Title: Personality-related variables in the process and product of achievement for undergraduate students.

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Five Factor Model (FFM): Acronyms: OCEAN and CANOE

- Established configuration of Personality (Allik & McCrae, 2004) – traits like magnetic north
- Implicated in educational processes (Di Giunta et al., 2013; Mcilroy et al., 2015)
- Implicated in educational achievement (Porpoat, 2009; Richardson et al., 2012)
- Implicated in educational choices (Furnham, 2010; Vedel et al., 2015)

Intermediate/specific constructs

- Distal & proximal functioning (Bidjerano & Dai, 2007)
- Academic Self-efficacy (Komarraju & Nadler, 2013) – beliefs, goal-setting, mastery, self-regulation, motivation
- Test Anxiety (Putwain & Symes, 2013; Szafranski, 2012) – negative source of variance – distraction, disruption, delay
- Academic Cons – tailored to the academic sphere (Richardson & Bond, 2009; Mcilroy & Bunting, 2002) – achievement striving, planning, consolidation, routine.


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Objectives of the study

- To ascertain cohort differences and similarities across measures (& IDs)
- To check the quality of the response data with reference to indicators
- To test the relationships between distal and proximal measures
- To evaluate implications emerging from the data (what do the numbers suggest?)

Method – supporting scaffold

- *N* = 235 (L4 = 97, L5 = 81, L6 = 57 Engineering students)
- Tutorials were built around the exercise
- Range of validated self-report measures used FFM (50 items), ASE (10 items), RTAS (20 items), Academic Cons. (10 items).
- Capturing human traits – blowing in the wind! Speed, direction, pattern, effects

Table 1: Descriptive statistics and reliabilities for personality-related measures and GPA.

		Level	**4**			**Level**	**5**			**Level**	**6**	
	M	SD	Skew	Kurt	*M*	SD	Skew	Kurt	*M*	SD	Skew	Kurt
Extraversion	**33.40**	6.95	-.37	.35	**34.14**	6.95	-.27	-.14	**32.56**	6.79	.13	-.70
Agreeableness	**37.68**	5.31	-.32	.03	**38.67**	5.77	-.32	.03	**36.68**	6.65	-.69	.59
Conscientiousness	**33.14**	6.59	-.06	-.52	**34.38**	7.34	-.06	-.52	**33.56**	6.85	-.13	-.11
Emotional Stab.	**34.29**	6.89	-.12	-.03	**34.15**	7.61	-.12	.25	**33.18**	7.90	-.01	-.24
Openness	**36.37**	5.71	-.25	.64	**35.89**	5.36	-.17	.04	**36.20**	6.18	-.40	.17
Test Anxiety	**74.71**	18.39	-.18	-.15	**79.46**	23.43	-.38	-.29	**78.82**	20.43	-.28	-.58
Academic SE	**52.39**	6.88	-.02	.33	**48.95**	8.39	-.15	-.76	**50.21**	8.50	-.49	.27
Academic Cons	**40.75**	8.45	.24	-.44	**37.88**	8.61	-.15	.08	**40.28**	9.20	.28	-.01

Table 2: Correlation coefficients for personality-related measures and specific constructs.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Test Anxiety (1)	1							
ASE (2)	-.52**	1						
AC (3)	-.11	.35**	1					
Extra (4)	-.21**	.13	-.01	1				
Agree. (5)	.05	-.03	.02	.15*	1			
Cons. (6)	-.11	.23**	.36**	.14*	.12	1		
Emot Stab (7)	-.45**	.34**	.06	.19**	.09	.03	1	
Openness (8)	-.14	.33*	.01	.34**	.17**	.22**	.04	1
Mean	77.21	50.69	39.70	33.46	37.81	33.69	34.01	36.16
SD	21.05	7.93	8.78	6.90	5.85	6.90	7.40	5.67
Alpha	.91	.78	.78	.83	.78	.82	.82	.77

Key:* $p < .05$. ** $p < .01$; ; Agree = Agreeableness; Cons = Conscientiousness; ASE = Academic Self-efficacy; AC = Academic Conscientiousness; Emot Stab = Emotional Stability

Table 3: Multiple Regression analyses: Specific constructs regressed on general personality traits.

