The Dirt on Grit: Examining Relations with School Adjustment, School Performance, and Theories of Intelligence

Whitney Borton
Jackie Grelle
Hanover College

PSY 401: Advanced Research
Abstract
Recent studies have examined the predictive power of grit. Grit, or perseverance and passion for long-term goals, has been found to be predictive of success in adults and privileged children. A central goal of the current study was to determine if grit had the same predictive power among children with minority and low SES status. This study was also designed to examine if a child’s theory of intelligence predicted their grit score. The participants were 136 6th, 7th, and 8th grade students from an urban middle school. Of the 133 participants who indicated ethnicity, 92.5% identified themselves as an ethnicity other than Caucasian. These students filled out a survey measuring school adjustment, grit, theory of intelligence, self-reported school performance, and basic demographic information. We found that grit positively predicted three subscales of school adjustment as well as self-reported school performance. We also found that an incremental theory of intelligence positively predicted grit.
The Dirt on Grit: Examining Relations with School Adjustment, School Performance, and Theories of Intelligence

For a student, getting an education can be a daunting task. Not only must the student strive to achieve in the classroom, he or she must navigate other obstacles as well. Many times, peer relationship issues -- including peer pressure, bullying, and the maintenance of friendships – can be a stumbling block to academic achievement. Other difficulties that students face are behavior and disciplinary issues. On top of all this, students also sometimes have to deal with negative feelings about school and uncaring teachers. The students’ reactions to these elements all factor into their school adjustment (Corrigan, 2003).

It is believed that a student’s character plays an important role in his or her response to the stressors of the education system. Recognizing that there is more to success than IQ scores, several school systems have begun to implement programs designed to teach students the importance of traits such as zest, grit, self-control, social intelligence, gratitude, optimism, and curiosity (Tough, 2011). One of these traits that has recently gotten a lot of attention is grit. Grit, as defined by Duckworth, Peterson, Matthews, and Kelly (2007), is “perseverance and passion for long-term goals.” Individuals high in grit work steadily toward their goals, despite obstacles and challenges along the way. They also tend to overcome failure and boredom to complete a project (Duckworth et al., 2007).

Research on grit has shown that it can predict the completion of a difficult task. A study by Duckworth et al. (2007) looked at West Point students during their first year at the military school. The authors found that grit, self-control, and a “whole candidate score” (which included items such as SAT score, high school rank, extracurricular activities, and a physical exercise evaluation) were each related to the completion of summer training, academic GPA after one
year, and the students’ Military Performance Score. Importantly, the authors also found that grit predicted the completion of the summer training better than any other measured factor. Grit also appears to predict achievement among younger students, including advancing to higher rounds in the Scripps National Spelling Bee. Researchers used factors including grit, self-control, and verbal IQ to predict the success of students in the spelling bee. In this study, despite the relationship between grit and self-control, grit predicted performance while self-control did not. Verbal IQ was also a predictor of advancement to further rounds, although not enough participants completed the verbal IQ measure to accurately determine whether grit or verbal IQ was the stronger predictor (Duckworth et al., 2007).

Although associations between grit and successful outcomes have been supported by empirical data, this research has focused entirely on adults or privileged students with few to no risk factors for low school adjustment and performance (Duckworth et al., 2007). There have been no published empirical studies to our knowledge that have tested these associations among students who come from more diverse backgrounds. Examining grit’s effectiveness in predicting positive academic outcomes among low-income, minority youth represents the first major goal of the present study. Examining these linkages is important for two reasons. First, minority status and low socioeconomic status both are risk factors that contribute to the academic, personal, and social problems indicative of low school adjustment (Johnson, 2000). Understanding how grit might diminish these risk factors is critical. Second, despite the lack of previous research relating grit to higher achievement of at-risk students, several schools -- including the KIPP network of charter schools, which serves low-income students, mostly of minority status -- have implemented character development programs, which involve grit (Tough,
2011). The current study may provide some of the first empirical evidence that grit is related to positive outcomes among students at risk for low school adjustment.

