

# Expanding the Narrative of Intercultural Competence: A Study of Library Faculty and Staff

Nastasha E. Johnson, Purdue University, USA  
William C. Ledbetter, Purdue University, USA

## Abstract

---

Libraries and library professionals are challenged daily to adapt to the changing cultural makeup of the colleges and universities in which they are situated. Being culturally competent is a journey, and more research needs to be done to determine where library workers are in their individual journeys in order for libraries to be inclusive and adaptive. In this project, we measure the intercultural competence of a small sample of library workers at a large research-intensive university using the Intercultural Development Inventory (IDI) and the Beliefs, Events, Values Inventory (BEVI). Participants identified and engaged with cultures that were not their own and then self-debriefed about them. Our research suggests that those who intentionally engage with other cultures will become more culturally competent.

**Keywords:** academic libraries; intercultural competence; intercultural development; professional development

**Publication Type:** research article

---

## Introduction

Libraries can be an integral part of a higher education institution. An academic library can meet the needs of its residential and virtual clientele in every way contextually appropriate: course support, technological support, and even entertainment and social needs. In some countries, they function as central repositories of data and knowledge about and for the communities they serve (Field & Tran, 2018). However, little to no research has been done to measure the intercultural adeptness of the library workers who serve and teach in their communities. Some research exists regarding preparing future librarians within the library and information science (LIS) curriculum (Alajmi & Alshammari, 2020; Costello, 2018; Villagran & Hawamdeh, 2020), but even those are limited in the perspective of the day-to-day realities of the job. Conversations about inclusion and diversity have been largely limited to the attraction of an ethnically representative workforce or to working with a diverse student population (Jones & Murphy, 2019; Kung et al., 2020; Vinopal, 2016).

Furthermore, there is a lack of research extending the conversation about the continued training and development of library faculty and staff as the international population of students in the U.S. has increased (Click et al., 2018; Moody, 2021). Blackburn (2015) suggests expanding the notion of a “learning circle” to include an understanding of how intercultural competence is reflected in the services offered. In this study, the aim was to extend the narrative to include an understanding of the cultural competence of those who offer said services. At a research-intensive library in the U.S. Midwest, we studied a sample of the library staff’s preconceived

notions and beliefs about people and their experiences with other cultures, and we offered them opportunities that encouraged intercultural competence and development.

## Literature Review

### Intercultural Competence Continuum

The Intercultural Competence Continuum (ICC) is adapted from the Development Model of Intercultural Sensitivity (DMIS) created by Milton Bennett, which is a grounded theory built on cognitive constructivist and communication theories (Bennett, 1993). Bennett theorized that intercultural competence is a progressive cognitive process. There are five developmental stages: Denial, Polarization, Minimization, Acceptance, and Adaptation. On one end of the spectrum, a person with a monocultural mindset will deny the difference in Denial, recognize difference but have an “us versus them” mentality in Polarization, and then minimize the difference in the Minimization Stage. Progressively, a person with a multi-cultural mindset will accept and appreciate differences in the Acceptance stage and actively shift behavior in the Adaptive stage. Built on the DMIS Model, the Intercultural Development Inventory (IDI) was designed to measure and predict someone’s developmental orientation along the continuum and recommend paths to progress along the continuum to more advanced and multi-cultural mindsets as appropriate (Hammer et al., 2003).

The IDI is a 50-item survey that averages 15-20 minutes to complete. After the inventory, an individual can optionally participate in a one-on-one debriefing with an IDI-qualified administrator. This is the only way that someone has access to their individual results. However, if a person is participating as part of a group, a qualified administrator gives a group debriefing with an aggregate summation of the group’s individual results from the IDI. Group debriefings are common with working groups and leadership teams of organizations and schools. For this project, the participants served as a non-representative sample of the library faculty and staff; therefore, it was only potentially reflective of the entire faculty and staff of the project organization. There is scant literature on the use of the IDI assessment with library professionals. Clemson University recently published about their plan to administer the IDI to its staff as a part of diversity-related professional development (Redd et al., 2020).

### Beliefs Events and Values Inventory

The Beliefs, Events, & Values Inventory (BEVI) is a 494-item questionnaire that helps those who take it understand what their belief and value structures are, and how they interplay with their goals, plans, and behaviors. According to the BEVI’s (2021) website, it has built an instrument that evaluates “1) extensive demographic information, 2) a life history questionnaire, and a comprehensive assessment of beliefs, values, and attitudes, and worldviews, and 4) qualitative ‘experiential reflection’” into a single instrument (Shealy, 2016). Specifically, the BEVI was built on the Equilintegration Theory (EI) which explains the internal processes by which one’s worldviews are formed (Shealy, 2015). The BEVI instrument measures people’s responses to Likert-scaled questions in seven domains and 17 processes. The domains and processes are listed in Table 1 with more detail further in the paper.

Table 1. Scales of the BEVI Inventory

BEVI Domains	BEVI Scales
Formative Variables	Negative Life Events
Fulfillment of Core Needs	Needs Closure Needs Fulfillment Identity Diffusion
Tolerance of Disequilibrium	Basic Openness Self-Certitude
Critical Thinking	Basic Determinism Socioemotional Convergence
Self-Access	Self-Awareness Meaning Quest
Other Access	Religious Traditionalism Gender Traditionalism Sociocultural Openness
Global Access	Ecological Resonance Global Resonance

*Note.* Reproduced from “BEVI Scales” by BEVI, 2021 (<https://thebevi.com/about/scales/>). Copyright 2021 by BEVI—Beliefs, Events and Values Inventory.

