Using the Intercultural Development Inventory to measure intercultural development for a high-impact global community engagement program

Jennifer Crystle
Marymount University, jcrystle@marymount.edu

Megan W. Moran
Marymount University, mmoran@marymount.edu

Diana G. Venskus
Marymount University, dvenskus@marymount.edu

Using the Intercultural Development Inventory to measure intercultural development for a high-impact global community engagement program

Authors

Corresponding Author

Jennifer Crystle, Marymount University, 2807 N. Glebe Road, Arlington, VA 22207

Abstract

High-impact practices (HIPs) in higher education, such as global community engagement programs, enhance student learning and lead to increased levels of civic involvement among graduates. However, it is unknown if participation in a global community engagement/service-learning program affects the development of cultural competence. The purpose of this study was to determine if student and faculty participation in a two-week community engagement/service-learning program in Guatemala would result in intercultural development measured using the Intercultural Development Inventory (IDI) tool. Participants were recruited from a graduate physical therapy education program in the U.S. and completed a pre- and post-trip IDI. Data analysis revealed no statistically significant change in IDI scores after the global community engagement/service-learning program.

Keywords

community-based learning, global engagement, graduate education, high-impact practices

Revisions

Creative Commons License

Using the Intercultural Development Inventory to Measure Intercultural Development for a High-Impact Global Community Engagement Program

Jennifer Crystle[1], Megan W. Moran[2], and Diana G. Venskus[3]

The College of Health and Education
Marymount University, United States
[1]jcrystle@marymount.edu
[2]mmoran@marymount.edu
[3]dvenskus@marymount.edu

Abstract

High-impact practices (HIPs) in higher education, such as global community engagement programs, enhance student learning and lead to increased levels of civic involvement among graduates. However, it is unknown if participation in a global community engagement/service-learning program affects the development of cultural competence. The purpose of this study was to determine if student and faculty participation in a two-week community engagement/service-learning program in Guatemala would result in intercultural development measured using the Intercultural Development Inventory (IDI) tool. Participants were recruited from a graduate physical therapy education program in the U.S. and completed a pre- and post-trip IDI. Data analysis revealed no statistically significant change in IDI scores after the global community engagement/service-learning program.

Keywords: community-based learning, global engagement, graduate education, high-impact practices

Introduction

The 2022 report of the American Association of Colleges and Universities: *The Effects of Community-Based and Civic Engagement in Higher Education* synthesizes the efficacies of community-based and civic engagement programs, in particular, high-impact practices (HIPs) (Chittum et al., 2022). Accordingly, these programs are associated with desirable student, program, and institutional outcomes. HIPs, such as service-learning, community-based learning, and global learning, afford students experiences in communities and cultures that are different from their own; engagement and participation in experiential learning related to their career or field of study; and interactions with community partners that result in increased students' self-perception of their learning and higher learning outcomes. Outcome measures reported across the published literature support improvements in overall learning, disposition, and practical skills among students; increased graduation and retention rates; and commitment by students to future engagement in service benefiting society (Chittum et al., 2022). While the research supports the use of HIPs, it is unclear if a two-week community engagement/service-learning trip will improve graduate physical

therapy students' intercultural development. The purpose of this study is to measure the change in intercultural development, using the Intercultural Development Inventory (IDI), in a group of physical therapy graduate students, faculty, and staff who participated in a two-week community engagement/service-learning project in Central America.

Literature Review

Service-learning is "structured pedagogy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities" (Bailey et al., 2002, p. 434). The goals of service-learning courses are reciprocal and mutually beneficial to students of the learning institution and the community. Community engagement is "the collaboration between institutions of higher education and their larger communities [...] for the mutually beneficial creation and exchange of knowledge and resources" to empower both the community and the learners (American Council on Education, n.d., para. 1). Defining matters important to the community and sustaining partnerships are integral to community engagement. Service learning and/or community engagement performed internationally are directly associated with learners' development of cultural competence (Hou et al., 2018; Kohlbry, 2016; Meaux et al., 2021; Nokes et al., 2005; Schubbe, 2023).

