# Purdue University College of Science Global Dialogues Program 2018-19 Program Assessment

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## **ABSTRACT**

Purdue University College of Science Global Dialogues Program (GD) aims to transform the ways students view themselves and navigate the world. It would appear that, as intended, participation in Global Dialogues exposes students to the cultures and values of people who come from different backgrounds than themselves. Especially for U.S. American, mostly Caucasian and female students, the lasting impact of this exposure is to reinforce and boost students' sense of themselves and their potential. Delayed posttesting (T3) revealed that many learning outcomes attained are long-lasting rather than temporary and others show additional growth after the program concluded.

### INTRODUCTION

The College of Science Global Dialogues Program (GD) at Purdue University was created to enable students to see themselves and the world differently. It is designed to promote understanding of the varying life experiences and values of College of Science students. It aims to transform communication and relationships leading to collaboration both in and outside of the classroom at Purdue and beyond. The program involves 8 bi-weekly dinner meetings, a cultural trip to Chicago, and the creation and implementation of a service event.

In 2019, the Beliefs Events and Values Inventory (BEVI) was used to assess the effectiveness of the Global Dialogues program. The BEVI seeks to examine how and why the respondent experiences reality the way they do. It offers a series of questions that different people will react to in different ways, with emotions ranging from very mild to very strong. The face validity of the survey is low, meaning that it is difficult to guess the intent of an item just by examining it at face value. The instrument is composed of 2 validity and 17 process 100-point, normed scales.

In 2019, of the 20 students who began the GD program, 16 completed it. These 16 took the BEVI both at the beginning and end of the program; 15 of them also had valid administrations of the BEVI in a delayed posttest several months following the semester's end. This analysis of T1 (pretest), T2 (posttest), and T3 (delayed posttest) data is therefore limited to the 15 with complete data sets at each administration of the instrument.

Among the seventeen BEVI scales, those closest to outcomes identified for the Global Dialogues program are **Sociocultural Openness** (open regarding a wide range of actions, policies, and practices in the areas of culture, economics, education, environment, gender /global relations, politics) and **Global Resonance** (invested in learning about/encountering different individuals, groups, languages, culture; seeks global engagement).

## RESULTS AND DISCUSSION

It turns out that, unsurprisingly, the self-selected group of students who engaged in the Global Dialogues program scored highly on the two identified learning outcomes from the baseline point; at the whole group level, not much change over the course of the program could be expected nor was it found. See the comparison of means in the bar charts that follow.

## Sociocultural Openness

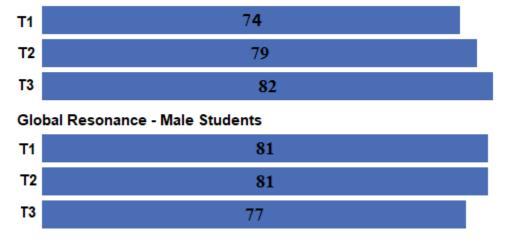
T1	94
T2	95
Т3	95

### Global Resonance

T1	78
T2	80
ТЗ	80

However, regarding **Global Resonance**, there was a little room for growth. While the scores of Caucasian students decreased marginally (from 83 at T1 and 85 at T2 to 79 at T3) and non-Caucasian students' scores increased slightly (from 75 at T1 to 77 at T2 and T3), these changes were not statistically significant. Domestic students (from 81 at T1 and 83 at T2 to 80 at T3) versus international students (from 69 at T1 to 70 at T2 and 73 at T3) displayed a similar pattern of small changes that were not statistically significant. *A between-group or over-time difference of five points on these normed 100-point scales is considered meaningful*. By this indicator, female students did exhibit meaningful growth in this area as opposed to males.

#### Global Resonance - Female Students



The post-program assessment was administered right at the end of the semester and during final exams. It is possible for stress related to the administration timing as well as potential discomfort with the learning experiences to create barriers to learning in the short term that resolve over time. It is also important to document that any progress that occurred as a result of the experience is maintained over the long term. Some BEVI scales showed little change between T1, T2, and T3 administrations. However, **Socioemotional Convergence** (a critical thinking scale) and

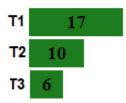
**Emotional Attunement** (a self-awareness scale) both reflect short-term growth in the aggregate mean that plateaued in the months after the program rather than falling to previous levels.

## Socioemotional Convergence (Critical Thinking)



Another scale, **Gender Traditionalism** (with the low end of the spectrum aligned with Global Dialogues learning outcomes), showed some development in the short-term followed by continued growth over time.