### Structured Debrief/ Thiagi Method of Structured Debrief

Structured debriefs are a tool similar to structured reflections that can help people engage with progressively unfolding and digging deeper in the event or situation being analyzed. Debriefing is believed to have started in military training as an efficient way to assess and adjust in preparation for combat, but it is also commonly associated with psychology and nursing practices (Fanning & Gaba, 2007). Debriefing is a means of recollection and sense-making of event, simulation, or experience, and it may entail contextual questions. Despite how specific debriefs may differ, Lederman (1992) states that there are seven common structural elements: debriefer, participants to debrief, an experience, impact of the experience, recollection, report, and time. For participants in this project, the experiences differed, but the intent and subject matter of the experiences were the same. The participants were tasked with engaging with cultures that were different from their own, which is an individual and private assessment that is tangential to this project. Also for this project, the authors created questions based on the Thiagi Debriefing Method (Thiagarajan, 1992), which includes a six-part questionnaire that asks participants to explain their feelings, what they think their feelings or impressions mean, and how their feelings may affect their behavior in the future. The primary objective of this study was to determine the influence of cultural exposure on the intercultural competence of the test group. The research question is: Will the deliberate exposure to intercultural events increase the intercultural competence of library faculty and staff?

---

## Methods

In this project, we recruited a heterogeneous group of library faculty and staff to participate in a three-phase intercultural assessment and intervention project. We sent a recruitment email to the entire library staff of approximately 130 people using a library list-serv and enrolled the first respondents to the study. This list-serv was accessible by staff, faculty, administration, and administrative professionals at a large research-intensive university in the Midwest U.S. The first 18 people to respond to the call were included in the study. The participants were a mixture of both men and women with 15 women and three men in the group. There was only one visible minority in the sample, which is perhaps due to the lack of diversity within the studied library setting. The study included three phases: (1) assessment of the group's intercultural competence at the start of the study, (2) their exposure to other cultures, and (3) measurement of their intercultural development at the end of the study.

In the first step, using the IDI and BEVI, we pre-assessed participants' intercultural competence. In the second phase, an intervention was implemented that incentivized engagement with other cultures around the campus and the local area. The third phase reassessed their intercultural development using the IDI for any change in the intercultural knowledge and awareness of the faculty and staff. We hypothesized that with intentional exposure to other cultures, the mean intercultural competence of the study group will increase.

### Phase 1

Study participants, consisting of library faculty and staff, were asked to take the IDI and BEVI surveys for the determination of their intercultural competence at the beginning of the study. Each participant was debriefed individually and as a group by a certified IDI/BEVI debriefing administrator. Only aggregated results were revealed and discussed in the group debriefing.

### Phase 2

To facilitate their exposure to other cultures, subjects were asked to participate in at least five intercultural activities for a minimum of one hour in the greater local area. To help participants identify an event involving a culture different than their own, a calendar list of multicultural events was posted on the project's private website. This suggested list of events covered a diverse array of activities (e.g., dance, conversation groups, beading workshops, etc.) and ethnicities (e.g., Native American, Asian, Black, Latino, etc.). Participants were asked to self-reflect on their intercultural experiences during the event by answering a collection of pre-designed, thought-provoking questions (see Table 2) via Qualtrics software. Participants were incentivized with \$5 gift cards at the completion of every reflection survey. At the end of the project, there was a drawing for a \$100 gift card for those who completed five or more surveys/events.

Table 2. Structured Debrief Questionnaire

Questionnaire
Q1. How do you feel about the cultural exercise? What is your reaction to the people and the activities?
Q2. What was the significance of the activity for the target audience? (For example, was it a celebration, a commemoration, a community forum?)
Q3. What did you learn from the exercise? What insights did you gain about other people's behavior? About your own behavior?
Q4. How does the exercise relate to other real-world events? (For example, is this event part of a series or local version of something national?)
Q5. If you were to participate in this activity all over again, how would you behave differently?
Q6. As a result of your new insights, how would you behave differently in your workplace?
Q7. Upload proof of attendance (Please make sure your anonymity is preserved in the uploaded files, e.g., no selfies)
Q8. Please provide the last number of your IDI username. For example, if your IDI username was 4107-2018LibrariesInterculturalPre27, enter 27.
Q9. Did you speak with anyone (including family or coworkers) about your experience prior to completing this reflection?

*Note.* The Qualtrics reflection survey was designed to ensure the anonymity of the reflections, and participants were informed about privacy and confidentiality when they signed their consent to be a part of this IRB-approved project. The project was funded by an internal grant provided through the Office of the Provost and a campus center that focuses on intercultural learning and mentoring.

### Phase 3

Participants were asked to complete a post-intervention IDI survey at the end of the study. The group was debriefed on the aggregated survey findings and their corresponding intercultural competence growth measured during the project.

## Results

### Pre- and Post-Intervention IDI Results

The Intercultural Competence Continuum (ICC) is adapted from the Development Model of Intercultural Sensitivity (DMIS) created by Milton Bennett, which is a grounded theory built on cognitive constructivist and communication theories (Bennett, 1993). Bennett theorized that intercultural competence is a progressive cognitive process. There are five developmental

stages: Denial, Polarization, Minimization, Acceptance, and Adaptation. On one end of the spectrum, a person with a monocultural mindset will deny the difference in Denial, recognize difference but have an “us versus them” mentality in Polarization, and then minimize the difference in the Minimization Stage. Progressively, a person with a multi-cultural mindset will accept and appreciate differences in the Acceptance stage and actively shift behavior in the Adaptive stage. Built on the DMIS Model, the Intercultural Development Inventory (IDI) was designed to measure and predict someone’s developmental orientation along the continuum and recommend paths to progress along the continuum to more advanced and multi-cultural mindsets as appropriate (Hammer et al., 2003).

