

# The relationships between personality, learning approaches, career decision making and academic success: A longitudinal approach

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# USQ Campuses



Toowoomba



Fraser Coast



Springfield

# Transition to University

- All students will go through a transition phase.
  - Diverse student body (age, work experience, education experience, culture, intellectual ability etc).
- What factors influence success at university?
- What strategies can be implemented to smooth the transition experience?



# Enhancing the Student Experience

- Research indicates that:
  - 30% students feel ill-prepared to make right choice at end of high school (McInnis et al., 2000; Krause et al., 2005).
  - Academic success and continued participation is influenced by the first year student experience (Huntly & Donovan, 2009).
- Individual differences factors that influence student transition: learning approaches, self-confidence, personality (McKenzie et al., 2004).

# Personality

## Big Five Factors:

- O = **Openness to Experience** (imaginative, artistic; **intellect**)
- C = **Conscientiousness** (dependable, hardworking)
- E = **Extroversion** (sociable, outgoing).
- A = **Agreeableness** (courteous, cooperative)
- N = **Neuroticism** (tense, nervous; **emotional stability**)



**Conscientiousness** is the trait most consistently positively correlated with **academic success** (Nguyen et al., 2005).

**Conscientiousness** and **Intellect** positively related to **Deep** and **Strategic** approaches.

**Neuroticism** positively correlated with **Surface** approach.

# Approaches to Learning

- Intentions and strategies an individual uses to achieve a learning goal/task.
- Student Approach to Learning (SAL):
  - **Deep** (intention to understand; seek meaning)
  - **Surface** (memorise facts; study without reflection)
  - **Strategic** (achieve academic success; consistent effort to meet requirements)
- **High achievement** predicted by a **Deep** approach either alone or in combination with a **Strategic** approach
- **Low achievement** predicted by a **Surface** approach.



# Career Decision Making

- **Career Decidedness** – degree to which an individual is decided on entering a particular career (career choice).
- **Major Satisfaction** – degree to which satisfied with major area of study (i.e., program).
- **General Self Efficacy** – feelings of competence and belief in ability to cope with a variety of challenging situations.
- Expect students who are decided in career futures, satisfied with major area of study, and believe in their capability of performing actions will experience academic success.

# Method

- **Participants:** 590 first-year students across five faculties at USQ were tracked over time – 175 did not have a GPA in second year and were excluded from sample = 415 students
  - 27% cancelled; 14% graduated; 53% not currently studying, 4% transfer and 2% dismissed.
  - Arts (n = 41), Business and Law (n = 114), Education (n = 94), Engineering and Surveying (n = 86) and Sciences (n = 78). Faculty unknown (n = 2).
  - N = 415 (261 females and 154 males) with complete data; ages ranging 17 to 64 years (M = 30.75; SD = 10.90); 22 on-campus students (5%) and 393 distance students (95%).
  - 39% studying full time; 61% studying part time.



# Method

- **Measures:** online self-report survey; demographic variables.
  - **Personality** measured by NEO-FFI Form S (Costa & McCrae, 1992); OCEAN.
  - **Learning approaches** measured by ASSIST (Entwistle, 1997); Deep, Strategic, Surface.
  - **Career Decision making** measured by Career Choice Status Inventory (Savickas, 1993), Academic Major Satisfaction Scale (Nauta, 2007), General Self Efficacy Scale (Schwarzer & Jerusalem, 1995).
  - Academic success measured by GPA (GPA1; GPA2).
- **Individual feedback on learning profiles; track student progress.**

# Descriptive Statistics

Measure	<i>M</i>	<i>SD</i>	$\alpha$	<i>No. items</i>
<b>GPA1</b>	5.53	1.07		
<b>GPA2</b>	5.22	1.13		
<b>Personality</b>				
Open/Intellect	41.09	6.49	.72	12
Conscientiousness	45.64	7.08	.85	12
Extraversion	41.11	6.94	.79	12
Agreeableness	44.53	6.02	.74	12
Neuroticism	32.87	9.06	.87	12
<b>Learning Approach</b>				
Deep	64.18	8.83	.85	16
Strategic	76.71	12.48	.89	20
Surface	44.40	11.45	.86	16
<b>Career Decision Making</b>				
Career Choice	25.56	5.16	.71	6
Major Satisfaction	27.07	4.31	.90	6
General Self Efficacy	39.16	4.30	.81	10

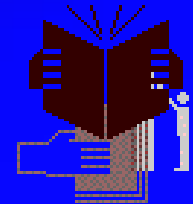
# Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. GPA1	1.00												
2. GPA2	.73**	1.00											
3. Consc	.22**	.33**	1.00										
4. Open	.19**	.15**	.14**	1.00									
5. Extra	.02	.04	.26**	.05	1.00								
6. Neuro	-.15**	-.15**	-.36**	-.08	-.40**	1.00							
7. Agree	.18**	.23**	.22**	.08	.26**	-.29**	1.00						
8. Deep	.24**	.23**	.35**	.43**	.10*	-.12*	.04	1.00					
9. Surf	-.31**	-.27**	-.36**	-.39**	-.13**	.52**	-.18**	-.41**	1.00				
10. Strat	.33**	.35**	.66**	.22**	.24**	-.32**	.17**	.60**	-.45**	1.00			
11. Choice	.08	.01	.12*	.02	-.04	-.09	-.03	.16**	-.05	.12*	1.00		
12. M Sat	.16**	.11*	.20**	.10*	.10*	-.22**	.05	.24**	-.38*	.28**	.26**	1.00	
13. GSE	.18**	.17**	.47**	.34**	.28**	-.45**	.05	.38**	-.42**	.40**	.11*	.19**	1.00

Note. \*\*  $p < .01$ , \*  $p < .05$ .

