The Influence of Undergraduate Experiences on Post-Baccalaureate Outcomes

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Sunny Moon

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California State University, Los Angeles

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Session Outline

**Introduction**
- Research questions

**Method**
- Participants
- Materials and procedure

**Results**
- Data analysis procedure

**Discussion**
- Conclusion & Implications
- Limitations & Future research
Only few studies exist that examine how undergraduate experience affects other outcomes such as work experience and life satisfaction.

**Alumni surveys** examine how individuals’ experiences in college (e.g., *Sense of belonging*) reflect on outcomes of post-graduate experience (e.g., Job success and satisfaction).

How alumni assessments of satisfaction with their **college experience** are influenced by perceived quality of their alma mater’s service performance and outcomes of these performances.

College experience can be accounted for a school involvement and even different **characteristics** found within ones' academic department.
Research Questions
Identify Factors within Alumni Undergraduate Experiences As Well As Long-term Post-baccalaureate Outcomes

Undergraduate Experiences

Post-baccalaureate Outcomes

Predict
Understand the Relationships among Personal Characteristics, College Experiences, and Long-term Post-baccalaureate Outcomes

- Personal Characteristics
- Undergraduate Experiences
- Post-baccalaureate outcomes

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How Do Personal Characteristics, Undergraduate Experiences, and Alumni Outcomes Explain Alumni Giving Behavior
Methods

Participants and Procedures

Materials
Participants (N=1914) and Procedures

Sample
- Cal State LA undergraduate Alumni
- Graduated from 2000-2017
- Demographics match our institution

Measures
- Gallup-Purdue Index Survey
- Developed by both Gallup and Excelencia in Education

Collect
- Feb 12, 2018 - Mar 13, 2018
- Out of 9,210 email invites, responses are 1914, the response rate: 21%
Participant Demographics (N=1914)

- Pell Recipients: 69%
- No Pell: 27%
- Don't Know: 4%

- Transfer: 71%
- First time: 29%
- Declined to State: 1%

- Hispanic: 61%
- White: 15%
- Black: 8%
- Asian: 14%
- Other: 1%
- Don't Know: 2%

- 1st Gen: 52%
- Not 1st Gen: 46%
- Don't Know: 2%

- Male: 42%
- Female: 57%

- LA: 58%
- LA: 65%
- LA: 64%

- Before 2005: 11%
- 2005 - 2009: 19%
- 2010 - 2014: 34%
- 2015 - 2017: 35%

- Yes, 37%
- No loan, 44%
- Don't Know, 19%

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Participant Responses (N=1914)

Bachelor's degree holders make up 68% of the participants, while 32% hold a postgraduate degree.

- **Median Household Income:**
  - $60,000 to $89,999: 32.0%
  - $50,000 to $59,999: 17.6%
  - $30,000 to $49,999: 12.3%
  - $20,000 to $29,999: 9.9%
  - $10,000 to $19,999: 6.0%
  - $0 to $9,999: 0.5%

- **Median Personal Income:**
  - $48,000 to $59,999: 30.5%
  - $40,000 to $47,999: 24.2%
  - $32,000 to $39,999: 19.9%
  - $24,000 to $29,999: 10.1%
  - $16,000 to $19,999: 9.9%

- **Employment Status:**
  - Full-time: 66.3%
  - Part-time: 10.6%
  - Unemployed: 5.6%
  - Not in Workforce: 14.1%
  - Don't Know: 0.2%

- **Visit Career Services Office:**
  - Yes: 62%
  - No: 31%
  - Don't Know: 7%
Results

Data Analysis Procedures
Factor Analysis
Regression Analysis (Path Model)
Data Analysis Procedures

Data Cleaning
- Verify the self-reported information
- Check assumptions
- Recode & create proxies

Principal Component Analysis
- Varimax orthogonal rotation method.
- Factor Loading >.4
- Reliability analysis (α >.5)
- Save the estimating factor score coefficients using the regression method

Test Model’s Goodness-of-fit
- Maximum likelihood estimation
- Model Evaluation Criteria
  - $\chi^2$/df <3,
  - CFI or IFI >.90
  - RMSEA<.08

