

**White Paper Summarizing the Major Findings of:
'Intercultural Learning in Semester-Long Study Abroad: A Comparative
Analysis of the Effectiveness of One-on-One versus Group-Mentored
Interventions*'**

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ABSTRACT

Evidence suggests that facilitated interventions in study abroad enhance gains in intercultural development, but many studies are not fully generalizable due to small numbers or lack of experimental design. In the study summarized here, participants received either individual or small group interventions online in a course with trained intercultural mentors. Pre-posttest changes were analyzed with an intercultural competence assessment instrument for both treatment groups and a control group (a total of 376 subjects), and analysis of variance (ANOVA) methods were used to explore between-group differences. Findings corroborate previous research on the effectiveness of mentorship in study abroad. Additional findings of this study may be found in a forthcoming peer-reviewed article by Jones, Campbell and Acheson, anticipated to appear in late 2019, in the *Journal on Excellence in College Teaching*.

INTRODUCTION

Contemporary research has countered the long-held assumption that intercultural competence development occurs naturally due to participation in a study abroad experience. Rather, recent evidence suggests that facilitated intervention during an undergraduate study abroad program provides greater gains in intercultural development as compared with no intervention (Krishnan, Masters, Holgate, Wang & Calahan, 2017; Paige & Good, 2009; Pederson, 2010; Vande Berg, Paige & Lou, 2012). For this study, our research further explores this learning phenomenon. This study of 376 subjects examines the efficacy of both individual and group-mentored interventions over the period of a semester-long study abroad. Or to state the research question more plainly: What, if any, meaningful differences in intercultural growth existed between individualized mentoring, group mentoring, and no mentoring?

Purdue University is a land grant, research institution in rural Indiana with an undergraduate enrollment of approximately 30,000; of whom 21% are international students (Purdue University Data Digest, 2019). More than 75% of students are enrolled in a STEM program of study (Purdue University Data Digest, 2019). In recent years, Purdue's rate of study abroad participation has climbed to approximately 25%, and the number of students who choose semester or year abroad programs has been around 400. In 2012, Purdue's Faculty Senate identified intercultural knowledge and competence as a learning outcome that should be embedded in all undergraduate degrees (Purdue University, 2012).

In response to this mandate, the Dean of International Programs prioritized shifting the study abroad paradigm: from one focused solely on increasing participation to one that also worked intentionally on improvement of students' intercultural skills. In the spring of 2015, an on-line intercultural mentorship course began to be offered, adapted from the "Minnesota model" (Paige, Harvey & McCleary, 2012), to support Purdue's long-term study abroad students. A small pilot study of mentored as opposed to non-mentored semester abroad participants replicated findings from the education abroad research literature: e.g. Purdue students who received on-line semester-long intercultural mentoring were more likely to make meaningful intercultural competence gains than students who did not receive such mentoring during their semester abroad (Yngve, 2015). However, this learning intervention relied heavily on adding the electronic mentoring of a number of study abroad participants per semester to the workload of each of the Dean's professional staff members; as such, while staff identified it as a rewarding professional experience, it was not a sustainable model for institutional change.

In order to scale up mentorship offerings to serve the nearly 400 students studying in semester-long programs each year, Purdue entered into a partnership in 2016 with a renowned

non-profit international youth exchange organization, AFS Intercultural Programs. This partnership provides the AFS *Global Competence Certificate* (GCC) online curriculum as a digital text to the university, as a credit-bearing course within the College of Liberal Arts (COM 30301). This allows for a significant percentage of semester abroad students to receive mentoring in a group setting rather than individually. The partnership has also provided facilitator training and support materials that allow designated faculty and staff across the university to become more effective and confident mentors of intercultural learning.

RESEARCH METHODS

This study examines data gathered from 376 undergraduate students who took part in a semester or yearlong study abroad program during the period between spring 2017 and fall 2018. The two treatment groups were comprised of students who had opted into a scholarship program designed to boost student willingness to engage in a mentorship course and pursue deeper intercultural learning while studying abroad. Students earned the scholarship in the semester following successful completion of the one-credit mentoring course (Purdue Study Abroad, n.d.). The control group was recruited by email from among undergraduates approved to study abroad in those same semesters, but who chose not to receive any structured intercultural mentoring; either from Purdue or from their program provider or host university.

