PROMOTING POSITIVE IDENTITY: THE MAKING CAREER AND EDUCATION CHOICES WORKSHOP

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Introduction

- This randomized pilot study investigates intervention gains in the Making Career and Education Choices (MCEC) workshop, a developmental intervention for promoting the positive identity development of adult college students.

- Adults follow diverse pathways into college. However, they share the experience of facing one or more transitions in their personal and career life (Hardin, 2008).

- Developmental interventions strategically target core developmental processes during life transitions to promote long-term positive change over the life course.

- Positive identity is the sense of coherence, integration, and direction that individuals construct through their life choices (Eichas, Meca, Montgomery, & Kurtines, 2014).

- During life transitions, positive identity development is a marker of phase-adequate engagement: intentionally engaging in actions that maximize transition benefits and minimizes opportunity costs that are present in the individuals’ transition context (Dietrich, Parker, & Salmela-Aro, 2012).
The Dual Cycle Model

• We used the dual cycle model of identity development (Luyckx et al., 2006) to operationalize positive identity development.

• The dual cycle model proposes a commitment formation cycle and a commitment evaluation cycle.

  • In the commitment formation cycle, individuals explore identity alternatives (exploration in breadth) and make identity choices (commitment making).

  • In the commitment evaluation cycle, individuals explore the identity choices they have made (exploration in depth) before integrating these choices into their sense of identity (identification with commitment).

• Sometimes individuals get “stuck” in the process of exploring identity alternatives. Maladaptive exploration is ruminative exploration (Luyckx et al., 2008).

The MCEC Workshop

• The MCEC workshop uses journal exercises and group discussions to engage students in the challenge of making career and education choices.
<table>
<thead>
<tr>
<th>Session Theme</th>
<th>Journal Exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Big Picture</td>
<td>• (completed in group) Identify most important life course events and turning points and co-construct life stories by sharing with the group.</td>
</tr>
</tbody>
</table>
| 2. The Present      | • Solve a hypothetical career dilemma  
• Identify a personal career/education dilemma and apply critical problem solving strategies to the personal career/education dilemma.                                        |
| 3. The Future       | • Identify most important long-term career goal, break this goal into activities essential for achieving the goal, and the feelings (e.g., flow) associated with engaging in the activities. |
| 4. Life Change      | • Identify a life change goal for reaching the long-term career goal.  
• Identify obstacles to making the life change.  
• Apply critical problem solving about actions to take to accomplish the life change goal.                                      |
| 5. Sources of Support | • Identify sources of social support available for reaching goals and how to enhance this support.                                                                                                                  |
| 6. What Works       | • Review work by evaluating progress towards goals and identifying actions that seemed to have worked so far.                                                                                                      |
Method

Participants and Procedure

• Over two semesters, 58 upper-level university center (Floyd & Walker, 2008) students at a community college were randomly assigned to either the MCEC workshop \( n = 32 \) or to a control group \( n = 26 \).

• Thirteen students did not attend assigned workshop sessions, resulting in a final sample of 45 (MCEC, \( n = 19 \); control, \( n = 26 \)) for the treatment on the treated (TT) analyses.

• Participants were age 20-55 \( (M = 32.33, SD = 10.95, Md = 28) \).

• Thirty-seven were female (22 White, 6 Hispanic, 8 Black, and 1 Asian) and 8 were male (4 White, 3 Hispanic, and 1 bi-ethnic).
Participant Characteristics

- Full-time Work: 64%
- Financially Independent: 76%
- Non-Spouse Dependents: 31%
- Part-time Student: 31%
- Single Parent: 24%
- Delayed Enrollment: 44%
- GED/HS Equivalent: 27%
- First Generation-College: 42%
- First Generation-Bachelors: 47%
Consented and Enrolled  
N = 58

- MCEC  
  n = 32
  - Pretest  
    n = 31
    - Posttest  
      n = 15
      - FIML  
        ITT analysis, n = 32  
        TT analysis, n = 19

- Allocation
  - Pretest
  - Posttest
    - Analyses

- Control group  
  n = 26
  - Pretest  
    n = 23
    - Posttest  
      n = 15
      - FIML  
        ITT analysis, n = 26  
        TT analysis, n = 26
Measures

• Five dual cycle model constructs were measured with 17 items from the Dimensions of Identity Development Scale (Luyckx et al., 2008) identified through pilot testing of the items to provide acceptable model fit ($\chi^2(109) = 137.72, p = .033, \text{CFI} = .96; \text{TLI} = .96; \text{RMSEA} = .05, 90\% \text{ CI} [.01, .07], p_{\text{CLOSE}} = .574; \text{SRMR} = .05$).

