

Week 6: Learning Styles

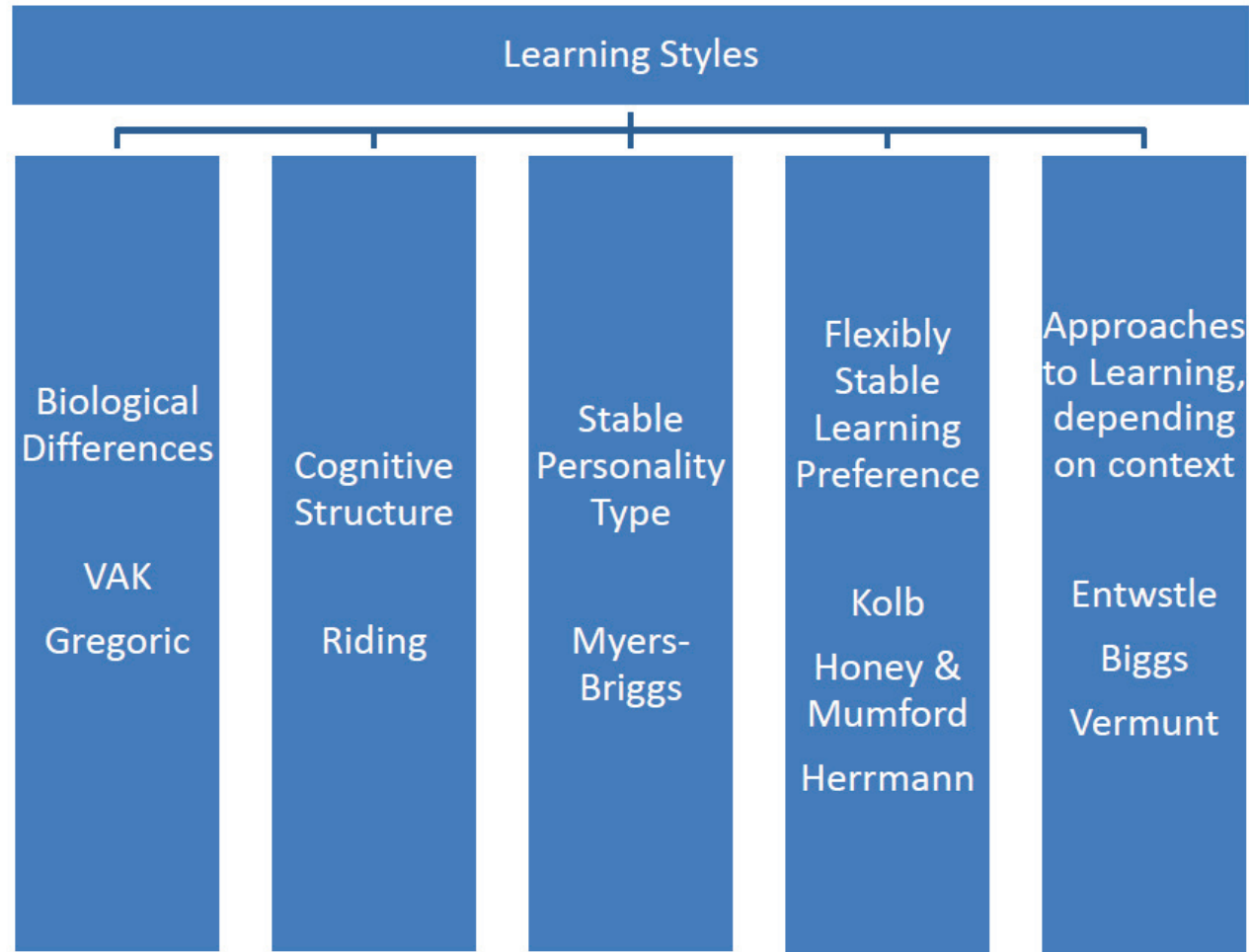
Roland Tormey
How People Learn I

Teaching Support Centre / Centre d'appui à l'enseignement
Email: roland.tormey@epfl.ch

Claims about Learning Styles

- “Learning styles are a way to help improve your quality of learning. By understanding your own personal styles, you can adapt the learning process and techniques you use. This site is dedicated to helping you better understand learning styles, as well as providing an easy way to discover your own styles.”- <http://www.learning-styles-online.com/>
- “Knowing your learning style can accelerate your learning as you undertake activities that best fit your preferred style”. - <http://www.mftrou.com/honeymumford.html>
- Does knowing your “learning style” help your learning as these websites claim?

