

# Growth and Challenges in Developing Cultural Competence and Leadership Among PT Students Through Virtual Cross-Cultural Educational Sessions

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## Study Design

Quasi-experimental study was utilized to investigate the changes in cultural competence and leadership development after a series of structured cross-cultural interaction sessions as the intervention.

## Purpose

The goal of the current study was to explore if cross-cultural educational sessions would enhance cultural competence and leadership development among U.S. and Taiwanese SPTs following participation in a series of virtual cross-cultural educational sessions.

## Background

Cultural competence and leadership are important for health-care professional and patient interactions. Cultural competence is an essential component in the vision of American Physical Therapy Association (APTA). According to Lee et al.<sup>9</sup>, students who received online cultural competence training in addition to their school's basic curriculum expressed significant improvements in the development of communication skills with the culturally diverse, ability to understand and value others, and self-awareness of the student's own prejudices and biases towards others who are different from them. Having skills to communicate effectively with all individuals ensures that student physical therapists (SPTs) are well-equipped to treat a broad population, especially when face-to-face interactions with fellow SPTs from other countries are scarce.

## Methods

To begin, 16 Taiwanese participants, and 1 U.S. participant completed the Intercultural Effectiveness Scale (IES), Cultural Competence Self-Assessment Checklist (CCC), and Leader Efficacy Questionnaire (LEQ) to measure their confidence in communicating cross-culturally and personal awareness of cultural diversity. The intervention included four 1-hour sessions (explained below) comprised of an informational video description of assorted topics in the PT profession from both countries, along with small group guided discussions between SPTs.

Session 1: Tips and Considerations for Intercultural Communication

Session 2: PT clinical & Theoretical Education in Taiwan and US

Session 3: PT Licensing Requirements & Specialty Certifications in Taiwan vs U.S.

Session 4: Health System: Public and Private Health Insurance in Taiwan vs U.S.

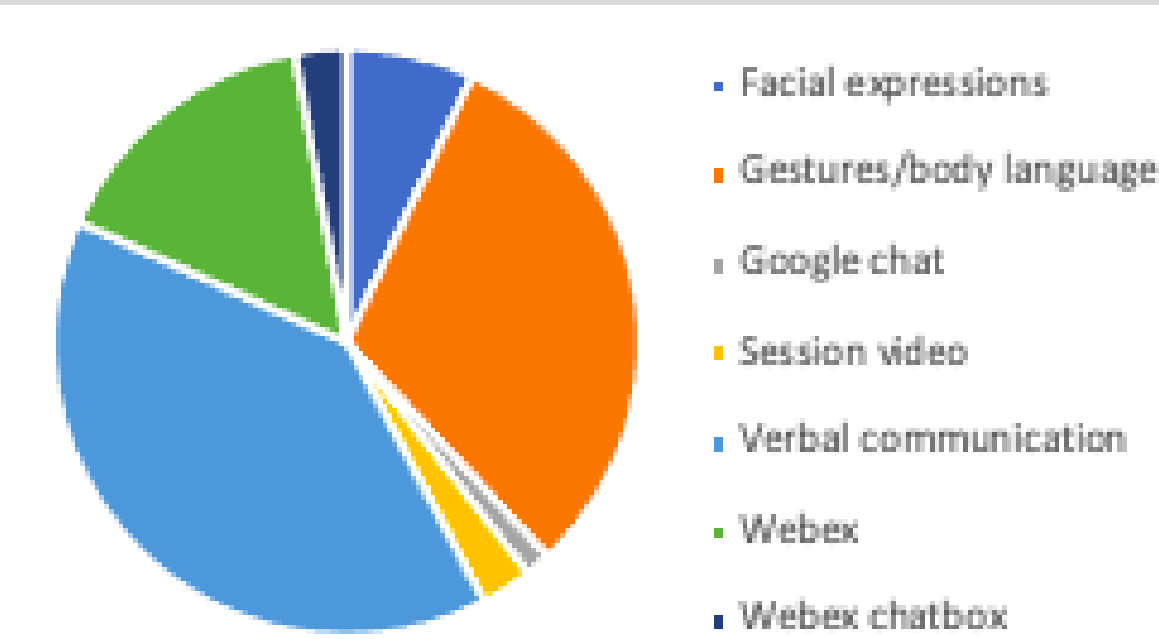
Participants were requested to openly reflect on their experience with the intervention following each session, in addition to completing the IES, CCC, and LEQ after all sessions were completed to assess development in leadership and cultural competence.