The Learning Intervention

There were two treatment groups. Each student in the first treatment group (INDIV) received one-on-one mentoring during their semester abroad, as well as an individualized pre-departure debriefing on their IDI results by a Purdue qualified administrator of the instrument. The curriculum for the individualized mentoring course (cf. Yngve, Acheson-Clair & Jones, 2018) consists of twelve assignments, each designed around one of the components of

intercultural competence or of critical thinking, as quantified by the appropriate AAC&U VALUE rubric (Rhodes, 2010). Each of these weekly assignments, delivered through Blackboard, requires students to engage with the host culture to complete activities, followed by guided conversations within an online discussion board thread. A handful of these assignments necessitate discussion in the on-line forum among a peer group cohort, with each student being required to give active-listening feedback to at least two other students' postings. The remaining weekly discussions occur in a private discussion forum between each student and their assigned mentor, and are tailored by the mentor to the student's initial IDI developmental stage. Each mentor-student pair is required to adhere to a cycle of two feedback and response interactions following the student's initial posting of a weekly assignment to this private discussion forum.

Students in the second treatment cohort (GROUP) received group-based mentoring during their semester abroad. They were asked to view a group IDI debriefing video, which focused on the aggregate mean and distribution of group results, rather than having an individual debrief of their own results. The curriculum of the group-mentored course is a customized version of the AFS on-line Global Competence Certificate (<https://afs.org/certificate/>), which is designed to help learners develop intercultural competence by focusing on four key competency areas: self-awareness, awareness of others, emotional intelligence, and bridging cultural differences. Participants are required to engage regularly with peers in virtual forums to discuss culture-general¹ content as presented primarily through short videos. Students take part in four synchronous on-line 'Facilitated Dialogue Sessions' during their semester abroad allowing their

¹ "Culture-general" refers to dimensions and frameworks by which cultures commonly differ, as defined by research, such as preferred communication styles or attitudes around time or relationship building. Additional information on "culture-general" as opposed to "culture-specific" approaches to intercultural learning can be found at: https://quic.queensu.ca/php/toolsForSuccess/part_2_increasing_knowledge/part_2_increasing_knowledge.html

mentor to help the group make connections between the on-line content and the students' lived experiences as a study abroad participant.

Over the past two academic years, the program has involved 50 mentors from 27 units across the campus. Mentors are recruited from a university master list of Intercultural Development Inventory (IDI) Qualified Administrators. In addition, mentors in the GCC course are further required to be trained as Qualified Facilitators of the Global Competence Certificate. Both groups of mentors receive a pre-semester training in the application of the AAC&U Intercultural Knowledge and Competence VALUE Rubric as a formative teaching tool, in IDI stage-based pedagogy, and in balancing challenge and support pedagogies (Sanford, 1968).

Assessing the Learning

All participants were required to complete the Intercultural Development Inventory (IDI) at the beginning (pretest, or T1) and end (posttest, or T2) of their semester abroad. The IDI is a well-researched (Engelking, 2018; Vande Berg, M., et al, 2009; Watson & Wolfel, 2015), valid and reliable tool (Hammer, et al, 2003; Hammer, 2012; Wiley, 2016) that is widely used to measure intercultural development in both business and education. As summarized in the table below, the instrument categorizes the individual's developmental ability to engage effectively and appropriately with cultural difference, according to a five-stage continuum.

Intercultural Development Continuum: IDI Scores and Descriptions	
Denial (IDI score: < 70)	Disinterest in & avoidance of other cultures; ignores diversity.
Polarization (Score: 70-84.99)	Judges difference from an 'us vs. them' perspective, in which there is no neutral ground.
Minimization (Score: 85-114.99)	Highlights commonalities while suppressing notice of differences; non-dominant group members may adopt "go along to get along" attitude.
Acceptance (Score: 115-130)	Enjoys recognizing and exploring difference; embraces deeper understanding; may be challenged by perceived ethical dissonance between own cultural viewpoint & others' morals or behaviors.
Adaptation (Score: > 130)	Can intentionally shift frame of reference, behaviorally code-shift and focus on adaptive learning strategies.

Table 1: Intercultural Development Continuum: Scores and Descriptions

The decision to use the IDI to assess these learning interventions was based upon Purdue University's adoption of the Intercultural Knowledge and Competence VALUE Rubric as a framework for undergraduate curricular alignment, and the IDI's shared developmental origins with the same rubric. Further, Purdue researchers have found that intentionally using the Intercultural Knowledge and Competence VALUE Rubric together with the IDI predicts significant increases in intercultural competency acquisition (Calahan, 2018).

Data Analysis Methods & Significance Standards

The focus of this comparative analysis was the mean IDI change between T1 (pre-departure assessment) and T2 (semester's end) for each group. The statistical analysis software, SPSS Statistics 25, was used to analyze data. A one-way analysis of variance (ANOVA) in conjunction with a post hoc Tukey test with an alpha of 0.1 was used to determine whether the means were significantly different from group to group. In quasi-experimental research such as the current study, which relies on existing treatment groups rather than random assignment, false negatives could easily occur with strict observance of a very low P-value (Amrhein & Greenland, 2018). Also pertinent is the strong theoretical basis for assuming that mentorship will increase gains in learning; confirming a finding that has been demonstrated elsewhere should not require a particularly stringent P threshold. Therefore, in this study, the significance threshold was set at $P < .1$, with the acknowledgment that the P-value is but one indicator of the value and surety of findings, not a verdict of significance to be accepted without question.

