



Concurrent validity of approaches to study instruments

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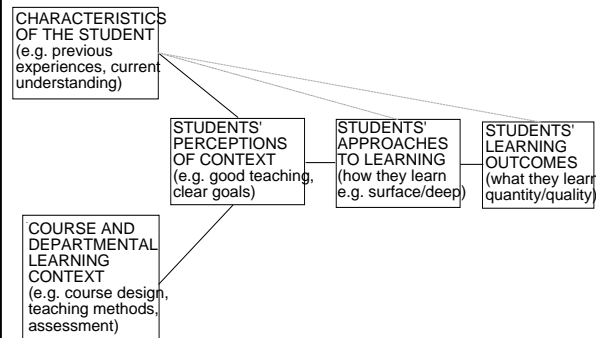
3 Learning Approaches

- **Deep** -- active orientation to the learning task: search for meaning, holistic approach or 'big picture', seek for interrelationship between parts (Biggs, 1987)
- **Surface** -- extrinsic motivation, focus on elements rather than the task as a whole, apply rote learning strategies.
- **Achieving / Strategic** -- highly organised approach to study with high achievement motivation



Students' approaches to study are contingent upon:

- 1) Their prior experiences
- 2) Perceptions of current learning contexts



Quantitative measurement of approaches to learning

- **SPQ (1979)**: Personal qualities important to academic learning: motives and strategies on each of the 3 major dimensions
- **ASI (1979)**: Broader classification of meaning, reproducing or achieving orientations, with a 4th dimension measures learning pathologies



Previous correlation study of these 2 instruments

- **Wilson et al** - Gender differences in approaches to learning (1996 Br J Ed Psychology 66: 59-71)
- SPQ - 42 item measure containing 3 learning approaches scales, each comprising a motive and strategy subscale (Biggs, 1987)
- ASI-S (Entwistle 1981, Entwistle & Ramsden 1983) - 30-item short form of the ASI containing the 3 main study orientations

Correlation analysis by Wilson et al (1996)

- 2 cohorts of mixed 1st year psychology students (n= 165 and 118)

Orientation	SPQ					
	Deep Approach		Surface Approach		Achieving Approach	
	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
Meaning	0.45*	0.61*	-0.23	-0.49*	0.37	0.18
Reproducing	-0.12	-0.037	0.44*	0.62*	-0.08	0.04
Achieving	0.31	0.14	0.00	0.18	0.46*	0.46*

Present correlational analysis

- 1st year medical undergraduate students in two different learning and cultural contexts (n = 128 and 103)
- Shortened SPQ: 18-item, has 6 subscales previously verified that data best fit by three second order factors: deep, surface and achieving; by Fox et al (2001) Br J Education Psychology, 71, 511-530.
- Shortened ASI: 18-item, has 5 factors: deep approach, surface approach, monitoring studying*, organised studying and effort management; by Entwistle et al (2002) in Mattick et al (2004) Medical Education, 38, 535-543.

Shortened SPQ

- Shortened to make it easier to administer to students, particularly suitable to assess students longitudinally, which is important for long courses such as medicine

Example Items

Surface – I think browsing around is a waste of time, so I only study seriously what's given out in class or in course outlines.

Deep – I find that at times studying gives me a feeling of intense personal satisfaction.

Achieving – I see getting high marks as a kind of competitive game, and I play it to win.

Shortened ASI

- Shortened to make it easier to administer to students, easily and completely finished

Example Items

Deep – I have usually set out to understand for myself the meaning of what we had to learn

Surface – Much of what I've learned seems no more than lots of unrelated bits and pieces in my mind

Achieving – On the whole, I've been quite systematic and organised in my studying

2 cultural and learning contexts

- Undergraduate medical program in Australia
- Undergraduate medical program in Hong Kong
- Both use PBL as the approach for the medical program
- Students filled in the two shorten questionnaires before they started their medical program in the first year as part of a PBL conception and perception study using both qualitative (phenomenographic) approach and quantitative (survey) approach respectively

Correlation between two 18-item instruments of SPQ and RASI

Orientation	shorten ASI		shorten SPQ			
	Deep Approach		Surface Approach		Achieving Approach	
	HK	Newcastle	HK	Newcastle	HK	Newcastle
Meaning	0.66**	0.68**	-0.16	-0.31**	0.44**	0.26**
Reproducing	-0.15	-0.09	0.37**	0.35**	-0.18*	0.09
Achieving	0.47**	0.51**	0.03	-0.06	0.59**	0.66**

**p<0.01; * p<0.05

Conclusions



- Correlational analysis of 2 short inventories to assess approaches to learning indicates moderate correspondence between deep approach and meaning orientation; between surface approach and reproducing orientation; and between achieving approach and achieving orientation.
→ Evidence of *concurrent validity* (ASI and SPQ are measuring similar constructs)
- Both shortened 18-item SPQ and ASI appears useful for large scale, particularly longitudinal, questionnaire research. Both are easy to administer and should be easily and fully completed by students.

Further Reading



- Entwistle & McCune (2004). The conceptual bases of study strategy inventories. *Educational Psychology Review*, 16, 325 – 345.
- Richardson, J.T.E. (2005). Instruments for obtaining student feedback: A review of the literature. *Assessment & Evaluation in Higher Education*, 30, 387-415.