Purdue University

NOMINATION FORM FOR

HELPING STUDENTS LEARN AWARD

Stewart Chang Alexander and Kristofer Chang Alexander

Name of Nominees

Associate Professor and Clinical Assistant Professor

Titles

Public Health and HTM	765-427-9860 - alexan90@purdue.edu 765-494-4957 - kristofer@purdue.edu
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Title of Innovation

Intercultural Development Program

Name of Nominator

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Nominations must be sent electronically to cie@purdue.edu. Nominations must be received no later than 5 pm, Monday, February 1, 2021.

1. How does the improvement facilitate learning?

The *Intercultural Development Program (IDP)* is a program designed to improve a student's intercultural expertise by helping students learn, practice, and improve how to effectively interact in diverse intercultural situations (increasing their Cultural Intelligence (CQ)). CQ has been used in the fields of business, military and diplomacy arenas, yet is relatively new in the field of education. CQ consists of four related (yet distinct) domains: *Motivation:* a person's interest level, tenacity, and self-confidence during multicultural interactions; *Cognitive:* a person's understanding of cultural similarities and differences); *Metacognitive:* a person's ability to plan for and apply cognitive elements during cultural interactions); and *Behavioral:* a person's ability to interact effectively during intercultural situations that require unique or specific behaviors). *Pedagogical Method.* Five learning outcomes were developed for the *IDP*: 1) Identify important cultural dimensions between US and other cultures; 2) Learn and Practice how to regulate their emotions during new intercultural situations; 3) Construct specific techniques to help student's examine their predisposed judgments of familiar and new people, places and things; 4) Assess and Interpret cultural situations in order to plan and interact with others from different cultures, and 5) Reflect on their cultural interactions and identify and develop new ways to interact in future cultural interactions. *Theory.* Bandura's Social Learning Theory (SLT) integrates behavioral and cognitive theories of learning into a comprehensive theory that explains how individuals learn new social behaviors by observing and then imitation. SLT hightlghts cognitive and behavioral processes that can be accomplished by observing real-world actions, and/or demonstrating these behaviors through verbal and non-verbal instruction. In this theory, how much a learner grasps is dependent on three central elements: their *attention*, *retention* and *reproduction*. The *IDP* allow students to engage in the *attention* and *retention* phases of SLT

while in a controlled university environment. For example, during the *attention* phase, an instructor may teach an interactive lecture on cultural differences in non-verbal communication. Then, during the *retention* phase, the instructor has students pair up and practice different forms of non-verbal communication and discuss the appropriateness of each form in diverse social encounters. In turn, by equipping students with these CQ tools, self-efficacy increases as students become more comfortable and competent with intercultural interactions. Furthermore, the *IDP* is designed to provide feedback and guidance throughout the course to help students apply newly acquired knowledge and skills using effective strategies. Interacting with international students allow students to engage in the *reproduction* phase by enacting behavior in real world, culturally appropriate setting. After these real-world encounters, students reflect on their interactions through journaling and one-on-one instructor meetings, then make any necessary corrective actions and then repeat the process.

2. How is this work creative and/or innovative?

Our *IDP's* innovation is in its adaptability, flexibility and mobility of key skills for all post-graduate working environments. The faculty leads (Hospitality and Tourism Management - Kristofer Chang Alexander and Public Health – Stewart Chang Alexander), worked to increase the impact of this program from its initial pilot within one study abroad course to its integration now within different disciplines and different learning environments (in the classroom, online, and overseas). The format of the IDP is very versatile and easily adaptable. Large portions of the *IDP* are online allowing for increased flexibility for self-paced learning and use within many different educational settings while maintaining consistent content. This content has been developed into a series of digestible modules, allowing instructors to select all or only a few modules based on the needs of their course and learners.

3. What are the broad impacts?

The *IDP* was originally designed for use with a pre-study abroad class taught by the co-creators. After this initial pilot, the *IDP* developers were approached by the College of Health and Human Sciences to develop an online version of the *IDP* to more broadly teach intercultural development for all HHS study abroad programs. The success of the deployment of the *IDP* within HHS caught the attention of the Center for Intercultural Mentoring, Learning and Research (CILMR). CILMAR recruited the developers to further enhance their online modules to be a fully developed series of intercultural learning virtual modules that could be used campus-wide in all Colleges. The modules deployed in Fall 2020 campus-wide. To date 711 Purdue students participated in the *IDP* from 7 different colleges (ENGR17911, 27920, 47921; NUR 108; ME 290; MGMT 44431; HTM 462; CSR 415, and ASEC 331). The project's next step is to work with the School of Nursing, Department of Nutrition and the College of Pharmacy to embed the modules throughout their curriculum for Fall 2021.