Culture is the outward representation of the living conditions and systems in which a community exists. It is the core of individuality and human expression. Cultural competence, also known as intercultural competence, is the ability of an individual, or group to interact meaningfully and effectively within a community inherently different (National Prevention Information Network, 2021). Cultural competence is essential for effective interactions and quality healthcare outcomes (Deardorff, 2006; National Prevention Information Network, 2021).

Cultural competence among healthcare providers may help in closing the gap created by the social determinants of health (Powell, 2016). Social determinants of health are the non-medical factors that characterize an individual's environment that impact directly and indirectly health, function, and quality of life. These same factors define the culture of the individual and are the basis for disparate health outcomes. As one progresses in their intercultural competence, the capacity for engagement increases in complexity, resulting in less biased patient interactions, improved patient health outcomes, and improved participation in a healthier society.

Preparing future healthcare professionals with the capacity for intercultural competence is essential for delivering culturally relevant healthcare that is sensitive to and addresses health disparities (Kruse et al., 2014; Tamer et al., 2023). Indeed, intercultural training toward a more reciprocal understanding of the patient-client-community interaction is increasingly an expectation of students preparing for entry-level practice across healthcare disciplines (Fleckman et al., 2015; McGuire et al., 2006). Academic training modules and study abroad programs are common strategies used in intercultural training programs. The research supports the use of curricula that address knowledge, attitudes, and skills in developing cultural competence (Deardorff, 2015; VanHoose & Eigsti, 2023). Learning theories, such as Kolb's Experiential Learning Cycle (1984) and Mezirow's Transformative Learning Theory (1991), often guide the design and implementation of global and intercultural programming. While these theories offer shared guidance around the need for experience and critical self-reflection, to date, there is a lack of

agreement on structure, sequencing, and duration in study abroad programs; and an absence of a common, credentialed curriculum for cultural competence (McKivigan, 2020).

Within the literature, there exist multiple models to track a learner's intercultural competence (Abrishami, 2018; Botelho & Lima, 2020). One such model was developed in 1993 by Milford Bennett; the Developmental Model of Intercultural Sensitivity (Bennett, 1993 as cited in Abrishami, 2018). The Developmental Model of Intercultural Sensitivity is a continuum of six stages, beginning with denial and ending with integration. Bennett's model describes the behaviors in the first three phases as ethnocentric and those in the final three as ethnorelative. This model is the basis for the development of the IDI.

The IDI is a direct measure of cultural development. It is theory-based and is supported by strong independent psychometric analyses (Hammer, 2011; Hammer et al., 2003). Progression of intercultural development traverses a continuum, i.e., the Intercultural Development Continuum (IDC), from monocultural to intercultural, marked by five stages: denial, polarization, minimization, acceptance, and adaptation. Denial is defined as an orientation that may not notice deeper cultural differences and may deny or withdraw from such differences. Polarization is an orientation that views cultural differences as *us* and *them*. Individuals in this orientation may either be uncritical toward one's cultural practices or overly critical of one's cultural values. Minimization is the middle of the IDC. Individuals in this orientation emphasize cultural commonalities and universal values, often masking deeper recognition of cultural differences. Acceptance is the orientation that both recognizes and appreciates patterns of cultural difference and commonality. Finally, adaptation is the most advanced orientation of the IDC. Persons in this stage have the capacity to shift cultural perspectives and adapt in culturally appropriate and authentic ways (IDI, n.d.).

Within the research, support for using the IDI as a measure of intercultural development in programs with a global education program exists. Fitzgerald et al. (2018) used the IDI in a pre-post analysis of nursing students in a study abroad program in Nicaragua. Their findings show progression along the IDC following global immersion. The purpose of this study is to measure the change in intercultural development, using the IDI, in a group of physical therapy graduate students, faculty, and staff who participated in a two-week community engagement/service-learning project in Central America.