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## Factor Loadings for Principal Component Analysis on Undergraduate Experience Variables (62%)

<table>
<thead>
<tr>
<th>Question Items</th>
<th>Sense of Belonging</th>
<th>Social activity</th>
<th>Faculty Interaction</th>
<th>Career Center</th>
<th>Internship/Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cal State LA was the perfect school for people like me.</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can’t imagine a world without Cal State LA.</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cal State LA prepared me well for life outside of college.</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cal State LA is passionate about the long-term success of its students.</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My professors at Cal State LA cared about me as a person.</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My education from Cal State LA was worth the cost.</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was challenged academically at Cal State LA.</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had at least one professor at Cal State LA who made me excited about learning</td>
<td>.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While attending CSULA: Did you hold a leadership position in a club or organization...?</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While attending CSULA: Did you participate in a student club or organization?</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was extremely active in extracurricular activities and organizations while attending Cal State LA.</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While attending CSULA: Did you participate in a research project with a faculty member?</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While attending Cal State LA, I worked on a project that took a semester or more to complete.</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often, did you talk to faculty or staff members at CSULA about possible career options?</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While attending Cal State LA, I had a mentor who encouraged me to pursue my goals and dreams.</td>
<td>.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How easy or difficult was it for you to access career services while attending Cal State LA?</td>
<td>.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How helpful was the career services office to you?</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While attending CSULA: Did you have a paid job or internship?</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While attending CSULA did you have a job or internship that allowed you to apply what you were learning in the classroom?</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reliability (Cronbach’s alpha)

- Sense of Belonging: .90
- Social activity: .58
- Faculty Interaction: .54
- Career Center: .71
- Internship/Job: .49

### Variance Explained

- 25%
- 11%
- 9%
- 8%
- 7%
## Question Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>My job gives me the opportunity to do work that interests me.</td>
<td>.89</td>
</tr>
<tr>
<td>I am deeply interested in the work that I do.</td>
<td>.87</td>
</tr>
<tr>
<td>I have the ideal job for me.</td>
<td>.84</td>
</tr>
<tr>
<td>On a five-point scale, where 5 means extremely satisfied and 1 means extremely dissatisfied, how satisfied are you with your organization as a place to work?</td>
<td>.73</td>
</tr>
<tr>
<td>Engagement (3-ITEM WEB Short Version)</td>
<td>.69</td>
</tr>
<tr>
<td>How closely related is your current work to your undergraduate major(s)?</td>
<td>.52</td>
</tr>
<tr>
<td>Ladder scale - present time</td>
<td>.73</td>
</tr>
<tr>
<td>Ladder scale - 5 years from now</td>
<td>.69</td>
</tr>
<tr>
<td>WB5 View Physical TSS</td>
<td>.67</td>
</tr>
<tr>
<td>WB5 View Social TSS</td>
<td>.64</td>
</tr>
<tr>
<td>WB5 View Purpose TSS</td>
<td>.61</td>
</tr>
<tr>
<td>WB5 View Community TSS</td>
<td>.56</td>
</tr>
<tr>
<td>What is your total annual HOUSEHOLD income, before taxes?</td>
<td>.83</td>
</tr>
<tr>
<td>What is your total annual PERSONAL income, before taxes?</td>
<td>.79</td>
</tr>
<tr>
<td>Employment Status</td>
<td>.70</td>
</tr>
<tr>
<td>WB5 View Financial TSS</td>
<td>.51</td>
</tr>
<tr>
<td>How likely is it that you would recommend CSULA to family, friends/colleagues?</td>
<td>.78</td>
</tr>
<tr>
<td>Cal State LA provided me with the knowledge and skills I needed to be successful in the workplace</td>
<td>.75</td>
</tr>
<tr>
<td>How helpful was CSULA reputation to you in obtaining a job upon graduation?</td>
<td>.74</td>
</tr>
<tr>
<td>What is your highest completed level of education?</td>
<td>.90</td>
</tr>
<tr>
<td>Approximately how many years did it take for you to obtain your undergraduate degree from Cal State LA?</td>
<td>.97</td>
</tr>
</tbody>
</table>

