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Abstract

Cultural heritage describes our way of life. It comes from previous generational traditions and incorporates our current constructed and natural environments, and tangible artifacts. The photo narrative process, derived from photovoice, combines photography and narrative expression about artifacts important to one's way of life. The purpose of this study was to explore effects of the photo narrative process on students' intercultural learning in agriculture. Photo narrative assignments were developed for students to capture facets of their cultural heritage, and their host countries' cultural heritage from three separate study abroad programs. Archival data were collected (i.e., course assignments to illustrate one's cultural heritage via photo and text) and visual social semiotics were used to analyze data. The Developmental Model of Intercultural Sensitivity provided context for students' levels of intercultural competence. The results showed participants experienced frame shifts (i.e., perspective change in worldviews) from ethnocentrism to ethnorelativism, as evidenced in the rhetoric of their artifacts after participating in the photo narrative process. The photo narrative process is a valuable educational technique; its purposeful use helps learners experience and progress through the stages of intercultural competence. Photo narrative takes advantage of young people's preferred communication methods (i.e., social media), combining image and text, which empowers them through expressive communication and reflection. Purposeful photo narrative processes may be adapted to help learners explore perspective shifts in racism, classism, or religion to increase understanding and empathetic response between dissimilar groups.

Keywords

Intercultural competence, photo narrative, cultural heritage

Funding Source

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The Photo Narrative Process: Students' Intercultural Learning in Agriculture

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Abstract

Cultural heritage describes our way of life. It comes from previous generational traditions and incorporates our current constructed and natural environments, and tangible artifacts. The photo narrative process, derived from photovoice, combines photography and narrative expression about artifacts important to one's way of life. The purpose of this study was to explore effects of the photo narrative process on students' intercultural learning in agriculture. Photo narrative assignments were developed for students to capture facets of their cultural heritage, and their host countries' cultural heritage from three separate study abroad programs. Archival data were collected (i.e., course assignments to illustrate one's cultural heritage via photo and text) and visual social semiotics were used to analyze data. The Developmental Model of Intercultural Sensitivity provided context for students' levels of intercultural competence. The results showed participants experienced frame shifts (i.e., perspective change in worldviews) from ethnocentrism to ethnorelativism, as evidenced in the rhetoric of their artifacts after participating in the photo narrative process. The photo narrative process is a valuable educational technique; its purposeful use helps learners experience and progress through the stages of intercultural competence. Photo narrative takes advantage of young people's preferred communication methods (i.e., social media), combining image and text, which empowers them through expressive communication and reflection. Purposeful photo narrative processes may be adapted to help learners explore perspective shifts in racism, classism, or religion to increase understanding and empathetic response between dissimilar groups.

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Introduction

Literature exists (Bringle & Hatcher, 2011; Conner, Roberts, & Sterns, 2016; Kasravi, 2009; Kitsantas, 2004) about the importance of teaching and practicing intercultural understanding (Cunningham, 2015) during study abroad or other high impact experiential (HIE) learning programs. How do we know if learners make progressive growth in understanding and acquiring intercultural competencies as a result of their HIE program? Some might rely on traditional evidence such as research papers to document learners' growth/change over time. These traditional forms may not capture the fluidity of students' changes in intercultural competence as well as more often used means like social media. Today, personal photographs with short narratives portray one's culture, as seen through daily Facebook, Instagram, and Twitter posts. Given students' proclivities for digital photography and truncated narratives to describe their daily existence, an updated method is needed to capture students' descriptions of their cultural heritage, and intercultural understandings when studying abroad.

Every culture possesses its own set of traditional semiotics (Aiello, 2016). Traditional semiotics are defined as a "set of socially constructed meanings or norms that become embedded and naturalized in the cultural fabric, to the extent that they become invisible or common sense" (Aiello, 2016, p. 92). Cultural semiotics has the potential to be captured via photographs by members outside the culture in which they are embedded. Although meanings of cultural semiotics are not always fixed, or certain, the possibilities of their attributed meanings can give outside members insights into new cultures (Aiello, 2016). Developing an understanding of another culture's semiotics opens the opportunity to expand viewpoints and develop compassion for

individuals and communities globally (Harrell, Sterner, Alter, & Lonie, 2017).

Photographs purposefully captured to portray messages may have an impactful and educational role in students' learning processes of different cultures. Purposeful interaction and assessment of another's culture opens the potential to retain more information about that culture and its traditional semiotics. Intercultural competence can be defined as the ability to communicate effectively and appropriately in multicultural situations with people who differ linguistically and culturally from oneself (Byram, 1997; Sinicrope, Norris, & Watanabe, 2007).

