# Relationship between Personality Traits, Academic Achievement and Salary: An Empirical Study in a Reputed B-School in Bangalore, India

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Abstract: Most of the B-Schools in India are facing problems in placing their students. Recruiters claim that the reason for this is the absence of required skill-sets in the students. The challenge is in identifying the skills or personality traits which lead to good placements. In this study, personality traits were borrowed from the psychological concept of OCEAN. Ten traits were short-listed and the objective was to find out if there is a correlation between them and CGPA (academic achievement) and Salary Obtained during placements. The study, which was carried out in a reputed B-school in Bangalore (India), revealed that out of these 10 traits, only confidence has a correlation with salary. The traits which have correlation with CGPA are self-motivation and confidence. Another aspect that was studied was the efficacy of a program called personality enhancement program-which forces students to learn from activities like public speaking, presentations etc. It was found that this program helps students to build their confidence levels and confidence is impacting, both, CGPA as well as salary. The study also found that there is no correlation between CGPA and Salary. SEM is also corroborating the above results, which were obtained through regression analysis and ANOVA.

Keywords: Personality traits, CGPA, Salary, Correlation, PEP (personality enhancement program).

#### I. Introduction

A lot of discussion goes on now about the effect of academic performance on job success or the ability to get high paying jobs through the placement process in business schools in India. Somehow, it has always intrigued the academia as to how the relative payment structures are arrived at by the corporate. Which means, what exactly does the corporate look at when deciding responsibilities and the consequent remunerations offered to students? Questions asked regarding this aspect of decision making leads to divergent answers from different corporate entities — which is understandable as different businesses has different environment and roles and hence the wide disparity in remuneration. This leaves the academic at square one as his original quest for finding out the traits of students who receive higher remuneration than their compatriots, remain unanswered. This takes us to the original discussion of being able to arrive at certain traits of students who receive better compensation than the rest of the student body.

Literature survey shows the presence of some personality traits that are more prone to ensure job success and hence, better compensation. The Big Five Personality Traits, as they are called, is the subject of a lot of research – primarily pertaining to their impact on the job success of individuals, as well as their academic achievement. The five factors, more commonly known by the acronym OCEAN, are openness, conscientiousness, extraversion, agreeableness, and neuroticism. This OCEAN model is able to account for different traits in personality without overlapping. Empirical research has shown that the Big Five personality traits show consistency in interviews, self-descriptions and observations. Moreover, this five-factor structure seems to be found across a wide range of participants of different ages and of different cultures.

Openness often stands for "intellect" and is best expressed as inventive or curious versus consistent or cautious. Conscientiousness is expressed as efficient or organized versus easy-going or careless. Extraversion is defined as outgoing or energetic as opposed to being solitary or reserved. Similarly, agreeableness is considered as friendly or compassionate as opposed to analytical or detached. Neuroticism is often referred to as "emotional stability". It is expressed by sensitiveness or nervousness versus being secure or confident.

So, openness reflects the degree of intellectual curiosity and creativity of a person. Conscientiousness measures how much organized and dependable the person is – and his degree of achievement orientation. Extraversion is about energy and positive emotions, while agreeableness is about being compassionate and cooperative. Neuroticism is the tendency to experience unpleasant emotions easily, like anger and anxiety.

There is a lot of discussion in the literature linking the big five personality traits or OCEAN, as it is known, with success in jobs as well as academic achievement.

Overall, literature is of the opinion that personality plays an important role that affects academic achievement. A study conducted with 308 undergraduates who completed the Five Factor Inventory Processes

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and offered their GPA suggested that conscientiousness and agreeableness have a positive relationship with all types of learning styles, whereas neuroticism has an inverse relationship with them all. The Big Five personality traits accounted for 14% of the variance in GPA, suggesting that personality traits make great contributions to academic performance. Results also indicate that intellectual curiousness has significant enhancement in academic performance if students can combine their scholarly interest with thoughtful information processing.

Though there was some controversy on the issue of personality traits affecting workplace performance (low correlation coefficients), later studies have shown that (1) that the correlations obtained by psychometric personality researchers were actually very respectable by comparative standards, and (2) that the economic value of even incremental increases in prediction accuracy was exceptionally large, given the vast difference in performance by those who occupy complex job positions. Some businesses, organizations, and interviewers assess individuals based on the Big Five personality traits. Research has suggested that individuals who are considered leaders typically exhibit lower amounts of neurotic traits, maintain higher levels of openness (envisioning success), balanced levels of conscientiousness (well-organized), and balanced levels of extraversion (outgoing, but not excessive). Further studies have linked professional burnout to neuroticism, and extraversion to enduring positive work experience. When it comes to making money, research has suggested that those who are high in agreeableness (especially men) are not as successful in accumulating income.

