



THE GLOBE PROGRAM

The GLOBE Implementation Office Summary of the 2014 GLOBE U.S. Partners/Country Coordinators Annual Survey

JUNE 2015

Prepared by Valerie L. Williams, Ph.D., Senior
Program Evaluator, UCAR Community Programs

BACKGROUND

The GLOBE Annual Partner Survey is one of the primary data-collection tools of the GLOBE Implementation Office (GIO). Initially administered in 2005, this survey gathers information from GLOBE Partners (U.S. Partners and Country Coordinators) on activities related to the GLOBE Program. (For U.S. Partners, the survey also includes questions that confirm their GLOBE Program status as either “Active” or “Inactive” on an annual basis.)

Information from the survey is cited in sponsor annual reports, the GLOBE Annual Review, and presentations at the annual meetings. In 2012, the GLOBE Annual Partner Survey was revised to align with the community-approved 2012-2017 GLOBE Strategic Plan. This five-year plan includes 2017 GLOBE Program goals for the GLOBE Community (U.S. Partners, Country Coordinators, teachers, and scientists) and actions for the GLOBE Program Office (GPO)¹ to undertake in order to support the community’s efforts in achieving these goals. An essential component of the Strategic Plan is the set of performance measures for each performance area that gauge and help monitor the progress of the GLOBE Program. Data from the GLOBE Annual Partner Survey, and other sources such as the GLOBE website, are collected in order to determine progress toward achieving these goals.

SURVEY DESIGN

The primary purpose of the GLOBE Annual Partner Survey is to gather descriptive information on the GLOBE community, which, over time, can provide the basis for further in-depth exploration and investigation. The specific objectives of the survey are to:

1. Gather information on partnerships, and the demographics that they serve, as part of trend analysis;
2. Monitor the extent to which GLOBE Partners are engaging in activities outlined in the Partnership agreements, and the type(s) of support provided for these activities; and
3. Monitor progress on key performance areas outlined in the GLOBE Strategic Plan.

In order to meet the first and second objectives listed above, items from the 2011 survey on partnership type, area served by the partnership, school types and grade levels, training activities, and funding provided to support partnerships, were retained in the current survey. Survey items addressing the third objective listed above were developed using a framework linking the strategic performance area and the corresponding performance measure to either an existing survey item that asked about the topic area or to a newly developed survey item. Additional survey items were developed by the Evaluation Working Group, and were designed to address areas of interest in training and implementation. (See Table 1.)

¹ Changed to GLOBE Implementation Office in 2013, located at UCAR, Colorado.

Table 1. Strategic Plan Measures and Corresponding Survey Questions

Performance Area	Performance Measure	Corresponding Survey Questions (Q)
Education: <i>Awareness and use of GLOBE materials</i>	Use of GLOBE teaching materials and resources	Q15: Which of the following best describes how frequently you used the following GLOBE materials and resources?
	Alignment of GLOBE materials with curriculum	Q16: Have you aligned GLOBE materials to meet state, regional, and/or national curricular needs?
Education: <i>Educational impact of GLOBE</i>	Provision of effective evaluation capabilities	Q21: Do you assess the quality of the training you conduct? If so, how? Q22: Please select the option that best describes how you assessed the quality of your training.
Communication: <i>Internal communication</i>	Level of partner awareness of GLOBE activities and events	Q6: Which of the following GLOBE events did you participate in last year?
Communication: <i>Awareness of GLOBE</i>	Frequency of international input received by GPO	Q8: Do you provide information to GPO communications on events and achievements within your country/partnership service area?
	Number of social media activities and updates	Q12: Please select the option that best describes how often you use the following social media platforms.
Science: <i>Use of GLOBE data in scientific inquiry</i>	Number of student collaborative projects	Q28: Please list and describe any student-related GLOBE projects within your local service area Q29: Please describe how GLOBE data were used.
	Relevance and currency of protocols	Q27: Please select the three most relevant protocols to teachers in your service area.
International: <i>Strength of Partner Networks</i>	Frequency of communication among partners	Q10: How frequently do you communicate with other GLOBE partners?