## Data Analysis

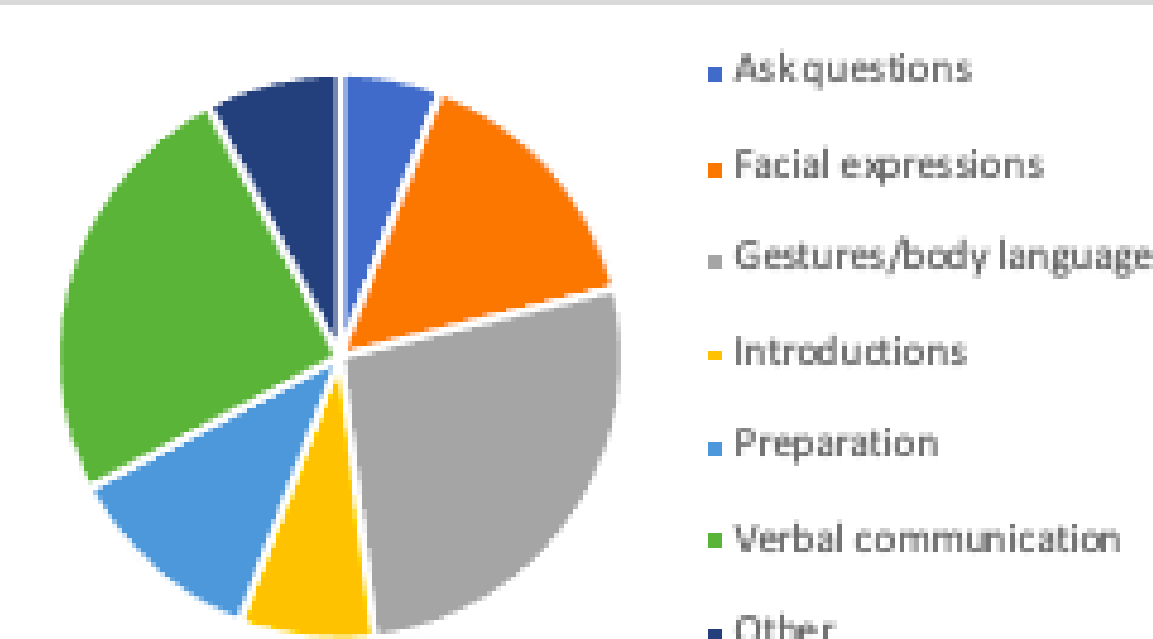
SPSS Version 27 was utilized for all quantitative analysis. Statistical analysis was divided into two parts. In part 1, the cross-sectional survey was analyzed with a Mann-Whitney U comparison between groups and a Spearman Correlation between the CCC and LEQ. In part 2, to compare pre-series to post-series results, a Sign Test was performed. Qualitative coding was performed for all qualitative data.

