

Big five personality inventory with academic success



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Many validation studies have been performed to test the validity of the Big 5 personality inventory with academic success and performance as well as which personality is predictor of good grades. In particular studies have found that conscientiousness and openness especially correlated with academic performance. This essay will examine and evaluate the usefulness of the big 5 personality inventory and will be discussing its validity and implications. Conscientiousness personality traits lead students to be organised, disciplined and motivated to succeed. This in turn has a positive effect on their ability to study and on their effort and commitment they put into their work (Maltby et al 2007 p. 387) a trait referring to individuals' level of dutifulness, achievement striving and organization. Bratko, Chamorro-Premuzic & Saks (2006) also have documented and argued that the Importance of Conscientiousness in educational settings is self-explanatory: Being organized, disciplined and motivated to succeed has no doubt beneficial effects on students' study habits, affecting their level of effort and commitment with the course (Bratko, Chamorro-Premuzic & Saks 2006). Research indicates that the Big Five Traits (Neuroticism, Extraversion, Openness, Conscientiousness and Agreeableness) reflect core aspects of human's personality and have strong influences on behaviour (Costa & McCrae 1992 in Komarraju & Karau 2005). Conscientiousness has consistently and positively predicted examination performance as well as grade point average and academic success. Openness is positively related to final grades with high scorers using learning strategies that emphasize critical thinking. Neuroticism is related to reduced- academic performance. Agreeableness is positively associated with grades. Entwistle and Entwistle (1970 in *ibid*) found that stable introverts using good study methods <https://assignbuster.com/big-five-personality-inventory-with-academic-success/>

achieved higher performance than extroverts or emotionally unstable students, whereas Furnham and Medhurst (1995 in *ibid*) showed a significant positive correlation between sociability and performance in a seminar class (Komarraju & Karau 2005). Paunonen & Nicol (2001 in Durham 2004) found the Big Five traits among the significant predictors of grade point average (GPA) in a population of college students. Similarly, Lounsbury, Loveland, Sundstorm & Gibson (2003 in Durham 2004) found that Big Five traits significantly predicted cumulative GPA among adolescents in high school and middle school. Lounsbury et al (2003 in Durham 2004) found that the Big Five constructs of conscientiousness, openness and agreeableness were positively related to course grades and grade point average. Durham (2004) therefore argues that these results suggest that students who are more open to new learning, discovery and exploration, higher on self control. More orderly, higher of achievement striving and lower on anxiety, impulsivity, hostility, and vulnerability will have higher GPA. Durham (2004) furthers his argument by saying that “ students who sit in the front of the class (conscientiousness) prepare their assignments (conscientiousness), follow the directions given (agreeableness) and ask questions (openness) and usually better students; high levels of openness, conscientiousness and agreeableness and low levels of neuroticism are an ideal combination” (Durham, 2004)

Hypothesis

The hypothesis of this literature review is that Big 5 personality traits of Openness, contentiousness, extraversion, agreeableness and neuroticism are significantly related to academic performance and predicting grades.

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There have been many studies documented which have investigated the relationship of the five personality traits namely, openness, conscientiousness, extraversion, agreeableness and neuroticism with academic achievement. For example, in studying the relationship between the big five personality traits and academic performance, Komarraju & Karau (2005) developed the following specific hypotheses. First, as Neuroticism is characterized by emotional distress and poor impulse control (Komarraju & Karau 2005), Komarraju & Karau (2005) expected students high in Neuroticism to have difficulty in coping with academic challenges and dealing with setbacks. There, Komarraju & Karau (2005) predicted that Neuroticism would be positively related with the academic motivation factors of debilitating anxiety, withdrawing, disliking school, and discouraged about school. Extraverted individuals are warm, socially-oriented, and assertive (Komarraju & Karau 2005). Agreeable individuals tend to be trusting and cooperative, and may be receptive to collaborative learning (Komarraju & Karau 2005). Therefore, Komarraju & Karau (2005) predicted that Extraversion and Agreeableness would both be positively related with approval and affiliating motives. Komarraju & Karau (2005) argue that because assertiveness is an element of Extraversion they predicted that Extraversion would be related with influencing motives. Individuals high in Openness seek novel experiences, are intellectually curious, and may be more receptive to novel educational experiences Komarraju & Karau (2005). The researchers therefore predicted that Openness would be positively related with thinking and desire for self improvement. Finally, conscientious individuals are generally organized, disciplined, and hard working, and have been found to achieve greater academic success (Komarraju & Karau 2005). Therefore, the <https://assignbuster.com/big-five-personality-inventory-with-academic-success/>