Performance Area	Performance Measure	Corresponding Survey Questions (Q)
	Number of collaborative partnerships, events, and projects	Q13: Are you currently involved in any collaborative GLOBE-related projects with other GLOBE partners? If yes, list and describe any collaboration you have or had with any GLOBE partners.
Technology: <i>Relevance of GLOBE website</i>	Amount of information from partners received and uploaded	Q7: What is the primary way you receive news about GLOBE?
Funding: <i>Income</i>	Amount of funding	Q33. Please estimate your annual funding/budget for GLOBE.

The current version of the survey consists of 36 questions divided into 5 sections (not including demographic questions for Country Coordinators and recommitment questions for U.S. Partners). Where appropriate, the survey maintained the section headings to reflect the performance areas in the GLOBE Strategic Plan. (See Table 2.)

Table 2. Survey Organizational Structure

Section Heading	Number of Questions	Primary Information Obtained
Partnership Information	5 questions	Descriptive information on partnerships, their local service area, and populations they serve
Partnership Activities	9 questions	Information on training, participation in GLOBE events, communication, and collaboration among the GLOBE community
Education and Training	12 questions	Information on relevance of GLOBE educational materials and resources, alignment with educational standards, amount of training conducted, and interaction with GLOBE schools
Science Activities	5 questions	Information on most frequently used GLOBE protocols, scientist involvement, and student-related GLOBE projects
Funding	5 questions	Information on annual funding budget for GLOBE and resources used to support GLOBE in the local service area

METHOD

The online survey was created using SurveyMonkey, and was administered to the GLOBE Partners via a weblink within the December 2014 GIO Director's Letter. Respondents were instructed to complete the survey in one sitting (because the survey was not configured to save results upon exit). Follow-up announcements regarding the survey were made in the 2015 January and the 2015 February Director's Letters. The survey was officially closed in March 2015. (See Figure 1.)

Total Number of Potential Survey Respondents: 180 (81 Country Coordinators and 99 U.S. Partners)*
Total Number of Surveys Submitted: 163
Total Number of Completed Surveys: 127
Response Rate for Completed Surveys: 71%
Number of Responses from U.S. Partners: 59
Percentage of Responses from U.S. Partners: 60%
Number of Responses from Country Coordinators: 68
Percentage of Responses from Country Coordinators: 84%
**Represents Country Coordinators and U.S. Partners with active email accounts*

Figure 1. Overall Survey Results

KEY SURVEY RESULTS

Partnership Background Information

Close to one-third (31 percent) of the respondents (n), described their partnership as "Higher education" (i.e. university or college). Approximately 20 percent of the total respondents described their partnership as a "Ministry," all of who were Country Coordinators. (See Figure 2.)

