

Assessment Research for Optimizing Student Learning Abroad: The Georgetown Consortium Study

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Council on International Educational Exchange (CIEE)

- **The leading U.S. non-governmental international education organization**
- **Mission: “to provide experiences that allow learners to acquire knowledge, gain understanding and develop skills for living and working in an increasingly diverse and intercultural world”**
- **Offers programs that annually enroll 5,000+ U.S. university students in 108 study programs abroad**
- **Annually organizes 25-30 IFDS for U.S. faculty.**
- **Sponsors 45,000 international students for U.S. study, work and travel**

The Central Debate about Student Learning Abroad

View I: Students learn abroad quite effectively when left to their own devices.

View II: Students learn most effectively abroad when we intervene in their learning.

What Does this Mean for Engineering Education Abroad?

Relevant ABET 2000 Criteria: Program Outcomes and Assessment

- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand the impact of engineering solutions in a global and societal context
- A recognition of the need for, and an ability to engage in, lifelong learning

A Research-Based Response: The Georgetown Consortium Study

- Four-year study; DOE Title VI funding
- 4 US institutions: Georgetown, Rice U, U of Minnesota-Twin Cities and Dickinson
- Multiple program providers
- 1,300+ students tested
- 61 study abroad sites; very broad range of program types and durations
- 2 learning domains: second language & intercultural development
- 7 foreign languages

Our Study Tested Several Hypotheses:

- I. Study abroad participants make greater gains in second language and intercultural learning than students who stay at home.**

Hypothesis II

There are significant correlations between student learning abroad and a wide variety of learner characteristics and program elements.

Hypothesis III

Students learn most effectively when we intervene in their learning before and after study abroad



Intervening in Student Learning Abroad Can Take Several Forms

- Potential Passive interventions:
 - ✓ Study Abroad Program Design
 - ✓ On-Campus Study Abroad Policies
 - ✓ On-Campus Curricular Changes
- Potential Active interventions:
 - ✓ Advising
 - ✓ Pre-departure orientation
 - ✓ Mentoring while students are abroad
 - ✓ Re-entry orientation

NB: This study focuses on the impact, on student learning, of many passive and active interventions

Hypothesis IV: Sanford's Challenge/Support Hypothesis* Applies to Student Learning Abroad

- A. Without sufficient challenge, learners abroad are bored and don't learn.
- B. When there's too much challenge, learners abroad are overwhelmed and don't learn.
- C. Learners abroad learn most effectively when they benefit from intervention that facilitates an appropriate amount of challenge.**

*Nevitt Sanford (1966). *Self and society: Social change and individual development*. New York: Atherton Press.

Study's Principal Independent Variables*

(Each points to a potential intervention in student learning)

- **Duration of Program**
- **Amount of pre-departure target language study**
- **Language of coursework on site (a. content courses; b. target language courses)**
- **Context of academic work (a. location of courses; b. student course composition; c. type of faculty)**
- **Type(s) of housing at program**
- **Structured experiential learning**
- **Guided reflection on intercultural experience**

*Engle, L. and J. Engle (2003). "Study Abroad Levels: Toward a Classification of Study Abroad Types." *Frontiers: The Interdisciplinary Journal of Study Abroad* IX: 1-20.

Additional Independent Variables

(Each points to a potential intervention in student learning)

- Pre-departure and on-site orientation with cultural component
- Gender
- Academic Major
- Prior study abroad experience
- Prior experience living abroad
- Amount of Interaction with Host Country Nationals
- Perception of Cultural Similarity/Dissimilarity

Testing of Learning Domain I: Second Language Acquisition

- Instrument: Simulated Oral Proficiency Interview (SOPI)*
- Pre- and post-testing of 968 students
- Testing of 7 foreign languages

*<http://www.cal.org/topic/ta/sopi.html>

ACTFL Scale & SOPI Ratings

<u>ACTFL Ratings</u>		<u>Study Score</u>
Superior		3.0
	High	2.8
Advanced	Mid	2.3
	Low	2.1
	High	1.8
Intermediate	Mid	1.3
	Low	1.1
	High	0.8
Novice	Mid	0.3
	Low	0.1

Language Research Finding 1

Study Abroad vs. Control Students

Study Abroad Participant (SAP) ratings increased significantly more than Controls' SOPI ratings.

On average, SAPs' SOPI scores improved one sublevel, from just below Intermediate High to just below Advanced Low.

On average, Controls improved about half a sublevel, from just below Intermediate High to Intermediate High.

Language Research Finding 2

Oral Proficiency Gain: Males vs Females

On average, Female SOPI scores improved one sublevel, from just below Intermediate High (1.7) to just below Advanced Low (2.0).

However, Male students, on average, improved about half a sublevel, from just below Intermediate High (1.6) to Intermediate High (1.8).