Results

Figure one below shows mean IDI point changes in developmental orientation by treatment group: individual-mentored (INDIV) and group-mentored (GROUP) as well as the control group, who received no Purdue mentoring. The number in parentheses within each bar indicates the

total quantity of tested study participants within that particular treatment group, while the number above each bar indicates the mean IDI point change for the named group.

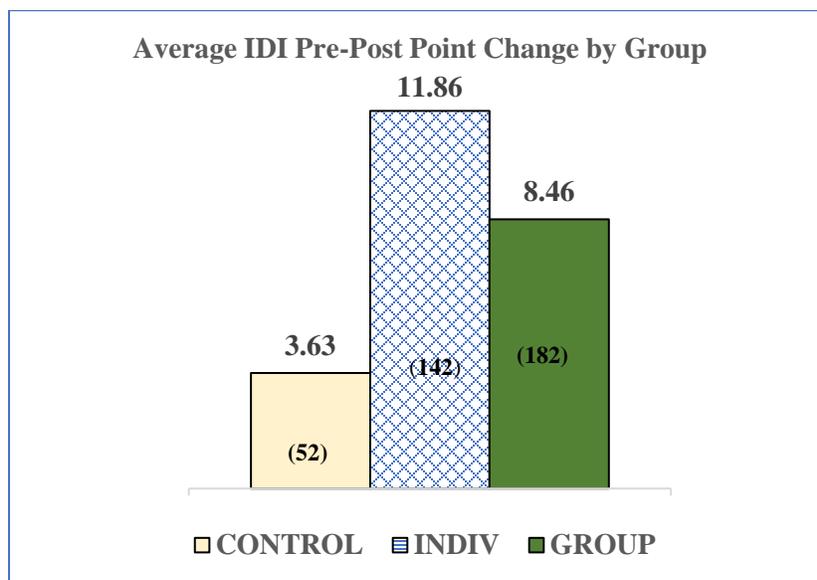


Figure 1: Average IDI Developmental Orientation Change by Group

Here we can clearly see that the intercultural development results of a semester abroad have been greatly enhanced by a mentoring intervention, given that the average gain for the Control Group is less than half that of the group-mentored cohort and less than a third of the average growth attained within the cohort who received individualized mentoring. The above averages can be more clearly understood when one examines the difference in developmental progression, stasis or regression between the groups, as we will show on the next page. In short, the patterns illuminate what (some) study abroad scholars have recognized for many decades:

“It is clear that foreign study does produce changes in attitudes of students. But, when the evidence is inspected more closely, it becomes apparent that some students have changed not at all and others have become more narrowly American and more critical of foreign values...” (Churchill, 1958, p.447).