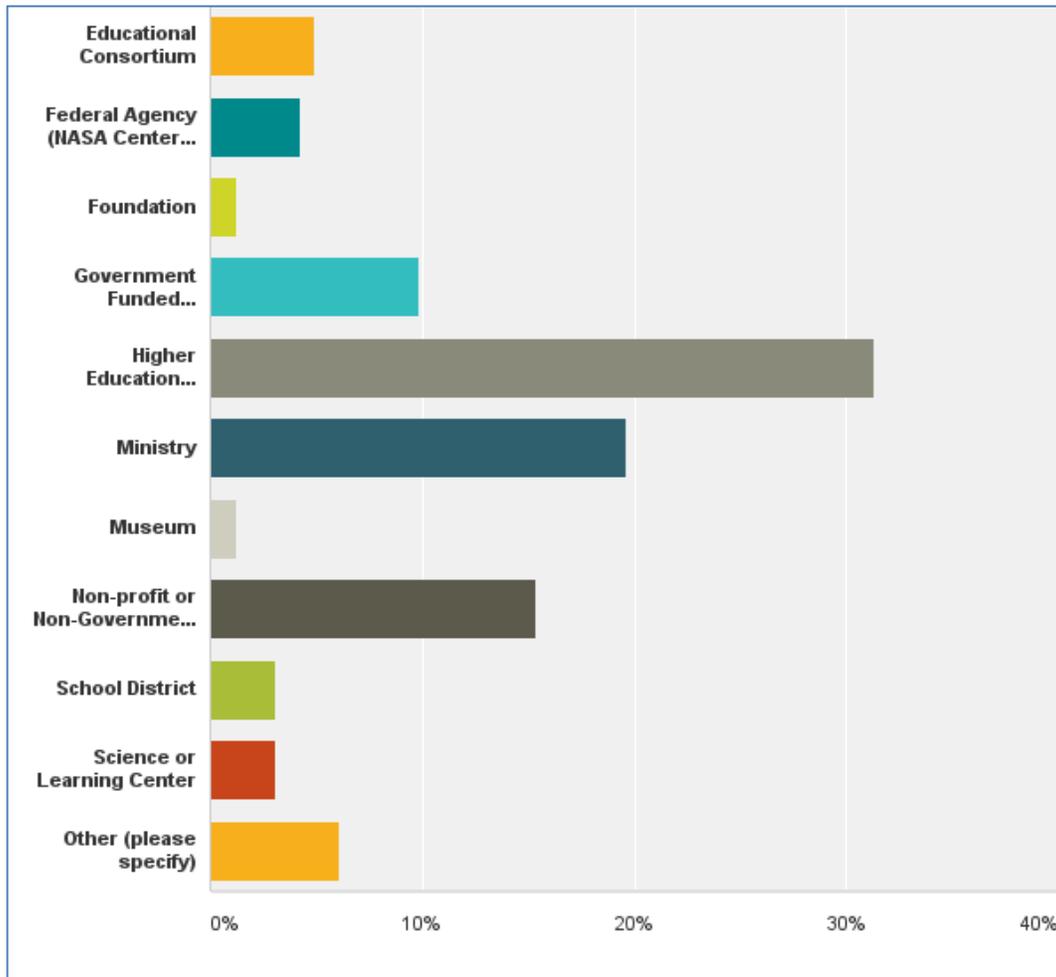


Figure 2. Q2: Which one of the following organization types best describes your partnership? (n=163)

The vast majority (89 percent) of the survey respondents (both U.S. Partners and Country Coordinators) reported working with public schools. Secondary grade levels ranked the highest among the K-12 grade levels that the majority of survey respondents worked with. (See Figure 3.)