What is meant by “learning style”?



- Learning styles are **stated preferences** in ways of **learning** or in **processing information** and which are said to be associated with **greater success** in learning.
- Approaches to learning are stated preferences in learning or processing information **in a particular discipline or context**, which are said to be said to be associated with greater success in learning.

Different types of learning styles

- Perceptual styles (VAK):
 - Visualisers
 - Verbalisers (auditory)
 - Tactile learners (kinaesthetic)
- Thinking styles:
 - Serialist vs wholist
 - Conceptual vs. applied thinkers
- Learner in Context Habits
 - Deep
 - Surface
 - Strategic

Different proposed types of use

- Meshing hypothesis
- Heuristic for teachers
- Self-evaluation/ reflective tool

Scoring the ASSIST

Quantitative Social Research Methods

Experiments

- Control for non relevant factors by selection of participants
- Typically non-realistic situations (hard to make claims about populations)
- Allows observations
- Usually smaller numbers
- Test hypotheses

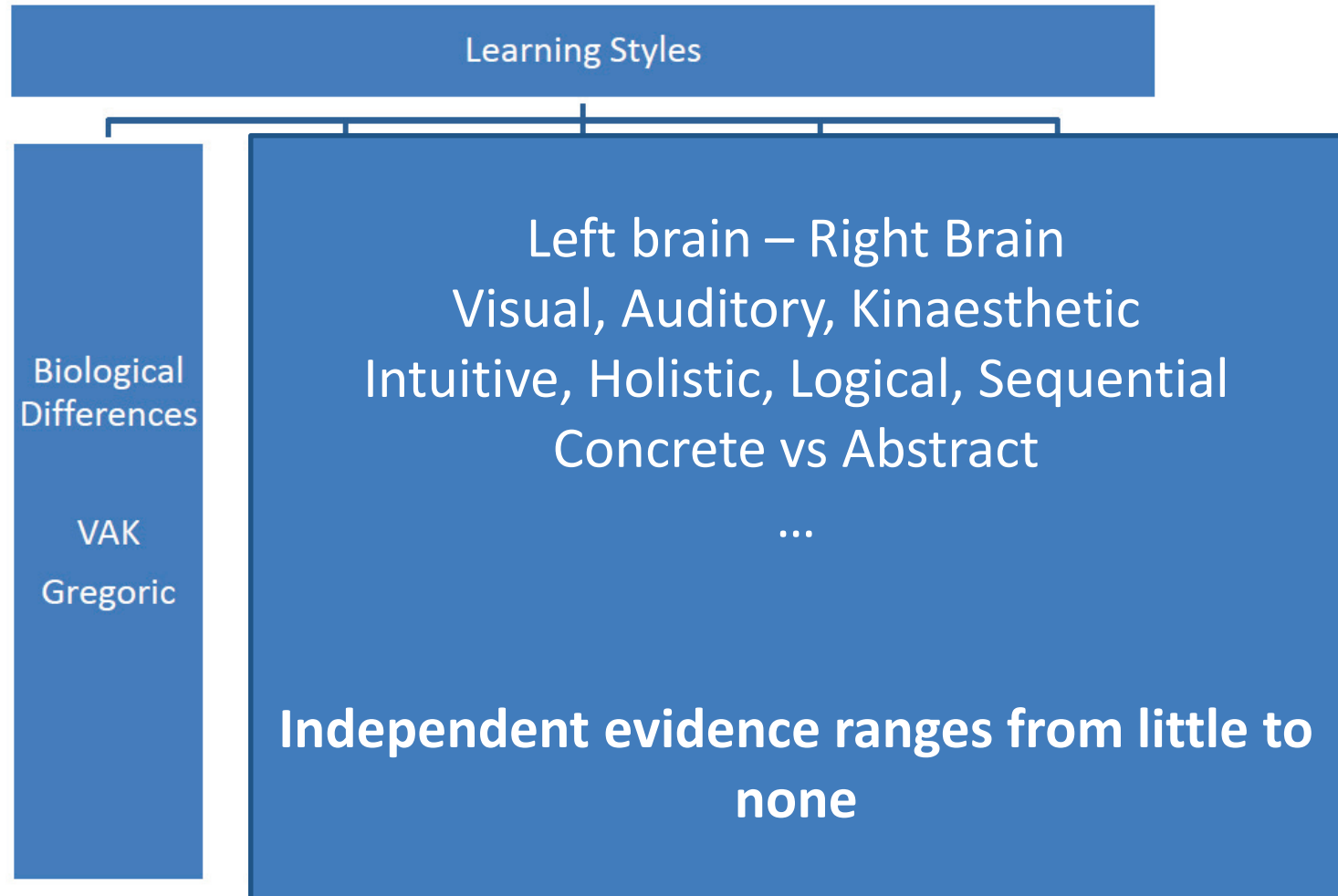
Surveys

- Control for non-relevant factors by large numbers which enables those factors to be taken into account in analysis
- Typically 'real-life' questions
- Can make claims about population if randomly selected
- Relies on self-reports
- Larger numbers
- Develop hypotheses / test hypotheses

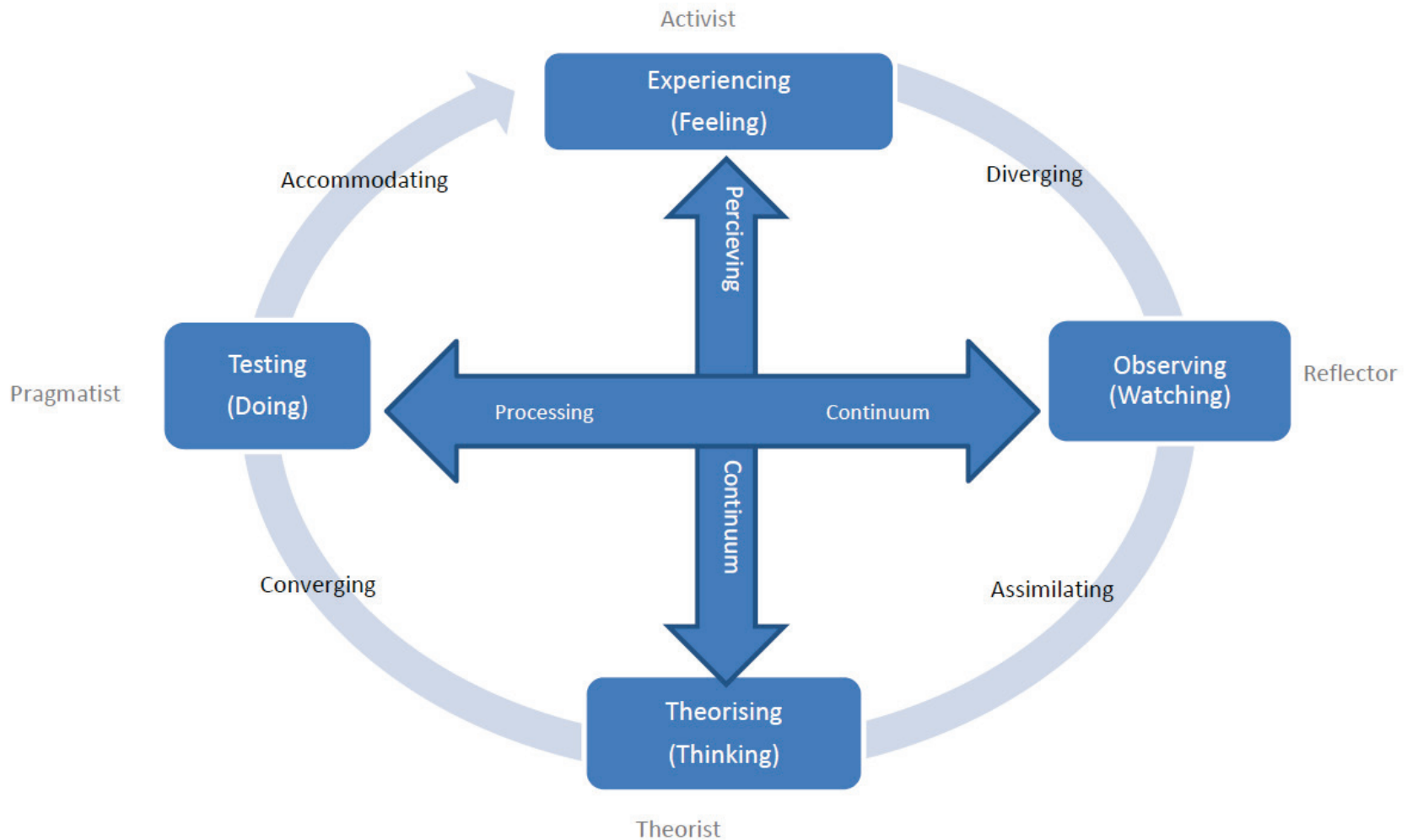
What evidence is used to assess learning styles (or other scales?)