researchers predicted that Conscientiousness would be positively related with persisting, achieving, and desire for self-improvement. Komarraju & Karau (2005) found that avoidance was positively related with both Neuroticism and Extraversion, and was negatively related with both Conscientiousness and Openness, with Neuroticism explaining the most variance. Komarraju & Karau (2005) argue that “ these results may suggest that neurotic students tend to avoid many aspects of academic life and view education as a means to an end rather than an intrinsically fulfilling enterprise”. Similarly, Komarraju & Karau (2005) argue that extraverts may be more concerned with social aspects of college life. In contrast, conscientious and open students are less likely to be avoidant in their motivation. Komarraju & Karau (2005) found that students with higher levels of Openness and Extraversion were more engaged in learning, with Openness explaining the most variance. Komarraju & Karau (2005) further their argument by saying “ this suggests that students who are sociable and enjoy exposure to new ideas are likely to be engaged in the educational experience and may benefit from discussion and interactive learning”. Finally, Komarraju & Karau (2005) found that students who were more conscientious, neurotic, and open to experience scored higher on achievement with Conscientiousness explaining the most variance. Komarraju & Karau (2005) argue that these results suggest that students who are responsible and intellectually curious may be more achievement oriented, hard-working, and competitive. Komarraju & Karau (2005) noted that neuroticism was related with achievement, and this relation between Neuroticism and achievement may be because of “ compulsive preparation” Komarraju & Karau (2005).

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Correlation of subjective responses and objective assessment and confirmation of the validity of conscientiousness trait with relation to academic achievement

Discussion section

There may be narrower personality traits that could add to the incremental validity of the Big 5 inventory with relation to academic success and predicting grades for example. Lounsbury, Sundstorm, Loveland & Gibson (2003) investigated and examined the narrow traits in addition to the Big Five in predicting academic success among adolescents. Lounsbury et al (2003) investigated individual grade point average

(GPA) and scores from the Adolescent Personal Style Inventory among 220 seventh-graders and 290 tenth-graders, including agreeableness, conscientiousness, emotional stability, extraversion, and openness, plus four narrow traits, aggression, optimism, tough-mindedness, and work drive. Lounsbury et al (2003) found that all traits correlated significantly ($P < .01$) with GPA among both 7th- and 10th-graders. Lounsbury et al (2003) found that the Big Five traits together accounted for 15% and 10% of variance in GPA among 7th and 10th graders, respectively. Consistent with prior research, narrow traits accounted for 8% and 12% of the variance in GPA among the 7th and 10th graders beyond that predicted by the Big Five. The narrow traits aggression and work drive together accounted for 18% and 21% of the variance in GPA in 7th and 10th graders, respectively, to which the Big Five added 1% in the 7th graders and no significant increment among 10th graders.

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The validity and reliability of the NEO PIR in terms applicability: discussing the issue for the professional development of the teacher in schools and also for the positive feedback and educational development of the child, analysing the practicality of the learning style

Personality tests that are to predict academic achievement and success are not only for the professional development of the teacher, lecturer but also for the personal and educational development of the student or pupil at school or university. These personality tests therefore they need to be such that the teacher and student can interact with them for the teacher to perhaps to alter his or her teaching style and approach and more so for the student to be aware of his or her subjective and predominate learning style and how these are contributing to many cognitive aspects such as information processing, retention of information, memory or indeed knowledge acquisition. Research has testified that from the NEO PIR the trait that is predominately applicable is conscientiousness as we have seen, although the other four have also contributory effects for academic achievement, however the practicality of using it may still be questionable because if the trait of conscientiousness is the predictor of academic success then will it be easy for the student to develop these traits within him. How easy will it be for the teachers to aid and support the students in developing a conscientiousness personality is questionable. An easier way for both the student to understand for his or her own academic development and also for the teacher to support the student may be through the education of personal learning styles. Learning styles in particular is a model which pinpoints and highlights the cognitive abilities necessary for learning, which is a cognitive