In a study in Germany(Spurk & Abele, 2010); Who Earns More and Why? A Multiple Mediation Model from Personality to Salary; Journal of Business Psychology, 2011, 26: 87-103), it was found that except for openness the other Big Five personality traits had an indirect influence on annual salary. Despite the same educational background and comparable labor market conditions, some people are more successful in their careers and earn more money than others. Career success is not only a result of education, socio-economical background, and external labor market conditions, but it also results from individual differences. Here, annual salary is taken as the measure of objective success as it is one of the key indicators of an individual's job success. In another study(A.Judge, A.Higgins, Thoresen, & R.Barrick, 1999 Autumn 1999;52,3:), the authors came to the conclusion that conscientiousness positively affected career success, neuroticism negatively affected career success, while general mental ability positively affected career success. Also, data obtained from the Intergenerational Studies (a set of 3 studies that followed participants from early childhood to retirement) showed that adulthood measures of the Big Five traits impacted career success more strongly than measures of Big Five traits from childhood.

In a study(Barrick & Mount, Spring 1991; 44, 1;) linking the personality traits with job performance of five occupational groups, it was found that only conscientiousness, among the five personality traits, showed consistent relations with all job performance criteria across all five occupational groups. The rest of the personality traits had differential impact on different occupational groups and also distinct criterion type of job performance. Extraversion had a high degree of correlation with two occupations involving high social interaction — managers and sales. The degree of correlations between other personality traits and job performance in various occupations, were relatively weak.

In a study conducted in USA (LOUNSBURY, SMITH, LEVY, LEONG, & GIBSON, 2009), the authors compared the personality traits between undergraduate business majors and nonbusiness majors at a large university. The scores of business majors were higher conscientiousness, emotional stability, extraversion, assertiveness, and tough-mindedness. However they scored lower on agreeableness and openness. In a thesis propounded by (Holland, 1996), it was asserted that people flourish in environments where there is a good fit between their personality and the environment in which they function. According to the author, good fit leads to satisfaction, longevity, and higher levels of performance. Lack of fit results in dissatisfaction, withdrawal, instability, and lowered performance. Also, there are individual differences between students regarding personality traits and a positive relation between traits and satisfaction of the individual in the major. Given this discussion, there is scope of acknowledging that many researchers have put forth the contention that the Big Five personality traits are too broad and that narrower personality traits may be more appropriate in predicting behavior of individuals. This has been verified in work as well as academic domains (Lounsbury, Sundstrom, Loveland, & Gibson, 2003), (V. Paunonen & C. Ashton, 2001; Vol. 81, No.3).

The narrower traits identified by the authors were assertiveness, optimism, tough-mindedness, and work-drive. Business majors had a relatively higher score on assertiveness as this trait is widely considered as an important attribute for success in any area of business(Michelli & Straw, 1997) especially in management and leadership positions(Henman, 2005). Tough-mindedness was defined as appraising information and making decisions on the basis of logic, facts,and data rather than feelings, sentiments, values, and intuition. Business majors scored higher on tough-mindedness – they scored higher on pragmatic and economic values but lower on aesthetic, religious, and theoretical values(T.Terenzini & Pascarella, 1991; Vol. 32; No.1). Dispositional optimism is widely regarded as an important factor for success in all aspects of life (Seligman, Rashid, & Parks, 2006), particularly in business. As noted by(Heathfield, 2006), "Optimism may be partly responsible for success in most aspects of life" and "its power cannot be over-rated as a factor" in business success. Lounsbury,

(Lounsbury, Sundstrom, Loveland, & Gibson, 2003) found that optimism was one of the traits most highly correlated with job satisfaction and career satisfaction for several business occupations. The authors also found work drive to be another one of the traits more highly related to job and career satisfaction. In addition, characteristics of individuals scoringhigh on work drive, such as consistently working hard, putting in long hours, andotherwise extending oneself for one's job and career, are widely recognized as key factors for success in business.

### II. Research Methodology

The primary objective is to find out if there is any correlation between academic achievement as well as salary obtained from corporates during placements – with personality traits of individual students. Data was collected from the students, faculty, and administration of a reputed business school in Bangalore, India. The study is divided into two parts.