- Reliability: Do you get the same answer if you give the test a number of times to the same person?
 - Measured using Cronbach's alpha
- Validity: Does it assess what it says it assesses?
 - Factorial validity: If different items measure the same underlying feature, are they correlated?
 - Face validity: Does it look like it measures what it says it measures?
 - Predictive validity?: If the theory says people who score well will also score highly on something else, do they?

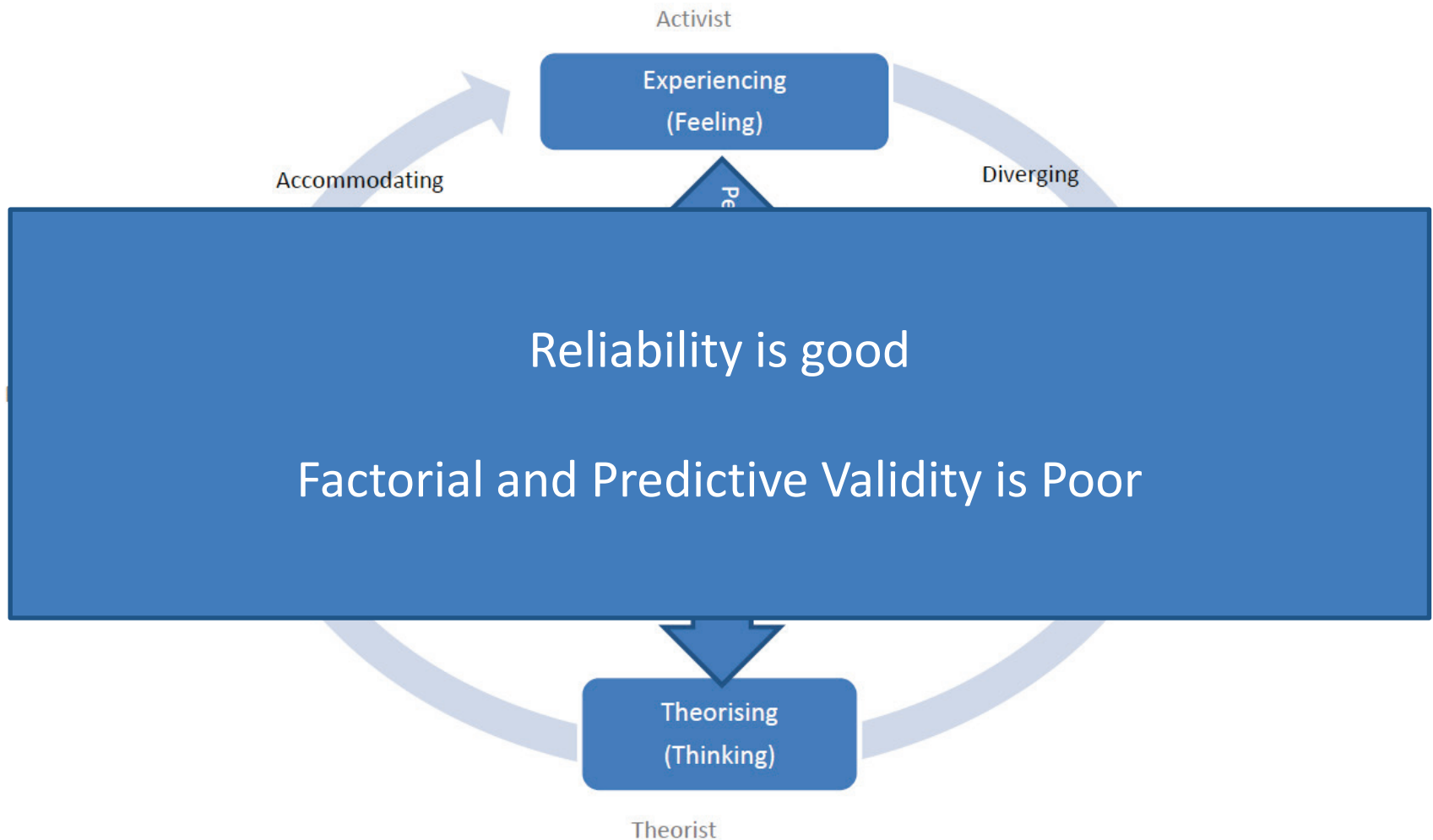
Evidence for biological models?