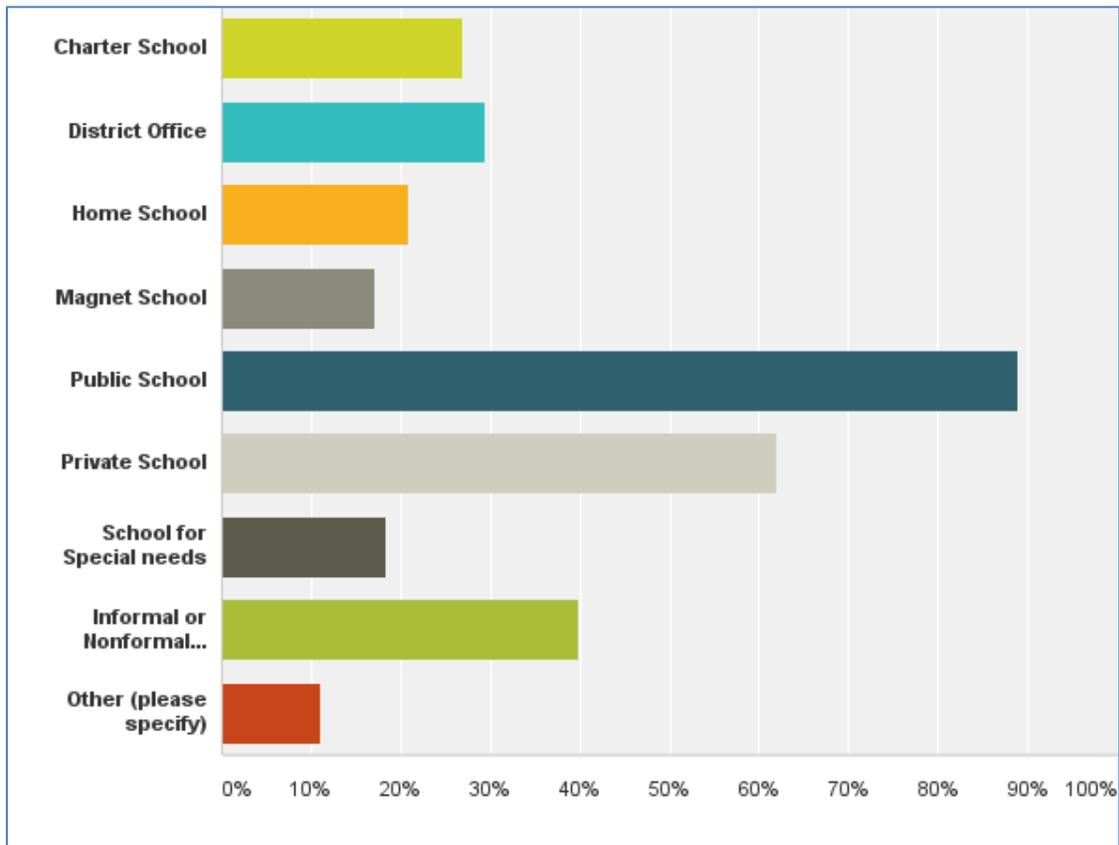


Figure 3. Q3: Which of the following does your organization work with in your local service area? (Note: n = 163)

Partnership Background Information

GLOBE Partners engage in many different activities to support the teachers and schools in their local service areas. Many of the GLOBE Partners do not receive formal support for their time (see the section “Partnership Activities: Funding” for more information), so prioritizing their time is critical to efficiently and effectively supporting GLOBE teachers.

The survey indicated that the highest priority for the majority of respondents is providing training or training new teachers, with 41 percent of survey respondents giving this activity the highest priority among desired partnership activities. (See Figure 4.)

