Openness to Diversity and Challenge as a Noncognitive Attribute for Student Success

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Presentation Outline

• Development of ODC construct

• Link between ODC and college experiences/outcomes

• Change and malleability in ODC

• Interventions that may promote ODC
Creating ODC

• Pilot project for National Study of Student Learning (Pascarella, Bohr, Nora, Ranganathan, Desler, & Bulakowski, 1994)

• Research from NSSL (Cabrera et al., 2002; Pascarella et al., 1996; Pierson et al., 2003; Whitt et al., 2001; Wolniak et al., 2001)
Defining ODC

• “[N]ot only includes an assessment of an individual’s openness to cultural, racial, and value diversity, it also taps the extent to which an individual enjoys being challenged by different ideas, values, and perspectives” (Pascarella et al., 1996, p. 179)

• Sample items (7-8 items, α = .83-.88)
  – “I enjoy having discussions with people whose ideas and values are different from my own”
  – “Learning about people from different cultures is an important part of my education”
ODC as a Single Construct

• Challenge as integral to diversity experiences (Crisp & Turner, 2011; Gurin, Dey, Hurtado, & Gurin, 2002)

• Original development through factor analysis (Pascarella et al., 1994)

• Additional factor analyses (Bowman, 2014)
  – Eigenvalue greater than one
  – Scree plot
  – Factor loadings > .62
ODC as a Noncognitive Predictor

• Necessary for adjustment to college environment

• Subset of openness to experience?
  – Fantasy
  – Aesthetics
  – Feelings
  – Actions
  – Ideas
  – Values
ODC and Openness to Experience

• Openness to experience (OTE) and academic achievement (Conneley & Ones, 2010; Poropat, 2009)

• Adjusted correlations between ODC and OTE (single institution)
  – Full OTE measure: $r = .59$
  – Facets 1-3 (fantasy, aesthetics, feelings): $r = .39$
  – Facets 4-6 (actions, ideas, values): $r = .70$
ODC as Predictor of Student Success

• Mostly examined as outcome variable

• Very limited research evidence
  – Wabash National Study of Liberal Arts Education (longitudinal)
  – Single-institutional data from psychology subject pool (cross-sectional)
ODC and Student Outcomes

• Predicts all five college experience scales (Bowman, 2014)
  – Diversity experiences ($\beta = .29^{***}$)
  – Academic challenge ($\beta = .25^{***}$)
  – Faculty/staff interactions ($\beta = .14^{***}$)
  – Peer interactions ($\beta = .11^{***}$)
  – Good teaching ($\beta = .18^{***}$)

• Predicts student success (Bowman, 2014)
  – College GPA ($\beta = .04^{**}$)
  – Second-year retention ($B = .09^*$, odds ratio = 1.09)
ODC and Student Outcomes (cont.)

• Predicts increases in Australian students’ civic engagement (Denson & Bowman, 2013)

• Predicts increases in interpersonal and curricular diversity experiences (Bowman, 2012)

• Predicts international students’ college adjustment (Yakunina et al., 2012)
ODC Persistence Effects are Indirect

• Incorporating college experiences when predicting retention (WNSLAE)

• Predicts intermediate outcomes (single institution)
  – Campus climate, social integration, and goal commitment
  – Institutional commitment and validation (similar to conscientiousness and self-efficacy)
  – Not intent to persist
Change in ODC Over Time

- No evidence for K-12

- WNSLAE (also see O’Neill, 2012)
  - Time 1 (start of first year): 3.89
  - Time 2 (end of first year): 3.76
  - Time 3 (end of fourth year): 3.80

- Single institution (ODC & year): \( r = .13^{**} \)
Malleability of ODC

<table>
<thead>
<tr>
<th>Time period for correlations (WNSLAE dataset)</th>
<th>Unadjusted</th>
<th>Adjusted for attenuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start of 1\textsuperscript{st} year to end of 1\textsuperscript{st} year</td>
<td>.58***</td>
<td>.68***</td>
</tr>
<tr>
<td>Start of 1\textsuperscript{st} year to end of 4\textsuperscript{th} year</td>
<td>.48***</td>
<td>.56***</td>
</tr>
<tr>
<td>End of 1\textsuperscript{st} year to end of 4\textsuperscript{th} year</td>
<td>.56***</td>
<td>.64***</td>
</tr>
</tbody>
</table>

Pretest variance explained in multiple regression analyses:

--End of first year: 26.6\% (Pascarella et al., 1996)
--End of second year: 22.0\% (Whitt et al., 2001)
--End of third year: 19.6\% (Whitt et al., 2001)
Interventions to Promote ODC

- **Diversity experiences** (Chang et al., 2006; Longerbeam, 2010; Pascarella et al., 1996; Pike, 2002; Reason et al., 2010; Whitt et al., 2001)
  - Interpersonal interactions
  - Discussing issues of difference
  - Racial/cultural awareness workshop
  - Perceiving positive diversity climate

- **Mixed findings for other experiences**
  - Civic engagement may bolster ODC (Longerbeam, 2010; Reason et al., 2010)
  - Fraternity/sorority membership may diminish ODC (Pascarella et al., 1996; Wolniak et al., 2001)
Conclusions

- ODC appears to bolster college engagement
- Effects on college persistence are indirect
- Reciprocal relationship with diversity experiences?
- Much more research is needed
Thank you!

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