## Qualitative Results

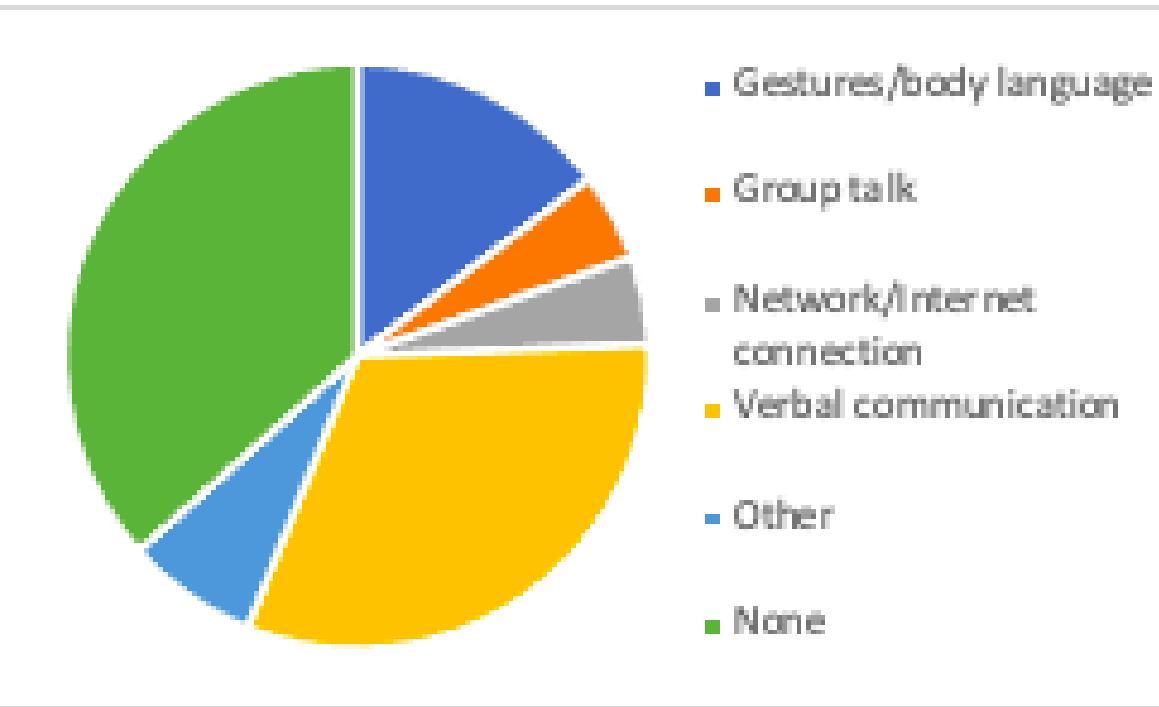
**Graph 1.** What forms of communication have you used to connect USD-NTU partners?



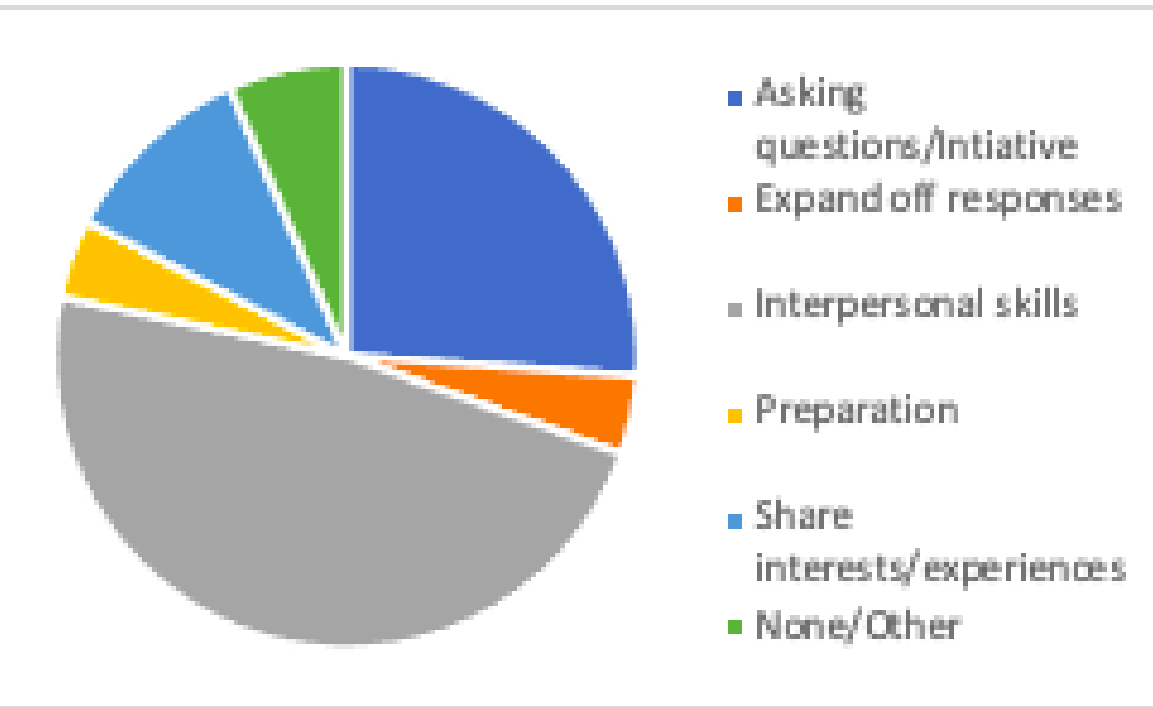
**Graph 2.** Which communication strategies that you used were helpful, and why?