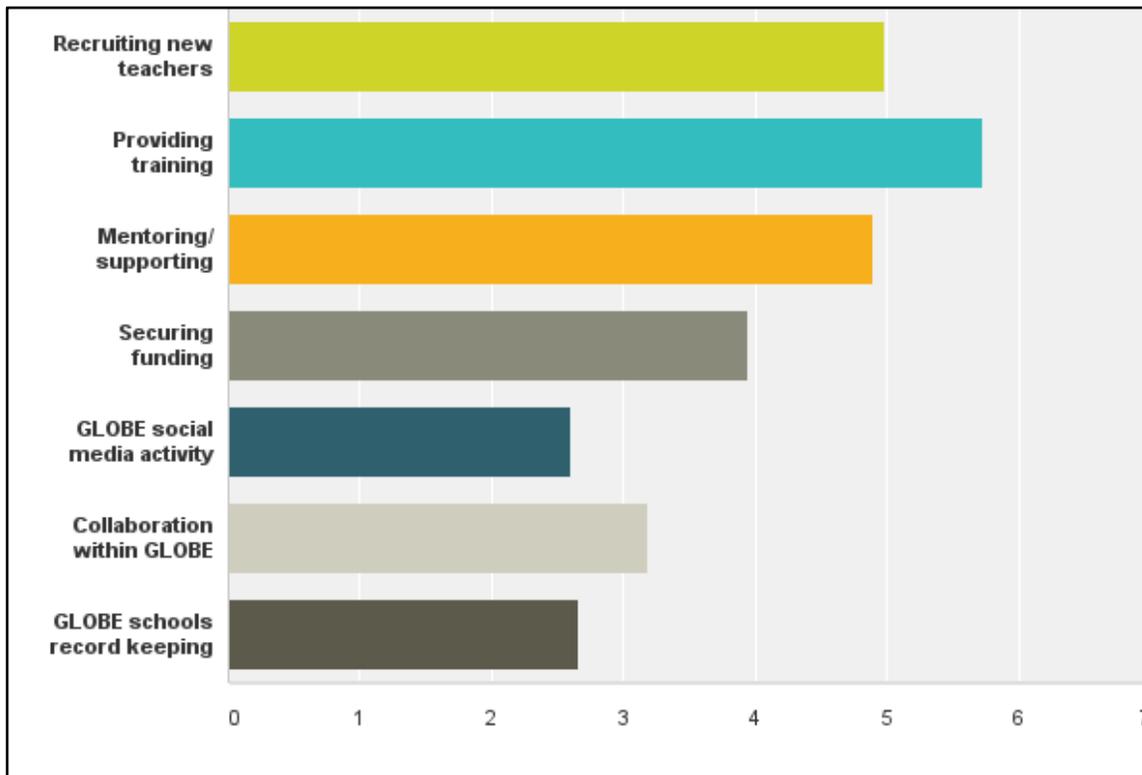


Figure 4. Q5: Please rank the following according to how you prioritize your time for the following partner activities. (1 = my lowest priority, 7 = my highest priority)
(Note: n = 150)

NOTE: The scale of 1 to 7 was switched from the survey item for the purposes of this graph, since the graph displays the weighted average for each activity; the higher weighted average corresponds to a higher priority.

For most respondents, the frequency of these trainings ranged from once a year to twice a year. (See Figure 5.)

