Cultural Intelligence: A Predictor of Ethnic Minority College Students’ Psychological Well-being

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Quantitative Dissertation Defense
Liberty University
March 29, 2012
In 2010, the United States ranked 12th in the world in the percentage of post-secondary degrees earned.

United States minority college students enrollment
- 15% in 1976
- 32.2% in 2007

Data has identified there is an ethnic minority college students’ degree attainment gap.

Psychological well-being can be a challenge for minority students as they adjust to a new cultural environment, while trying to maintain a sense of ethnic identity.
Business Literature

- Business school literature has established one aspect of effective cross-cultural adjustment in diverse environments as cultural intelligence (CQ).

- The Big Five personality traits have been established as an antecedent for cultural intelligence and a predictor of job performance and success in international work assignments.
Big Five Personality Traits

- Extraversion – engagement with the external world
- Agreeableness – concern with cooperation and social harmony
- Conscientiousness – we control, regulate, and direct our impulses
- Neuroticism – the tendency to experience negative feelings
- Openness to Experience – imaginative creative people from down-to-earth, conventional people

Cohen & Swerdlik, 2005; Goldberg, 1993; Johnson, 2010
### The Cultural Intelligence Theoretical Model

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivational CQ</td>
<td>Showing interest, confidence, and drive to adapt cross-culturally</td>
</tr>
<tr>
<td>Cognitive CQ</td>
<td>Understanding cross-cultural issues and differences</td>
</tr>
<tr>
<td>Metacognitive CQ</td>
<td>Strategizing and making sense of culturally diverse experiences.</td>
</tr>
<tr>
<td>Behavioral CQ</td>
<td>Changing verbal and nonverbal actions appropriately when interacting cross-culturally</td>
</tr>
</tbody>
</table>

Earley & Ang, 2003
Psychological Well-being (PWB)

- **Self-acceptance** – positive evaluation of self and past life experiences
- **Positive relations with others** – having trusting, satisfying interpersonal relationships with others
- **Autonomy** – having an internal locus of evaluation and does not look to others for approval, but uses personal standards for evaluating self
- **Environmental mastery** – capacity to effectively choose and manage environments suitable to their strengths
- **Purpose in life** – predicated on the belief that life has meaning and purpose
- **Personal growth** – continual development as characterized by self-actualization

Ryff, 1989a
Literature Review: Gap

Lack of empirical evidence of the relationship:
- Between the Big Five and CQ of ethnic minority college students
- Between CQ and PWB, specifically with ethnic minority college students
The purpose of this study was two-fold:

1. Examine the Big Five personality traits as a predictor of the cultural intelligence model for ethnic minority college students

2. Determine if there is a predictive relationship between cultural intelligence factors and ethnic minority college students’ psychological well-being
Design and Analysis

- Multivariate Correlational
  - Non-experimental research
  - Express relationships among naturally existing predictor and criterion variables

- Analysis
  - Standard Multiple Regression
Research Question 1

Will the combination of the Big Five personality traits predict the cultural intelligence of ethnic minority college students?
Research Hypotheses (Question 1)

- H1: There is no statistically significant predictive relationship between the combination of the Big Five personality traits and ethnic minority college students’ cultural intelligence.

- H1.1 There is a statistically significant positive predictive relationship between ethnic minority college students’ openness to experience and cultural intelligence.

- H1.2 There is a statistically significant positive predictive relationship between ethnic minority college students’ conscientiousness and cultural intelligence.
Research Hypotheses (Question 1)

- H1.3 There is a statistically significant positive predictive relationship between ethnic minority college students’ extraversion and cultural intelligence.

- H1.4 There is a statistically significant positive predictive relationship between ethnic minority college students’ agreeableness and cultural intelligence.