Kolb active learning cycle

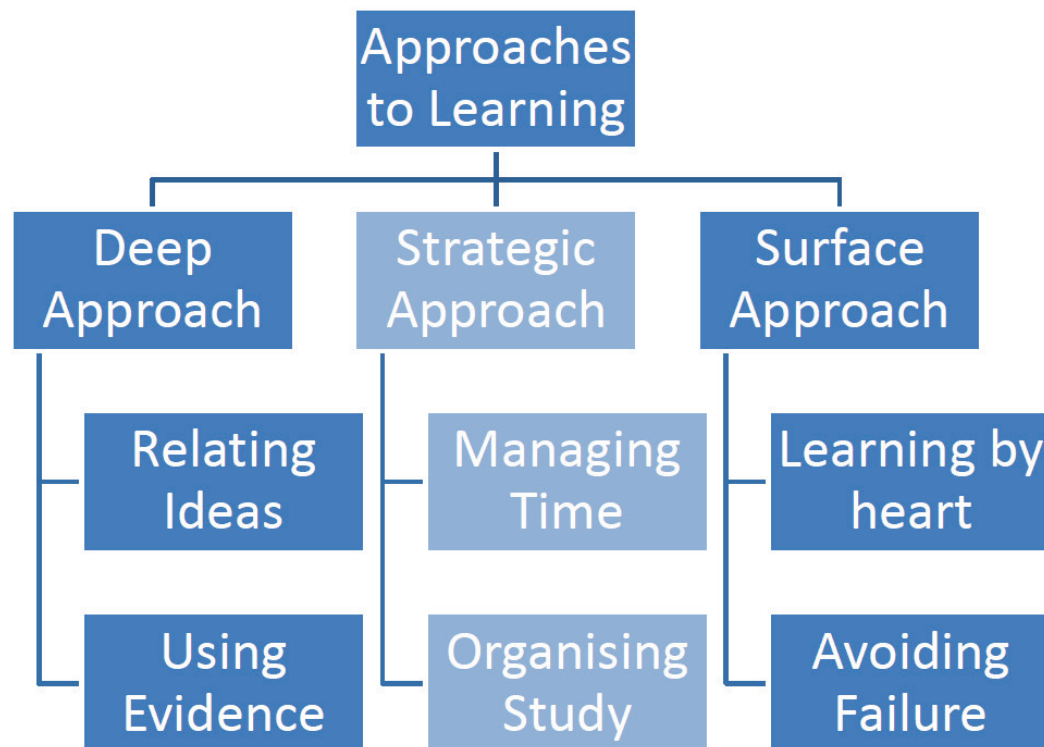


Kolb active learning cycle



Approaches to Learning

- Depends on context, as well as experience
 - Same person may differ from class to class



Evidence for Approaches to Learning

- Reliability is good
- Factorial Validity
 - Factors emerge (but not always the ones proposed)
 - Predictive validity...?

Predictive validity of Approaches to Learning

1914

A. Duff et al. / Personality and Individual Differences 36 (2004) 1907–1920

Table 2

Correlations between personality, approaches to learning, age, (N = 146)^a

	Extra	Neuro	Open	Agree	Cons	Deep			
Extra	1	−0.300**	0.275**	−0.226**	0.581**	0.21	0.094	0.210	
Neuro		1	0.001	−0.045	−0.058	−0.08	−0.250*	0.097	success
Open			1	−0.210*	−0.045	0.27	0.038	−0.054	GPA
Agree				1	0.113	−0.22	0.001	0.153	0.060
Cons					1	0.58	−0.264**	0.110	−0.138
Deep						1	−0.060	0.562**	0.066
Surf							1	0.043	0.115
Strat								1	0.210
Age								1	−0.097
H Pts								1	−0.054
GPA								1	0.153

* $p < 0.05$; ** $p < 0.01$.

^a Extra = extraversion; neuro = neuroticism; open = openness to experience; agree = agreeableness; cons = conscientiousness; deep = deep approach; surf = surface approach; strat = strategic approach; H Pts = prior academic achievement; GPA = academic success.

Is there value in learning style questionnaires?

A reliable and valid instrument which measures learning styles and approaches could be used as a tool to encourage self development, not only be diagnosing how people learn, but by showing them how to enhance their learning”

(Coffield et al 2004, p. 132)