Development and Validation of a Work Values Scale for Assessing College Students: A Mixed-Method Approach

Research Center for Psychological and Educational Testing, National Taiwan Normal University
Presenter: Tzu-Ying Cheng

Yao-Ting Sung
Yung-Tim Chang

Introduction
The meaning of work values

What people consider an ideal job, what they would like to obtain from their work, or what criteria are important to them; these notions are reflected in their behavior, and help to determine whether or not their behavior is appropriate.

Super (1970): work values to be related to work objectives
Wollack, Goodale, Wijting, and Smith (1971): work values to be a general as opposed to specific indicators of a person’s attitude toward work and that through socialization accumulate and solidify over time.
Rokeach (1973), Kalleberg (1977), Pryor (1970) Dawis (1991) and Robbins (2001): work values could be used to explain an individual’s “needs” and “expected gains from working.”

Literature review

✓ Work value assessments

Super (1970) → Work Values Inventory (WVI)
Gay, Weiss, Hendel, Dawis and Lofquist (1971) → Minnesota Importance Questionnaire (MIQ)

Intrinsic values
Achievement
Comfort
Status
Altruism
Safety
Autonomy
Extrinsic values
Achievement
Comfort
Status
Altruism
Safety
Autonomy
Aim of the Study:

- (1) to determine the work values dimensions of Taiwanese students by means of qualitative research
- (2) to develop a work values scale suitable for use college students based on the work values dimensions obtained by qualitative research
**Method: Qualitative Research (1/4)**

Focus-group interview:
- 30 Taiwanese nationals split evenly between men and women (include college students and individuals with more than 2 years of working experience.)
- five separate focus-group interview

1. Focus-group interview
2. Reading of the transcripts
3. Open coding
4. Axis coding
5. Selecting coding
6. Item development and review
7. Expert’s examination

**Method: Qualitative Research (2/4)**

Work Values Structural Framework
- Comfort → stable life, salary, and benefits
- Prestige → social approval and social status
- Growth → professional growth and challenges
- Autonomy → the power of autonomy that an individual possesses
- Self-actualization → implementation of abilities and actualization of ideals
- Social motivation → serving others, social responsibility, moral conscience
- Interpersonal connections → social networks and engaging in teamwork

2015/11/15

**Method: Qualitative Research (3/4)**

- 30 Taiwanese nationals split evenly between men and women (include college students and individuals with more than 2 years of working experience.)
- five separate focus-group interview

1. Focus-group interview
2. Reading of the transcripts
3. Open coding
4. Axis coding
5. Selecting coding
6. Item development and review
7. Expert’s examination

**Method: Qualitative Research (4/4)**

Work Values Structural Framework
- Comfort → stable life, salary, and benefits
- Prestige → social approval and social status
- Growth → professional growth and challenges
- Autonomy → the power of autonomy that an individual possesses
- Self-actualization → implementation of abilities and actualization of ideals
- Social motivation → serving others, social responsibility, moral conscience
- Interpersonal connections → social networks and engaging in teamwork

2015/11/15
Method : Quantitative research (3/4)

- **Pilot study**
  - Sample: 629 college students
    (261 males ; 368 females)

- **Formal study**
  - Sample: 592 college students
    (247 males ; 345 females)

Method : Measures (4/4)

- **Initial Item Development & Reliability**
- **Exploratory factor analysis (EFA)** → SPSS 18.0
- **Confirmatory Factor Analysis (CFA)** → LISREL 8.70
- **Test–retest reliability coefficient & Correlations**
Results for WVA (1/2)

**Step1. Pretest**
EFA & Reliability Testing
Deleted 19 items.
The scale had a total of 42 reliable items.
(factor loading < .4)
Cronbach’s $\alpha = .86 \sim .92$

**Step2-1. Formal Testing**
Reliability Testing
CR: .84 to .91
Correlation coefficient: .20 to .78
Internal consistency reliability: .84 to .91
Retest reliability: .67 to .83.
Overall scale reliability: .75

Step2-2. Formal Testing
Validity Testing

EFA:
Principal Axis Factoring and Promax rotation
KMO: 0.942
Bartlett’s test: 3098.10 ($p < .001$).
Total of explained variance: 62.48%

Results : CFA for WVA (2/2)

A model is regarded as acceptable if:
- $\chi^2: p < 0.005$
- RMSEA is less than .5
- CFI exceeds .9
- TLI is less than .9

<table>
<thead>
<tr>
<th>LISREL ML</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>$p$</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>NNFI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-factors</td>
<td>3098.10</td>
<td>798</td>
<td>&lt;.001</td>
<td>0.070</td>
<td>0.06</td>
<td>0.96</td>
<td>0.96</td>
</tr>
</tbody>
</table>
Discussion

Critical findings

- Constructed a conceptual work values framework from empirical data.

<table>
<thead>
<tr>
<th>Work Value Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>intrinsic values</td>
</tr>
<tr>
<td>extrinsic values</td>
</tr>
<tr>
<td>prestige values</td>
</tr>
<tr>
<td>social values</td>
</tr>
<tr>
<td>self-actualization</td>
</tr>
<tr>
<td>professional growth</td>
</tr>
<tr>
<td>autonomy</td>
</tr>
<tr>
<td>prosocial</td>
</tr>
<tr>
<td>comfort</td>
</tr>
<tr>
<td>prestige</td>
</tr>
<tr>
<td>interpersonal</td>
</tr>
</tbody>
</table>

- Good reliability
  \( (\alpha = .84 \text{ to } .91; \text{ retest reliability } = .67 \text{ to } .83) \)

- Good validity
  \( (\text{RMSEA } = .070, \text{ CFI } = .96, \text{ SRMR } = .06) \)
Limitations

✓ The sample used in this study was limited to college students in Taiwan.

Future research:
compare the cross-cultural work values of Westerners(individualistic) or Easterners(collectivistic).

Likert scale for scoring

Future research:
Experiment with different scales and different response formats to overcome this problem.

Thank you for your listening