Bennett's (1986) Developmental Model of Intercultural Sensitivity (DMIS) was developed to "both illustrate 'improvement' in the ability to comprehend and experience difference, and it [implies] the strategies that will impede such experience" (Bennett, 1986, p. 181). Bennett's (1986) DMIS was based on the concept of *difference*, in that cultures "differ fundamentally in the way they create and maintain world views" (p. 181). The more students recognize this ethnocentric principle, the greater intercultural sensitivity they possess. Byram (1997) identified one's attitude, knowledge, skills of interpreting and relating, skills of discovery and interaction, and critical cultural awareness toward a different culture as significant factors contributing to intercultural competence.

Bennett (1986) observed six stages of intercultural competence, which are useful in understanding personal growth and development of intercultural sensitivity. The first three stages, denial, defense, and minimization, constitute an ethnocentric viewpoint, in which an individual's own culture *is* the central worldview (Sinicrope et al., 2007). The second three stages, acceptance, adaptation, and integration,

comprise an ethnorelative viewpoint, in which an individual displays an increased understanding of the world (Sinicrope et al., 2007).

The ethnocentric stages of Bennett’s (1986) DMIS can be seen as “ways of avoiding cultural difference, either by denying its existence, by raising defenses against it, or by minimizing its importance” (Bennett, 2004, p. 1). The ethnorelative stages are “seeking cultural difference, either by accepting its importance, by adapting perspective to take it into account, or by integrating the whole concept into a definition of identity” (Bennett, 2004, p. 1-2). Progression through the DMIS expresses cultural competence, from less to more,

providing a sound way of developing and teaching intercultural understanding.

Sinicrope et al. (2007) found Bennett’s (1986) DMIS is a dynamic model (Figure 1) that explains “how individuals respond to cultural differences and how their responses evolve over time” (p. 8). The early stages “define the parochial denial of difference, the evaluative defense against difference, and the universalist position of minimization of difference” (Bennett, 1986, p. 179). Conversely, concluding stages “define the acceptance of difference, adaptation to difference, and the integration of difference into one’s world view” (p. 179).

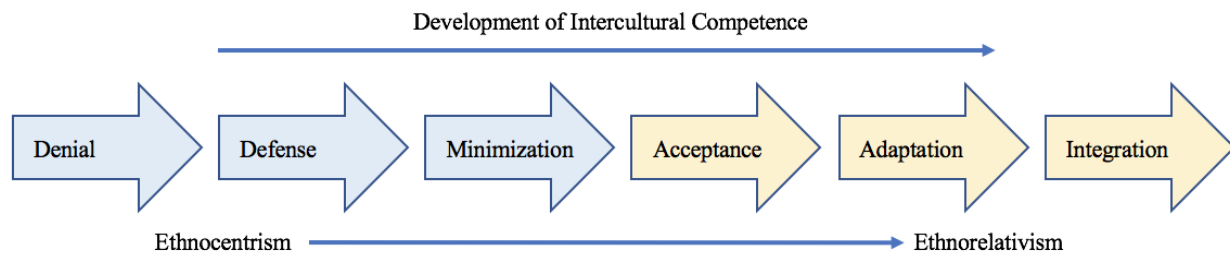


Figure 1. Bennett’s (1993) Model of Cultural Competency; adapted from “A developmental approach to training for intercultural sensitivity,” by M. J. Bennett, 1986.

Photovoice is defined as a communication and learning process, centered on the conception of knowledge in which people identify, portray, and enhance their community through photographs (Wang & Burris, 1997). The symbolic and ideological meaning of an image derived after in-depth analyses correspond to the “range of possible meanings inscribed by cultural codes” (Aiello, 2016, p. 94). The photovoice process involves participatory research, which can be applied to many disciplines to serve a functional role in education when approached with a focus on culture (Harrison, 2003; Wang & Burris, 1997).

Photo narrative, the combination of photography and narrative expression about artifacts important to one’s way of life, was derived from photovoice. Photographs contain visual social semiotics, or signs, reflecting individual beliefs, values, and attitudes about a culture’s political and social climates (Harrison, 2003). Photovoice has the potential to develop intercultural competence through valuable insights about lived experiences (Roberts & Edwards, 2016), generating knowledge and diversifying communication, through the portrayal of signs and meanings central to a different culture (Borron, 2013; Sinicrope et al., 2007).

Cultural competence does not develop automatically, or through mere contact with a different culture (Heinzmann et al., 2015). Therefore, participants' shifts in intercultural competence through reflective inquiry resulted in changed perspectives that were "maintained and deepened over time" (Wilbur, 2016, p. 59). Wilson and Fowler (as cited in Liu & Dall'Alba, 2012) found that students' active and purposeful engagement in the learning process shifted their intercultural learning. Intercultural sensitivity is "the ability to discriminate and experience relevant cultural differences" (Hammer et al., 2003, p. 422). Intercultural competence is "the ability to think and act in interculturally appropriate ways (Hammer et al., 2003, p. 422).