• The items also had acceptable scale reliability (exploration in breadth, $\rho = .74$; commitment making, $\rho = .84$; exploration in depth, $\rho = .73$; identification with commitment, $\rho = .78$; ruminative exploration, $\rho = .88$).

• In the sample for this study, Bayesian estimation with informative priors indicated acceptable model fit (Posterior Predictive Checking 95% CI [-.25.22, 96.03]; Posterior Predictive $p = .15$).

• Scales also had acceptable reliability (exploration in breadth, $\alpha = .79$; commitment making, $\alpha = .87$; exploration in depth, $\alpha = .68$; identification with commitment, $\alpha = .72$; ruminative exploration, $\alpha = .85$).
Data Analysis Strategy

- We assessed pre to posttest intervention effects using two-wave latent growth curve models with corrections for measurement error (Duncan & Duncan, 2004).
- Slopes provided latent change scores, and intercepts provided latent initial scores.
- The intercept and semester cohort were included as covariates of the slope.
Results

- Results revealed statistically significant effects on
  - Exploration in Breadth ($B = .46, p = .029$, Cohen’s $d = .84$),
  - Commitment Making ($B = .44, p = .014$, Cohen’s $d = .62$),
  - Exploration in Depth ($B = .31, p = .034$, Cohen’s $d = .65$), and
  - Identification with Commitment ($B = .28, p = .035$, Cohen’s $d = .42$).

- Intent-to-treat (ITT) analyses also showed statistically significant effects on
  - Exploration in Breadth ($B = .54, p = .008$, Cohen’s $d = .81$) and
  - Commitment Making ($B = .35, p = .035$, Cohen’s $d = .37$),
  - but not on
    - Exploration in Depth ($B = .13, p = .45$, Cohen’s $d = .29$) or
    - Identification with Commitment ($B = .21, p = .075$, Cohen’s $d = .29$).
## Parameter Estimates

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Predictor</th>
<th>TT Analyses (N = 45)</th>
<th>ITT Analyses (N = 58)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Estimate (SE)</td>
<td>95% CI</td>
</tr>
<tr>
<td><strong>Exploration in Breadth</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Change</td>
<td>EB Initial</td>
<td>-.22 (.20) [-.61, .18]</td>
<td>-.25 (.18) [-.60, .09]</td>
</tr>
<tr>
<td></td>
<td>Cohort</td>
<td>-.13 (.22) [-.57, .30]</td>
<td>.24 (.20) [-.14, .63]</td>
</tr>
<tr>
<td></td>
<td>MCEC</td>
<td>.46* (.21) [.05, .87]</td>
<td>.54** (.21) [.14, .95]</td>
</tr>
<tr>
<td><strong>Commitment Making</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM Change</td>
<td>CM Initial</td>
<td>-.28 (.23) [-.74, .18]</td>
<td>-.25* (.11) [-.46, -.04]</td>
</tr>
<tr>
<td></td>
<td>Cohort</td>
<td>-.08 (.16) [-.51, .36]</td>
<td>.01 (.20) [-.39, .41]</td>
</tr>
<tr>
<td></td>
<td>MCEC</td>
<td>.44* (.18) [.09, .79]</td>
<td>.35* (.16) [.02, .67]</td>
</tr>
<tr>
<td><strong>Ruminative Exploration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RE Change</td>
<td>RE Initial</td>
<td>-.29** (.10) [-.48, -.10]</td>
<td>-.27** (.10) [-.47, -.07]</td>
</tr>
<tr>
<td></td>
<td>Cohort</td>
<td>.04 (.19) [-.34, .42]</td>
<td>-.03 (.25) [-.53, .47]</td>
</tr>
<tr>
<td></td>
<td>MCEC</td>
<td>-.01 (.19) [-.39, .36]</td>
<td>.09 (.24) [-.38, .56]</td>
</tr>
<tr>
<td><strong>Exploration in Depth</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ED Change</td>
<td>ED Initial</td>
<td>-.57 (.36) [-1.27, .13]</td>
<td>-.72** (.26) [-1.22, -.22]</td>
</tr>
<tr>
<td></td>
<td>Cohort</td>
<td>.40 (.22) [-.03, .83]</td>
<td>-.29 (.16) [-.61, .02]</td>
</tr>
<tr>
<td></td>
<td>MCEC</td>
<td>.31* (.15) [.02, .59]</td>
<td>.13 (.18) [-.21, .48]</td>
</tr>
<tr>
<td><strong>Identification with Commitment</strong></td>
<td>IC Initial</td>
<td>-.29 (.18) [-.65, .07]</td>
<td>-.28* (.13) [-.54, -.03]</td>
</tr>
<tr>
<td></td>
<td>Cohort</td>
<td>.19 (.18) [-.16, .53]</td>
<td>-.26* (.12) [-.49, -.02]</td>
</tr>
<tr>
<td></td>
<td>MCEC</td>
<td>.28* (.13) [.02, .54]</td>
<td>.21 (.12) [-.02, .45]</td>
</tr>
</tbody>
</table>