# Multiple Regressions

- **Deep** approach predicted by **Conscientiousness** ( $\beta = .31^{**}$ ) and **Intellect** ( $\beta = .39^{**}$ ).
- **Strategic** approach predicted by **Conscientiousness** ( $\beta = .60^{**}$ ) and **Intellect** ( $\beta = .13^{**}$ ).
- **Surface** approach predicted by **Neuroticism** ( $\beta = .48^*$ ), **Intellect** ( $\beta = -.33^{**}$ ); **Conscientiousness** ( $\beta = -.17^{**}$ ) and **Extraversion** ( $\beta = .12^{**}$ ).



## Variable

*t**B**SE B* $\beta$ *t**B**SE B* $\beta$ 

## Personality

Conscientiousness	3.32	.03	.01	.17**	5.78	.05	.01	.29**
Openness to Experience	3.17	.03	.01	.15**	.04	.02	.01	.10*
Extraversion	-1.89	-.02	.01	-.10	.06	-.02	.01	-.10
Neuroticism	-1.43	-.01	.01	-.08	.63	-.00	.01	-.03
Agreeableness	2.58	.02	.01	.13**	.00	.03	.01	.17**

## Learning Approaches

Deep	.59	.01	.01	.05	.27	.00	.01	.02
Surface	-3.96	-.02	.01	-.22**	-2.67	-.01	.01	-.14**
Strategic	3.32	.02	.01	.20**	4.39	.02	.01	.27**

## Career Decision-Making

Career-Decidedness	.60	.01	.01	.04	-.63	-.01	.01	-.03
Major Satisfaction	1.98	.03	.01	.11*	.02	.02	.01	.06
General Self-Efficacy	3.50	.04	.01	.17**	3.41	.05	.01	.17**

Variable	<i>t</i>	<i>B</i>	<i>SE B</i>	$\beta$
<b>Step 1</b>				
Major Satisfaction	2.19	.03	.01	.12*
General Self-Efficacy	3.57	.04	.01	.18**
<b>Step 2</b>				
Major Satisfaction	1.61	.02	.01	.08
General Self-Efficacy	1.16	.02	.01	.07
Conscientiousness	2.51	.02	.01	.14*
Openness to Experience	2.86	.02	.01	.14**
Agreeableness	2.78	.02	.01	.14**
<b>Step 3</b>				
Major Satisfaction	.29	.00	.01	.02
General Self-Efficacy	.31	.00	.01	.02
Conscientiousness	-.13	-.00	.01	-.01
Openness to Experience	1.57	.01	.01	.08
Agreeableness	2.39	.02	.01	.11*
Surface Approach	-2.49	-.01	.01	-.15*
Strategic Approach	3.31	.01	.01	.21**

Hierarchical  
Regression  
GPA1

Variable	<i>t</i>	<i>B</i>	<i>SE B</i>	$\beta$
<b>Step 1</b>				
GPA1	21.30	.77	.04	.73**
<b>Step 2</b>				
GPA1	19.44	.72	.04	.68**
Conscientiousness	4.70	.03	.01	.16**
Openness to Experience	-.15	-.00	.01	-.01
Agreeableness	2.08	.01	.01	.07*
<b>Step 3</b>				
GPA1	18.82	.72	.04	.68**
Conscientiousness	3.37	.03	.01	.12**
Openness to Experience	.02	.00	.01	-.00
Agreeableness	2.13	.01	.01	.07*
Surface Approach	.73	.00	.00	.03
Strategic Approach	.67	.00	.00	.03
<b>Step 4</b>				
GPA1	18.82	.72	.04	.68**
Conscientiousness	3.48	.03	.01	.16**
Openness to Experience	.21	.00	.01	.01
Agreeableness	2.02	.01	.01	.07*
Surface Approach	.53	.00	.00	.02
Strategic Approach	.71	.00	.00	.03
General Self-Efficacy	-.89	-.01	.01	-.04

Hierarchical  
Regression  
GPA2

# Key Findings

- **Arts students less career decided than Engineering & Surveying, Sciences, and Business students.**
  - **Scope to explore different career pathways**



# Key Findings: SAL and Personality



- Regression analyses as expected:
  - **Intellect** and **Conscientiousness** positively predict **Deep approach**.
  - **Conscientiousness** positively predicts **Strategic approach**.
  - **Neuroticism** and **Extraversion** positively predict and **Intellect** negatively predicts **Surface approach**.

# Key Findings (multiple regression): Predictors of GPA

- **Regression analyses:**
  - **Conscientiousness, Agreeableness and Intellect** positively predict **GPA1** and **GPA2**.
  - **Surface approach** negatively predicts **GPA1** and **GPA2**; **Strategic approach** positively predicts **GPA1** and **GPA2**.
  - **GSE** positively predicts **GPA1** and **GPA2**; **Major satisfaction** positively predicts **GPA1** only.
  - **GPA1** predicts **GPA2**.

# Key findings: Hierarchical Regression



- **GPA1** – positively predicted by **Strategic** approach and **Agreeableness**; negatively predicted by **Surface** approach.
- **GPA2** – **GPA1** strongest predictor (52.8% variance); when control for GPA1, **Conscientiousness** and **Agreeableness** positive predictors.

# Implications

- The current findings indicate that **first-year experience** is vital to subsequent success.
- First year students who are **trusting, cooperative**, and who intend to excel (**achievement oriented**) are more likely to be successful in first year and progress into second year studies.
- Educators should focus on **noncognitive factors** that positively influence first year experience - need to ensure students have learning opportunities to **gain confidence** and **self-belief and experience early success**; have opportunities to promote the practice of **time management** skills and appropriate **study habits**.

Thank you! ..... questions?