The purpose of this study was to explore effects of the photo narrative process on students' intercultural learning in agriculture. The research questions were 1) Which stages of intercultural competence were most prevalent in students' descriptions of their cultural heritage, 2) Which stages of intercultural competence were most prevalent in students' descriptions of host country nationals' cultural heritage, and 3) Did participants' intercultural competencies shift because of their participation in the photo narrative process?

Methods

A qualitative research design (Patton, 2002) for this non-experimental study offered appropriate analyses techniques of photo narrative (PN) assignments that produced participants' artifacts. The research design allowed measurement of the quality of descriptions from PN assignments to determine impact on cultural competence. This determination enabled the study of students' perspectives through analyses of their communications (Fraenkel, Wallen, & Hyun, 2015). "A

person's or group's conscious and unconscious beliefs, attitudes, values, and ideas often are revealed in their communications" (Fraenkel et al., 2015, p. 476). Among these revelations of students' beliefs and values, natural cultural themes emerged through "developing appropriate categories, ratings, or scores" (Fraenkel et al., 2015, p. 476), which were used for subsequent comparison to highlight the phenomenon under study. The research was approved by the Institutional Review Board at [State] University.

The population ($N = \sim 7,800$) consisted of undergraduates in the College of Agriculture and Life Sciences (AGLS) at [State] University. Purposive sampling methods (Fraenkel et al., 2015) were used to draw a sample of students who studied abroad on one of three short-term (i.e., less than 30 days) study abroad programs in Namibia or Costa Rica during 2016 and 2017. The sample ($n = 55$), although self-selected, could represent the population of interest because all students in AGLS had the same opportunities to participate in the Namibia and Costa Rica programs (Fraenkel et al., 2015).

An important component for each of the study abroad programs was for undergraduate agricultural students to complete multiple PN assignments. The PN is a series of photographs paired with short narratives, which was used to gauge participants' understandings of cultural heritage (i.e., own and foreign). PN assignments mirror a major facet of social media use in that it is a communicative photograph supplemented with a short narrative. The PN process has great potential for educators to create impactful assignments congruent with young peoples' communication processes. Such assignments have the potential to help students understand and change their intercultural competencies.

Table 1 illustrates the ideas, similarities, and differences of each PN assignment for each study abroad program. PN1 and PN2 assignments from Namibia 2016 and Costa Rica 2017 are similar, but PN1 and PN2 from Namibia 2017 were enhanced to further develop students’

reflective processes. Despite this difference, all PN assignments were based on the same principles of increasing cultural competency through reflection while traveling abroad. Participants recorded their cultural perceptions (own and foreign) before and during travel.

Table 1. *Photo Narrative Assignment Descriptions and Instructions.*

Program	PN1	PN2
Namibia (2016)	Submit a photo representing your personal cultural heritage and supplement it with 100-150 words describing why your photo best represents your personal cultural heritage. Also, participate in double-blind critiques (each student reviews another student’s photo, using the same criteria, and write why your peer’s photo best represented his/her culture).	Capture a specific element of your host country (see categories) via photograph, and supplement it with 100-150 words describing how, or why, the photo best represents the chosen theme (i.e., categories): <ul style="list-style-type: none"> ● Historical/cultural value of an agricultural product ● Consumer effect on production ● Environmental issues affecting production ● Multicultural significance between [respective country] and U.S. product uses/values ● Socio-economic effects
Costa Rica (2017)	Submit a photo representing your personal cultural heritage and supplement it with 100-150 words describing why your photo best represents your personal cultural heritage. Also, participate in double-blind critiques (each student reviews another student’s photo, using the same criteria, and write why your peer’s photo best represented his/her culture).	Capture a specific element of your host country (see categories) via photograph, and supplement it with 100-150 words describing how, or why, the photo best represents the chosen theme (i.e., categories): <ul style="list-style-type: none"> ● Historical/cultural value of an agricultural product ● Consumer effect on production ● Environmental issues affecting production ● Multicultural significance between [respective country] and U.S. product uses/values ● Socio-economic effects

Table 1. Continued.