Methods

Using quantitative exploratory design and analyses, this study measures the effect of a two-week global community engagement/service-learning program on the development of cultural competence among participants. Subjects in this study included students, staff, and faculty from an accredited graduate physical therapy program housed in a private university in the mid-Atlantic region of the U.S. Non-probability convenience sampling strategies were used to recruit participants. All students in the third-year cohort of a three-year Doctor of Physical Therapy degree program were invited to participate. Students were enrolled in the second full-time clinical education practicum course, in the penultimate semester of the professional curriculum. Clinical education in health care is student-centered and thus lacks the reciprocity expected in either community engagement or service learning (Dombrowsky et al., 2019). Unique to this academic program and the subject of this project, the global community engagement/service-learning

program is scheduled in the final two weeks of the clinical education practicum course in Guatemala in Central America. Core and adjunct faculty and staff accompanying the students in Guatemala were also invited to participate.

The two-week community engagement/service-learning experience is designed to develop the students' intercultural competence in addition to their professional skills. Academic modules and community activities were developed as a matter of introduction to the community and toward an appreciation of cultural differences. A mandatory orientation included a 30-minute introduction to Guatemala's culture and history one month before departure. In the country, time spent with indigenous and lay leaders along with interactions within the community fostered an exchange of histories and customs. The first evening in Guatemala, students attended dinner at a restaurant owned by a family native to Guatemala. Dinner included education on Mayan culture and history. The following day, a community leader shared local customs. Weekend excursions included tours of historical sites in Antigua, Guatemala, and visiting local artisans. Unstructured opportunities throughout the two-week immersion, i.e., free time enhanced participants' interactions with local customs, cuisine, and the arts. Clinical practice provided the greatest exposure for cultural development. Students supervised by faculty participated in the delivery of physical therapy services that included screening, examination/evaluation, diagnosis, treatment, and education. Students spent approximately 72 hours in clinical settings working with community partners and engaging with patients and their families. The settings included a local, public hospital; a nationally based older adult day center program, and varied community-based clinics. Students and faculty met each evening to recap the day's experiences. During this time, faculty provided prompts for reflective journaling that progressed through the trip from self-awareness to questioning and adaptation. The reflection prompts were built using Rolfe et al.'s (2001) reflection framework beginning with *what,* progressing to *so what.*

The organization and administration of this study followed the six-step recommendations of Tamer et al. (2023). This study was approved by the University Institutional Review Board. Electronic communications were used for recruitment, delivery of informed consent, and administration of the IDI surveys throughout this study. The students were compensated for their time with five-dollar gift cards for a local coffee shop. To maintain objectivity between examiners and participants, communications were managed by an extra-departmental faculty administrator. The IDI score is the primary dependent variable in this study. The IDI is a 50-item questionnaire, that uses a 5-point Likert scale to measure intercultural development across five dimensions, namely: denial, polarization, minimization, acceptance, and adaptation. The survey was administered by a credentialed IDI Qualified Administrator unknown to the study participants. The IDI has strong content and construct validity and strong intercultural reliability. Score reports consist of three unique scores as follows:

- Perceived Orientation (PO) is the locus on the IDC that represents where the individual sees themselves, i.e., perceives functioning.
- Developmental Orientation (DO) is the individual's primary orientation relative to cultural differences as measured by the IDI.
- The Orientation Gap (OG) is the difference between the PO and DO scores.

Structurally, the five constructs are supported with confirmatory factor analysis (Hammer, 2011). Pragmatically, the IDI is well supported in the literature and provides users with constructive feedback and both individual and group developmental plans. The IDI was administered before

and after the global community engagement/service-learning experience to capture change resulting from the international practice experience (Kruse et al., 2014). Recruitment for student participation began in December 2022, three months before the global community engagement/service-learning trip. Faculty recruitment began in January 2023. Students and faculty returned from the trip on March 11, 2023, and one month later post trip IDI testing began. Follow-up emails were sent monthly for three months to remind participants to complete the post-test. Data were de-identified and coded by the IDI Qualified Administrator prior to analysis to protect participant confidentiality and minimize bias. The data were analyzed using IBM SPSS Statistics version 27.

Findings

Thirty-six students and seven staff and faculty were invited to participate in this study. Twenty-three participants completed pretest IDI surveys. Pretest scores from the six participants who did not complete the posttest were excluded from data analyses, resulting in 11 students and six staff and faculty totaling 17 participants. Based on the review of the means and standard deviations, no significant differences were observed between the student and faculty/staff groups, therefore the analyses reported here represent the group collectively.