process. The tools of learning style can enable the student to completely understand which styles may aid him or her and according to that style of learning, the teacher will be able to help and support the student developing a interactional system between the teacher and the student in an academic environment and discussing cognitive variables in relation to learning styles rather than broad personality traits which maybe far difficult to generalize towards the students learning process. Therefore learning style approach and assessment may not only be a cognitive and academic achievement predictor most importantly on the basis of individual differences but this will enable both the teacher and student to interact with them for the professional development of the teacher and for the academic and cognitive development of learner. A well known and documented approach to learning is presented by Kolb (1984 in Maltby 2007) in which he discusses the learning processes such as concrete experience, reflective observation, abstract conceptualization and active experimentation.

Other than the Big Five traits of conscientiousness, openness, agreeableness, extraversion and neuroticism, there are other traits or, motivation related traits as argued by Lounsbury (2003 in Durham 2004) which can add incremental and predictive validity to the NEO personality inventory in the domains of education success. For example, Lounsbury (2003) found that traits such as aggression, optimism tough mindedness and work drive can not only significantly correlate with grade point average but moreover “ add incremental validity to the existing NEO Five.” (Durham, 2004)

In line with Lounsbury (2003) Durham (2004) is also for the inclusion of the factors of aggression, optimism and tough mindedness. Durham (2004) argues that these traits of optimism, aggression and tough mindedness could be better predictors of academic performance and grade point average. Optimism, Durham (2004) argues is a tendency to maintain positive expectations about the future and Prola and Stern (1984 in Durham 2004) found positive correlations between optimism and grade point average. Optimism is an important assessment because it influences task-orientated behaviours (Durham 2004).

With regards to conscientiousness there will a consensus that it is correlated with academic achievement and performance through Meta analysis and self and other assessed approaches, however with regards to openness, although it has been acknowledged that it refers to academic intelligence, agreeableness, neuroticism, extraversion there is far lesser consensus how it refers and relates to academic achievement. For example Bratko, Chamorro-Premuzic & Saks (2006) have found that some argue that high neuroticism is detrimental for academic performance on school examinations but others suggests that higher levels of worry and perfectionism that characterize neurotic individuals may lead to better and higher performance. The trait of extraversion is also debated with academic achievement as some have argued of negative correlation and other have argued of positive correlation (Bratko et al 2006). Bratko et al (2006) also argue that alternative explanations indicate in the direction of developmental changes in the ability-extraversion correlation, such that brighter individuals become more introverted over time.

Some traits of the BIG 5 such as extraversion, conscientiousness and openness which all relate to motivation, striving and academic self fulfilment have been correlated with certain measures but have not been correlated with other measures such as the IQ tests. Psychologists have argued that the NEO Big 5 personality inventory predominately reflects a person's motivation and in particular motivation to self actualise in academic domains but does not take into consideration specific academic cognitive abilities which is predominately related and correlated with academic success and achievement. For example, Ones Schmidt & Viswesvaran 1993 (in Gagner & Pere 2001) have established no correlation between motivational factors and IQ & ability for academic progress. The psychologists argue that the tests such as the NEO PIR which may measure or take into consideration the motivation factor of conscientiousness and disregard cognitive abilities may not be highly valid in predicting achievement in comparison to higher validity and reliability of cognitive and IQ measures of predicting achievement, and the results obtained from an IQ test maybe useful for the professional development of the teacher with relation developing cognitive constructs of the child such as numeracy but also important for the development of the learner to know which areas in academia need to be concentrated upon. Gagner & Pere (2001) assessed the unique contribution of motivation to academic achievement. Over 200 high school students completed two IQ tests and three motivation and conscientiousness related measures twice during a semester. The results revealed that IQ and motivation were not correlated; cognitive abilities were by far the best predictor of school achievement. The psychologists argue that " these results question the belief of most educators about the crucial role of motivation as a

