

Feb, 22, 2017

# THE DEVELOPMENT OF PHILOSOPHICAL COMPETENCE SCALE



OSAKA PREFECTURE UNIVERSITY

KAI HATANO

1

## TODAY'S PRESENTATION

- Two types of Assessment
- Reliability and Validity
- The development of Philosophical Competence scale
- Future directions

## TWO TYPES OF ASSESSMENT (BANTA, 2010)

### Direct measure

- The assessment of learning outcome
- Direct evidence
- E.g., examination, reports, portfolio.

### In-direct measure

- The assessment of learning process
- Indirect evidence
- E.g., Students survey, psychological scale

3

## RELIABILITY

- **Reliability** ■ ■ the overall consistency of a measure
- **Test-retest reliability** : assesses the degree to which test scores are consistent from one test administration to the next.
- **Internal consistency** : assesses the consistency of results across items within a test.

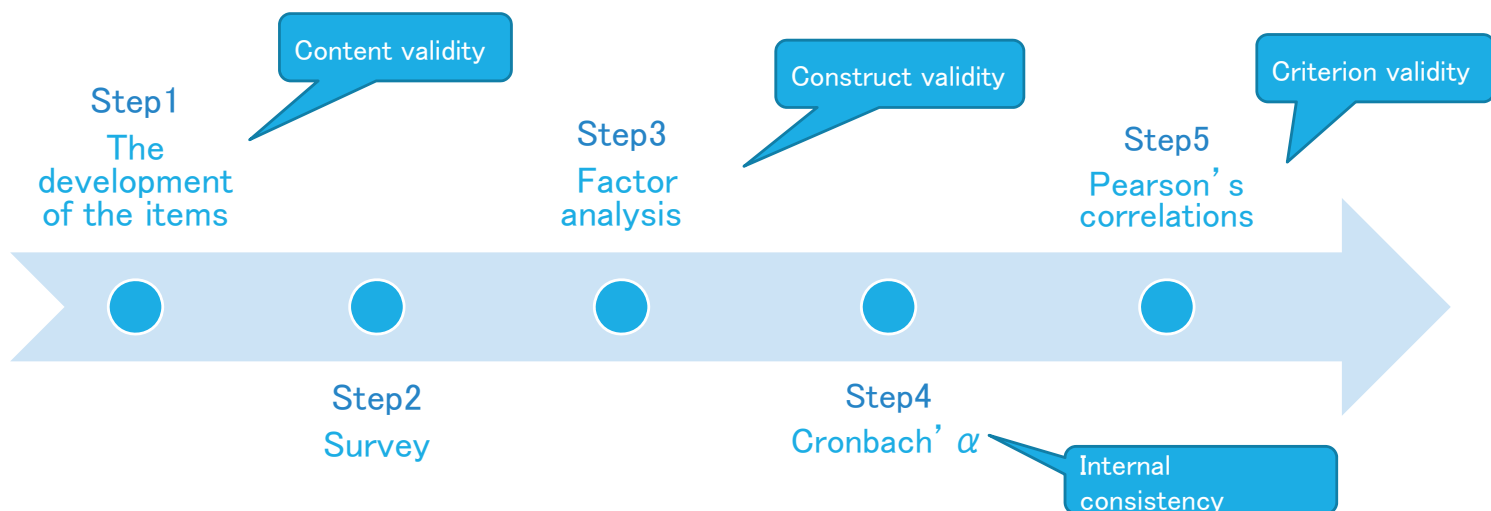
4

## VALIDITY

- **Validity** is the extent to which a concept is well-founded and corresponds accurately to the real world.
  - **Content validity** : is a non-statistical type of validity that involves the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured.
  - **Criterion validity** : refers to the degree to which the operationalization correlates with other measures of the same construct that are measured at the same time.
  - **Construct validity** : refers to the extent to which operationalizations of a construct measure a construct as defined by a theory.