Program	PN1	PN2
Namibia (2017)	<p>Acquire a series of photos that best represent your cultural heritage <i>two weeks before the date of departure</i>. Supplement your photos with narrative one week after exposure in a new cultural environment. During the first week of study:</p> <ol style="list-style-type: none"> 1. <u>Choose three photos</u> from your collection <u>that best show your personal cultural heritage</u>. 2. Describe (~200 words) how these photos best represent your cultural heritage. 3. Participate in double-blind reviews (i.e., each student analyzes a peer’s photo set and writes a narrative describing how the peer’s photos best represent his/her cultural heritage). 4. After the peer review, reflect on the similarities/differences between narratives. 	<p>Collect a series of photos that best represent the host country’s cultural heritage in the first two weeks of country study. After the second week of study:</p> <ol style="list-style-type: none"> 1. <u>Choose three photos that best represent the host country’s cultural heritage</u>. 2. Describe (~200 words) how these photos best represent the host country’s culture or heritage. 3. Participate in double-blind reviews (i.e., each student analyzes a peer’s photo set and writes a narrative describing how the peer’s photos best represent the host country’s cultural heritage). 4. After the peer review, reflect on the similarities/differences between narratives. 5. Share reflections from the PN process related to intercultural learning and/or expression of cultural heritage in domestic and foreign settings.

Data consisted of students’ archival PN assignments, collected after their short-term study abroad programs and after grades were assigned. Personal information (e.g., students’ names, family names, etc.) was redacted from the artifacts prior to analyses of the archival data. Table 2 displays the number of usable artifacts per PN assignment and program type.

Table 2. *Frequencies of Coded Photo Narrative Artifacts.*

Program	<i>f</i>		Total
	PN1	PN2	
Namibia (July 2016)	14	15	29
Costa Rica (Jan. 2017)	20	17	37
Namibia (July 2017)	20	20	40

MAXQDA, a software for “qualitative, quantitative and mixed methods data analysis,” (MAXQDA, 2017, para. 1) was used to thematically group and code all PN artifacts. Descriptive methodology and qualitative analyses were used to “identify the symbols used in the image and determine their meaning for society as a whole” (Lester, 1995, p. 126) to detect common themes, messages, and meanings that help define a population’s culture (Edgar & Rutherford, 2017). Coding groups, themes, and ideas were formulated before analyses to aid in organizing and making sense of the descriptive text and photographs. Content analysis was guided by Bennett’s (1986) DMIS to measure if students transitioned from ethnocentric to ethnorelative worldviews, illustrated on a continuum of intercultural competence as a result of PN processes.

Results

This primary finding was that students’ intercultural competencies shifted from ethnocentric to ethnorelative worldviews after participation in the PN process. Frequencies of the DMIS stages in PN1 and PN2 artifacts showed students’ intercultural sensitivities changed when discussing their own and host country nationals’ cultural heritages.

Ethnocentrism Revealed

PN1 helped students establish a cultural base to build upon before entering a new culture. Figure 3 illustrates ethnocentric stages (denial, defense, and minimization) were found in students’ descriptions of their cultural heritage (PN1 artifacts). No ethnorelative stages (acceptance, adaptation, and integration) were found in PN1 artifacts.

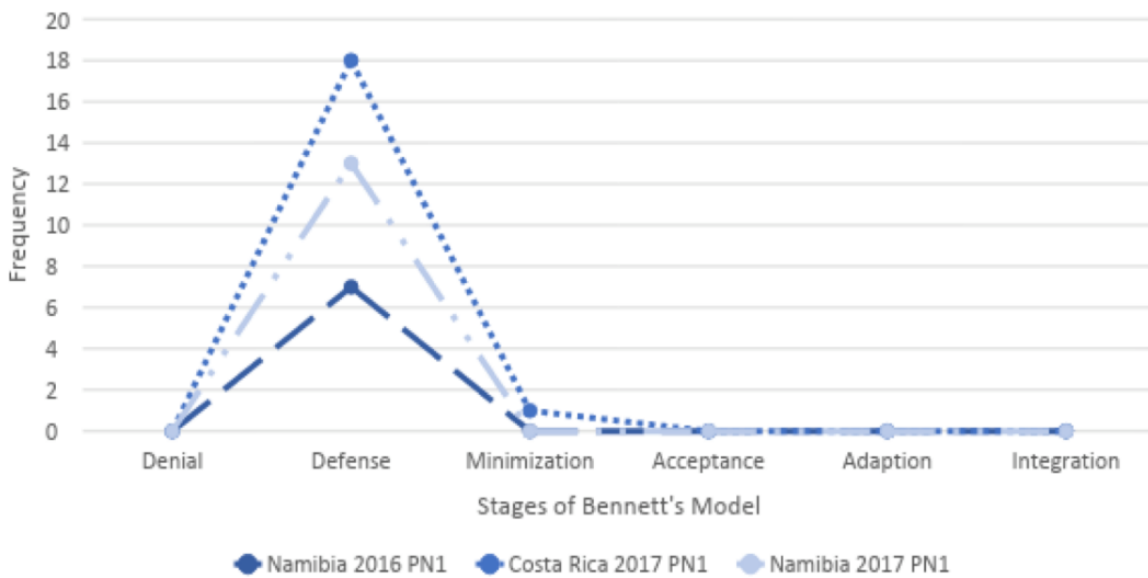


Figure 2. Frequencies of Bennett’s (1986) DMIS stages in PN1 artifacts.