Language Research Finding 3

SAPs' oral proficiency gains *did not correlate* with any single type of housing (that is, no one type of housing predicts oral proficiency gains more than other types). SAPS in the study lived in four different types of housing: a) with host families, b) in apartments with other U.S. students, c) in dorms with other U.S. students, or d) in dorms with host country nationals

Language Research Finding 4

SOPI Gains & Time Spent with Host Families

We did, however, find significant correlations between SOPI gains and the percentage of time students spent with a host family (the more time spent with their families, the higher their oral proficiency gains)

Testing of Learning Domain II

Intercultural Learning

- Intercultural Development Inventory (IDI)*
- Psychometric instrument based on Bennett's Developmental Model of Intercultural Sensitivity (Denial, Defense, Minimization; Acceptance, Adaptation, Integration)
- 50-item instrument
- Pre- and post-testing of 1,300 students

*Bennett, M.J. (2004). Becoming interculturally competent. In J. Wurzel (Ed.), *Toward multiculturalism: A reader in multicultural education* (2nd ed., pp. 62-77). Newton, MA: Intercultural Resource Corporation.

Intercultural Research Finding 1

Intercultural Learning: SAPs vs. Controls

SAPs showed significantly greater increases in IDI scores than the Control students at home.

Intercultural Research Finding 2 Gender and Intercultural Learning

Female SAPs showed statistically significant increases in their IDI score.

Male scores, however, actually decreased—males post-test IDI scores were in fact lower than the post-test scores of Control students on home campuses.

Gender and IDI Gain (SAPs only; N = 1156)

	N	Mean							Effect size (Cohen's <i>d</i>)
		IDI-1	SD	IDI-2	SD	Change score	t	Sig. (2- tailed)	
Male	384	94.31	14.68	93.81	17.22	-.4919	-.639	.523	.033
Female	772	97.19	13.97	100.94	15.29	3.745	8.683	.000	.312

Research Finding 3 Group Mentoring and IDI Gain

Students who received mentoring “often” to “very often” showed the greatest increase in IDI scores.

(Note the progressive pattern in Change Scores, and recall the challenge/support hypothesis)

Group mentoring on site
(SAPs only; N = 931)

	N	Mean							Effect size (Cohen's <i>d</i>)
		IDI-1	SD	IDI-2	SD	Change score	t	Sig. (2-tailed)	
Never	359	94.65	13.93	95.50	15.23	.831	1.214	.226	.064
Rarely	302	96.27	13.82	97.88	14.62	1.607	2.247	.025	.129
Sometimes	179	96.91	14.30	99.09	16.99	2.178	2.301	.023	.172
Often	60	96.65	17.09	99.80	17.21	3.143	1.951	.056	.252
Very often	31	94.89	12.53	99.91	18.46	5.016	1.987	.056	.357

Research Finding 4

Perceived Cultural Similarity/Dissimilarity and IDI Gain

SAPs whose IDI scores changed significantly were those who felt the host culture was “somewhat dissimilar” to “dissimilar” from the host culture.

In other words, the perception of dissimilarity is associated with greater IDI change, except for the highest rating of “very dissimilar.”

(Recall the “Challenge/Support” Hypothesis.)

Perceived Cultural Similarity/ Dissimilarity (SAPs only; N = 864)

	N	Mean							Effect size (Cohen's <i>d</i>)
		IDI-1	SD	IDI-2	SD	Change score	T	Sig. (2- tailed)	
1 very similar	29	95.51	15.04	93.62	16.75	-1.896	-.975	.338	.181
2 ↑	146	93.96	14.68	93.53	15.44	-.4315	-.438	.662	.036
3	350	95.07	13.96	97.66	15.72	2.584	3.844	.000	.205
4 ↓	293	97.67	13.77	99.96	14.83	2.284	3.244	.001	.190
5 very dissimilar	46	95.68	14.06	94.78	18.81	-.9020	-.384	.703	.057

Intercultural Finding 5

SAPs' intercultural learning gains *did not correlate* with living with a host family.

(Recall that we saw the same lack of correlation between living with a host family and gains in language learning.)

Intercultural Finding 6

Exposure to Target Culture and IDI Gain

We evaluated three dimensions of cultural exposure in exploring the relationship of SAPs' exposure to the target culture and gains in their IDI scores:

- Exposure to Host Family
- Exposure to Other People from the U.S.
- Exposure to People from the Host Country

(Recall Challenge/Support, in considering the learning boundaries the data suggest here.)

Intercultural Finding 6A

Exposure to Host Family and IDI Gain

The higher the amount of time spent with the host family, the larger the change in SAP IDI score.

(Recall that language gains also correlated with amount of time spent with host family.)

Host Family (SAPs only; N = 572)

	N	Mean							Effect size (Cohen's <i>d</i>)
		IDI-1	SD	IDI-2	SD	Change score	t	Sig. (2- tailed)	
1: 1~25%	445	96.85	13.67	98.03	16.20	1.172	1.823	.069	.086
2: 26~50%	120	94.98	13.81	98.34	14.09	3.366	2.904	.004	.265
3: 51~75%	7	94.38	8.84	99.33	10.66	4.947	1.723	.136	.651
4: 76~100%	0	-----		-----		-----	-----	-----	

Intercultural Research Finding 6B Exposure to Other U.S. People and IDI Gain

SAPs who spent the least amount of time with other people from the U.S. had the highest change in IDI score.