### Gender Traditionalism



It is often helpful to conduct subgroup comparisons so that patterns hidden in aggregate norms emerge. In this case, the data suggest that female students benefited more from the program than male students, with larger gains on **Needs Fulfillment** (72, 84, 83, as opposed to 83, 81, 75) and the two critical thinking scales **Basic Determinism** (18, 17, 11 versus 18, 15, 16) and **Socioemotional Convergence** (65, 80, 85 in contrast to 83, 81, 74), in addition to **Global Resonance** discussed above. Males (22, 14, 6), on the other hand, experienced greater change on the **Gender Traditionalism** scale than did female students (13, 7, 6). Non-Caucasian students (24, 13, 7) also lowered their scores on this scale more than Caucasian students, who started out much closer to the learning outcome of a low score on this scale (8, 5, 4), and international students (31, 22, 13) made larger gains than domestic students (12, 5, 3).

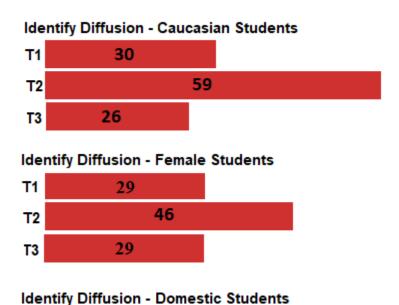
The most remarkable result for the whole group over the treatment period was the unsettling and subsequent resettling of participants' identities.

Identity Diffusion				
<b>T1</b> ,	25			
<b>T2</b>	30			
T3	24			

Higher scores on **Identity Diffusion** indicate a painful crisis of identity, while lower scores reflect resolution of the respondents' sense of self in relation to others. Temporary increases in Identity Diffusion often reflect transformative learning processes in which learners experience cognitive dissonance and emotional disequilibrium as a catalyst for restructuring their understanding of the self. While the aggregate means follow this pattern of short-term unsettling and long-term resolution with relatively small shifts in Identity Diffusion, the difference for certain sub-groups was much greater.

The Caucasian students (as opposed to non-Caucasian students) experienced the most dramatic disturbance of sense of self between the beginning and end of the semester of meetings, followed by the female (as opposed to the male) students. However, it is the Identity Diffusion scores of the domestic, U.S. national students (as opposed to international) students that are the most striking. (Note that these sub-groups overlap to a great extent.) While for the domestic students, the temporary increase in Identity Diffusion was substantial (from 23 to 38 between T1 and T2), the score at T3 (16) was significantly lower than the T1 score.

This trend can be viewed in the following bar charts:



T1 23
T2 38
T3 16

Non-Caucasian student scores did not shift meaningfully (23, 19, 23), nor did those for male students (21, 17, 19). International student scores shifted in the opposite pattern, decreasing in the short-term but rising again over time (30 at T1, 20 at T2, and 37 at T3).

One possible explanation for the consistent pattern of a spike in Identity Diffusion at T2 followed by a reduction at T3 shared by Caucasian students, US domestic students, and females is end-of-semester stress. Anxiety about successfully completing final projects and performing well on final exams can impact students' self-efficacy and sense of belongingness in academic and disciplinary cultures. However, literature on emotional resilience of students suggests that members of minority groups would be much more likely to suffer from these negative effects, since they often have less access to cultural capital and social support and are more subject to imposter syndrome and denigration by others (Morales, 2008). While females are a minority in this STEM setting, the other two subgroups displaying the increase-decrease pattern in Identity Diffusion are majority groups. We must therefore look for additional explanations for this phenomenon.

It is likely that many of the U.S. American (mostly Caucasian) students started the program without having much sense of their own culture (as discussed in the Whiteness literature by Frankenberg, 1993, for example). They learned about themselves through their intentional interaction with culturally different others, which can cause initial anxiety and identity confusion, but then eventually were able to internalize a clearer sense of self in relation to others (Tabit et al, 2016). This finding is also consistent with Transformative Learning Theory, which posits that deep structural changes in the self occur in response to moments of disequilibrium, or temporary unsettling that inspires processes of growth and development (Taylor, 2007).

In summary, it would appear that, as intended, participation in Global Dialogues exposes students to the cultures and values of people who come from different backgrounds than themselves. The group as a whole improved on constructs such as critical thinking, self-awareness and empathy for others, and these changes were long-lasting rather than short-term. All students also became more flexible about gender norms and roles, but the male students, international students, and Non-Caucasian students especially developed in this area. Female students, specifically, made progress in several other areas, including critical thinking, self-efficacy, and intercultural competence. Identities of students shifted over time, with international students resolving identity crises in the short-term and other groups, including Caucasian students, US American students, and females, temporarily unsettled by their experiences of difference. Females' sense of self returned to baseline after a few months, while Caucasian and U.S. American students ended up with a stronger sense of who they are than when they started.

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