The second major goal of the present study is to examine factors that might predict individual differences in grit. To date, Duckworth et al. (2007) have found several predictors. In one study, higher grit was associated with age such that older participants reported more grit than younger participants. The authors offer several explanations for this finding, including that, as individuals age and gain life experience, they learn that constantly changing ambitions is not the best path to success, and it sometimes takes time to achieve a goal. Individuals’ education also played into their level of grit. Participants with any type of college degree had a higher grit score than those without, and among college degree holders, individuals with an Associate’s degree had the greatest amount of grit. In addition, certain personality traits were linked to grit. There were significant positive correlations between grit and the Big Five traits of conscientiousness, agreeableness, extraversion, and openness to experience and a negative correlation between grit and neuroticism. Grit was particularly strongly correlated with conscientiousness, which includes characteristics such as competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Like grit, conscientiousness looks at an individual’s tendency to discipline themselves in order to achieve a goal. However, unlike grit, conscientiousness includes social variables, such as dutifulness, or obedience. Therefore, while conscientiousness and grit share some similar characteristics, conscientiousness is broader (Engler, 2009). Despite the similarities, Duckworth et al. (2007) found that grit explained differences in success better than conscientiousness.

A predictor of grit that has been suggested but not empirically tested is an individual’s theory of intelligence (Zhivotovskaya, 2009). Dweck and Leggett (1988) suggest that there are
two ways that children think about intelligence. One of these theories is the entity theory, the belief that intelligence is fixed, and there is nothing one can do to improve it. Students with this theory of intelligence consistently adopt performance goals, meaning that they are focused on outcomes (e.g., grades) rather than learning and are preoccupied with others’ perceptions of their abilities. These goals have been demonstrated to lead to the avoidance of challenges, low persistence, and other maladaptive behaviors. Children with an incremental theory believe that intelligence is flexible, and with a certain amount of effort, it can be changed. Research shows that incremental theories are linked with learning goals, which means that a child’s main concern is gaining knowledge. These goals have been associated with challenge seeking and high persistence (Dweck & Leggett, 1988). These students work harder to meet the goals they have set for themselves. Sriram (2011) found that this pattern held true in high-risk college students. The students with an incremental theory of intelligence exerted more effort academically than those with an entity theory of intelligence. Because students with an incremental theory of intelligence believe that their ability can be increased, they should be less likely to give up when challenged – in other words, these students should show more grit.

In sum, in the current study we were interested in two aspects of grit. First, we examined the relationship between grit and both school adjustment and school performance – as indicated by students’ self-reported grades. We were especially interested in examining these relationships among a sample of high-risk students. Second, we investigated whether or not a child’s theory of intelligence would be a predictor of that child’s grit. To accomplish this task, we administered surveys measuring school adjustment, school performance, grit, and theories of intelligence to middle school students at a magnet school in a public, urban school district. We hypothesized that there would be a positive correlation between grit and three facets of school adjustment
(relationships with other students, academic and disciplinary difficulties, and general aspects about school and teachers), due to the fact that higher grit scores are associated with completing difficult tasks (Corrigan, 2003; Duckworth et al, 2007). As a result of the perseverance of gritty individuals, we predicted that they would be more likely to work through social difficulties causing better peer relationships. Similarly, we expected that gritty students would have fewer behavioral issues because we think that, due to their ability to work through challenges, they will be less likely to have a strong, negative reaction in the face of adversity. For these reasons, we expected that gritty students will have better overall school adjustment. We also believed that there would be a positive correlation between grit and school performance. We believed that grittier students would be able to overcome academic obstacles and work through challenges to obtain higher grades, which are indicative of higher school performance (Dombusch, 1987). Finally, we believed that students with an incremental theory of intelligence would have higher grit scores than students with an entity theory of intelligence, as students with an incremental theory of intelligence tend to be more concerned with working to increase knowledge (Dweck & Leggett, 1988).

Method

Participants

The participants in this study were 136 students (87 girls, 48 boys) from an urban, magnet middle school in a Midwestern city. Of the 136 students, 50 were in the 6th grade, 39 were in the 7th grade, and 46 were in the 8th grade. Of 136 participants, 8% were Caucasian, 15% were Hispanic, 65% were African American, and 12% were multiracial. According to the
Indiana University School of Medicine (2011), 80% of the students are eligible for free or reduced lunch.

