The Relationship between Temperament and Changes in Cultural Competency among Undergraduate Students

Kwame Opoku Akyeampong  
*Minnesota State University, Mankato*

Olufolajimi Onadipe  
*Minnesota State University, Mankato*

Follow this and additional works at: [https://cornerstone.lib.mnsu.edu/eec-presentations](https://cornerstone.lib.mnsu.edu/eec-presentations)

*Part of the [Curriculum and Instruction Commons](https://cornerstone.lib.mnsu.edu/cic), and the [Higher Education Commons](https://cornerstone.lib.mnsu.edu/hic)*

**Recommended Citation**
The Relationship between Temperament and Changes in Cultural Competency among Undergraduate Students

Kwame Opoku Akyeampong (Bio-medical Science)
Olufolajimi Onadipe (Bio-medical Science)

Faculty Mentor: Dr. Elizabeth Sandell (Elementary Education)
Undergraduate Research Symposium
Minnesota State University, Mankato (MN)
April 20, 2014
Research Questions

1. What changes occur in cultural competence of undergraduates as a result of the human relations course?
2. Does temperament affect the change in cultural competence of undergraduates?
Definitions of Key Terms

- Temperament (Keirsey, 1998) may be considered to include a set of observable personality traits, e.g., communication habits, behavior patterns, values, attitudes and talents, etc.

- Culture is “the customary beliefs, social forms, material traits of a racial, religious, or social group; also, the characteristic features of everyday existence shared by people in a place or time” Merriam-Webster (2012).

- Cultural Competency is "the capability to accurately understand and adapt behavior to cultural differences and commonality" (Hammer and Bennett, 2010).
MSU Diversity Requirement

- Education: “To prepare principled professional practitioners who thrive and succeed in diverse environments, promote collaborative and generative communities, and engage in life-long learning.”

- MSU Purple courses: “To increase students’ understanding of individual and group differences, emphasizing the dynamics of race, gender, sexual orientation, age, class, and/or disabilities.”
Milton Bennett

The first three stages are defined as avoiding cultural differences

The last three stages are defined as seeking cultural differences
Developmental Model of Intercultural Sensitivity

Developmental Model of Intercultural Sensitivity (Hammer et. al., 2003)
Intercultural Development Inventory

- Mitchell R. Hammer, PhD
- Originated from the DMIS
- Designed to measure individual/group intercultural sensitivity
Results from Previous Research

1. Undergraduate students arrive at the class with polarization orientation or ethno-centric minimization orientation to cultural differences and similarities (McNabb & Tupy, 2011).

2. With traditional knowledge-based assignments, students showed no statistically significant differences in cultural orientation during the semester (McNabb & Tupy, 2011).

3. There were no statistically significant differences according to their gender, age, academic major, or academic classification (Tupy, McNabb, & Leidell, 2012).

4. There were no statistically significant differences among students in classes taught by five different instructors (Sandell, 2014).
Previous Results with Significant Differences

1. With intentional assignment to service learning with a culture different than theirs, students showed statistically significant differences between IDI scores at the end of the semester when compared to the beginning of the semester (Tupy, McNabb & Leidell, 2012).

2. With interactive, experiential assignments (such as a cultural partnership with reflection), students showed statistically significant differences between IDI scores at the end of the semester when compared to the beginning of the semester (Sandell & Tupy, 2012).
Keirsey Temperament Sorter II

- Dr. David Keirsey
- Originated from Carl Jung’s theory of psychological types
- Designed to measure temperament on four scales
  - A) introvert – extrovert
  - B) intuitive – sensory
  - C) feeling – thinking
  - D) judging – perceiving
Methodology

- 86 persons, 18 to 30 years old, who were enrolled in EEC 222w (Human Relations in a Multicultural Society) during the Fall semester, 2013.
- The Intercultural Development Inventory (IDI) (Hammer & Bennett, 1998, 2001)
- The Keirsey Temperament Sorter II (KTS-II) (Keirsey, 1998).
- The assessments on-line at the beginning and conclusion of the Fall 2013 semester.
Subjects

- Total 86
- Male 28
- Female 58
- 18 - 29 years old 79
- 30+ years old 7
- Freshmen 18
- Sophomores 39
- Juniors 21
- Seniors 8
- Education majors 57
- Non-education majors 29
Research Question #1

- What changes occur in cultural competence of undergraduates as a result of the human relations course?
Intercultural Development Inventory

Intercultural Development Continuum

Monocultural Mindset

Minimization

Polarization

Denial

Acceptance

Adaptation

Intercultural Mindset
## Change in Cultural Competence in one semester

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Perceived Orientation – All</td>
<td>PO_pre - PO_post</td>
<td>-2.03169</td>
<td>4.99197</td>
<td>.41892</td>
<td>-2.85986</td>
</tr>
<tr>
<td>Developmental Orientation – All</td>
<td>DO_pre - DO_post</td>
<td>-3.48831</td>
<td>12.39778</td>
<td>1.04040</td>
<td>-5.54511</td>
</tr>
</tbody>
</table>
Research Question #2

• Does temperament affect the change in cultural competence of undergraduates?
## Influence of temperament on change in cultural competence

<table>
<thead>
<tr>
<th>Condition</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre_Post * Introversion/ Extroversion on Perceived Orientation</td>
<td>21.313</td>
<td>1</td>
<td>21.313</td>
<td>1.728</td>
<td>.191</td>
</tr>
<tr>
<td>Pre_Post * Introversion/ Extroversion on Developmental Orientation</td>
<td>135.798</td>
<td>1</td>
<td>135.798</td>
<td>1.782</td>
<td>.184</td>
</tr>
<tr>
<td>Pre_Post * Intuitive / Sensing on Developmental Orientation</td>
<td>14.179</td>
<td>1</td>
<td>14.179</td>
<td>.184</td>
<td>.669</td>
</tr>
<tr>
<td>Pre_Post * Feeling / Thinking on Perceived Orientation</td>
<td>10.950</td>
<td>1</td>
<td>10.950</td>
<td>.882</td>
<td>.349</td>
</tr>
<tr>
<td>Pre_Post * Feeling / Thinking on Developmental Orientation</td>
<td>78.262</td>
<td>1</td>
<td>78.262</td>
<td>1.021</td>
<td>.314</td>
</tr>
<tr>
<td>Pre_Post * Judging / Perceiving on Perceived Orientation</td>
<td>40.789</td>
<td>1</td>
<td>40.789</td>
<td>3.334</td>
<td>.070</td>
</tr>
<tr>
<td>Pre_Post * Judging / Perceiving on Developmental Orientation</td>
<td>177.238</td>
<td>1</td>
<td>177.238</td>
<td>2.330</td>
<td>.129</td>
</tr>
</tbody>
</table>
Conclusions

1. Statistically significant changes occurred in cultural competence of undergraduates as a result of the human relations course.

2. Temperament does not affect the changes in cultural competence of undergraduates.
Future research

- How does the cultural partnership assignment affect cultural competency?
- How does the service learning assignment affect cultural competency?
Acknowledgements

- Dr. Elizabeth Sandell, research mentor
- Students in EEC 222W
- Dr. Marilyn Hart, Director of the URC
- MSU Foundation
- MSU College of Education
- Undergraduate Research Center at MSU
- Undergraduate Research Symposium, Mankato, Minnesota
- MSU Center for Excellence in Scholarship and Research


Questions?