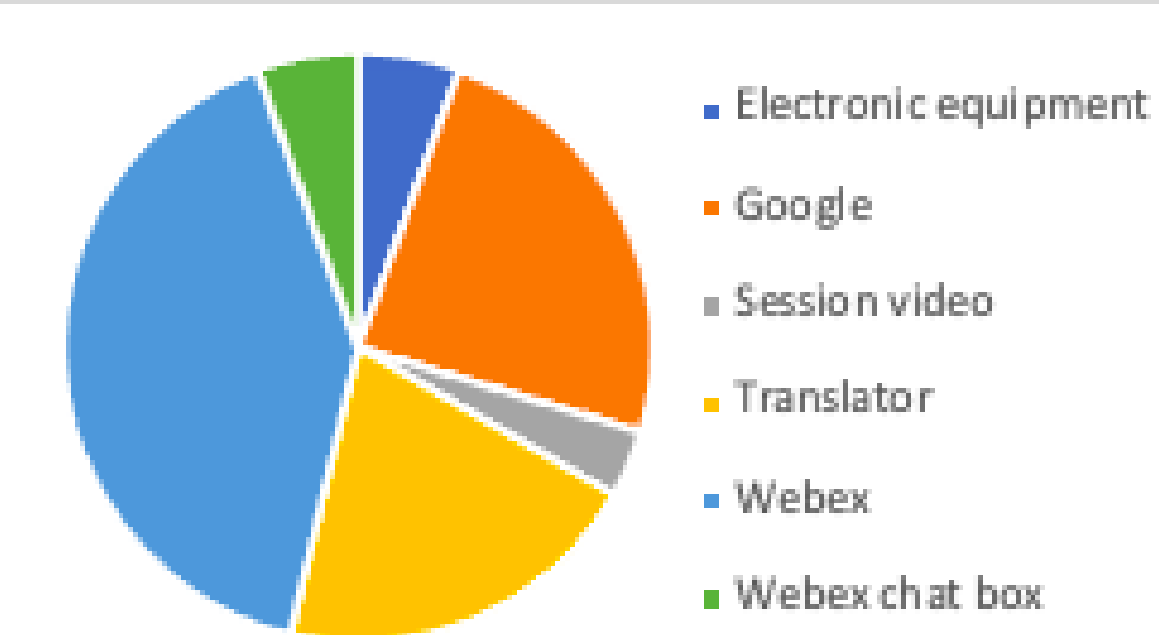
**Graph 3.** Which communication strategies that you used were NOT helpful or even created barriers, and why?