Procedure

Because we were administering surveys to children, we sent passive parent consent forms home with each child (see Appendix A). Parents were asked to sign the form only if they did not want their child to participate. Of the 137 students who were asked to take home a consent form, only 1 student was denied consent. The researchers administered the survey during school hours in January. Before beginning the survey, each student signed an assent form (see Appendix B). Each question in the survey was read aloud to the students, who marked their answers on the questionnaire.

Measures

In order to assess school adjustment, we used the School Adjustment – Child (Revised) questionnaire created by the Conduct Problems Prevention Research Group (Corrigan, 2003). The entire survey can be seen in Appendix C. This questionnaire consisted of three subscales that assessed students’ perception of their relationships with other students, academic and disciplinary difficulties, and general feelings about school and their teachers. The relationships with other students subscale contained six items that examined how students get along with their peers (e.g., “I am having a hard time making friends at school this year”). The academic and disciplinary difficulties subscale contained five items that assessed the degree to which the child reported difficulties in school regarding schoolwork and behavioral problems (e.g., “I have had an easy time handling my schoolwork this year” and “I have gotten into some trouble this year by breaking school rules”). The general aspects about school and teacher subscale had nine
items that looked at how students viewed their general experience at school (e.g., “I’m having a good year at school”). Each question was answered on a five-point scale ranging from not at all true (one) to really true (five). To ensure that higher scores meant better school adjustment, some items were reverse-scored.

We used the Grit Scale to measure how gritty the students were (Duckworth, Peterson, Matthews, and Kelley, 2007). This survey can be found in Appendix C. The scale contained two subscales measuring students’ consistency of interests and perseverance of effort. The consistency of interests subscale contained six statements used to measure the steadiness of the students’ goals, ideas, and interest (e.g., I become interested in new pursuits every few months”). The perseverance of effort subscale contained six items measuring the students’ determination in finishing a project or goal (e.g. “I finish whatever I begin”). Each question was answered on a five-point scale ranging from not at all true (one) to really true (five). To ensure that higher scores meant better higher grit, some items were reverse-scored.

To measure the students’ theory of intelligence, we used the Theory of Intelligence Scale (Dweck, Chiu, & Hong, 1995). This survey can also be found in Appendix C. This scale consisted of three questions regarding students’ opinions of the malleability of intelligence (e.g. “Your intelligence is something about you that you can’t change very much”). These questions were answered on a six-point scale ranging from strongly agree to strongly disagree. The scores were averaged so that higher scores indicated greater agreement with the incremental theory of intelligence.

At the end of the survey, we asked the students to provide basic demographic information and to answer a question regarding their school performance. These questions can be found in
Appendix C. The demographic questions included age, gender, grade, and ethnicity. The school performance question asked students to report their typical letter grades (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987). The children’s answers were then converted to numbers on a 4 point scale. For example, mostly A’s was equal to 4, and about half A’s and half B’s was equal to 3.5. The lowest score possible was 0.5, which signified mostly below D’s. We chose to use self-reported grades because self-reported grades have been found to correlate fairly highly with actual grades ($r = .76$), with students with below average grades only slightly exaggerating their performance (Dornbusch et al., 1987). Second, because it was necessary to use passive parent consent, we were unable to gain access to the students’ actual grades.

Results

Cronbach’s alphas, means, and standard deviations for all study variables are presented in Table 1. As seen in this table, all of the measures used had Cronbach’s alphas above .69. Correlations between all study variables are presented in Table 2.

To analyze the relationship between grit, school adjustment, and school performance, we did four regression analyses. The outcome variables were the three subcategories of school adjustment and self-reported grades. The central predictor in all four analyses was grit scores, but we also included gender, ethnicity, and grade level to determine if any of these variables interacted with grit to predict school adjustment or school performance. Consistent with our hypotheses, we found that grit positively predicted all three measures of school adjustment as well as school performance. Specifically, students who reported high levels of grit also reported more positive relationships with other students, $\beta = .22, t(128) = 2.56, p = .01$, fewer academic and disciplinary difficulties, $\beta = .44, t(128) = 5.52, p < .001$, and more positive attitudes about
their school and teacher, $\beta = .44$, $t(128) = 5.66$, $p < .001$. The relationships between grit and these three factors can be seen is Figures 1, 2, and 3. We also found that grit positively predicted students’ self-reported grades, $\beta = .30$, $t(127) = 3.56$, $p = .001$. This relationship can be seen in Figure 4. Analyses did not yield any significant interactions between grit and gender, ethnicity, or grade level in predicting school adjustment or school performance, all $ps > .05$.