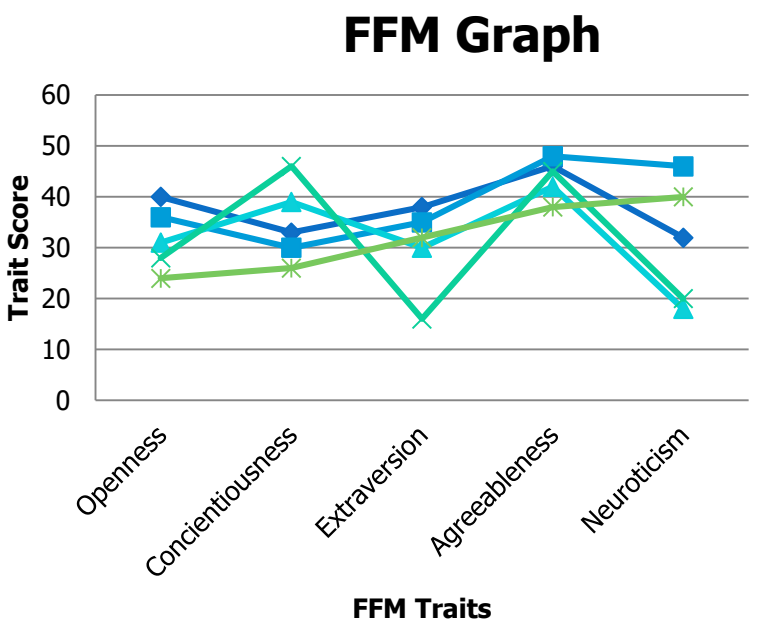
	Test Anxiety	Academic Self-efficacy	Academic Conscientiousness
Predictors	β	β	β
Openness	-	.28**	-
Conscientiousness	-	.16**	.36**
Extraversion	-.12**	.32**	-
Emotional Stability	-.43**	.28**	-
Adjusted R^2	.21	.23	.13
	F(2,232) = 31.92**	F(3,229) = 24.26**	F(1,232) = 34.50**

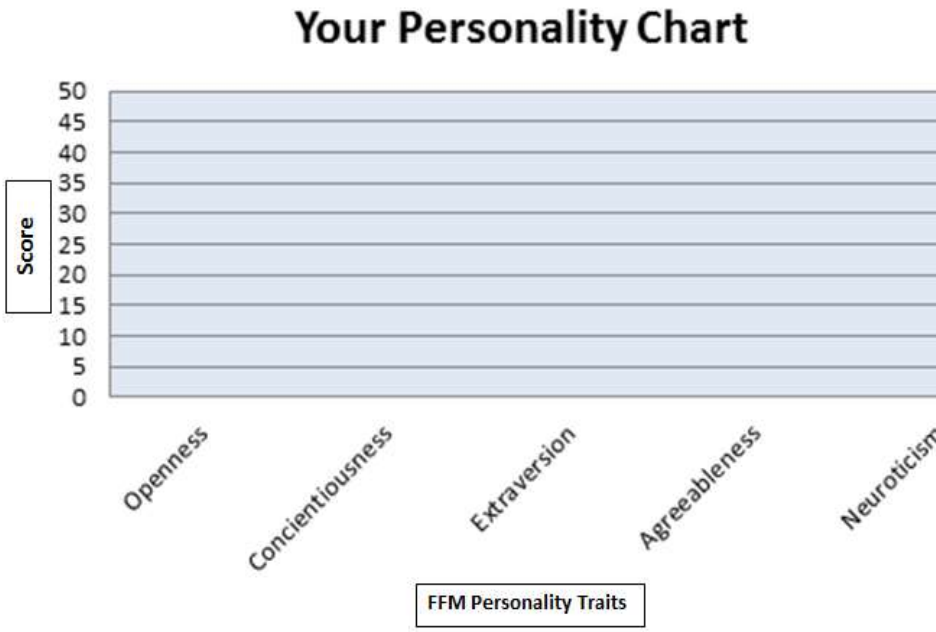
Conclusion (1)

- Architecture of personality (Taxonomy – dynamic interplay)
- Broad traits translate into specific application (Di Giunta et al., 2013)
- Identifying clusters facilitates models
- Supports learning, complements ability, enhances achievement

Conclusion (2)

- Always a story in the data (no bad data?)
- Numbers not static – identify patterns, differences, similarities, shifts
- Can alert us to problems, pressures, progress & product
- Metrics have meaning if measures are soundly constructed
- Ideographic lies behind the nomothetic


FFM Graph
Trait Score
60
50
40
30
20
10
0
Openness
Concientiousness
Extraversion
Agreeableness
Neuroticism
FFM Traits
Person 1
Person 2
Person 3
Person 4
Person 5


Your Personality Chart
Score
50
45
40
35
30
25
20
15
10
5
0
Openness
Concientiousness
Extraversion
Agreeableness
Neuroticism
FFM Personality Traits

Assessment grid

Number each of the assessment methods in relation to how appropriate you think each of the five personality traits are im
can substitute/add other assessment tasks such as portfolio, multiple choice test, peer assessment etc., according to the n
of study.

Assessment Method							
Personality Factors	Essay	Practical Report	Exam	Group Work	Presentation	Poster	Dissertation
Openness							
Conscientiousness							
Extraversion							
Agreeableness							
Neuroticism							

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Questions?

- If you would like more information on the presentation or a personality resource booklet,

- please send an email to David Mcilroy at:

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