Table 3 has examples of “Defense” and “Minimization” from students’ PN1 artifacts. These examples illustrate

ethnocentric rhetoric and ways of thinking, and a predetermined instinct to defend one’s own culture, values, and practices.

Table 3. *Ethnocentric Rhetoric from PN1 Artifacts.*

DMIS Stages	Excerpts from PN1 Artifacts	Programs
Defense	<i>The recent celebration of our American Independence never fails to show the things that have the largest impact on our lives: America’s freedom. The bloodshed across the world for our freedom has changed the course of history, bettered the lives of millions, and will never be forgot.</i>	Namibia 2016
Defense	<i>To me, agricultural [sp.] is the most vital industry in the world, and I strive to be a part of it for the rest of my life like my ancestors before me.</i>	Namibia 2016
Defense	<i>I am born and raised Texans and will never leave home. This sunset is irreplaceable...</i>	Costa Rica 2017
Defense	<i>Almost all child-bearing women in my family lineage sacrificed a salary job to raise their children for the betterment of society...members of my heritage have stood the test of time and stayed strong with and for each other to weather the storms.</i>	Costa Rica 2017
Defense, Minimization	<i>In my culture, we don’t believe in waste. Food represents habits, heritage of recipes passed down, one generation to another.</i>	Namibia 2017
Defense	<i>We live to serve others and do our part to make the country a better place.</i>	Namibia 2017

Ethnorelativism through Purposeful Reflection

Figure 4 shows evidence of increased ethnorelative viewpoints, with “Acceptance” as the most prominent stage in students’ descriptions of host country

nationals’ cultural heritage (PN2 artifacts). PN2 artifacts were completed after students spent two weeks immersed in their host countries’ culture. Descriptions in PN2 artifacts reflected ethnorelative, revealing a noticeable shift from PN1 findings.

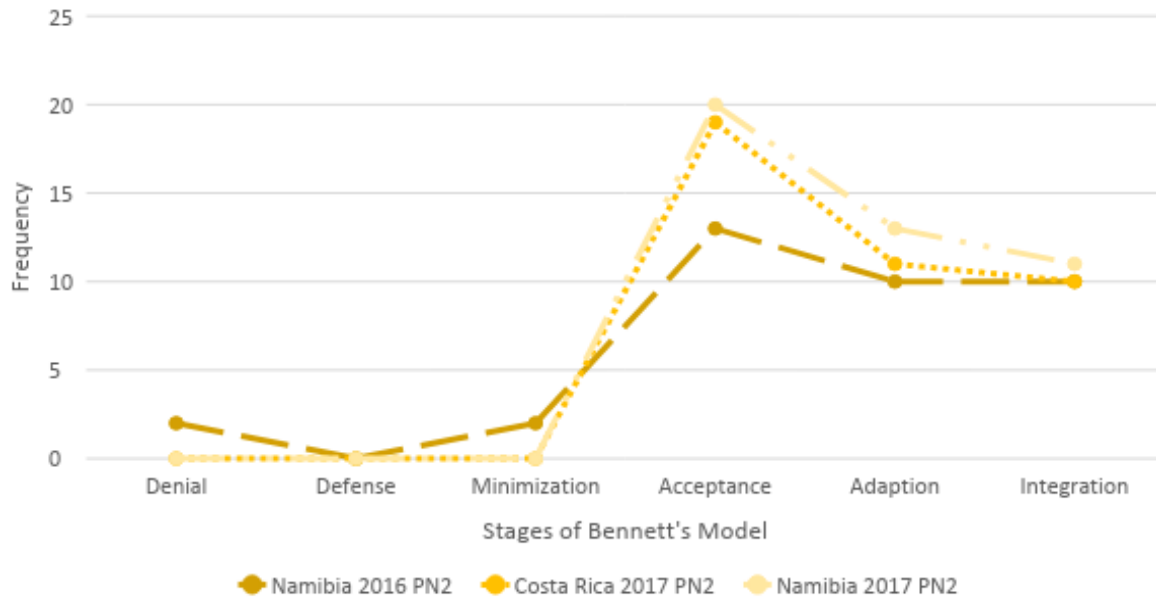


Figure 3. Frequencies of Bennett's (1986) DMIS stages in PN2 artifacts.

Table 4 shows students' reflections from PN2 represented purposeful interactions with host country nationals and experiences in cross-cultural immersion. The rhetoric extracted from students' PN2 assignments (Table 4) shows their desire to

understand new cultures and a willingness to apply intercultural experiences in their own lives. Their changed views are seen as "manifestations of changes in the underlying worldview" (Bennett, 1986, p. 11).

