonstrated that the perseverance of efforts component of grit is a much better predictor of academic achievement than the consistency of interest component, as well as overall grit. Therefore, to optimize the potential of the grit scale in predicting academic achievement in school children,

educators should focus on the perseverance of efforts facet (Crede et al., 2016).

### **Harvesting a Successful Student Population**

Educating institutions and organisations all over the world have demonstrated the influential effects of selected interventions on academic performance and achievement. Whether enhancing the grit levels of students is possible has not yet been ascertained. However, interventions that concentrate on elevating an individual's resilience and social and personal skills have proved to be effective (Durlak et al., 2010; Paunesku et al., 2015). Thus, it seems possible to suggest that grit interventions could also have a positive effect on academic outcomes. For instance, some research has shown that outcomes related to educational success can be uplifted by cultivating traits that are seemingly related to grit. Such that, by helping students to feel that they “fit in” and that they belong to the student population and have value within the university, academic achievement was increased (Walton & Cohen, 2011). Additionally, offering students insight into how their course is relevant to their own lives, and aligning their interests with their own life increased academic achievement (Hulleman & Harackiewicz, 2009). Setting goals, identifying possible obstacles and challenges to their studies and helping students learn self-control strategies can increase academic performance, increase engagement and reduce absences (Oyserman, Bybee & Terry, 2006; Brigman & Webb, 2007). Finally, the use of a self-efficacy based intervention was investigated among university students and it was revealed that a 4-month individual cognitive-behavioural intervention program increased self-efficacy, engagement, performance and retention (Bresó, Schaufeli & Salanova, 2010) – which, in turn, would optimise academic outcomes. All of the above traits and characteristics have been closely associated with grittiness in students, and each have shown great success in uplifting the educational success of students.

It is therefore a worthwhile pursuit of educating institutions throughout the UK to consider interventions that could potentially enhance the perseverance of their students as previous research has revealed that interventions to increase similar traits are greatly effective. As a result, it is crucial to acknowledge the perseverance of the student population in order to monitor and regulate the achievement of students. Furthermore, these already existing interventions and programs can be improved upon and developed through the

inclusion of grit's perseverance of efforts component. By embedding this - as a factor that enhances academic outcomes such as achievement, engagement and motivation - students will benefit from a program that is designed to optimize their full potential and as a result, experience greater academic achievement and success.

### **Conclusion**

Grit is a strong predictor of academic outcomes for many students – but not all students. Consequently, the cultural-sensitivity of grit is in question and needs to be addressed. Regardless, research has posited that grit is a meaningful concept that has predictive abilities within education. In fact, the impact of grit on academic outcomes can be further enhanced by concentrating on the perseverance of efforts component of grit rather than overall grit. Grit has been heavily criticized for falling victim to the jangle fallacy, which states that grit is simply a reconstruction of the construct of conscientiousness. However, the perseverance component has reported to predict academic outcomes over and above those of conscientiousness. It can therefore be suggested that measuring and monitoring student's perseverance of efforts is a highly effective method in determining which students will succeed and which students can be directed to support. Furthermore, the cultivation of grittiness as a trait has not yet been proved possible; but enhancing seemingly-related traits has been beneficial to academic achievement. Thus, it can be concluded that enhancing grit – namely perseverance of efforts - can have a great impact on academic achievement, attendance and retention. As a result, the educational rewards for students would be substantial, as well as the financial benefits for schools and educating institutions. With this in mind, focusing on grittiness or perseverance of student populations alone would be simplistic and limits the potential of student's success. Such that, a recently developed model advocates that a successful or thriving student should express determination towards goals, be focused on their strengths, persist in the face of adversity, embrace challenges and notice the responsibility they hold over their own choices and actions (Kannangara, 2015). To optimize the full potential of students, the incorporation of grit alongside other achievement-related characteristics such as self-control, resilience and well-being is essential. So,

while grit is of incredible usefulness in an educational context, other traits should not be ignored.

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