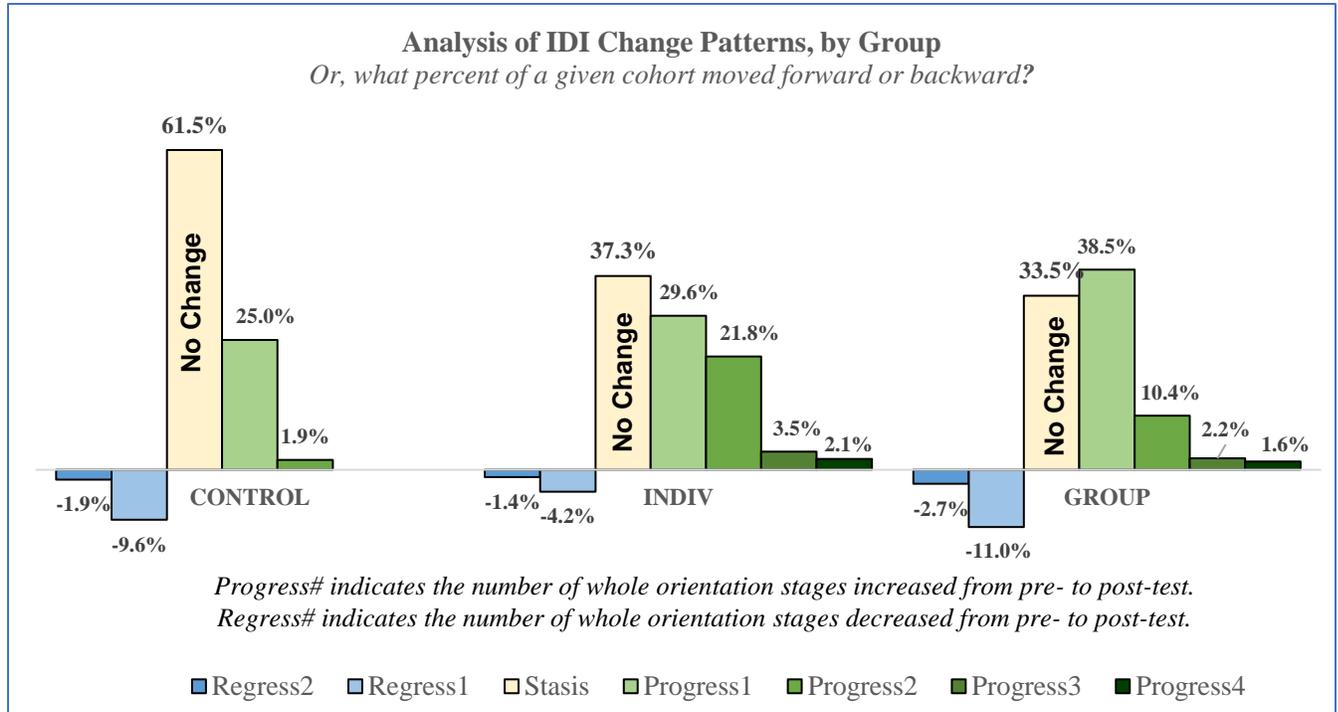


Figure 2: Patterns of Change in IDI Outcomes, by Group

In the chart above, we have calculated the number of students within each group who moved into a new or prior developmental stage between the initial pre-departure assessment and the end of the semester abroad. Then, a percentage was calculated as to what quantity moved forward and by how many stages (yielding Progress#), as well as how many regressed and by how many stages (e.g. Regress#). Notably, the likelihood of lack of change (or stasis) was cut in half by participation in either intervention, as the analysis indicates meaningful development for twice the percentage of treatment group students as for the control group. While there is a greater increase in the percentage of participants progressing one whole orientation stage in the group-mentored intervention than in the individual-mentored intervention (a difference of +8.9%), the individual-mentored intervention yields greater gains in the percentage of participants progressing two or more orientation stages (+11.4%). In total, 57% of individual-mentored participants progressed one orientation or more compared to 52.7% among group-mentored

participants. Also of note is the difference in combined regression for each of the two treatment groups. The individual-mentored intervention had a combined percentage of 5.6% of students who regressed as compared to 13.7% in the group-mentored intervention.

Significance of the IDI Score Differences

Experienced intercultural coaches have suggested that a “meaningful” difference in how a given individual conceptualizes and resolves to approach cultural difference can be observed with a four-point gain in pre and post-intervention IDI scores (Anderson, 2016); while in the analyses presented above the authors have identified moving into a new developmental orientation (or a prior one) to be meaningful change. For clarity, we wish to point out, for readers unfamiliar with this assessment instrument, that moving into a different IDI stage may occur with only a slight point-count change, or may require as much as 25-point gain if, for example, a person is in low minimization at the time of initial assessment.

In addition to the above ways of interpreting meaningful learning, a one-way analysis of variance (ANOVA) technique was used to explore the statistical significance of the IDI score differences between the three groups. Briefly, the resulting *p*-values indicated statistical significance in average differences among all groups with a 90% degree of certainty. By comparing the standard errors of each pair using the Post Hoc Tukey HSD Test, it was further found that, if this study were to be replicated, the results would be reliably similar for each of the treatment pairs. In other words, according to the standards set by the authors for this research endeavor, the differences in outcomes between the control and the two treatment groups were found to be statistically significant. Charts of the ANOVA and Tukey results, as well as an examination of gender, major and citizenship as influencing factors on students’ outcomes, can be found in the full published article (Jones, Campbell and Acheson, forthcoming).

CONCLUSION

Many scholars agree that facilitated intercultural intervention yields better results than no intervention. The verdict is still out, however, on what intervention is “best.” As with many other institutions, Purdue University began with providing boutique mentoring programs to students who were willing to ‘go the extra mile’ in developing their own intercultural competence. While boutique and certificate programs have their place in academia, concerted efforts to incorporate intercultural learning more broadly into curricula and into study abroad in particular require more commitment from both student and institution alike. While this study indicates, not surprisingly, that smaller class sizes and individualized instruction can translate to better learning outcomes for some individuals, group-mentored intervention can provide the opportunity to serve increasing numbers of the student population while still being attentive to the research on advancing intercultural competence development effectively. It appears that group-mentored interventions could fall into a sweet spot for ‘scaling up’ both students’ acquisition of intercultural competence and institutional or national participation rates in education abroad.

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