The first part deals with correlation between these traits and salary secured, as well as academic achievement. Salary is measured by the fixed compensation of the job that has been accepted by the student during the placement session organized by the business school. The placement season is the time during which the corporates visit the campus and interviews students with the purpose of absorbing them in their organizations as permanent employees. Salary offered by the corporate after the selection of the student (and accepted by the student) is taken as salary obtained for the purpose of analysis in this study. For measurement of academic achievement of the students, CGPA (cumulative grade point average) was used. CGPA is the weighted average of the grade points obtained by the students in each semester of the entire duration of the two year course (five semesters). This is a fairly good indicator of the student's performance in the PGDM program of the business school.

Measurement of personality traits were done in a slightly different manner from the earlier methods used in the literature. As seen from the discussion in the earlier section, some of the authors were of the opinion that the Big Five personality traits were too broad. So, they identified some personality traits which are narrower by definition. In this study, ten such traits – which were thought of as capable of correctly and narrowly describing the personality traits of students of the business school - were identified by the Faculty of the business school. The total number of students for whom the exercise was carried out numbered around 130. The total number of faculty who made the choice of traits was about 13. Each faculty was then given 10 students whom they knew very well. The faculty was then asked to rate each of the 10 students allocated to them on each of the traits on a scale of 1 to 10, where one is the lowest marks and ten the highest marks. The traits on which the evaluation was done were: hard working, dependable, polite, self-motivated, team oriented, organized, work well under pressure, effective communications, flexible, and confident. As can be observed, the traits are derived from the Big Five personality traits, but are much narrower – and, hence, easier to evaluate and likely to be more accurate.

In the second part of the study, an attempt is being made to find out if there is any correlation between the two dependent variables - namely, salary obtained and academic achievement, and the scores of the independent variable called Personality Enhancement Program (PEP). These set of activities called PEP is a unique effort by the business school to develop the personalities of students further. The activities in PEP are meant to deepen their self-awareness and self-realization as they reflect on their existing values, attitude, and belief system, their philosophy of life, paradigms, and perceptions - and thus discover how all these influence their present behavior, success and career.PEP is more about doing. The students are subjected to various simulationexercises in which they participate to enhance their corporate skills. The students start off with a thorough training on English language development. Each student is assessed and according to their categorization, in terms of their English language proficiency, training is imparted. It is very essential to bring the students upto a certain level of English Language proficiency, before they begin their corporate skills training. Once they reach an acceptable level of language proficiency, the focus shifts to presentation skills. The students receive various inputs in terms of delivery of an effective presentation. Post that each student undergoes a comprehensive training to enhance their writing skills. During the second year it is more about employability skills, along with conversational skills and interview skills. The overall objective of this initiative is to make the students start believing in themselves and thus face the corporate world with confidence and a positive mindset. The performance of each student is comprehensively tracked through a LOGBOOK, which focuses on the effort that is needed to be put in by the students, in order to develop them. It contains activities like public speaking, presentations, English comprehensions, CSR and article writing. Each student has a target for each of these activities and the responsible faculty then evaluates the percentage of target achieved. The marks are allotted based on these percentage achievements of targets set in the beginning of the semester. In this study, these marks obtained (components as well as total) are taken as the independent variable (as has been discussed earlier). The dependent variables are salary obtained and academic achievement. The data used in this project is for the full year (2014 -15).

### III. Analysis And Findings

SPSS is used as the statistical tool in this analysis. The primary methods adopted are regression analysis and ANOVA. Table 1 displays the output of regression analysis on the scores of personality traits obtained by students (independent variables) with academic achievement (CGPA) and salary obtained during placements.

Table 1: Output of Regression Analysis of CGPA & Salary Obtained with Personality Traits

	CGPA		Salary		
Traits	R-Square	Significance	R-Square	Significance	
Hardworking	0.186	.000	0.028	0.105	
Dependable	0.133	.000	0.008	0.381	
Polite	0.058	.018	0.187	0.068	
Self-Motivated	0.246	.000	0.042	0.045	
Sal in Lakh	0.039	.500			
Team Oriented	0.140	.000	0.200	0.175	
Organized	0.207	.000	0.031	0.086	
Work well under pressure	0.157	.000	0.030	0.091	
Effective Communication	0.132	.000	0.028	0.104	
Flexible	0.149	.000	0.290	0.098	
Confident	0.206	.000	0.630	0.140	
Total	0.144	.000	0.072	0.008	

It is evident from the table that there is no correlation between CGPA and salary obtained by students during placements. Also, no single trait seems to have any significant correlation with either CGPA or Salary Obtained. There is a high degree of correlation between confidence and salary obtained, albeit with a high significance level. In order to confirm this finding and also to get another perspective, regression analysis was carried out on the same set of data with the 'backward' method. Findings with this method are mostly quite similar, with a few dissimilarities. Self-motivation and confidence are correlated with CGPA, while the only trait correlated with Salary Obtained is confidence. So, confidence as a personality trait plays a major role in the achievement of the student, both academic as well as salary obtained.