### Factor Loadings for Principal Component Analysis on Post-Baccalaureate Outcomes Variables (60%)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
</tr>
<tr>
<td>Institutional Attachment</td>
<td></td>
</tr>
<tr>
<td>Higher Education</td>
<td></td>
</tr>
<tr>
<td>Time to Degree</td>
<td></td>
</tr>
</tbody>
</table>

### Reliability (Cronbach’s alpha)

- Job Satisfaction: .89
- Life Satisfaction: .86
- Finance: .77
- Institutional Attachment: .67
- Higher Education: N/A
- Time to Degree: N/A

### Variance Explained

- 19%
- 15%
- 11%
- 9%
- 5%
- 5%
Regression Analysis (Path Model)

Hierarchical linear regression was used to test if college experiences predicted six post-baccalaureate outcomes above and beyond the personal characteristics.
Undergraduate Experiences Predict Job Satisfaction (N=1749)

- Sense of Belonging
- Social Activity
- Faculty Interaction
- Career Center Experience
- Job/Internship Experience

Gender (0=M, 1=F)
- Hispanic (0=N, 1=Y)
- First Gen (0=N, 1=Y)
- Transfer (0=N, 1=Y)
- Pell (0=N, 1=Y)

Grad Yr

Job Satisfaction
$\Delta R^2 = 3.5\%$
Cumulative $R^2 = 4.3\%$

$p = .095***$
$p = .056*$
$p = .063**$
$p = .037$
$p = .134***$
$p = -.073***$
Undergraduate Experiences Predict Life Satisfaction (N=1749)

- Gender: 0=M, 1=F
  - Sense of Belonging: 0.099***
  - Social Activity: 0.083***

- Hispanic: 0=N, 1=Y
  - Sense of Belonging: 0.069**

- First Gen: 0=N, 1=Y
  - Social Activity: 0.049*
  - Career Center Experience: 0.060**

- Transfer: 0=N, 1=Y
  - Faculty Interaction: 0.102***

- Pell: 0=N, 1=Y
  - Job/Internship Experience: 0.061**

- Grad Yr
  - Life Satisfaction: Δ$R^2=11$
  - Cumulative $R^2=12$

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Undergraduate Experiences Predict Finance (N=1749)

- Gender 0=M, 1=F
  - Sense of Belonging
    - .126***
  - Hispanic 0=N, 1=Y
    - - .144***
  - First Gen 0=N, 1=Y
    - - .064***
  - Transfer 0=N, 1=Y
    - - .096***
  - Pell 0=N, 1=Y
    - - .099**
  - Grad Yr
    - - .299***

- Social Activity
  - - .051**
  - - .033

- Faculty Interaction
  - - .026
  - - .051**
  - - .033

- Career Center Experience
  - - .138***
  - - .064***
  - - .313**

- Job/Internship Experience
  - - .299***

Finance
\[ \Delta R^2 = 2.4\% \]
Cumulative \[ R^2 = 16\% \]
Undergraduate Experiences Predict Institutional Attachment (N=1749)

- Gender (0=M, 1=F): \( \beta = 0.079^{**} \)
- Hispanic (0=N, 1=Y): \( \beta = 0.124^{***} \)
- First Gen (0=N, 1=Y): \( \beta = 0.034^{*} \)
- Transfer (0=N, 1=Y): \( \beta = 0.064^{**} \)
- Pell (0=N, 1=Y): \( \beta = 0.066^{**} \)
- Grad Yr: \( \beta = 0.063^{***} \)

Factors:
- Sense of Belonging
- Social Activity
- Faculty Interaction
- Career Center Experience
- Job/Internship Experience

Institutional Attachment:
- \( \Delta R^2 = 53\% \)
- Cumulative \( R^2 = 57\% \)

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Undergraduate Experiences Predict Higher Education (N=1749)

- **Gender**
  - 0=M, 1=F
  - \( \beta = 0.051^* \)

- **Hispanic**
  - 0=N, 1=Y
  - \( \beta = -0.056^* \)