*Note.* TT = treatment on the treated; ITT = intent to treat; Change = slope; Initial = intercept

* *p < .05, ** *p < .01, *** *p < .001
Mean Change Graphs

Exploration in Breadth

Commitment Making

Exploration in Depth

Identification with Commitment

Ruminative Exploration

Pretest | Posttest
--- | ---
2.97 | 3.35
2.87 | 3.28
2.58 | 2.58
2.37 | 2.35

Pretest | Posttest
--- | ---
4.01 | 4.05
4.05 | 4.46
4.39 | 4.27
4.34 | 4.34

MCEC | Control
--- | ---
--- | ---
Outcome Mediation Analysis
Outcome Mediation Model

MCEC Workshop

Identity Commitment

A

.40* (.57)

A

.40* (.57)

B

D

.97*** (1.10)

.99** (.81)

C

-.17 (-.27)

-.17 (-.27)

E

-.25 (-.29)

-.25 (-.29)

Career Agency

Academic SOC

.31

.07

.34

A*B = .38, 95% CI [.03, .85]
A*D = .37, 95% CI [.003, 1.03]

Posterior Predictive p = .429
Posterior Predictive Checking 95% CI [-38.961, 45.170]
Posterior Predictive Checking

95% Confidence Interval for the Difference
-38.961  45.170

Posterior Predictive P-Value 0.429
(Proportion of Points in the Upper Left Half)
### Outcome Mediation Model Results