Table 1. Descriptions of Participants

Total Respondents	*n*	*%*
Total Invitation	43	
Total Pre-Trip Respondents	23	53.49
Total Post- Trip Respondents	17	73.91
Sex		
Female	13	76.47
Male	4	23.53
Age		
25-29	9	52.94
30-34	4	23.53
35-39	0	.00
40-45	1	5.88
45+	3	17.65
Race		
Asian	1	5.88
Black or African American	1	5.88
White	13	76.47
Other	2	11.76
Ethnicity		
Hispanic or Latino	0	.00
Non-Hispanic or Latino	17	100.00
Role in Program		
Student	11	64.71
Faculty	5	29.41
Other	1	5.88
Citizenship		
U.S.	17	100.00
Other	0	.00
Lived Outside of U.S.		
Never	14	82.35
Less than 6 months	2	11.76
Greater than 1 year	1	5.88
Highest Level of Education Completed		
University graduate	8	47.06
M.A. or equivalent	3	17.65
Ph.D. or equivalent	5	29.41
Other	1	5.88

See Table 1 for a description of participants. Approximately 75% of participants reported their sex as female and 25% male; according to the most recent workforce data, about 66% of physical therapists identify as female and 33% as male (American Physical Therapy Association, 2023). The percentage of participants in this study who identify as Black (5.88%) and White (76.47%) is consistent with physical therapy workforce data 4.22% and 75.6% respectively (American Physical Therapy Association, 2023).

The IDI findings indicate that no participants' PO or DO scores were in the denial category in either pre or post-test (see Table 2). And no participants' PO scores fell into the polarization category. Three participants scored in the polarization category at the pretest; four scored in this same category at the posttest. Most participants' PO scores fell in the acceptance category at the pretest (*n* = 9) and posttest (*n* = 10). In contrast, most participants' DO scores were in the minimization category at both the pretest (*n* = 10) and posttest (*n* = 8).

Table 2. Intercultural Development Inventory Descriptive Results (*n* = 17)

Frequency	PO		DO	
	Pre–PO	Post–PO	Pre–DO	Post–DO
Denial	0	0	0	0
Polarization	0	0	3	4
Minimization	2	1	10	8
Acceptance	9	10	3	4
Adaptation	6	6	1	1

Note. PO = Perceived Orientation; DO = Developmental Orientation.

Mean PO scores among participants are higher than mean DO scores in both the pre and post-tests. This is evidenced in positive OG mean scores. Comparing pretest to posttest performance, change scores are negative for both PO and DO suggesting backward progression, or retraction along the IDC. A comparison of pretest and posttest group performance was performed using a Wilcoxon Signed Rank test. There is no significant difference between the pretest and posttest scores for either PO (*W* = 62.00; sig. .49) or DO (*W* = 53.00; sig. .27; see Table 3).

Table 3. Change in Intercultural Development Inventory Scores

Statistic	PO		DO		OG	
	Pre–PO	Post–PO	Pre–DO	Post–DO	Pre–OG	Post–OG
Mean (SD)	125.82 (7.05)	125.10 (7.13)	104.42 (17.01)	101.02 (18.37)	21.40 (10.48)	24.08 (11.57)
Change (%)	-.72 (-0.57)		-3.40 (-3.26)		2.68 (12.52)	
W/Sig.	62.00/.49		53.00/0.27		109.00/.124	

Note. *W*/Sig = Wilcoxon Signed Rank Test; PO = Perceived Orientation; DO = Developmental Orientation; OG = Orientation Gap

Discussion and Conclusions

The results from this project do not show significant individual development along the IDC when comparing IDI scores pre-immersion with those observed following a two-week global community engagement/service-learning project in Central America. The lack of change in IDI scores after this single intercultural event is consistent with available research (Boggis, 2012; Tamer et al., 2023). Like the works of others, participants tended to overestimate their level of development. This is evidenced in the negative trend when comparing the *actual* development scores with the perceived development scores.