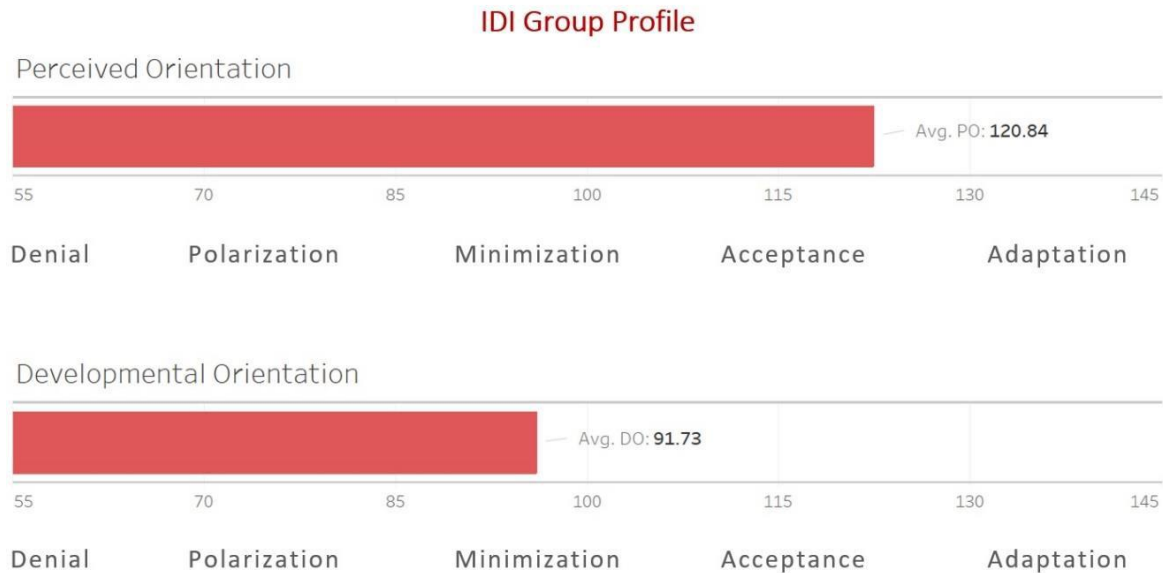


Figure 1. *Pre-Intervention IDI Results*

The first administration of the IDI revealed that the group's PO score is 120.84. The PO is where the group "thinks" it is along the Intercultural Development Continuum (IDC). This score is in the middle range of the Acceptance phase, where participants believe that they are appreciating and accepting of differences between people's life experiences and cultures. The group as a whole overestimated their intercultural competence which is common. The DO of the group, which is the actual position along the continuum, is 91.73. This score is on the lower end of the Minimization phase. This means that the group as a whole focused on the commonalities between cultures, thereby minimizing the nuisances within cultures.

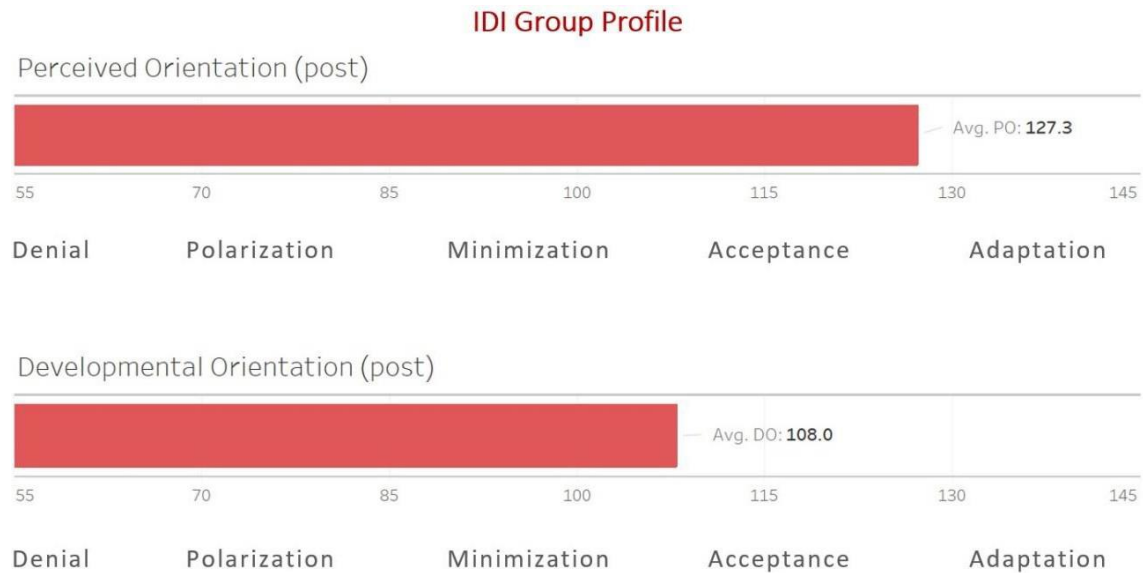


Figure 2. Images of Post-Intervention IDI Results

After all the participants had completed at least one intervening intercultural event, with half the group completing five or more, the group's PO was 127.27 points, which is a 6.43-point increase from where they thought they were before (see Figure 1). The actual DO increased by 16.27 points to 108 points (see Figure 2). The group as a whole remained in Minimization, but the score increased significantly.