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determinant of scholastic achievement” these findings may invite the educators to not only consider motivation and conscientiousness as an important factor of achievement but to also concentrate on the cognitive abilities of the learner and ways to enhance them perhaps by working with the learning style of the learner considering the VAK (the visual, auditory or kinaesthetic individual differences) and modifying educational resources to support all types of learners and by working within the unique learning style of the individual with the belief that by working within the cognitive framework of the individual this will improve the cognitive performance and abilities of the learner such as problem solving, information processing, logical and rational thinking which will enhance the IQ and therefore academic achievement. Komarraju & Karau (2005) also acknowledge that students who are taught in a way that matches their learning style and ability are likely to achieve at higher levels. In light of the findings that there are less or no correlations of motivational factors such as conscientiousness with academic progress Bratko et al (2006) argue that “ empirically, evidence is mixed with some studies indicating personality has incremental validity over ability in the prediction of academic progress but others showing it doesn’t” (Bratko et al 2006). Bratko et al (2006) also argue that personality inventories such as the NEO PIR use self ratings of traits. Whilst Bratko et al (2006) acknowledge and argue that most investigators have used self report personality inventories and academic progress as they are convenient and because they believe that people have a unique perspective of their own experiences and history of behaviour, however Bratko et al (2006) also maintain that self ratings can be inaccurate because people may present themselves in an unrealistically positive light or their position of an ‘

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actor' can bias their perception of their own consistent personality attributes other-rating data can be less susceptible to distortions caused by defensiveness and self-presentational strategies (Bratko et al 2006). As studies have shown that peer-ratings consistently show a substantial correlation with self rating data and their validity widely demonstrated (Bratko et al 2006), Bratko et al (2006) suggest that adding to peer-rating to self-rating can enhance the incremental validity of personality tests such as the NEO PIR further. Although some studies did not find a link between motivation and academic achievement some other studies did. For example Komarraju & Karau (2005) investigated the relationship between personality characteristics and academic motivation. Their research examined the link between the Big Five personality traits and individual differences in college student's academic motivation. Students were asked to complete the NEO Five Factor Inventory and the Academic Motivations inventory and the facets of both the academic motivations inventory and NEO big Five were correlated together which supports their academic motivation hypothesis and its importance with success (Komarraju & Karau 2005). This study not only indicated the importance of administering tests to examine academic motivations with relation to individual differences but also confirms the validity and reliability of the NEO Big Five.

Personality or intelligence tests: independence of personality tests from intelligence: understanding the correlations of ability & intelligence tests and personality tests

Although studies have testified to the theory that measure of intelligence is valid and reliable for prediction of academic achievement some other studies <https://assignbuster.com/big-five-personality-inventory-with-academic-success/>

have discovered the importance of personality tests independently from intelligence which adds to the validity and reliability of personality testing in relation to academic performance and achievement. For example Bratko et al (2006) analysed the relationship of self and other-assessed personality with school grades in 255 pupils. Conscientiousness was the strongest personality correlate of school grades for both self and peer-ratings. That is, the scores of self-rating and peer-rating for conscientiousness significantly correlated. It was interesting to discover that grades were negatively correlated with self assessed extraversion and emotional stability (neuroticism) and positively correlated with peer-ratings of autonomy. When cognitive ability was partialled out correlations between personality and school grades showed little change indicating that the effects of personality on academic performance was independent of intelligence. The investigators not only argue of the independence of personality to academic performance and therefore stressing its validity in domains of education but also argue that self ratings had only marginal incremental validity (3%) over peer-ratings in predicting school grades while incremental validity of peer-over self -rating was larger (9%). Therefore this study supports the notion that testing personality in domains of education and academic performance is indeed valid. In this study the self-rated assessment or rating compared to the peer-rated (observer) assessment and rating is thought provoking because there was a difference in both ratings and their correlations significances. In the study of Bratko et al (2006) noted that the relationship between. In the study Bratko et al (2006) found that the predictive power of conscientiousness increased substantially when assessed by peer ratings as opposed to self-rating and there Bratko et (2006) argue that this suggests <https://assignbuster.com/big-five-personality-inventory-with-academic-success/>

that socially desirable responding may undermine that validity of self rated conscientiousness. Their results also indicated that “ combining measures of conscientiousness with intelligence are likely to be advantageous when it comes to predicting academic progress” (Bratko et al 2006). Bratko et al also argue that students may also want to look conscientious and autonomous in the “ eyes” of personality tests and therefore Bratko et al (2006) recommend that investigators include social desirability alongside both peer and self-ratings of personality to explore determinants of success and failure (Bratko et al 2006). Another way to avoid distortion and therefore validity in applied educational settings is for participants to respond anonymously possibly by mail as argued by Schinka (1997). Schinka (1997) suggests that these techniques of anonymity will minimize conscious motivation to distort personality profiles.