From the original responses and database, it is noticed that about 30% of the students have got a score of 80% and above in self-motivation. The corresponding figure for 70% marks is about 65%. The figures remain exactly the same in case of confidence as well. In case of overall marks, only 20% students got 80% and above, while 60% students got 70% and above.

Some relevant additional observations are:

- 1) Students who got 80% and above marks in confidence secured (on an average) 28% more salary than the rest of the students. The corresponding figure for 70% marks is 27%.
- 2) Students who got 80% and above marks in self-motivation secured (on an average) 21% more in CGPA (than the rest of the students). The corresponding figure for 70% marks is 15%.
- 3) Students who got 80% and above in total scores secured 24% more salary. The corresponding figure for 70% is 14%. Students, who got 80% and more in total scores, secured 20% more in CGPA. The corresponding figure for 70% marks is 18%.

These figures confirm the finding that 'confidence' is the most important criteria in salary, whereas in CGPA, total marks also matter along with self-motivation.

The results of the second part of the study are best illustrated by the following table:

Table 2: Output of Regression Analysis of CGPA & Salary Obtained with Components of PEP

•	CGPA	CGPA		Salary		
Traits	R-Square	Significance	R-Square	Significance		
OFP	0.186	.000	0.034	0.044		
Voice	0.154	.000	0.036	0.034		
Gesture	0.176	.000	0.041	0.028		
Confidence	0.139	.000	0.045	0.020		
Quality Total	0.171	.000	0.040	0.029		
PSP	0.329	.000	0.011	0.247		
PS	0.253	.000	0.011	0.260		
CSR	0.076	.002	0.000	0.893		
AW	0.010	.287	0.007	0.351		
Total Activity average	0.314	.000	0.000	0.939		

As can be seen from the above table, almost all components of PEP as well as the totals are correlated with CGPA while none of the components as well as the totals has any sort of statistically significant correlation with salary. Public speaking and presentations along with Total Activity are reasonably correlated with CGPA. However, the various components of Presentation are not very highly correlated with CGPA. In order to confirm these findings, regression analysis in 'backward' method was performed with all components of PEP (independent variables) and CGPA & Salary Obtained (dependent variables). In case of CGPA, the following components are correlated: OFP, Voice, PSP, and Total Activity Average. Among all the components, confidence is the only one which is correlated with Salary Obtained. Since confidence is emerging as the single most important personality trait which is impacting salary as well as academic achievement, it is imperative to examine the effect of PEP on this parameter. Regression analysis showed that Total Activity and Confidence (marks obtained in the first stage) are correlated. So, from this analysis, it may be concluded that PEP (all activities together) contribute to confidence building of students; and, confidence impacts both, CGPA as well as Salary Obtained.

From here, there is a need to examine whether there are statistically significant differences between different groups of students on their CGPA and Salary Obtained – and the ten personality traits identified in the first stage. Two groups are made on the basis of their CGPA – one group with CGPA below 7.00, and the other composed of students who have secured CGPA of 7.00 and above. Similarly, in the case of salary obtained, two groups were made – one with salary below 6.00 lakhs and the other with salary of 6.00 lakhs and above. ANOVA was used to explore differences among these groups.

The following table illustrates the results of the analysis:

Table 3: Output of ANOVA with CGPA & Salary Obtained

Personality Traits		CGPA			Salary		
		N	Mean	Sig	N	Mean	Sig
Hardworking	1	67	6.9776	0.003	102	7.2255	.151
	2	51	7.7157		16	7.7500	
	Total	118	7.2966		118	7.2966	
Dependable	1	67	7.0448	0.091	102	7.1961	.428
	2	51	7.4902		16	7.5000	
	Total	118	7.2373		118	7.2373	
Polite	1	67	7.6119	0.191	102	7.6863	.169
	2	51	7.9412		16	8.1875	
	Total	118	7.7542		118	7.7542	
Self-Motivated	1	67	6.8507	0.012	101	7.0396	.108
	2	50	7.48		16	7.6250	
	Total	117	7.1197		117	7.1197	
Team Oriented	1	67	7.0075	0.273	101	7.0990	.662
	2	50	7.27		16	7.2500	
	Total	117	7.1197		117	7.1197	
Organized	1	67	6.7313	0.002	101	7.0248	.522
	2	50	7.49		16	7.2500	
	Total	117	7.0556		117	7.0556	
Work well under	1	67	6.6791	0.003	101	6.9406	.294
Pressure	2	50	7.41		16	7.3125	
	Total	117	6.9915		117	6.9915	
Effective	1	67	6.6269	0.043	101	6.8614	.762
Communications	2	50	7.14		16	6.7500	
	Total	117	6.8462		117	6.8462	
Flexible	1	67	6.7313	0.001	100	6.9650	.184
	2	49	7.4184		16	7.3750	
	Total	116	7.0216		116	7.0216	
Confident	1	67	6.7313	0.030	101	6.9158	.235
	2	50	7.31		16	7.3750	
	Total	117	6.9786		117	6.9786	
TOTAL	1	69	66.9928	0.017	104	69.0529	.185
	2	51	73.5098		16	74.3750	
	Total	120	69.7625		120	69.7625	

As can be seen from the table, there is no statistically significant difference between students who get high salary jobs and student groups who have secured jobs which pay less than 6.00 lakhs per annum. However, in case of CGPA, all personality traits test scores are different and statistically significant for groups of students who score above and below 7.00 (except for polite and team-oriented). So, from ANOVA, we see that while academic achievement is impacted by personality traits, salary obtained does not. In case of PEP, Total Activity does not differ significantly among the two groups in terms of salary obtained. The same holds true in case of quality of presentation as well. However, difference between the two groups is statistically significant in case of

Total Activity and CGPA. In case of total quality and CGPA as well, the difference between the two groups is statistically significant. This reiterates the conclusion that academic achievement is impacted upon by personality traits as well as PEP, whereas the same does not hold true in case of salary obtained.

In order toconfirm the findings, SEM was carried out. Following is one example of SEM between the dependent variables ad PEP:

As has been seen earlier, the correlation between Salary Obtained and CGPA is quite weak (0.198). Most of the independent variables do not seem to have any correlation with Salary Obtained. There are a few variables only who display a weak correlation with the dependent variable, Salary. The components of total activity display weak correlation with Salary, while components of presentation virtually have no correlation with salary. Results of all similar SEM support all earlier findings (Salary vs. Personality, etc.).

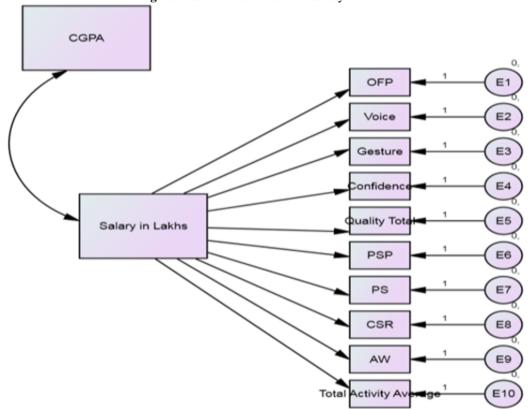


Figure 1: SEM Model between Salary and PEP

#### IV. Conclusion

There are a wide range of personality traits which are expected to impact the performance of students, both in terms of academic achievement as well as salary obtained during placements. It is also expected that the Personality Enhancement Program impacts CGPA and Salary. The study shows that virtually one component is emerging as the most important factor impacting salary and academic achievement. While for CGPA, it is the self-motivation and confidence of the student that determines performance, in case of salary it is only confidence. In case of PEP, the factor which has the highest correlation with the dependent variables is again confidence. However, in case of PEP, confidence is impacted upon by total activity that the student undergoes in the entire program.

The measurement of PEP is longitudinal, whereas the other areas of the study are cross-sectional in nature. There is a distinct possibility that while confidence alone produces immediate results in terms of higher salaries and may be higher grades as well, other personality traits may impact long term job success (and higher salaries in the long term). So, there is a need to monitor performances of students of the institute five/ten years after their graduation. Off course, then there will be a need to create a database of scores of these students on the various personality traits used in the study. Monitoring of personality traits along with job success in the long term may throw up some interesting insights.

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