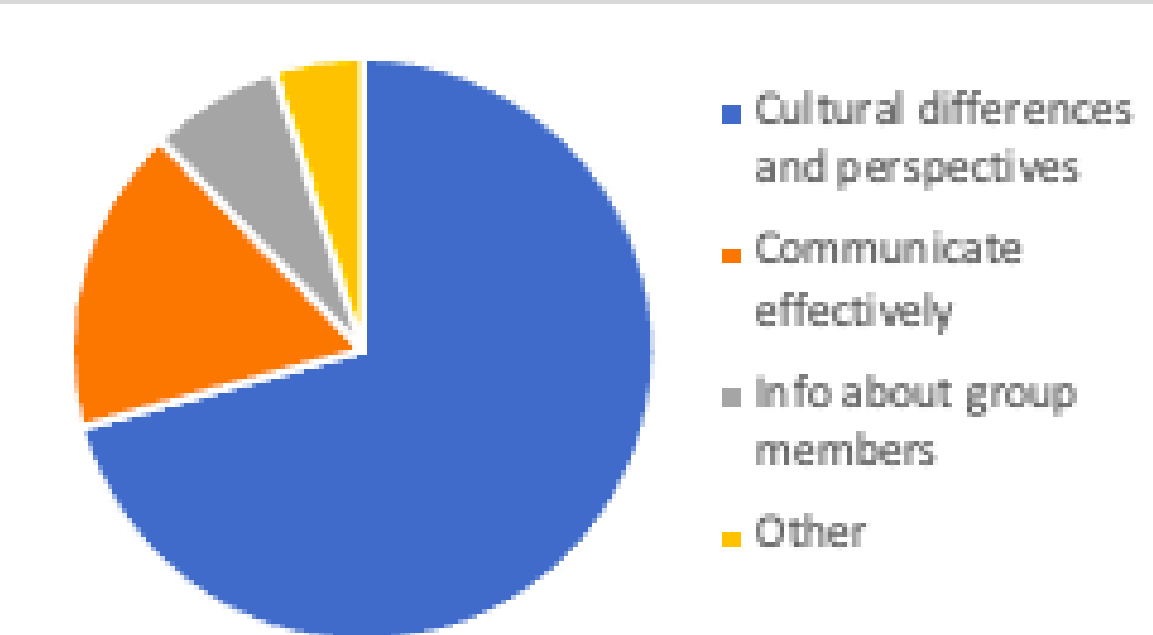
**Graph 4.** In what ways did you rely upon leadership skills to facilitate discussion in the group?



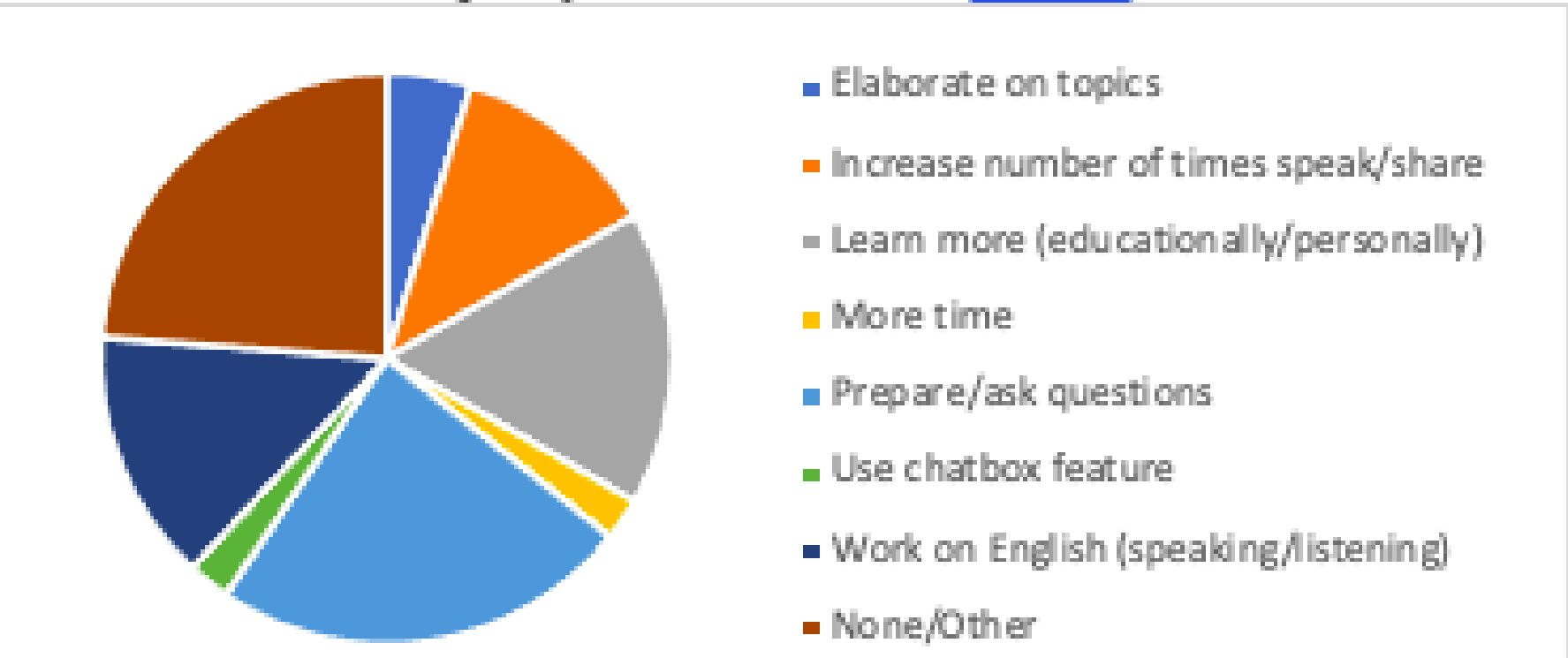
**Graph 5.** Tell us the use of technology (software, apps, electronic devices, etc. for helping you have conversation with your USD-NTU partners.