Table 4. *Ethnorelative Rhetoric from PN2 Artifacts.*

DMIS Stages	Excerpts from PN2 Artifacts	Programs
Acceptance	<i>...a key difference is that Namibia, unlike the U.S., included environmental protective measures in its constitution. This fact may hint at the idea that the cultures of Namibia hold their native wildlife and natural resources in higher regard than the U.S.</i>	Namibia 2016
Integration	<i>Almost anyone in the U.S. can connect to that love for animals and playing as a kid, and see that Namibia may not be so foreign.</i>	Namibia 2016
Integration	<i>Getting to hold this snake represents how easy it is to try something I normally wouldn't do...Essentially, I have changed my cultural heritage because none of my other family members would dare do what I did in holding one of these giant predators. Now that I have experienced this change, I will be able to take what I've gotten from Costa Rica and apply it to my family heritage back in the United States.</i>	Costa Rica 2017

DMIS		
Stages	Excerpts from PN2 Artifacts	Programs
Adaptation	<i>The impact of a deep-rooted and strong family goes far beyond the naked eye, and the visible difference in cultural values is apparent to all who have an appreciation for affective multiculturalism.</i>	Costa Rica 2017
Integration	<i>The story of Namibia is the story of beauty and struggle...Namibia's beautiful countryside tells a romantic story of naturalism, as the untainted land is truly this country's greatest commodity.</i>	Namibia 2017
Acceptance	<i>The continuous push to be better, grow more, and achieve standards is what makes Namibian agriculture unique.</i>	Namibia 2017
Acceptance	<i>My experience going through Katatura reminded me that not everything is as rose-colored as it seems. This also shows different perspectives can help you appreciate a subject as a whole.</i>	Namibia 2017
Adaptation	<i>...learning from the Namibians will change my behaviors and how I take care of my own homeland.</i>	Namibia 2017

Perspective Shifts (Ethnocentrism to Ethnorelativism)

Figure 5 illustrates the legitimacy of using PN processes to help students advance their intercultural learning, developing sensitivity and increased global competence. PN1 artifacts (blue lines) contained greater frequencies of students' ethnocentric views before their international experiences. However, analyses of PN2 artifacts revealed much greater frequencies of ethnorelative

perspectives after students had observed and engaged with host country nationals, even within two-weeks. In essence, time and the PN process helped participants shift their intercultural competence from ethnocentric (Denial, Defense, and Minimization) to ethnorelative (Acceptance, Adaption, and Integration) viewpoints.