In terms of validation between answers, the consistency score was 75, which means that similarly worded questions got the same responses. The congruency score was 83, which reflects the degree to which answers were responded to in a pattern. The negative life events score was high, which is a subjective measure of early traumatic experiences. However, the group expressed high resiliency with a lower need for closure and a higher need for fulfillment. This is often not the case for those who indicate higher rates of negative life events. Considering the group was fully comprised of adults 30 years old and older, there was a relatively surprising mid-range score on identity diffusion, thus suggesting that some were in the midst of an identity crisis, perhaps in their family lives or marital lives. Basic determinism of the group was relatively low as well, which suggested a high propensity to think critically, not to be particularly strong-willed, and not to prefer simplicity. The group's sociocultural openness was 94, the highest score measured, which directly coincides with the purposes of this project. The group's self-awareness score was also very high, with a score of 83. Lastly, the gender traditionalism of this group was very low, thus suggesting that the group was more flexible on gender norms, which is also directly related to the purpose of this project.

## Findings & Discussion

Of the 18 participants who began the inventory, 11 completed a post-intervention IDI inventory. A total of 28 self-reflection responses from seven individuals were received from the survey at the time of this writing, which means that some opted out of documenting their reflections and/or linking their study I.D. number to their responses. (The authors are aware of one participant who did not want the gift cards, so they did not self-identify). Eight of the 11 who completed both pre- and post-intervention IDIs were found to have grown in their overall IDI score, while two remained the same, and one regressed along the continuum. Those who grew were in Minimization or Polarization phases and moved to the next phases of Acceptance and Minimization, respectively. Interestingly, the group's difference between their PO before and after the intervention events increased less than their actual orientation before and after the intervention events. This suggests that though they increased significantly as a group, they did not think they had increased as significantly as they did along the IDC. Individually, this also suggests that those who have a large gap between their perceived and actual orientations are more likely to be able to grow as part of this exercise, but a larger sample size is needed to verify this finding. Though the sample is relatively small and not globally representative of the staff in the library field, it provides a means to demonstrate the impact of intentionality of professional development in the areas of intercultural competence. In addition, we realize the gender identity of the participants may be correlated to their willingness to be involved in and participate in the project (see Figure 3).

Participant	PO	DO	OG	Change PO	Change DO	Change OG	Group
1	116.87	91.56	25.31				
	127.47	116.63	10.84	10.60	25.07	-14.47	Growth
2	116.36	80.17	36.19				
	116.50	79.58	36.92	0.14	-0.59	0.73	Stasis
3	123.73	102.89	20.84				
	127.39	111.49	15.90	3.66	8.60	-4.94	Growth
4	125.01	106.66	18.35				
	118.32	92.24	26.08	-6.69	-14.42	7.73	Regression
5	113.83	70.05	43.78				
	120.18	90.07	30.11	6.35	20.02	-13.67	Growth
6	125.57	101.62	23.95				
	136.69	128.23	8.46	11.12	26.61	-15.49	Growth
7	125.32	100.37	24.95				
	131.87	123.30	8.57	6.55	22.93	-16.38	Growth
8	117.54	81.46	36.08				
	123.67	90.34	33.33	6.13	8.88	-2.75	Growth
9	124.38	99.95	24.43				
	129.87	115.81	14.06	5.49	15.86	-10.37	Growth
10	128.41	107.12	21.29				
	130.46	110.90	19.56	2.05	3.78	-1.73	Stasis
11	130.01	114.59	15.42				
	137.52	129.42	8.10	7.51	14.83	-7.32	Growth
<b>Group Means</b>				<b>4.81</b>	<b>11.96</b>	<b>-7.15</b>	<b>Growth</b>

Figure 3. Individual IDI Perceived Orientation & Developmental Orientations with Differences



## Reflection Analysis

A combination of Qualtrics survey software along with Python semantic processing was used to inspect the qualitative data created from the self-reflections (see Figure 4). Reflections of the cultural experience were then analyzed using the Intercultural Knowledge and Competency Value Rubric from the American Academies of Colleges and Universities (AAC&U). IDI results were analyzed and linked to their qualitative data. We compared the attitude of the participants with the outcome of their growth. For the sentiment analysis, we looked at the depth differential ( $\Delta$ ) and sentiment for each librarian individually. The sentiment analysis code script was developed using Python and TextBlob.

score	quote	PO change	DO change	growth
Polarization	Most in the class still thought this campus was as separated as it ever was...totally different than what I have witnessed. Everyone only sees what they know, how things stay the same, some saw a great difference from where they were from...city or country setting. I joined in the discussion on how much change has actually happened in the last 20 years, not just at Purdue.	0.14	0.59	Stasis
Minimization	All the people seemed relaxed and having good/clean family fun. I seemed uncomfortable at first but as the day went on, I seemed to loosen up and enjoy the games and the music...at least some of it.	2.05	3.78	Stasis
in minimization moved to acceptance	At one of the tables I took the citizenship quiz and it was really hard! I also learned something about turkish culture, which made me realize how little I actually knew about turkish culture.	10.6	25.07	growth
in minimization moved to acceptance	It really illustrated how we automatically judge someone based on our own values and beliefs without stopping to think about the cultural impacts.	11.12	26.61	growth
in polar moved to minimization	I learned that it is not enough to work at an institution that says that it has a diverse and open workforce. Every person at the University who participates in a public facing interaction needs to own that diversity statement in a proactive way and should be able to articulate how they participate in the institution's diversity initiatives. If they cannot, the diversity statement is as good as useless.	5.49	15.86	growth (small)

Figure 4. *Sample Reflection Responses*

## Overall Sentiment

For the semantic analysis, TextBlob was used to analyze the data. TextBlob is a Python library for processing textual data. The library looked at the polarity of a word, along with its occurrence, to describe its importance in determining the sentiment of the qualitative data. Positive or negative values were hand-coded by the authors to the words, which were then

averaged to give a range of values from a negative one to one. This sentiment analysis was then compared to a score of the empathy and openness rubric values of the AAC&U intercultural knowledge rubric to create the  $\Delta$  between the described skills and attitudes during the cultural event.