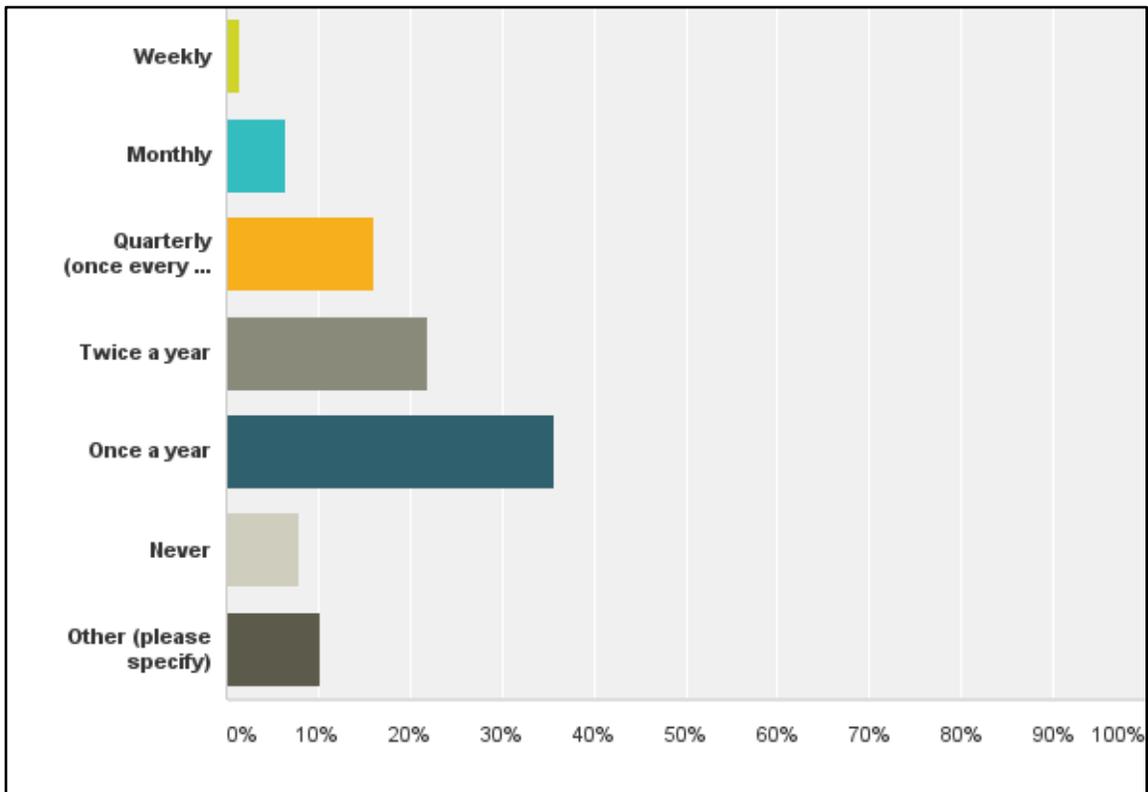


Figure 5. Q17: On average, how often do you conduct in-service teacher trainings?
(Note: n = 137)

With regard to pre-service teacher trainings, approximately one-third of respondents indicated that they conducted trainings once a year; while another one-third of respondents indicated that they never train pre-service teachers. (See Figure 6.)

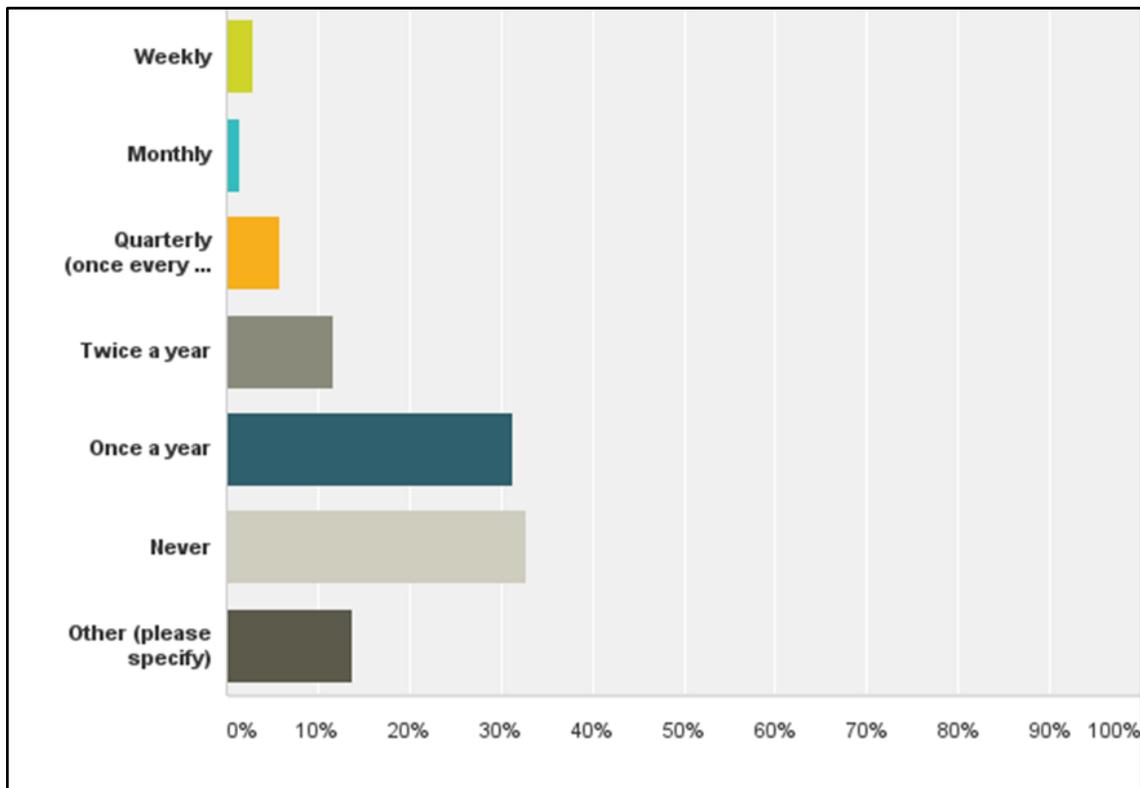


Figure 6. Q18: On average, how often do you conduct pre-service teacher trainings?
(Note: n = 137)