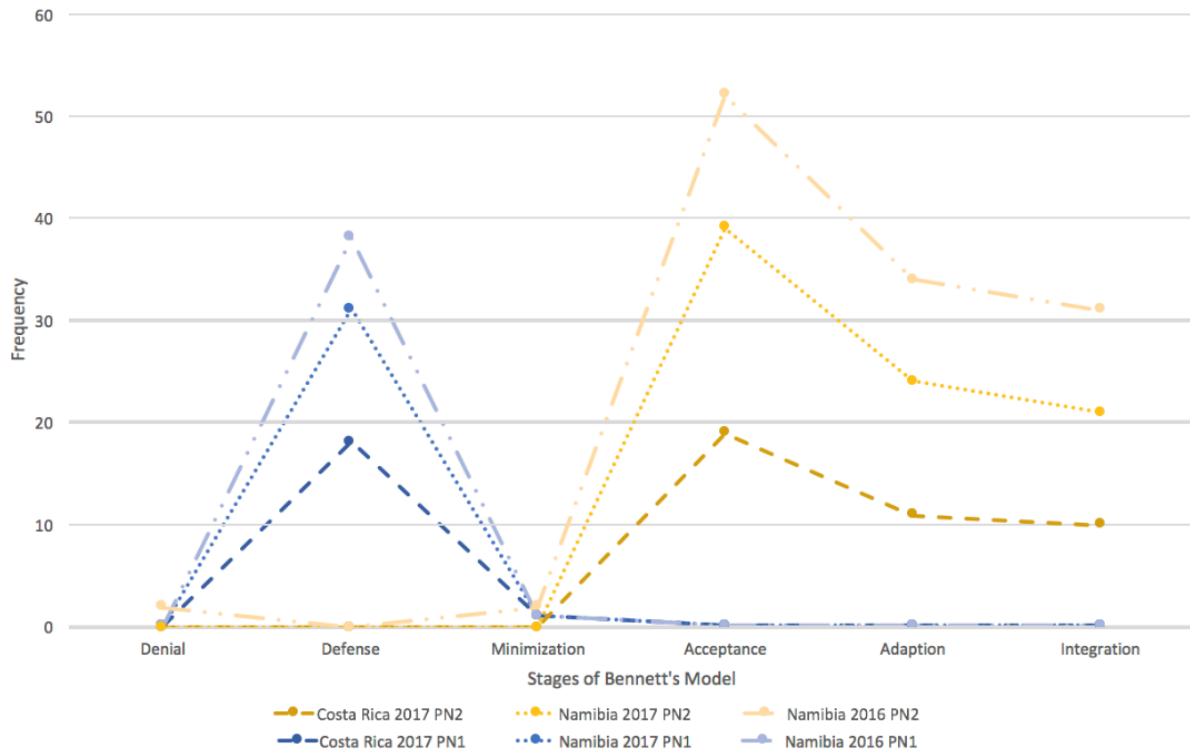


Figure 5. Changes in frequencies of Bennett’s (1986) DMIS stages for PN artifacts across study abroad programs in Namibia and Costa Rica (2016-2017).

Discussion

PN assignments were instrumental in helping students transition from ethnocentric to ethnorelative perspectives during international high-impact experiences. Artifacts examined in this study began with focused attention on each participant’s personal cultural heritage (PN1), moved to immersion and intentional engagement in new cultures (PN2), and concluded with increased intercultural competence because of purposeful reflections during the PN process. Bennett (2004) stated, “the DMIS supposes that contact with cultural difference generates pressure for change in one’s worldview” (p. 11). Our findings support Bennett (2004) through notable changes in students’ rhetoric and worldviews as illustrated from PN1 to PN2 artifacts.

Students’ intercultural sensitivities shifted while participating in the PN process during short-term study abroad programs. For future research, we recommend researchers discover methods to collect quantitative data to record participants’ intercultural perspective shifts using PN artifacts. Numerical values will be an important aspect of determining if significant changes in students’ intercultural competencies occurred because of their participation in the PN process.

The study’s outcome (i.e., shifts in participants’ DMIS stages as a result of PN processes) can help educators plan activities and assignments that align with young people’s methods of communication (i.e., social media use; pairing photographs with short narratives). Pew Research indicated that 88% of college-aged people (ages 18-29) used at least one social media platform

in 2018, a substantial growth from 7% in 2005 (Pew Research Center, 2018). Table 6 shows percentages of social media users by selected demographics. A majority

of American youth use social media, a valuable asset in applying PN processes across groups.

Table 5. *Percent of U.S. Adults Who Use Social Media Platform.*

Demographics	Percent			
	Facebook	Instagram	Twitter	
Race:	White	67	32	24
	Black	70	43	26
	Hispanic	73	38	20
Age (18-29)	81	64	40	
Education:	High school or less	60	29	18
	College	71	36	25
	College graduate	77	42	32
Residence:	Urban	75	42	29
	Suburban	67	34	23
	Rural	58	25	17

Note. Data were adapted from “Social Media Fact Sheet,” by Pew Research Center, 2018. Retrieved from <http://www.pewinternet.org/fact-sheet/social-media/>

Pew Research (2018) found exactly 90% of youth in elementary school owned a cellphone; more than 90% of high school graduates and 96% of college students own cellphones, of which 80% were smartphones. Although some may not have social media accounts, opportunities for “PN-like” activities, or photographs supplemented with narratives, through cellphone use is widely available.

“Engaging in various forms of social media is a routine activity that research has shown to benefit children and adolescent by enhancing communication [and] social connection” (O’Keefe, Clarke-Pearson, & Council on Communications and Media, 2011, p. 800). The educational value and usability of PN assignments was demonstrated through this study. We can use PN processes to create a more understanding society. For example, future research should be conducted using PN processes to assess participants’ perspective shifts across a spectrum of social issues. Studies could focus on issues such as racism, religion,

classism, and/or nationalism to increase understanding and empathetic response between dissimilar groups.

“Attempts to reduce the direct, traditional form of racial prejudice have typically involved educational strategies to enhance knowledge and appreciation of other groups” (Dovidio, Kawakami, & Gaertner, 2000, p. 102). Reducing prejudice can be done most effectively in group settings, such as during study abroad programs, or in traditional classroom settings. Bennett (2004) stated that each progression along the six stages of the DMIS “generates pressure for change in one’s worldview” (p. 11). Therefore, as individuals with the “‘default’ ethnocentric worldview” (Bennett, 2004, p. 11) become increasingly exposed to different cultures and ways of life, an impending pressure develops for the individual to adjust his/her own culture, or way of life, to accommodate the shifting social environment around him/her. “This happens because the ‘default’ ethnocentric worldview, while sufficient for

managing relations within one's own culture, is inadequate to the task of developing and maintaining social relations across cultural boundaries" (Bennett, 2004, p. 11).