To examine the relationship between theories of intelligence and grit, we did another regression analysis. The outcome variable was grit, and the central predictor was the theory of intelligence. We also included gender, ethnicity, and grade-level to investigate possible interactions. We found that incremental theories of intelligence were predictive of grit scores, $\beta = .24$, $t(128) = 2.80$, $p = .006$. The relationship between theory of intelligence and grit can be seen in Figure 5. Analyses did not yield any significant interactions between theories of intelligence and gender, ethnicity, or grade level in predicting grit.

**Discussion**

Our hypotheses that grit would positively predict both an individual’s school adjustment (relationships with other students, academic and disciplinary difficulties, and general aspects about school and teachers) and school performance were supported by our results. In our study, grit was a significant predictor of each of these measures. This finding provides evidence that those who are willing to persevere through challenges in order to achieve a goal are more likely to be better adapted to different aspects of school in addition to being more likely to perform at a higher level.

Our hypothesis that students with incremental theories of intelligence would have higher grit scores than students with entity theories of intelligence was also supported by our results.
Incremental theories of intelligence significantly predicted higher grit scores. This finding supports the notion that students who believe that they can increase their intelligence will have more of an incentive to work through challenges.

As a result of our study, we believe that if schools were to implement programs that taught grit, it would give students with disadvantages such as low IQ, minority status, or low SES status a greater chance to succeed. Teaching grit could increase both school adjustment and school performance. Although there are currently no published interventions to increase grit, grit is currently being taught through character classes in some schools that serve this disadvantaged population. Teachers at these schools give students a character report card where students are graded on character traits much like they are with class work. Then, the teachers discuss with parents strategies to improve upon their student’s weaknesses according to this report card. Through this method, teachers are able to point out areas of character that need improvement. Students respond because they are encouraged to make the necessary changes to receive a better grade on the next report card (Tough, 2011). Because grit predicts better adjustment and performance in school, this method should be encouraged in these schools and employed in others.

Because our data suggested a relationship between grit and theory of intelligence, it may be possible to increase a child’s grit by teaching an incremental theory of intelligence. Burke and Williams (2012) found that a thinking skills intervention influenced children’s views about intelligence. Specifically, the researchers found that children who were taught certain thinking skills, such as comparing and contrasting, generating ideas, and decision making, held more incremental theories of intelligence. These children were not just adding facts to their existing knowledge; they were learning new ways to interpret these facts. To some extent, they were
learning how to learn. If students are taught new ways to analyze and solve problems, they may start to believe that they can actually become more intelligent.

One limitation to our study is that it was a concurrent design rather than a longitudinal design. As such, we can tell that grit and school adjustment are correlated at a single point in time, but we are unable to say that grit predicts changes in school adjustment over time. Another limitation is that it was a correlational design rather than an experimental design. Being a correlational design, we can only say that grit and school adjustment are correlated, but we cannot determine the direction of causality. It could be that students with higher school adjustment are already doing well, so challenges do not bother them as much. If an experimental design were used, we could make cause-and-effect conclusions. By manipulating grit somehow, we would be able to determine whether or not increasing grit caused an increase in school adjustment. One way to do this might be giving students more long-term projects. From the researchers’ own experiences, students rarely participate in projects of this nature. Without these long-term commitments to a project, students rarely have a chance to practice being gritty. An experimental design, through random assignment, would also eliminate any confounding variables that might be present among students, such as support received from home. Future studies could try a longitudinal or an experimental design.

Duckworth et al. (2007) suggests that there are many words to describe effort a person puts into a task. A “responsible” student tends to turn in assignments on time while a “lazy” student might not get his or her work done at all. However, there are not many words to capture the persistence of this effort over a long period of time. A student may put a lot of effort into a particular assignment, but this does indicate the ability to focus on something for an extended amount of time. The term “grit” has the unique ability to capture both the amount of effort and
the endurance of it. It is not only important to acknowledge a difference between short-term and long-term effort, but our research suggests that the development of grit in children should be encouraged. By doing so, students, whether they are disadvantaged or not, will have a greater chance to succeed.
References


Table 1. Cronbach’s alphas, means, and standard deviations for study variables.