4. What is the evidence of student learning?

The *IDP* was created with a built in student assessment by using the Cultural Intelligence Scale (CQS) as a pre/post CQS evaluation. CQS has shown adequate internal consistency, strong construct validity, and average convergent validity and discriminant validity. Statistical Analysis. For each of the last three years, we estimated the effects of the *IDP* on student CQ growth by using a multilevel model of change using STATA version 15.1. For each dataset, we used a two-level hierarchical linear structure composed of student questionnaire responses from two points of time at level 1 (TIME), and the study arm of the participant at level 2 (GROUP). The models we use are:

Level 1: Level 2:

$$CQ_{ti} = \pi_{0i} + \pi_{1i}(TIME - TIME_1)_{ti} + e_{ti} \qquad \pi_{0i} = \beta_{00} + \beta_{01}(GROUP_i) + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(GROUP_i) + r_{1i}$$

Evidence of Student Learning #1. In 2018, we conducted a quasi-experimental study comparing the intercultural development program (a combined 9-week cultural learning course followed by a 3-week study abroad experience) to a comparison group of students participating in an on-campus summer program. Students in the teaching program traveled to New Zealand, Australia, and Japan. Students in the comparison group were enrolled in the Purdue Summer Stay Program (a traditional 12-week summer, on-campus research/education experience where students received a $2,500 scholarship for summer classes and were required to complete 9 credit hours of coursework). The sample consisted of 53 intercultural development program students and 62 comparison group students. To compare the CQ development between groups, we estimated multivariate multilevel models of change for each CQ domain. In the overall model Time was significant as a fixed effect ($p<.001$), but not significant as a random effect. Accordingly, Time as a random effect was removed from our final model. The multilevel models of change indicate that in relation to the comparison group, students participating in the intercultural development group experienced a statistically significant increase in *Cognitive CQ* ($p<.01$), *Metacognitive CQ* ($p<.01$), and *Behavioral CQ* ($p<.01$) domains, but did not experience a statistically significant increase in *Motivational CQ* ($p=0.08$). The effects sizes of their CQ development were small for *Motivational CQ* (Cohen's d = 0.20), medium for *Cognitive CQ* (Cohen's d = 0.851), and large for *Metacognitive CQ* (Cohen's d = 1.74) and *Behavioral CQ* (Cohen's d = 1.084). Evidence of Student Learning #2. In 2019, we wanted to determine how long students needed to go on a study abroad to receive maximum CQ growth. For this study, we examined the results of our intercultural development program with students either participating in a 3- or 6-week study

abroad experience compared to a control group. Students in the 3-week study abroad program traveled throughout: France, Italy and Switzerland (n = 26), while students in the 6-week program traveled throughout Japan (n = 25). We used the same Purdue Summer Stay program as our comparison group (n = 25). The results of the multilevel models of change indicate that in relation to the comparison group, intercultural development students experienced a statistically significant increase in *all four CQ domains*. Comparing the 3-week versus 6-week program, we found that the length of time overseas did not influence the students' CQ growth. Evidence of Student Learning #3. In 2020, we wanted to determine the effects our intercultural development program (9-week classroom instruction and study abroad experience) had on a student's intercultural growth. However, because of COVID, all study abroad programs in 2020 were cancelled. Thus, we were only able to evaluate the 9-week classroom instruction portion of our program. The comparison group for this study was a Purdue class on apparel design where no culture was taught during the class. In the overall model, Time was significant as a fixed effect ($p<.001$), but not significant as a random effect (the same results from 2018 and 2019). Accordingly, Time as a random effect was removed from our final model. The multilevel models of change indicate that in relation to the comparison group, students participating in the 9-week intercultural development course experienced a statistically significant increase in *Motivation CQ, Cognitive CQ* ($p<.01$), and *Metacognitive CQ* ($p<.01$) domains but did not experience a statistically significant increase in *Behavioral CQ* (p= n.s.). The effect sizes for the intercultural development course were medium for *Motivation CQ* (Cohen's d = 0.68) and large for both *Cognitive CQ* (Cohen's d = 1,67) and *Metacognitive CQ* (Cohen's d = 1.08).