Theoretical Implications

Likely, intercultural competence is a more complex construct in the later stages of development compared with the initial stages, i.e., acceptance or adaptation versus denial or polarization, respectively. For example, in the denial stage, behaviors might be measured as dichotomous, that is, cultural differences are perceived as existing or nonexistent. Variations in behavior are undifferentiated and overgeneralized. As participants advance on the IDC, they move from ethnocentrism–seeing the world through a singular cultural lens–to ethnorelativism, an ability to see one's own culture and beliefs as one of many possible realities. This may account for the lack of change after a two-week community engagement/service-learning trip.

Most participants in this project entered the IDC at the stage of minimization, the midpoint, transitional phase, or higher. This is consistent across studies (Tamer et al., 2023). Results reported in this study suggest negative, or retracted, development among participants when comparing pre-post exposure data. Other authors noted similar findings, a mix of participants progressing, remaining in the same orientation, or regressing (VanHoose & Eigst, 2023). A single event such as the two-week community engagement/service-learning used in this project may not be sensitive enough to effect measurable change. Additional direct and indirect measures that capture the complexities of intercultural competence and the uniqueness of the healthcare setting are recommended in the literature and supported by the findings of this study (DiBiasio et al., 2023; Tamer et al., 2023).

Practical Implications

When considering how to advance intercultural development through global engagement programming, scholars have long discussed the importance of critical reflection to support student learning and development (Dewey, 1938; Kuh, 2008; Pilon, 2017; Savicki & Price, 2022; Vande Berg, 2007;). According to Pilon (2017), intentional reflection is an integral part of the academic framework of a global engagement program. Furthermore, researchers have noted the importance of meaningful reflection, specifically in the reentry or post-immersion stage of the global engagement experience (Pilon, 2017). While this program employed various reflection opportunities during the pre-departure and in-country phases of the global engagement experience, it lacked re-entry reflection and curriculum which may have impacted the IDI results. As program leadership considers programmatic and curricular improvements, more attention to faculty training and the integration of structured reflection in the reentry stages should be considered.

Multi-modal curricula can be used to develop cultural competence in students in higher education (Boggis, 2012; Deardorff, 2015). Both local and international experiences can result in improved cultural competence (DiBiasio et al., 2023). This study focused on measuring changes in the IDI before and after a two-week international community engagement/service-learning trip. The timeline from pre- to post-test ranged from 3–7 months for the participants. It's possible that a modification to the curriculum to include individual learning plans (Boggis, 2012) and reflective practice during reintegration may be beneficial to intercultural development. Additionally, measuring student participants' changes in the IDI over the course of the three-year graduate program may be more meaningful and able to capture the true change that arises from the cultural competency training threaded throughout the curriculum (VanHoose & Eigsti, 2023).

Limitations and Future Research

The goal of intercultural development and cultural competence within healthcare education is to affect health outcomes in patients. Cultural competence is associated with competent, patient-centered care (Epner & Baile, 2012) and improved patient outcomes and satisfaction (Deardorff, 2006; National Prevention Information Network, 2021). However, the impact of this single immersive experience on future culturally competent clinical practice cannot be discerned from IDI scores, regardless of statistical significance or the lack thereof, as it is too far removed. Future research should assess patient outcomes.

There are other limitations in this study. The quantitative nature of the study did not allow investigators an opportunity to analyze students' reflections about their position on the IDC. This study included a small sample size for both pre and post-tests. Six participants did not complete the posttest reducing the data available for analysis. As such, the results are not generalizable. Additionally, variability in pre and post-test timing may have affected the results.

The results of this research show a chance to gain a more holistic understanding of intercultural development through a mixed-method study design. Due to the complexity and fluidity of adult learning and intercultural development, the qualitative analysis may complement and triangulate the quantitative results of the IDI assessment. Additionally, while this study measured the impact of a short-term community engagement/service-learning program, a longitudinal research design with an opportunity for more structured curricular intervention may be beneficial to analyzing the long-term impacts of intercultural programming.