<table>
<thead>
<tr>
<th>Study Variable</th>
<th>Cronbach’s alpha</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Adjustment: Relationships with other students</td>
<td>0.76</td>
<td>4.26</td>
<td>.74</td>
</tr>
<tr>
<td>School Adjustment: Academic and Disciplinary Difficulties</td>
<td>0.69</td>
<td>3.61</td>
<td>.68</td>
</tr>
<tr>
<td>School Adjustment: General Aspects about School and Teacher</td>
<td>0.76</td>
<td>3.51</td>
<td>.80</td>
</tr>
<tr>
<td>Grit</td>
<td>0.69</td>
<td>3.35</td>
<td>.55</td>
</tr>
<tr>
<td>Incremental Theory of Intelligence</td>
<td>0.81</td>
<td>4.44</td>
<td>1.41</td>
</tr>
<tr>
<td>Grades</td>
<td>n/a</td>
<td>2.93</td>
<td>.67</td>
</tr>
<tr>
<td>Study Variable</td>
<td>School Adjustment: Relationships with other students</td>
<td>School Adjustment: Academic and Disciplinary Difficulties</td>
<td>School Adjustment: General Aspects about School and Teacher</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>.270*</td>
<td>.345*</td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.270*</td>
<td>--</td>
<td>.413*</td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic and</td>
<td>.345*</td>
<td>.413*</td>
<td>--</td>
</tr>
<tr>
<td>Disciplinary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.229*</td>
<td>.439*</td>
<td>.435*</td>
</tr>
<tr>
<td>Grit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental Theory of Intelligence</td>
<td>.084</td>
<td>.134</td>
<td>.012</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Grades</td>
<td>-.004</td>
<td>.321*</td>
<td>-.045</td>
</tr>
</tbody>
</table>

*Correlation is significant at the $p < .01$ level.

*Table 2. Correlations between all study variables.*
Figure 1. The relationship between grit and school adjustment: relationships with other students.
Figure 2. The relationship between grit and school adjustment: academic and disciplinary difficulties.
Figure 3. The relationship between grit and school adjustment: general aspects about school and teachers.
Figure 4. The relationship between grit and school performance.
Figure 5. The relationship between grit and incremental theories of intelligence.
Appendix A

Dear Parent or Guardian,

We, Whitney Borton and Jackie Grelle, are senior psychology majors at Hanover College. We are in the process of completing our senior thesis project and are asking for your child’s assistance. In particular, we would like for your child to participate in a research project looking at a character trait called grit (defined as “perseverance and passion for long term goals”) and its relation to school adjustment, school performance, and attitudes toward learning. This survey will be administered in January 2012 during one of your child’s classes.

There will be four sections to the survey. In the first section, your child will answer questions regarding their feelings about peers, coursework, and teachers. In the second section, your child will report on their persistence and long-term goals. In the third section, your child will answer questions about how much they can change their own intelligence. In the final section, your child will report on their typical grades as well as their age, gender, grade in school, and ethnicity. The survey will take no longer than 15 minutes to complete.

Participation in this survey is completely voluntary. If your child does not want to answer any or all of the questions, they will not have to do so.

There are no known risks involved in being in this study, beyond those of everyday life. Your child’s responses will be anonymous: that is, your child’s name will never be associated with the responses that they give.

If you have questions about the study, feel free to contact one of the researchers:

Whitney Borton (bortonw12@hanover.edu)
Jackie Grelle (grellej12@hanover.edu).

If you would like to speak with our research advisor, please contact Dr. Ellen Altermatt (altermattel@hanover.edu, 812.866.7317) or the administrative supervisor of the Institutional Review Board, Dr. Bill Altermatt (altermattw@hanover.edu, 812.866.7318).

Please return this form only if you DO NOT want your child to fill out our survey.

I do not want my child to participate in the study.

Child’s Name: _____________________________  Grade: ___________

Parent or Guardian’s Signature: ________________________________  Date: ______________
Appendix B

We are doing a study to look at how students’ personality relates to how they do in school. We would like for you to help us, because you are all students.

If you would like to be in our study, you will fill out a short survey. The first part of the survey asks about how you feel about school, friends, school work, and teachers. The second part of the survey asks questions about your goals. The next part will examine how you think about intelligence. Finally, the last section asks you a few basic questions about yourself. The survey won’t take more than 15 minutes to complete.