- H1.5 There is a statistically significant negative predictive relationship between ethnic minority college students’ neuroticism and cultural intelligence.
Overview of Participant (N=137)

- **Ethnicity**
  - 86% Black or African-American
  - .7% Asian
  - 4% Hispanic or Latino
  - 2% American Indian or Alaska Native
  - 8% Two or more races

- **Sex**
  - 75% Female

- **Age**
  - 83.2% – 18 to 26 years old
  - 16.7% – 27 or older
Overview of Participant (N=137)

- **Classification**
  - 91.3% Juniors or Seniors

- **Country of Birth**
  - 93.4% United States

- **Degree Program Area**
  - Agricultural Engineering
  - Biology
  - Communication Sciences & Disorders
  - Education
  - Human Development & Family Studies
  - Psychology
### Descriptive Statistics – Question 1

<table>
<thead>
<tr>
<th>Predictor Variables (Big Five)</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreeableness</td>
<td>86.45</td>
<td>10.16</td>
<td>0–125</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>92.13</td>
<td>11.91</td>
<td>0–115</td>
</tr>
<tr>
<td>Extraversion</td>
<td>92.26</td>
<td>11.08</td>
<td>0–120</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>81.54</td>
<td>9.28</td>
<td>0–120</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>66.78</td>
<td>15.54</td>
<td>0–120</td>
</tr>
<tr>
<td>Criterion Variable (CQ)</td>
<td>104.52</td>
<td>15.94</td>
<td>17 to 140</td>
</tr>
</tbody>
</table>
Assumption Tests – Question 1

- Assumption of normality was tenable
- No extreme outliers evident
- Homoscedasticity of the residuals was found tenable
- Linearity was tenable
- Multicollinearity was tenable
# Intercorrelations Among Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Agreeableness</th>
<th>Extroversion</th>
<th>Neuroticism</th>
<th>Openness To Experience</th>
<th>Conscientiousness</th>
<th>CQ Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreeableness</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.221**</td>
<td>-.417**</td>
<td>.392**</td>
<td>.550**</td>
</tr>
<tr>
<td>Extroversion</td>
<td>Pearson Correlation</td>
<td>.221**</td>
<td>1</td>
<td>-.558**</td>
<td>.487**</td>
<td>.402**</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>Pearson Correlation</td>
<td>-.417**</td>
<td>-.558</td>
<td>1</td>
<td>.210</td>
<td>-.644</td>
</tr>
<tr>
<td>Openness To Experience</td>
<td>Pearson Correlation</td>
<td>.392**</td>
<td>.487**</td>
<td>-.210*</td>
<td>1</td>
<td>.332**</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Pearson Correlation</td>
<td>.550**</td>
<td>.402**</td>
<td>-.644</td>
<td>.332**</td>
<td>1</td>
</tr>
<tr>
<td>CQ Total</td>
<td>Pearson Correlation</td>
<td>.087</td>
<td>.238**</td>
<td>-.170</td>
<td>.332**</td>
<td>.189*</td>
</tr>
</tbody>
</table>

Note.
** p < .01, two-tailed.  * p < .05, two-tailed.
Results

\( R^2 = .133, \ adj \ R^2 = .100, \ F = (5,131) = 4.014, \ p = .002 \)
# Contributions of Predictor Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Zero-Order</th>
<th>Partial r</th>
<th>$\beta$</th>
<th>SE</th>
<th>B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness</td>
<td>.33*</td>
<td>.26*</td>
<td>.32</td>
<td>.18</td>
<td>.55</td>
<td>3.14</td>
<td>.002</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.19</td>
<td>.07</td>
<td>.09</td>
<td>.16</td>
<td>.12</td>
<td>.74</td>
<td>.46</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>-.17*</td>
<td>-.06</td>
<td>-.08</td>
<td>.13</td>
<td>-.09</td>
<td>-.68</td>
<td>.50</td>
</tr>
<tr>
<td>Extroversion</td>
<td>.24*</td>
<td>.02</td>
<td>.03</td>
<td>.16</td>
<td>.04</td>
<td>.25</td>
<td>.80</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.09</td>
<td>-.11</td>
<td>-.13</td>
<td>.16</td>
<td>-.20</td>
<td>-.123</td>
<td>.22</td>
</tr>
</tbody>
</table>

Note.
*p < .05
Research Question 2

Will the combination of the cultural intelligence factors predict the psychological well-being of ethnic minority college students?
Research Hypotheses (Question 2)

- **H2**: There is no statistically significant predictive relationship between the combination of the cultural intelligence factors and ethnic minority college students’ psychological well-being.