To conduct the semantic analysis, the raw files were pre-processed using Python. The files were downloaded from the Qualtrics site and converted into the appropriate file type. Before inserting the data into the processor, it needed to be cleaned of extraneous information. The data columns that were not relevant to the text analysis were removed from the file, including location information, digital proof of attendance, and identifying information of the responders. Any blank responses from testing the survey or incomplete responses were removed.

The integrity of the data was reviewed in Python, paying close attention to any truncated columns or misrepresented data values. The researchers were able to reduce the reflection results for questions one, three, and five to their root values, a process known as lemmatization. By lemmatization, we mean that the differences in case intense between words were removed, leaving only the lemma (root of the words). By doing this, it is possible to find the frequencies of words to count their occurrence. The existing stop words library in Python, which is a collection of common English words such as "for," "to," and "the," were also removed. Stop words are often removed from things such as search engines, as they appear so frequently that it is not relevant to the overall meaning of the query.

When we applied the technique to the results, it gave a large range of values with a high variation for some. Median is a better suited metric than average in our case, and Table 3 reflects the data for each participant who completed both the reflections and the post-intervention IDI. The median gives us the middle value considering our small sample size and the asymmetrical data. Though the sample was small, the range was quite large. The coefficient of variation is the ratio of the standard deviation to the mean, and it was greater than 60% for all but two participants. The standard error is the ratio of the standard deviation to the square root of the number of samples, which was important due to there being some participants who only had a few reflections to as many as ten.

Table 3. Structured Debrief Questionnaire

ID	Mean	Median	Range	Variance	StandDev	StandErr	CoOfVar
1	0.1100	0.1100	0.1800	0.0162	0.1273	0.0900	166%
4	0.1150	0.1150	0.1500	0.0028	0.0532	0.0217	46%
6	0.1567	0.1800	0.1300	0.0046	0.0681	0.0393	43%
11	0.1333	0.1500	0.2400	0.0071	0.0843	0.0344	63%
13	0.1560	0.1200	0.2500	0.0111	0.1055	0.0472	68%
14	0.0780	0.0950	0.5100	0.0245	0.1565	0.0495	201%
15	0.0533	0.0400	0.1000	0.0026	0.0513	0.0296	96%

---

## Variation (ANOVA)

Analysis of Variance (ANOVA) is an effective method to demonstrate the variation among different samples of an experiment. We used the method outlined by Analytics Vidhya to analyze the sentiment data in Microsoft Excel (Singh, 2018), The sum of squares values both between and within the groups is analyzed along with degrees of freedom to provide a number known as an F-value, which can then be compared to hypothesis tests using known statistical tables. If the values do not differ the F-value is less than the F-critical value for the alpha (or confidence interval) selected. The P-value should also be higher than the alpha to show similarity in the samples.

Using a box and whisker chart to display the values was a way to show the variation among some of the participants. In figure 7 we used Microsoft Excel to create the graphic and used the existing values from our sentiment analysis in TextBlob. We also stored both the text responses and results of the IDI in an access database for ease of access and query. This proved useful, as the results for the sentiment analysis were repeated multiple times to confirm their accuracy.

## Moderate Correlation

We took the results of the differences between the pre-intervention IDI DO and the post-intervention IDI DO (see Figure 4) to represent the change in the participants' competency and awareness of intercultural ideas. "The underlying assumption of the model is that as one's experience of cultural difference becomes more complex and sophisticated, one's potential competence in intercultural relations increases" (Hammer et al., 2003, p. 423). Our extension of this result was to tie it into the sentiment of the participants by using the key-ID from their Qualtrics survey. By using both the values of the TextBlob analysis and the IDI, we found moderate correlations. We also analyzed the PO change.

The length of time spent during the Qualtrics survey and the number of responses was also beneficial to the analysis. We took the average length in minutes of the responses on Qualtrics along with a count of the unique verified events that were attended and responded to as compared to the sentiment score for that participant. We found these have little correlation to the growth in our case study.

## Depth Differential

The  $\Delta$  was calculated by reading the responses for questions one, three, and five and by determining how they aligned with the associated rubrics from the AAC&U. Questions one and three were used to analyze the feelings of the reflector and aligned with the skill rubric of empathy. Five was used to analyze the attitude of openness. Once the value of each was found, the  $\Delta$  was calculated as the difference between the behavior score and the feeling score.

The overall score, which was the sum of the two values for empathy and openness, was also assigned a value to group the participants together. This was based on the perfect score of eight and the number of scores at each value. This was done to allow comparison between those that were actively and minimally engaged in the cultural experience but had a similar  $\Delta$  and for the comparison of respondents who were aligned in their anticipated behavior to those who had a conflict. This will need to be confirmed in a larger population, but it is interesting in our case study. In short, we found that people who demonstrated openness and empathy scored higher

on IDI after their events. This finding is aligned with the entire group's high empathy and high critical thinking values on the BEVI assessment.