In order to better understand the importance of the GLOBE materials and resources used during training workshops, the survey asked partners to identify how frequently they used specific GLOBE resources, including learning activities and protocols, the GLOBE website, and the Teacher’s Guide. Atmosphere protocols were the most frequently used resources by the survey respondents, with over 60 percent indicating that they use them “almost all of the time.”

The GLOBE website and the Teacher’s Guide were used “almost all of the time” by slightly more than 50 percent of the respondents. The survey responses are shown in Table 3, with the most frequently used materials highlighted in green, and some of the less frequently used materials highlighted in gray.

Table 3. Survey Responses

	Almost All the Time	Sometimes	Not Very Often	I Have Not Used this GLOBE Resource in the Past Year
Atmosphere Protocols	61.6%	15.9%	3.6%	18.8%
Atmosphere Learning Activities	46.7%	27.7%	6.6%	19.0%
Hydrology Protocols	44.9%	19.1%	11.0%	25.0%
Hydrology Learning Activities	32.8%	26.3%	15.3%	25.5%
Soil Protocols	32.8%	19.0%	14.6%	33.6%
Soil Learning Activities	23.0%	24.4%	18.5%	34.1%
Land Cover Protocols	25.4%	15.9%	20.3%	38.4%
Land Cover Learning Activities	17.0%	23.0%	22.2%	37.8%
Earth as a System Protocols	25.8%	28.1%	7.8%	38.3%
Earth as a System Learning Activities	21.1%	32.8%	12.5%	33.6%
GLOBE Teacher's Guide	52.2%	19.6%	10.1%	18.1%
GLOBE Website	55.5%	16.1%	9.5%	19.0%
GLOBE Training Website	32.8%	23.9%	17.2%	26.1%
GLOBE Data Visualization	24.6%	30.6%	16.4%	28.4%
GLOBE Science Data Entry	37.3%	20.1%	14.2%	28.4%

With regard to training quality, approximately 75 percent of the survey respondents indicated that they assessed the quality of their trainings, using different methods and tools to gather data. For the assessment methods used, the most common among U.S. Partner and Country Coordinator respondents were gathering teacher feedback after workshops (75 percent) and using customized surveys or questionnaires developed by the individual partner (54 percent). There were differences, however, between these two groups for some of the other assessment methods. For example, more Country Coordinator respondents used teacher classroom observation after workshops to assess quality, whereas more U.S. Partner respondents used the GLOBE website evaluation form for assessment purposes. (See Figure 7.)