- **First Gen**
  - 0=N, 1=Y
  - \( \beta = -0.050^* \)

- **Transfer**
  - 0=N, 1=Y
  - \( \beta = 0.048^* \)

- **Pell**
  - 0=N, 1=Y
  - \( \beta = -0.365^{***} \)

- **Grad Yr**
  - 0=N, 1=Y
  - \( \beta = -0.351^{***} \)

- **Sense of Belonging**
  - \( \beta = 0.126^{***} \)

- **Social Activity**
  - \( \beta = 0.022 \)

- **Faculty Interaction**
  - \( \beta = 0.024 \)

- **Career Center Experience**
  - \( \beta = 0.046^* \)

- **Job/Internship Experience**
  - \( \Delta R^2 = 2.5\% \)

- **Cumulative \( R^2 = 14\% \)**

**How helpful was the career services office to you?**
“How easy or difficult was it for you to access career services while attending Cal State LA?”

**Helpfulness and accessibility** did not predict higher education

\( \beta = -0.041, p = .138, \beta = 0.05, p = .079. \)

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Undergraduate Experiences NOT Predict Time-to-Degree (N=1749)

This study's college experience factors did not include academic performance measures (i.e., GPA, units taken per semester, remediation requirements, etc.) which are more likely to predict time-to-degree. 

\[ \Delta R^2 = 0.2\% \]

Cumulative \( R^2 = 26\% \)
Logistic regression was used to examine the degree to which personal characteristics, college experience, and outcomes collectively explained the variance in alumni giving (YES/NO).
Alumni Who Are Male, Graduated Long Time Ago, & Had High Sense of Belonging, Better Career Center Experience, and Better Finance, Were More Likely to Donate to Their Alma Mater

- Gender 0=M, 1=F (OR=.63***)
- Grad Yr (OR=.94***)
- Sense of Belonging (OR=2.13***)
- Career Center Experience (OR= 1.39***)
- Finance (OR=1.28*)
Discussions
Conclusions and Implications
Limitations and Future Research
Better Students’ Undergraduate Experiences, The Better Their Post-baccalaureate Outcomes

*Improve* students’ College *experiences* to help alumni have better life after graduation!!

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Conclusions

• **Job Satisfaction**
  : Job/Internship > Sense Belong > Early Graduation Year > Faculty Interaction > Social > 1st Gen

• **Life Satisfaction**
  : Sense Belong > Career Ctr > Female > Faculty Interaction > Social

• **Finance**
  : Early Graduation Year > Male > Job/Internship > Non-Pell > Non-Hispanic

• **Institutional Attachment**
  : Sense Belong > Career Ctr > Job/Internship > Early Graduation Year > 1st Gen

• **Advanced Degree Pursuit**
  : Early Graduation Year > Faculty Interaction > Career Ctr > Female > Non-1st Gen > Job/Internship

• **Time-to-degree**
  : Female > Non-Hispanic > Non-Pell

• **Alumni Giving**
  : Sense Belonging > Career Ctr > Male > Finance > Early Graduation Year
Implications

- Group Advising
- Proactive Advising
- Student Mentor

- Research with faculty
- Discuss with faculty: career & future goals
- Faculty interactions with Hispanic, female, or non Pell recipients

- Increase career advertisement for students
- Encourage faculty and career services professionals to work together

- Policy to encourage Hispanic students to have job/internship to apply what they learned in the class to an actual working organization

- Support students to lead or join a student club / organization
Limitations and Future Research

Response rate (21%) and respondent bias
- Can still enhance generalizability of these findings to other Hispanic-Serving institutions

Secondary data analysis could be limited to generate only certain factors by existing items
- Ex. Career center experiences
- Add a measure of academic performance and more items related to our unreliable constructs to make our model a better fit

Nature of self-reported data-validation problem
- Ex. Financial Data
- Consider using qualitative data (interviews), which may provide a richer, more in-depth perspective of the findings

This study is exploratory in nature
- Future research should attempt to replicate these findings in a wider variety of institutional settings
Audience Q & A
Thank you

Please remember to submit your evaluation for this session.
Contact Us

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