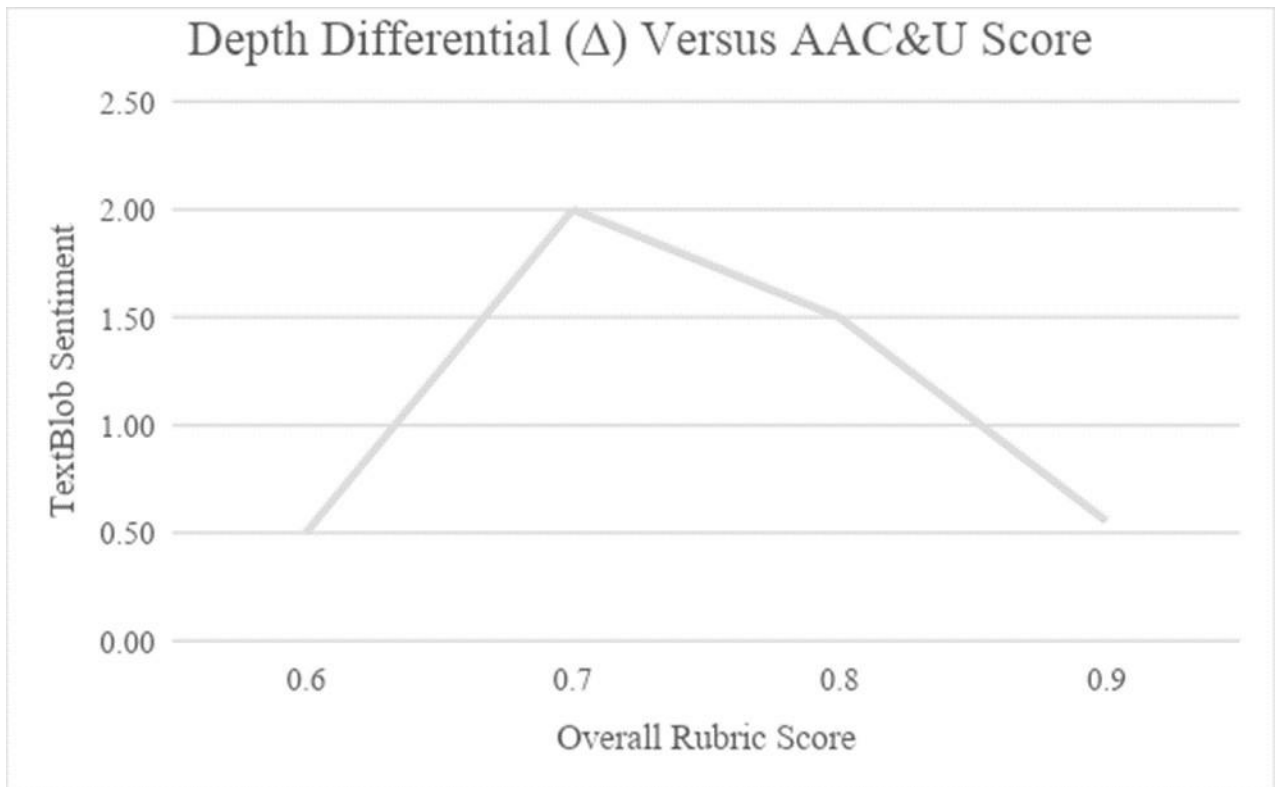


Figure 6. Overall Competency Score based on AAC&U Rubric compared to  $\Delta$

There was a moderate correlation when looking at the median and TextBlob sentiment for each librarian. The librarians did not vary significantly. The depth differential (see Figure 7) shows conflict that may suggest movement along the continuum. The box and whisker plot shows (see Figure 7) that some had tight clustering of sentiment for each event, while others were more varied.

The sentiment is not related to the overall intercultural competency score, but the overall score is related to the depth differential. People who scored at the extremes in competency tended to have a lower depth differential, which means that their overall sentiment did not vary greatly from their score using the AAC&U rubric. Those with a high amount of conflict between feelings and behaviors tended to score in the middle of the competency evaluation. This suggests that at the ends of the spectrum, being those with high intercultural competency and low intercultural competency, there is little difference between feelings (sentiments) and behaviors (from reflections). Those in transition may be experiencing discomfort and conflict between how they feel and the way they act in a new cultural environment. The sentiment was not correlated with the overall competency or engagement of the reflectors. Some enjoyed the exercise but were not active participants, while others reflected strongly on the experience but not in an engaging way.

Those who scored high or low on the AAC&U rubric analysis were similar in their feeling and behavior. Those in the middle score in overall competency had some conflict between the two. This may suggest that there is a conflict between how we behave and our attitudes as we move along the spectrum. Again, this will need to be explored in a larger study to gain confidence in the conclusions.

### Overall Sentiment

The average value of the TextBlob semantic analysis was 0.11, with negative one representing a negative impression and one being the most positive possible. The median was 0.11. The first quartile value is 0.05, and the third quartile value is 0.18. Overall, the data appears roughly linear with a slope of 0.01 when the data is arranged sequentially. The fact that there were few negative responses seems to suggest that overall, the respondents were either unclear in their preference for the activity or positive. It is important to note that the polarity is an average, meaning someone with a high score did not necessarily have only positive qualitative data. It simply means that the average of the sentiment was positive.

### Variation (ANOVA)

Figure 7 shows that the data was spread for some participants but not as varied for others. The number of responses varied for each librarian, but the average for all was in the high neutral range. Looking at each event as a source of possible unknowns, it is not surprising the attitude of the responses differed. Some events may have been more welcoming to the respondent, or the respondent may have simply not been interested in the event. We placed no restrictions on the cultural event other than that it was outside of their norm. This is likely a cause of the high variation in the sentiments.