#### Parameter Estimates

<table>
<thead>
<tr>
<th>Model Path</th>
<th>$B$</th>
<th>Posterior SD</th>
<th>$\beta$</th>
<th>95% Credibility Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDC at pretest $\rightarrow$ CM at pretest</td>
<td>1.00</td>
<td>—</td>
<td>.86</td>
<td>—</td>
</tr>
<tr>
<td>IDC at pretest $\rightarrow$ IC at pretest</td>
<td>.86***</td>
<td>.10</td>
<td>.86</td>
<td>[0.68, 1.06]</td>
</tr>
<tr>
<td>IDC at posttest $\rightarrow$ CM at posttest</td>
<td>1.00</td>
<td>—</td>
<td>.94</td>
<td>—</td>
</tr>
<tr>
<td>IDC at posttest $\rightarrow$ IC at posttest</td>
<td>.86***</td>
<td>.10</td>
<td>.85</td>
<td>[0.68, 1.06]</td>
</tr>
<tr>
<td>CA at pretest $\rightarrow$ CA Parcel 1 at pretest</td>
<td>1.00</td>
<td>—</td>
<td>.88</td>
<td>—</td>
</tr>
<tr>
<td>CA at pretest $\rightarrow$ CA Parcel 2 at pretest</td>
<td>.94***</td>
<td>.07</td>
<td>.93</td>
<td>[0.81, 1.09]</td>
</tr>
<tr>
<td>CA at posttest $\rightarrow$ CA Parcel 1 at posttest</td>
<td>1.00</td>
<td>—</td>
<td>.93</td>
<td>—</td>
</tr>
<tr>
<td>CA at posttest $\rightarrow$ CA Parcel 2 at posttest</td>
<td>.94***</td>
<td>.07</td>
<td>.96</td>
<td>[0.81, 1.09]</td>
</tr>
<tr>
<td>ASOC at pretest $\rightarrow$ SO at pretest</td>
<td>1.00</td>
<td>—</td>
<td>.95</td>
<td>—</td>
</tr>
<tr>
<td>ASOC at pretest $\rightarrow$ CO at pretest</td>
<td>.99***</td>
<td>.10</td>
<td>.89</td>
<td>[0.80, 1.21]</td>
</tr>
<tr>
<td>ASOC at posttest $\rightarrow$ SO at posttest</td>
<td>1.00</td>
<td>—</td>
<td>.96</td>
<td>—</td>
</tr>
<tr>
<td>ASOC at posttest $\rightarrow$ CO at posttest</td>
<td>.99***</td>
<td>.10</td>
<td>.83</td>
<td>[0.80, 1.21]</td>
</tr>
<tr>
<td><strong>Structural Parameters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. MCEC $\rightarrow$ IDC at posttest</td>
<td>.40*</td>
<td>.19</td>
<td>.57</td>
<td>[0.04, 0.77]</td>
</tr>
<tr>
<td>B. IDC at posttest $\rightarrow$ CA at posttest</td>
<td>.97***</td>
<td>.24</td>
<td>1.10</td>
<td>[0.59, 1.54]</td>
</tr>
<tr>
<td>C. MCEC $\rightarrow$ CA at posttest</td>
<td>-.17</td>
<td>.16</td>
<td>-.27</td>
<td>[-0.51, 0.11]</td>
</tr>
<tr>
<td>D. IDC at posttest $\rightarrow$ ASOC at posttest</td>
<td>.99***</td>
<td>.46</td>
<td>.81</td>
<td>[0.20, 2.07]</td>
</tr>
<tr>
<td>E. MCEC $\rightarrow$ ASOC at posttest</td>
<td>-.25</td>
<td>.32</td>
<td>-.29</td>
<td>[-0.92, 0.33]</td>
</tr>
<tr>
<td>F. IDC at pretest $\rightarrow$ IDC at posttest</td>
<td>.74***</td>
<td>.15</td>
<td>.77</td>
<td>[0.45, 1.06]</td>
</tr>
<tr>
<td>G. CA at pretest $\rightarrow$ CA at posttest</td>
<td>.24</td>
<td>.22</td>
<td>.23</td>
<td>[-0.20, 0.68]</td>
</tr>
<tr>
<td>H. ASOC at pretest $\rightarrow$ ASOC at posttest</td>
<td>.48</td>
<td>.17</td>
<td>.53</td>
<td>[0.16, 0.84]</td>
</tr>
<tr>
<td>I. IDC at pretest $\rightarrow$ CA at posttest</td>
<td>.30</td>
<td>.25</td>
<td>.35</td>
<td>[-0.20, 0.68]</td>
</tr>
<tr>
<td>J. IDC at pretest $\rightarrow$ ASOC at posttest</td>
<td>-.57</td>
<td>.44</td>
<td>-.48</td>
<td>[-1.63, 0.11]</td>
</tr>
<tr>
<td>A*B</td>
<td>.38*</td>
<td>.21</td>
<td>—</td>
<td>[0.03, 0.85]</td>
</tr>
<tr>
<td>A*D</td>
<td>.37***</td>
<td>.27</td>
<td>—</td>
<td>[0.00, 1.03]</td>
</tr>
<tr>
<td>$R^2$</td>
<td>IDC at posttest</td>
<td>.69***</td>
<td>.14</td>
<td>—</td>
</tr>
<tr>
<td>CA at posttest</td>
<td>.93***</td>
<td>.07</td>
<td>—</td>
<td>[0.73, 1.00]</td>
</tr>
<tr>
<td>ASOC at posttest</td>
<td>.66***</td>
<td>.14</td>
<td>—</td>
<td>[0.35, 0.89]</td>
</tr>
</tbody>
</table>

**Note:** $N = 45$. MCEC = Making Career and Education Choices Workshop; CM = Commitment Making; IC = Identification with Commitment; CA = Career Agency; SO = Selection/Optimization; CO = Compensation; ASOC = Academic Selection, Optimization, and Compensation; IDC = Identity Commitment.
MCEC ➔ Identity Commitment ➔ Career Agency

MCEC ➔ Identity Commitment ➔ Academic SOC
Implications and Future Directions

• Findings suggest that creating opportunities for adult college students to work on their career and education choices promotes critical components of the identity process.

• The strongest effects were on commitment formation (cycle 1), suggesting that sustained support may be necessary for promoting commitment evaluation (cycle 2).

• Future research should investigate whether or not intervention-related increases in indices of identity development mediate effects on domain-specific (e.g., academic and career) indicators of phase-adequate engagement, as well as long-term educational outcomes.

• Despite a trend toward increased adult college student enrollment (Reeves, Miller, & Rouse, 2011), adult students remain underrepresented in higher education research (Donaldson & Townsend, 2007).

• Identity theory provides powerful conceptual tools for investigating the intersection between development and education in adulthood.