Psychologists studied how the Big Five personality traits may relate to individual differences in academic motivation. Alongside the achievement and academic success, motivation is very important to reach academic success and this area also needs to be considered for students. Komarraju & Karau (2005) also reflect upon an interesting meta-analysis in support of the personality tests such as the NEO PIR for academic performance and success as well as for convergent and predictive validity. For example, Komarraju & Karau (2005) argue that Ackerman and Heggestad (1997 in Komarraju & Karau 2005) found some modest relationships between personality and intellectual ability measures. In their study Openness was positively related to intellectual ability, whereas Neuroticism was negatively related to intellectual ability. Komarraju & Karau (2005) argue that these investigators

concluded that intellectual abilities, interests and personality are interrelated and that intellectual ability level and personality traits determine success.

The validity of personality tests and their application in academic prediction of ethnic and culturally different students

Durham (2004) acknowledges that studies have established differences in the scores between African American Students and White students on personality measures, as well as in the educational domains including. Ethnic students bring their values and in particular ethnic values to the learning environment. Therefore, when assessing personality and correlating with grade point average it is important to consider and acknowledge different cultural and racial differences which may affect an individual's learning style and development (Durham 2004). Therefore, generalising the significances of the results on populations this issue also needs to be considered thoroughly. Durham (2004) argues " if there are differences in the personality traits scores of black and white students the applicability of these assessments to ethnic populations in doubt". Using the MMPI may be appropriate for use with ethnic and racial students

The validity and reliability of the NEO-PIR or Big Five inventory and its applicability across races and cultures

Worrell & Cross (2004) investigated the reliability and validity of Big Five Inventory scores in a sample of African - American college students as performed on the Big Five Inventory. The investigators discovered that reliable measures could be developed from the Adjective Q -sort and that

there are no perceived predictive validity differences between White and Black students using the NEO PIR (Worrell & Cross 2004)

The use of other measures especially the inclusion and applicability of the Assessment of Academic Self concept and motivation (AASM)

Assessment of Academic Self concept and motivation was developed according to the motivational systems theory. The uniqueness of this assessment is that it postulates that motivation is the patterns of goals, emotions and personal agency beliefs (self -concept) which is consistent with the socio-cognitive theory of personality development proposed by Albert Bandura. Durham (2004) argues that this model and assessment four aspects of self concept- ability, environmental responsiveness, control and value or importance it also assess four dimensions of the education environment: cognitive, social extracurricular and personal (Durham, 2004) validation studies have been performed by Rouse & Cashin (2000 in Durham 2004) and have found support for this assessment as well. Durham (2004) argues of the advantages of this measure with ethnic clients because it measures internal locus of control and the motivation aspect can measure academic success. With regards to values and race and cultural differences, John (1989 in Goldberg 1998) examined judge's classifications of the 300 terms in the Adjective Check list into the Big Five Categories to examine its validity and argues that ' traditional values' and ' individuation/ autonomy' adjectives closely related to the persons self -concept and cultural determinants may lie outside the Big Five. Goldberg (1998) argues that other personality factors that are not included inside the Big Five are religiousness, sexuality, introspectiveness, maturity, gender roles thrift and suppression
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and repression (Goldberg 1998). As there lays other aspects beyond the Big Five it would be interesting to see these influences for academic achievement as well. Paunonen & Jackson (2000) had also investigated into the NEO PIR and the Big Five traits and after a thorough investigation and analysis they found that a) Religious, devout, reverent b) sly, deceptive manipulative c) honest, ethical moral d) conservative, traditional, down-to-earth e) egotistical, conceited, snobbish and f) thrill seeking behaviours were independent from the Big Five Factors as they did not correlate. This finding is important to establish the internal consistency validity and what differences it would make if these traits are also examined along with cultural values as discussed to evaluate the impact it has on education success and achievement because these traits such as masculinity-femininity, religiosity, are also determinants of human behaviour and also academic motivation. These recommendations will improve the internal consistency of the NEO PIR personality assessment as argued by Paunonen & Jackson (2000)