Conclusions

This study used a quantitative exploratory design to measure the intercultural development of DPT students, faculty, and staff following their participation in a global community engagement/service-learning program in Guatemala. Study results do not demonstrate significant individual development along the IDC, and some results reported in this study suggest negative, or retracted, development among participants. Despite a lack of statistical significance, this study further contributes to the body of research that supports the need for structured curricular reflection in all stages of the intercultural learning experience, including the predeparture, in-country, and reentry stages. Based on the literature and findings of this study, program leadership is considering curricular changes to enhance these HIPs. Considerations include group debriefing sessions, personalized development plans, and added structured journaling. Future research is needed to discern how curricular components could support intercultural development among program participants. A mixed method study design that incorporates qualitative analysis of participant experiences and reflections is recommended to triangulate quantitative findings of the IDI assessment.

References

Abrishami, D. (2018). The need for cultural competency in health care. *Radiologic Technology*, *89*(5), 441–448. http://www.radiologictechnology.org/content/89/5/441

American Council on Education. (n.d.). *The elective classification for community engagement.* Carnegie Classification of Institutions of Higher Education. Retrieved June 19, 2024, from https://carnegieclassifications.acenet.edu/elective-classifications/community-engagement/how-to-apply/

American Physical Therapy Association. (2023, July 18). *A physical therapy profile: Demographics of the profession 2021-2022.* https://www.apta.org/apta-and-you/news-publications/reports/2023/physical-therapy-profile-demographics-profession-2021-22

Bailey, P., Carpenter, D., & Harrington, P. (2002). Theoretical foundations of service-learning in nursing education. *Journal of Nursing Education, 41*(10), 433–436. https://doi.org/10.3928/0148-4834-20021001-04

Bennett, M. J. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In R. M. Paige (Ed), *Education for the intercultural experience* (2nd ed., pp. 1-20). Intercultural Press.

Boggis, D. (2012). Effectiveness of a developmental curricular design to graduate culturally competent health practitioners. *Journal of Allied Health*, *41*(3), 140–146. https://www.jstor.org/stable/48721768

Botelho, M. J., & Lima, C. A. (2020). From cultural competence to cultural respect: A critical review of six models. *Journal of Nursing Education*, *59*(6), 311–318. https://doi.org/10.3928/01484834-20200520-03

Chittum, J. R., Enke, K. A., & Finley, A. P. (2022). *The effects of community-based and civic engagement in higher education.* American Association of Colleges and Universities. https://www.aacu.org/research/the-effects-of-community-based-engagement-in-higher-education

Deardorff, D. K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education, 10*(3), 241–266. https://doi.org/10.1177/1028315306287002

Deardorff, D. K. (2015). A 21st century imperative: Integrating intercultural competence in tuning. *Tuning Journal of Higher Education, 3*(1), 137–147. https://doi.org/10.18543/tjhe-3(1)-2015pp137-147

Dewey, J. (1938). *Experience and education*. Macmillan.

DiBiasio, P. A., Vallabhajosula, S., & Eigsti, H. J. (2023). Assessing cultural competence: A comparison of two measures and their utility in global learning experiences within healthcare education. *Physiotherapy*, *118*, 97–104. https://doi.org/10.1016/j.physio.2022.09.007

Dombrowsky, T., Gustafson, K., & Cauble, D. (2019). Service-learning and clinical nursing education: A Delphi inquiry. *Journal of Nursing Education*, *58*(7), 381–391. https://doi.org/10.3928/01484834-20190614-02

Epner, D. E., & Baile, W. F. (2012). Patient-centered care: The key to cultural competence. *Annals of Oncology*, *23*(3), iii33–iii42. https://doi.org/10.1093/annonc/mds086

Fitzgerald, E., A., Marzalik Penny, R., & Jennifer, K. (2018). Assessing intercultural development pre- and post education abroad. *Journal of Nursing Education, 57*(12), 747–750. https://doi.org/10.3928/01484834-20181119-08

Fleckman, J. M., Dal Corso, M., Ramirez, S., Begalieva, M., & Johnson, C. C. (2015). Intercultural competency in public health: A call for action to incorporate training into public health education. *Frontiers in Public Health*, *3*, Article 210. https://doi.org/10.3389/fpubh.2015.00210

Hammer, M. R. (2011). Additional cross-cultural validity testing of the Intercultural Development Inventory. *International Journal of Intercultural Relations*, *35*(4), 474–487. https://doi.org/10.1016/j.ijintrel.2011.02.014

Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003). 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