SAPs who spent the most time with other people from the U.S. showed the smallest gains in IDI score.

Other US People (SAPs only; N = 923)

	N	Mean							Effect size (Cohen's d)
		IDI-1	SD	IDI-2	SD	Change score	t	Sig. (2-tailed)	
1: 1~25%	231	96.60	14.69	99.11	15.66	2.509	3.308	.001	.218
2: 26~50%	402	95.50	13.78	97.16	15.64	1.648	2.477	.014	.124
3: 51~75%	212	94.48	14.09	96.19	15.01	1.710	2.095	.037	.144
4: 76~100%	78	96.52	14.64	95.56	17.50	-.956	-.556	.580	.063

Intercultural Research Finding 6C

Exposure to Host Country People and IDI Gain

SAPs who spent 26-50% of their time with host country people showed significantly greater gains in their IDI scores than those who spent 1-25% of their time with host nationals.

However, SAPs who spent more than 50% of their time with host nationals actually scored lower on their post-test than on their pre-test.

Host Country People (SAPs only; N = 924)

	N	Mean							Effect size (Cohen's <i>d</i>)
		IDI-1	SD	IDI-2	SD	Change score	t	Sig. (2-tailed)	
1: 1~25%	737	95.55	13.89	96.98	15.23	1.437	3.137	.002	.119
2: 26~50%	153	96.65	14.68	99.44	18.08	2.795	2.188	.030	.185
3: 51~75%	28	96.47	15.38	96.06	15.86	-.411	-.220	.828	.042
4: 76~100%	6	88.12	9.53	86.39	13.34	-1.733	-.359	.734	.147

Conclusions: Hypothesis I

Conclusion IA: Study abroad participants, on average, made greater gains in second language and intercultural learning than students who stayed at home.

Conclusions: Hypothesis I

Conclusion IB:

Female students, on average, made greater gains in oral proficiency and intercultural learning than males did.

However, male students, on average, lost ground in intercultural learning while they were abroad—they scored somewhat lower than control students at home did.

Conclusion: Hypothesis II

Students learned most effectively with interventions in their learning before and after study abroad.

(The two following slides show whether each variable in the study correlates significantly and positively with student learning: +SOPI = “correlates positively with oral proficiency gains”; +IDI = “correlates positively with intercultural learning gains”)

Study's Principal Independent Variables*

- Program Duration [+SOPI, +IDI]
- Pre-departure target language study [+SOPI, +IDI]
- Language of coursework on site (content courses +SOPI, target language courses +IDI)
- Context of academic work (location of courses +SOPI +IDI, student course composition +SOPI +IDI, type of faculty)
- Type(s) of housing at program [+SOPI +IDI]
- Structured experiential learning?
- Guided reflection on intercultural experience? [+IDI]

*Engle and Engle "Key Elements"

Other Significant Variables

- Pre-departure [+SOPI, +IDI]
and on-site orientation [+IDI] w/cultural component
- Gender [+SOPI, +IDI]
- Academic Major
- Prior study abroad experience
- Prior experience living abroad
- Amount of Interaction with Host Country Nationals [+SOPI, +IDI]
- Perception of Cult. Similarity/Dissimilarity [+IDI]

Conclusion: Hypothesis III

The Challenge/Support hypothesis offers significant explanatory value here: students did learn most effectively in several situations where they experienced neither too little nor too much challenge.

Interpretations and Implications

1. For most students, simply sending them abroad, in the belief that they will learn effectively when left to their own devices, is not an effective strategy.

Put differently: sending engineering students abroad in the hope that they will acquire knowledge, perspective and skills related to ABET learning outcomes is not an effective strategy.

The question is not whether we need to intervene in the learning of students, prior to and during study abroad—but how we can most effectively intervene to maximize their learning.

Interpretations and Implications

2. We need to intervene in the learning of male students in ways that we aren't now, if they're to learn effectively.

Interpretations and Implications

3. Students do not learn simply by being in physical contact with people from another culture. Put differently:

➤ **Proximity does not necessarily lead to proficiency.**

Students learn most effectively not when they have an experience *in* another culture—but when they have an experience *of* another culture.

Interpretations and Implications

- 4. Of the many ways we might intervene to help students gain an experience *of* another culture, the presence of an on-site mentor appears to be critical:**
- **Meet regularly to help manage perceptions of cultural similarity/dissimilarity**
 - **Meet regularly to help direct enrollment students understand the intercultural nature of educational differences**
 - **Maximize exposure to host culture: encourage more engagement with host families and other host country nationals; and less time with other U.S.**
 - **Focus on the intercultural learning of male students**
 - **Reinvigorate the intercultural learning process for Academic Year students**
 - **Advise students to continue formal study of the second language on site**

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