5

## STEP TO DEVELOPMENT THE PHILOSOPHICAL SKILL SCALE



6

## THE DEVELOPMENT OF THE ITEMS

- **Content validity**
- Based on previous research and interviewing the employers that hire the individuals be a graduate of Department of Philosophy, 33 items were developed.
- **Criterion validity (Hypothesis)**
- Philosophical skills would be acquired through the taking a critical attitude and the communication with others
  - We hypothesized that philosophical skills would be positively associated with critical thinking and communication skills

7

## PARTICIPANTS AND PROCEDURE

- One hundred forty one university students
- The data were collected using an online system (i.e., REAS)
- November in 2016
- measures
  - The items for philosophical Competence scale: thirty three items rated on 5–points Likert scale ranging from 1 to 5.
  - Communication skill scale: Six items rated on 5–points Likert scale ranging from 1 to 5.
  - Critical thinking scale: Seven items rated on 5–points Likert scale ranging from 1 to 5.

8

項目	因子		
	1	2	3
Q8 自分や他者が議論しているときに、それぞれの意見がどこで食い違っているのかを指摘できる	.709	.047	-.113
Q9 自分や他者が議論しているときに、それぞれの意見の良い所と悪いところを比べることができる	.666	-.027	.032
Q10 自分や他者が議論しているときに、これまでに無かった新しい意見を付け加えることができる	.643	.005	.029
Q4 他者の意見に優れた点があれば、それを伸ばす手伝いができる	.629	-.024	-.027
Q2 他者の意見に論理的な欠点があれば、それを直す手伝いができる	.581	-.074	.132
Q19 他者の意見を再現したり、紹介するのが得意だ	.537	.005	-.014
Q30 新しく覚えた知識や考え方を、別の知識や考え方と混ぜたり組み合わせるのが得意だ	.496	.116	.133
Q33 現代の哲学的な問題をよく知っている	.001	.817	.039
Q31 哲学の様々な分野の区分についてよく知っている	.059	.814	-.019
Q32 過去の哲学者の考え方をよく知っている	-.014	.776	-.012
Q27 自分にとって難しい言葉や概念に接すると、それについて調べたいと思う	-.186	.056	.911
Q21 文献資料を読む際、わからない言葉があれば徹底的に調べる	-.060	.101	.531
Q26 答えがなかなか出ない問題でも、時間をかけて考えぬくことができる	.123	-.118	.480
Q23 文献資料を読む際、理解できない考え方が見つければ、それが理解できるまで考える	.201	.000	.469
Q17 何かを論じる際には、自分の主張だけでなくそれを支える理由もセットで考えている	.252	-.098	.436

Philosophical Inquiry Scale

Philosophical Knowledge

Philosophical Attitudes

9

\* Maximum Likelihood Method, Promax rotation

Table 2 各尺度間の相関係数

	批判的思考態度・客観性	自分の感情や行動をうまくコントロールする	自分の考えや気持ちをうまく表現する	相手の伝えたい考えや気持ちを正しく読み取る	自分の意見や立場を相手に受け入れてもらえようように主張する	相手を尊重して相手の意見や立場を理解する	周囲の人間関係にはたらきかけ良好な状態に調整する
哲学的議論構築力	.491**	.350**	.368**	.532**	.398**	.427**	.513**
哲学的知識	.165*	.141	.242**	.226**	.216*	.187*	.257**
哲学的態度	.436**	.168*	.260**	.300**	.136	.416**	.273**

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

## DISCUSSION

- **Construct validity:** Exploratory factor analysis revealed that philosophical competence is consisted of three factors, that is, Philosophical Inquiry Skills, Philosophical Knowledge, and Philosophical Attitudes.
- **Internal consistency:** Cronbach'  $\alpha$  were good (.759 ~ .856).
- **Criterion validity:** In line with our hypothesis, three philosophical skills were positively related to critical thinking and communication skills.

11

## FUTURE DIRECTIONS

- Limited sample (limitations)
- Predictive validity
- Development of philosophical competence tests (direct measure)

12



Thank you for your attention!

[kai.hatano@las.osakafu-u.ac.jp](mailto:kai.hatano@las.osakafu-u.ac.jp)