Hou, Y. J., Liu, W. Y., Lin, Y. H., Lien, H. Y., Wong, A. M. K., & Chen, C. M. (2018). A pediatric service-learning program in physical therapy education. *Pediatric Physical Therapy*, *30*(2), 149–154. https://doi.org/10.1097/PEP.0000000000000498

Intercultural Development Inventory. (n.d.). *Intercultural Development Continuum©.* Retrieved May 18, 2024, from https://www.idiinventory.com/idc

Kohlbry, P. W. (2016). The impact of international service-learning on nursing students' cultural competency. *Journal of Nursing Scholarship*, *48*(3), 303–311. https://doi.org/10.1111/jnu.12209

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Kruse, J. A., Didion, J., & Perzynski, K. (2014). Utilizing the Intercultural Development Inventory® to develop intercultural competence. *SpringerPlus*, *3*(1), Article 334. https://doi.org/10.1186/2193-1801-3-334

Kuh, G. D. (2008). Why integration and engagement are essential to effective educational practice in the twenty-first century. *Peer Review, 10*(4), 27–28.

McGuire, T. G., Alegria, M., Cook, B. L., Wells, K. B., & Zaslavsky, A. M. (2006). Implementing the Institute of Medicine definition of disparities: An application to mental health care. *Health Services Research*, *41*(5), 1979–2005. https://doi.org/10.1111/j.1475-6773.2006.00583.x

McKivigan, J. (2020). Evaluation of the American Physical Therapy Association's guidelines for training culturally competent physical therapists. *Higher Education Research, 5*(4), 154–161. https://doi.org/10.11648/j.her.20200504.16

Meaux, J. B., Saviers, B., & Traywick, L. (2021). Effects of study abroad on cultural and interprofessional competencies. *Nurse Education Today*, *103*, Article 104928. https://doi.org/10.1016/j.nedt.2021.104928

Mezirow, J. (1991). *Transformative dimensions of adult learning.* Jossey-Bass.

National Prevention Information Network. (2021). *Cultural competence in health and human services*. Centers for Disease Control and Prevention. https://npin.cdc.gov/pages/cultural-competence#what

Nokes, K. M., Nickitas, D. M., Keida, R., & Neville, S. (2005). Does service-learning increase cultural competency, critical thinking, and civic engagement? *The Journal of Nursing Education*, *44*(2), 65–70. https://doi.org/10.3928/01484834-20050201-05

Pilon, S. (2017). Developing intercultural learning among students in short-term study abroad programs. *NECTFL Review, 79*, 133–153.

Powell, D. L. (2016). Social determinants of health: Cultural competence is not enough. *Creative Nursing*, *22*(1), 5–10. https://doi.org/10.1891/1078-4535.22.1.5

Rolfe, G., Freshwater, D., & Jasper, M. (2001) *Critical reflection in nursing and the helping professions: A user's guide.* Palgrave Macmillan.

Savicki, V., & Price, M. (2022). Reflective process and intercultural effectiveness: A case study. *Frontiers: The Interdisciplinary Journal of Study Abroad*, *34*(4), 6–25. https://doi.org/10.36366/frontiers.v34i4.505

Schubbe, E. (2023). Physical therapists' perceptions of preparedness to engage in culturally competent practice upon graduation: A qualitative research study. *Journal of Physical Therapy Education*, *37*(2), 145–154. https://doi.org/10.1097/JTE.0000000000000278

Tamer, D., Liu, Y., & Santee, J. (2023). Considering the Intercultural Development Inventory (IDI) to assess intercultural competence at U.S. pharmacy schools. *Pharmacy*, *11*(1), Article 39. https://doi.org/10.3390/pharmacy11010039

Vande Berg, M. (2007). Intervening in the learning of U.S. students abroad. *Journal of Studies in International Education, 11*(3–4), 392–399. https://doi.org/10.1177/1028315307303924

VanHoose, L., & Eigssti, H. (2023). The changing landscape of intercultural mindset in 616 doctor of physical therapy students over the past 7 year and the implications for Doctor of Physical Therapy cultural competence education. *Journal of Physical Therapy Education, 37*(4), 271–277. https://doi.org/10.1097/JTE.0000000000000303

Acknowledgment