This is not a test, and we won’t tell anyone your answers on the survey. You will not be asked to write your name on the survey. There are no right or wrong answers.

You can ask questions any time you want, and we will do our best to answer them. You don’t have to answer any questions you don’t want to, and you can stop taking the survey at any time.

I want to be in this study, and I know I can change my mind any time I want.

Name: ________________________________

Signature: ____________________________  Date: ____________________
Appendix C

School Adjustment

SAMPLE: I like to listen to music while I do homework.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

1. School has been especially difficult for me this year.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

2. I have had an easy time handling my schoolwork this year.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

3. My school friends and I get along well this year.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

4. Other kids have tried to hit me or make fun of me this year.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

5. I have stayed out of trouble with teachers this year.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

6. I am having a good year at school.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

7. Schoolwork is really hard this year.

Not at All True    A Little True    Somewhat True    Pretty True    Really True
8. I am having a hard time making friends at school this year.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

9. Other kids have tried to make me do things that I should not do this year (like breaking rules).

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

10. I have gotten into some trouble this year by breaking school rules.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

11. I like school this year.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

12. I am not doing as well as I should on my schoolwork this year.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

13. I do not have many friends at my school this year.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

14. Other kids bother me this year.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

15. Teachers have been upset with me because I broke some rules this year.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>

16. My school is a place where people treat me well.

<table>
<thead>
<tr>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★</td>
<td>★★★</td>
</tr>
</tbody>
</table>
17. Most teachers at my school do not care about kids, especially me.

Not at All True  A Little True  Somewhat True  Pretty True  Really True

18. My school is a place where kids will succeed.

Not at All True  A Little True  Somewhat True  Pretty True  Really True

19. Bad things happen to me at school.

Not at All True  A Little True  Somewhat True  Pretty True  Really True

20. School is fun.

Not at All True  A Little True  Somewhat True  Pretty True  Really True
Grit

SAMPLE: I like to read mystery books.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

1. New ideas and new projects sometimes distract me from previous ones.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

2. I am diligent.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

3. I have overcome setbacks to conquer an important challenge.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

4. I have difficulty maintaining my focus on projects that take more than a few months to complete.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

5. I become interested in new pursuits every few months.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

6. I finish whatever I begin.

Not at All True    A Little True    Somewhat True    Pretty True    Really True

7. I have been obsessed with a certain idea or project for a short time but later lose interest.

Not at All True    A Little True    Somewhat True    Pretty True    Really True
8. I am a hard worker.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★★</td>
<td>★★★★★</td>
</tr>
</tbody>
</table>

9. Setbacks don’t discourage me.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★★</td>
<td>★★★★★</td>
</tr>
</tbody>
</table>

10. My interests change from year to year.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★★</td>
<td>★★★★★</td>
</tr>
</tbody>
</table>

11. I often set a goal but later choose to pursue a different one.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★★</td>
<td>★★★★★</td>
</tr>
</tbody>
</table>

12. I have achieved a goal that took years of work.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Not at All True</th>
<th>A Little True</th>
<th>Somewhat True</th>
<th>Pretty True</th>
<th>Really True</th>
</tr>
</thead>
<tbody>
<tr>
<td>★</td>
<td>★</td>
<td>★★</td>
<td>★★★</td>
<td>★★★★</td>
<td>★★★★★</td>
</tr>
</tbody>
</table>
Theories of Intelligence

SAMPLE: Broccoli tastes good.

1. You have a certain amount of intelligence and you really can’t do much to change it.

2. You can learn new things, but you can’t really change your basic intelligence.

3. Your intelligence is something about you that you can’t change very much.
Demographics

1. Age ______________

2. Gender (Please circle one)
   
   Male   Female

3. Grade (Please circle one)
   
   6th    7th    8th

4. Ethnicity (Please circle one)
   
   Caucasian   African American   Hispanic   Other ______________

5. Which best describes your grades?
   
   □ Mostly A’s
   □ About half A’s and half B’s
   □ Mostly B’s
   □ About half B’s and half C’s
☐ Mostly C’s

☐ About half C’s and half D’s

☐ Mostly D’s

☐ Mostly below D’s