In concert with Bennett's (2004) study, and using this study as a model, PN processes can be tailored for participants exploring issues such as prejudicial and stereotyping behaviors. PN processes encourage purposeful reflection and engagement between culturally and ideologically diverse groups. Bennett (1986) noted, "The DMIS is not predominately a description of cognition, affect, or behavior. Rather, it is a model of how the assumed underlying worldview moves from an ethnocentric to a more ethnorelative condition" (p. 11), producing increased intercultural sensitivity and competence. Therefore, curriculum and other developmental programs based on intercultural competence should be focused on altering worldviews rather than particular knowledge, expression of attitude, or skillset (Bennett, 1986).

This study had some limitations. First, latent content, referring to the underlying meaning behind text and images, was used in this study. While this was useful in garnering the core meaning of different content in the PN artifacts, coding latent content "comes at some cost in reliability" (Fraenkel et al., 2015, p. 482). It is possible that one element of latent content could be interpreted or assessed differently by two different researchers. Although both interpretations of one element are valuable, the validity of coding could be somewhat skewed or questioned.

Second, regarding future studies, it is recommended that researchers use the enhanced PN instructions from the Namibia 2017 study abroad program because they were more detailed, providing students with greater opportunities for growth in

intercultural competence. Furthermore, a coding structure, or mechanism, should be developed to accurately capture each stage of Bennett's (1986) DMIS through the detection of keywords or statements. The presence of keywords could be accurately measured based on frequencies in participants' PN artifacts. In doing so, a uniform system would be established to code PN artifacts and quantify the qualitative contents of the data.

Another method for coding objectively PN artifacts would be to establish a third-party panel that could evaluate visual contents (i.e., photographs and images) for each PN artifact. The panel could evaluate images for congruence with the six stages in Bennett's (1986) DMIS by using social semiotic theories. Their findings would provide quantifiable evidence to determine if significant differences existed in students' shifting views between PN1 and PN2 artifacts.

This study could be enhanced by focusing on individual progressions of intercultural competence by tracking ethnocentric and/or ethnorelative rhetoric in PN1 and PN2 artifacts. By creating individual accounts of change in intercultural competence because of the PN process, the outcomes and credibility of similar studies would be strengthened in future research.

Participants in this study did not stay with host country nationals during their study abroad programs. However, assigning students to reside temporarily in host country nationals' homes while abroad might contribute to their intercultural understandings and sensitivities (Fabregas-Janeiro, 2011). Many professional and educational settings require people to operate successfully in multicultural and global settings; thus, individuals who possess intercultural communication capabilities and understandings (i.e.,

intercultural sensitivity and competence) are in high demand. Because there is a need for cross-cultural relations "...then there is pressure to develop greater competence in intercultural matters" (Bennett, 2004, p. 11).

Conclusion

Qualitative analyses of students' PN artifacts revealed deeper meaning beyond perceptions of new cultures, providing greater insights into students' intercultural competencies. The general, non-specific nature of the PN assignment instructions makes them widely adaptable and versatile to a variety of disciplines and educational realms. PN processes have immense educational value and potential as tools to impact students' ethnocentric worldviews by "[engaging] participants in a way to identify and visually portray issues that may otherwise go unsaid" (Borron, 2017, p. 12).

Enhanced intercultural competence should be a highlighted incentive of students' participation in study abroad programs, as supported by Fabregas-Janeiro (2011). Fabregas-Janeiro's (2011) study found that "Curricular materials should be examined and perhaps enhanced to assist in [developing intercultural competence]" (p. 41). This study presents a model for curriculum change that focuses on students' development of intercultural competence.

"Although intercultural sensitivity is not a direct reason to study abroad, this idea and other global trends and theories suggest large-scale influences for why students study abroad" (Harrell et al., 2017, p. 58). Students who "received largely monocultural socialization" (Bennett, 2004, p. 10) typically possess a very limited "cultural worldview" (p. 10), stunting intercultural interactions and communications. "The development of intercultural competence describes how we gain the ability to create an alternative experience that more or less matches that of

people in another culture. People who can do this have an *intercultural worldview*" (Bennett, 2004, p. 11). This study confirmed the PN process as a valid method to attain *intercultural worldviews*.

Harrell et al. (2017) noted the concepts of "intercultural sensitivity, internationalism and multicultural education are all related to the larger trend of globalization" (p. 58). Using PN assignments as vehicles to change intercultural competencies from ethnocentric to ethnocentric worldviews capacitates students to work in a "diverse society" (Harrell et al., 2017, p. 58); thus, making international experiences more valuable for career preparation. In our globalized world, international exposure and ability to collaborate with people from different cultures are valuable characteristics for graduates preparing to enter the workforce.

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