Figure 7. *Sentiment Overall vs Sentiment Per Event*

### Moderate Correlation

Our participants with the highest number of responses were also the ones with the most variation in the sentiments. However, we did find a moderate correlation in the sentiment of all responses for an individual with their growth on the intercultural continuum (see Figure 8). The  $R^2$  value is 0.72 when comparing the sentiment and change in DO. The change in PO and sentiment has an  $R^2$  value of 0.6. Since these are higher than 50%, we can say that there is a better chance than flipping a coin that the sentiment of a participant when reflecting will influence the change in their DO and PO. This should also be taken into consideration with our small sample size and explored further for more certainty.

The other metrics did not have a strong correlation including change in PO and DO compared to the average duration of the Qualtrics survey. Other factors that did not show a significant correlation were the number of responses. This seems to suggest that the times a person repeats the cultural event outside of their own does not influence the growth on the IDC as much as the attitude with which they approach those events. From our small sample, it also does not seem important that a time requirement is placed on the duration of the responses to the survey.

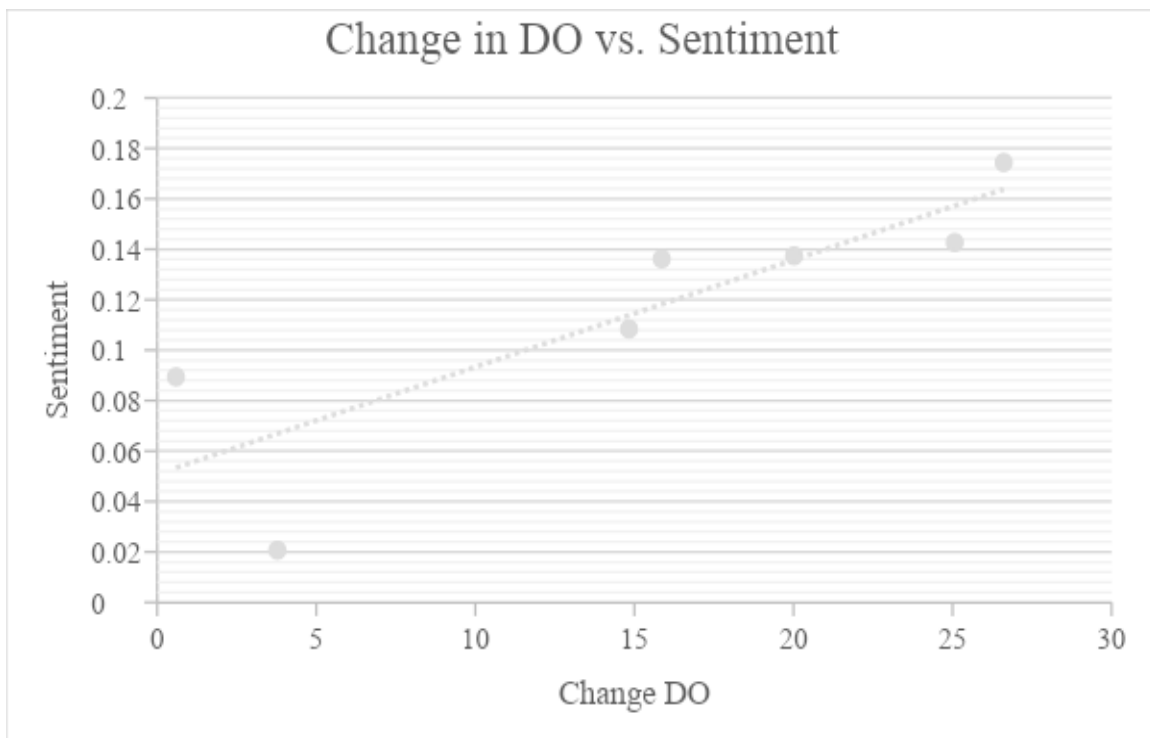


Figure 8. Overall Sentiment of Each Librarian Compared to Change in DO

### Conclusion

Intercultural competence and growth are more necessary than ever within libraries and beyond. The authors of this project were pleased with the participants' commitment to the process of

finding intercultural events that challenged them and intentionally reflecting on them. Though the physical load of the participation was minimal, the cognitive load of intercultural growth was challenging. When library faculty and staff make an intentional effort towards intercultural growth, they can change the way they personally and professionally function. Overall, we found the experience had a positive influence on the intercultural development of library faculty and staff. Though the sample size was relatively small and heterogenous, the work can be a part of a larger conversation in the field about the impact of intentional intercultural development work. Future research is needed to study the impact that intercultural personal and professional development can directly have on library services, collections, and instruction, as well as on the people that manage those programs. It is especially important to consider given the context of the study at a research-intensive university in the Midwest U.S. that has large international student and faculty populations in a region of the country that is not particularly diverse. As library staff, though the sample population was not particularly diverse, they are tasked with meeting the research and information needs of a diverse campus population. It was particularly exciting to see the progress that could be made with intentionality and resources despite the backgrounds of the participants. We found that there was a moderate correlation in the sentiment of all responses for an individual with their growth on the intercultural continuum. That is, as their sentiment shifted positively, their IDI scores also shifted positively.

The hope is that interculturally competent faculty and staff will create a culture within libraries that are interculturally responsive to the needs of the clientele. Future work will be tracing the impact of intercultural competence in direct-to-patron library work, that is, the relationship between intercultural competent instruction, inclusive collection practices, and inclusive library instruction. More quantitative and qualitative assessments of the impacts of the deliberate intercultural interactions outside of study abroad experiences, and for library workers, need to be done to explore the possibilities of interculturally engaged libraries. This project was promising to see the impact of intentional intercultural development with library workers.