- **H2.1**: There is a statistically significant predictive relationship between ethnic minority college students’ metacognitive CQ and psychological well-being.

- **H2.2**: There is a statistically significant predictive relationship between ethnic minority college students’ cognitive CQ and psychological well-being.
Research Hypotheses (Question 2)

- H2.3 There is a statistically significant predictive relationship between ethnic minority college students’ motivational CQ and psychological well-being.

- H2.4 There is a statistically significant predictive relationship between ethnic minority college students’ behavioral CQ and psychological well-being.
## Descriptive Statistics – Question 2

<table>
<thead>
<tr>
<th>Predictor Variables (CQ)</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metacognitive</td>
<td>23.83</td>
<td>3.61</td>
<td>4–28</td>
</tr>
<tr>
<td>Cognitive</td>
<td>27.01</td>
<td>6.96</td>
<td>6–42</td>
</tr>
<tr>
<td>Motivational</td>
<td>29.18</td>
<td>4.47</td>
<td>5–35</td>
</tr>
<tr>
<td>Behavioral</td>
<td>24.69</td>
<td>6.09</td>
<td>5–35</td>
</tr>
<tr>
<td>Criterion Variable (PWB)</td>
<td>248.89</td>
<td>45.42</td>
<td>0–600</td>
</tr>
</tbody>
</table>
Assumption Tests – Question 2

- Assumption of normality was not tenable
- No extreme outliers
- Assumption of homoscedasticity of the residuals was tenable
- Linearity was tenable
- Multicollinearity was tenable
### Intercorrelations Among Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Well-being Total</th>
<th>Metacognitive CQ</th>
<th>Cognitive CQ</th>
<th>Motivational CQ</th>
<th>Behavioral CQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-being Total</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.169*</td>
<td>.041</td>
<td>.144</td>
</tr>
<tr>
<td>Metacognitive CQ</td>
<td>Pearson Correlation</td>
<td>.169*</td>
<td>1</td>
<td>415**</td>
<td>.547**</td>
</tr>
<tr>
<td>Cognitive CQ</td>
<td>Pearson Correlation</td>
<td>.041</td>
<td>.415**</td>
<td>1</td>
<td>.410</td>
</tr>
<tr>
<td>Motivational CQ</td>
<td>Pearson Correlation</td>
<td>.144</td>
<td>.547**</td>
<td>.410*</td>
<td>1</td>
</tr>
<tr>
<td>Behavioral CQ</td>
<td>Pearson Correlation</td>
<td>.155</td>
<td>.330**</td>
<td>.372**</td>
<td>.361**</td>
</tr>
</tbody>
</table>

Note.  
** p < .01, two-tailed.  * p < .05, two-tailed.
Results

\[ R^2 = 0.046, \quad \text{adj } R^2 = 0.017, \quad F(4,131) = 1.59, \quad p = 0.18 \]
Research Results

- Significant positive relationship between minority college students’ Big Five personality traits and CQ
- Openness to experience had the greatest significance for CQ
- No significant relationship between minority college students’ CQ and psychological well-being
Significance
Empirical and Practical

- Expand the CQ nomological network by determining if the antecedent relationship between Big Five personality traits and cultural intelligence remains constant.

- Determine which cultural intelligence dimension best predicts ethnic minority college students’ psychological well-being.
Significance
Empirical and Practical

- Studying the model in a domestic higher education environment furthers cultural intelligence research
- Provides a theoretical framework for institutions of higher education to better prepare students for life in a global society
Implications

Use CQ to inform Higher Education:

- Curriculum programming that capitalizes on students’ openness to experience to increase successful task performance

- Minority social support structures and increased degree attainment
Limitations

- Correlational research design not indicative of a cause and effect relationship
- Participant self-reporting is subjectivity and increases responder bias
- Findings generalizations may be limited due to the small population size
- Generalizations across institutions
- No statistical controls were used to address participant lack of response
Future Research

- Replicated the study with:
  - Minority college students attending a Historical Black College or University & Predominately White Institution
  - United States immigrant college students

- Academic performance & CQ

- Determine whether there is a difference between training outcomes when the CQ framework is employed or not employed
Questions and Answers
References

Please see dissertation