**Graph 6.** What are the new things you learned after completing this session?



**Graph 7.** What would you like to change or try in your next meeting? It could be your way of communication or topics you would like to discuss



The above graphs pertain to each question asked after completing the virtual sessions. Popular answers stand out in larger portions of the pie graphs. Facial expressions and gestures were mentioned as both useful and not useful strategies for communication. Participants learned cultural differences and perspectives from peers, as well as the importance of electronics and technology to connect with others in different countries and cultures.

## Quantitative Results

A significant difference was found between Taiwanese and US students in their perception of learning from others (LEQ Means in Table 1). Some aspects of leadership efficacy were associated with cultural competence skills (Table 2). Students who participated in cross-cultural education series showed significant improvement in their cross-cultural interaction management (Table 3).

Table 1. Difference between Taiwan and US students

Domain	Mean ± SD		P-value
	Taiwan	US	
CCC Awareness	3.22 ± .39	3.06 ± .31	.249
CCC Knowledge	3.09 ± .36	3.07 ± .37	.671
CCC Skills	3.00 ± .47	2.67 ± .04	.135
LEQ Action	70.63 ± 8.37	68.82 ± 12.00	.452
LEQ Means	74.78 ± 6.38	66.08 ± 7.93	.027*
LEQ Self-Regulation	82.89 ± 10.66	83.88 ± 15.23	.769

CCC = Cultural Competence Checklist; LEQ = Leader Efficacy Questionnaire; \* = p<.05, indicating statistical significance

Table 2. Association between Cultural Competence and Leadership Efficacy

(Correlation coefficient, p-value)	CCC Awareness	CCC Knowledge	CCC Skills
LEQ Action	-.114, .095	.357, .095	.406, .055
LEQ Means	.101, .647	.115, .603	.426, .043*
LEQ Self-Regulation	-1.00, .648	.196, .370	.495, .016*

LEQ = Leader Efficacy Questionnaire; \* = p<.05, indicating statistical significance

Table 3. Difference before and after cross-cultural education series

Domain	Mean ± SD (n)		P-value
	Pre-series	Post-series	
Behavioral Flexibility	3.21 ± .49 (7)	3.41 ± .64 (11)	.219
Interaction Relaxation	3.14 ± .75 (7)	3.50 ± .51 (11)	.063
Interactant Respect	4.24 ± .46 (7)	4.42 ± .54 (11)	1.000
Message Skills	2.95 ± .65 (7)	3.42 ± .68 (11)	.375
Identity Management	3.48 ± .72 (7)	3.91 ± .54 (11)	.687
Interaction Management	3.14 ± .63 (7)	3.50 ± .67 (11)	.031*

IES = Intercultural Effectiveness Scale; \* = p<.05, indicating statistical significance

## Conclusion

These findings reinforce the notion that cross-cultural awareness benefits leadership abilities among SPTs, and engagement in cross-cultural interaction improves cultural communication skills and confidence. Future research is needed with the focus on larger sample sizes, specific to physical therapy students, and a more even distribution of cultures.

## Limitations

Limitations of this study included the small sample size and only studying short-term effects. Participants expressed that barriers to engaging in cross-cultural discussions include language differences, lack of body language/gestures to express certain ideas, unfamiliar topics, time differences, fear avoidance, and technology issues.

## Clinical Relevance

Short-term cross-cultural interaction could improve cultural competence and cross-cultural communication skills. Leadership efficacy could be related to cultural competence skills. The findings from this study can be used to develop strategies to facilitate cultural competence and investigate the effect of virtual cross-cultural modules for physical therapy students around the globe.

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