## References

- Alajmi, B. M., & Alshammari, I. (2020, April 6). Strands of diversity in library and information science graduate curricula. *Malaysian Journal of Library & Information Science*, 25(1), 103-120. <https://doi.org/10.22452/mjlis.vol25no1.6>
- Bennett, M. J. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In R. Paige (Ed.), *Education for the intercultural experience* (pp. 21-71). Intercultural Press.
- Blackburn, F. (2015, August 7). 'Cultural competence is for everyone:' Cultural competence in the United States library and information sector. Is it relevant to Australian libraries? *Australian Academic & Research Libraries*, 46(3), 176-193. <https://doi.org/10.1080/00048623.2015.1063800>
- Click, A. B., Wiley, C. W., & Houlihan, M. (2017). The internationalization of the academic library: A systematic review of 25 years of literature on international students. *College & Research Libraries*, 78(3), 328-58. <https://doi.org/10.5860/crl.78.3.328>



- Costello, L. (2018, November). [Review of the book *Information services to diverse populations: Developing culturally competent library professionals*, edited by N.A. Cooke]. *College and Research Libraries*, 79(7), 992-993. <https://doi.org/10.5860/crl.79.7.992>
- Fanning, R. M., & Gaba, D. M. (Summer 2007). The role of debriefing in simulation-based learning. *Simulation in Healthcare: Journal of the Society for Simulation in Healthcare*, 2(2), 115-125. <https://doi.org/10.1097/SIH.0b013e3180315539>
- Field, N., & Tran, R. (2018, January 11). Reinventing the public value of libraries. *Public Library Quarterly*, 37(2), 113-126. <https://doi.org/10.1080/01616846.2017.1422174>
- Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003, July). Measuring intercultural sensitivity: The intercultural development inventory. *International Journal of Intercultural Relations*, 27(4), 421-443. [https://doi.org/10.1016/S0147-1767\(03\)00032-4](https://doi.org/10.1016/S0147-1767(03)00032-4)
- Jones, S. D., & Murphy, B. (Eds.). (2019). *Diversity and inclusion in libraries: A call to action and strategies for success*. Rowman & Littlefield.
- Kung, J. Y., Fraser, K. L., & Winn, D. (2020, January). Diversity initiatives to recruit and retain academic librarians: A systematic review. *College & Research Libraries*, 81(1), 96-108. <https://doi.org/10.5860/crl.81.1.96>
- Lederman, L. C. (1992, June). Debriefing: Toward a systematic assessment of theory and practice. *Simulation & Gaming*, 23(2), 145-160. <https://doi.org/10.1177/1046878192232003>
- Moody, J. (2021, November 15). *Declining International Student Numbers Stabilize*. US News. <https://www.usnews.com/education/best-colleges/articles/declining-international-student-numbers-stabilize/>
- Redd, R. T., Sims, A., & Weekes, T. (2020, January 6). Framework for change: Creating a diversity strategic plan within an academic library. *Journal of Library Administration*, 60(3), 263-281. <https://doi.org/10.1080/01930826.2019.1698920>
- Shealy, C. N. (2015). Beliefs, events, and values inventory (BEVI). In C.N. Shealy (Ed.), *Making sense of beliefs and values: Theory, research, and practice* (pp. 113-173). Springer.
- Shealy, C. N. (Ed.). (2016). *Making sense of beliefs and values: Theory, research, and practice*. Springer.
- Singh, G. (2018, January 15). *A simple introduction to ANOVA (with applications in Excel)*. Analytics Vidhya. <https://www.analyticsvidhya.com/blog/2018/01/anova-analysis-of-variance/>
- Thiagarajan, S. (1992). Using games for debriefing. *Simulation & Gaming*, 23(2), 161-173. <https://doi.org/10.1177/1046878192232004>
- Villagran, M. A. L., & Hawamdeh, S. (2020, May 28). Cultural competence in LIS education: Case study of United States ranked schools. *Multicultural Education Review*, 12(2), 136-155. <https://doi.org/10.1080/2005615X.2020.1756091>
- Vinopal, J. (2016, January 13). The quest for diversity in library staffing: From awareness to



---

action. *In the Library with the Lead Pipe*.

<http://www.inthelibrarywiththeleadpipe.org/2016/quest-for-diversity>

**Natasha E. Johnson** ([nejohnson@purdue.edu](mailto:nejohnson@purdue.edu)) is an Associate Professor of Library Science at Purdue University Libraries & School of Information Studies in West Lafayette, Indiana. She also serves as a Provost Fellow in the Office of the Provost: Division of Diversity & Inclusion and as an Intercultural Learning Officer for the Center of Intercultural Learning, Mentoring, Assessment, and Research (CILMAR). She is a qualified administrator of the Intercultural Development (IDI) and the Beliefs, Events, Values Inventory (BEVI). She is currently a facilitator of the Purdue Institute on Racial Equity where faculty, staff, and graduate students are led through six modules that elevate anti-bias intervention, inclusive excellence, and equity-mindedness. Some of her other responsibilities include being a library liaison to the Mathematics & Physics Departments and maintaining the Mathematical Sciences Library and the Physics and Astronomy library collection.

**William C. Ledbetter** ([wledbett@purdue.edu](mailto:wledbett@purdue.edu)) is a Lecturer in the Computer and Information Technology Department at Purdue University. Will has over five years of experience working in the industry, primarily as a database administrator for the retail, financial, and healthcare sectors. He received his Master of Science degree in Information Systems from Middle Tennessee State University. His concentrations included business intelligence and analytics, database development, and cybersecurity. He has had the opportunity to work with MITRE over several summers at the National Cybersecurity FFRDC as an intern while pursuing his doctorate from Purdue. His research interests are natural language processing, cybersecurity, and technology-based learning.



[ This page is left intentionally blank. ]