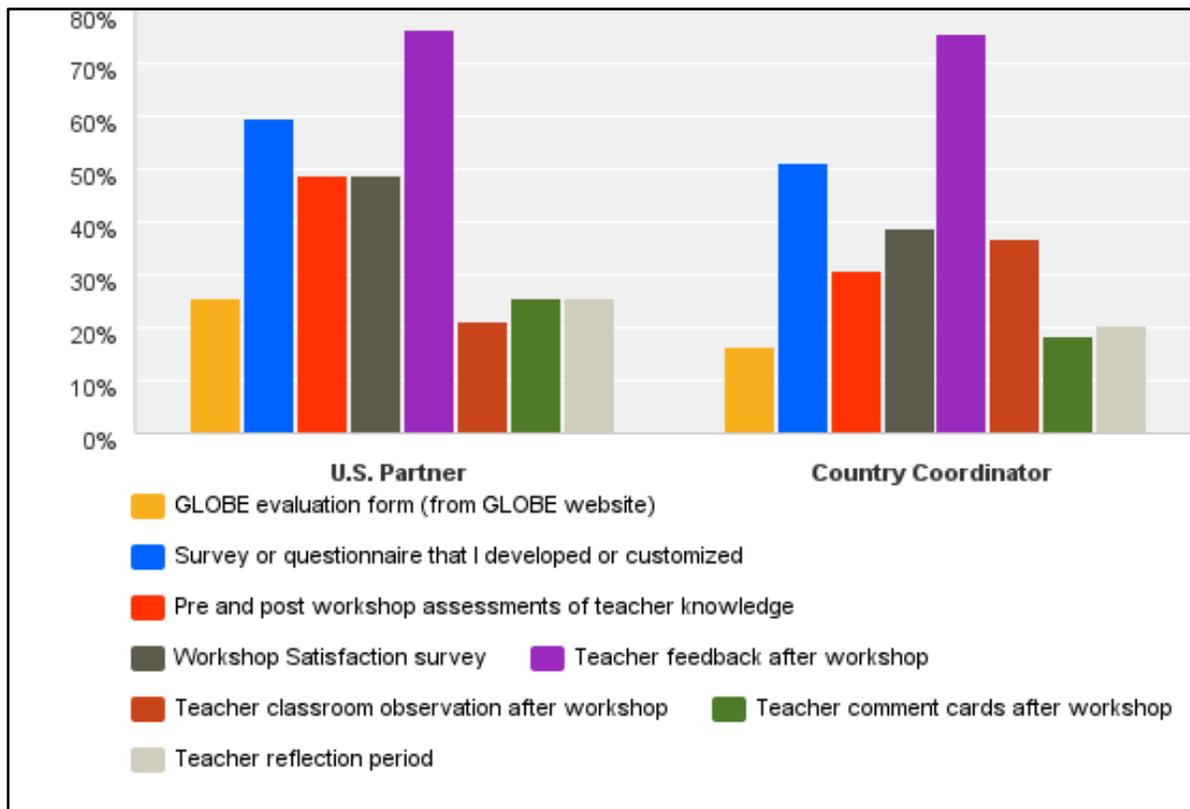


Figure 7. Q22: Please select the options that best describe how you assess the quality of your training (choose all that apply). (Note: n = 98)

In addition to teacher trainings, recruiting and supporting newly trained teachers were also top priorities, ranking second and third for the majority of survey respondents. There are a variety of ways that partners can support teachers in their local service area; therefore, the survey asked partners to identify which activities they engage in to support GLOBE-trained teachers.

Although most survey respondents engage in all activities, to a varying extent, the most common activities for supporting GLOBE-trained teachers included: 1) providing supplemental materials; 2) assisting in instrumentation set-up and use; and 3) arranging or participating in site visits to schools to provide mentorship to teachers. (See Figure 8.)

Answer Choices	Responses
Monitor accuracy of data collected	25.55% 35
Assist in instrumentation set-up and use	58.39% 80
Monitor and provide feedback on data reported	20.44% 28
Provide refresher training sessions	49.64% 68
Facilitate a teacher listserv or Facebook site	14.60% 20
Provide supplemental materials (e.g. implementation tips, classroom activities)	59.85% 82
Assist or support alignment of GLOBE materials and resources to local, state and/or national curricula requirements	37.23% 51
Arrange or participate in site visits to schools to provide mentorship to teachers	55.47% 76
Help teachers get funding or support for implementing GLOBE activities	35.77% 49
None of the above	10.22% 14
Total Respondents: 137	

Figure 8. Q19: Which of the following activities do you engage in to support GLOBE trained teachers? (choose all that apply) (Note: n = 137)

In addition, 55 percent of survey respondents indicated that they regularly monitor the participation of GLOBE schools and teachers in the service area. There were differences, however, between U. S. Partners and Country Coordinators regarding this question, with 75 percent of Country Coordinators monitoring participation compared to 34 percent for U.S. Partners. (See Figure 9.)

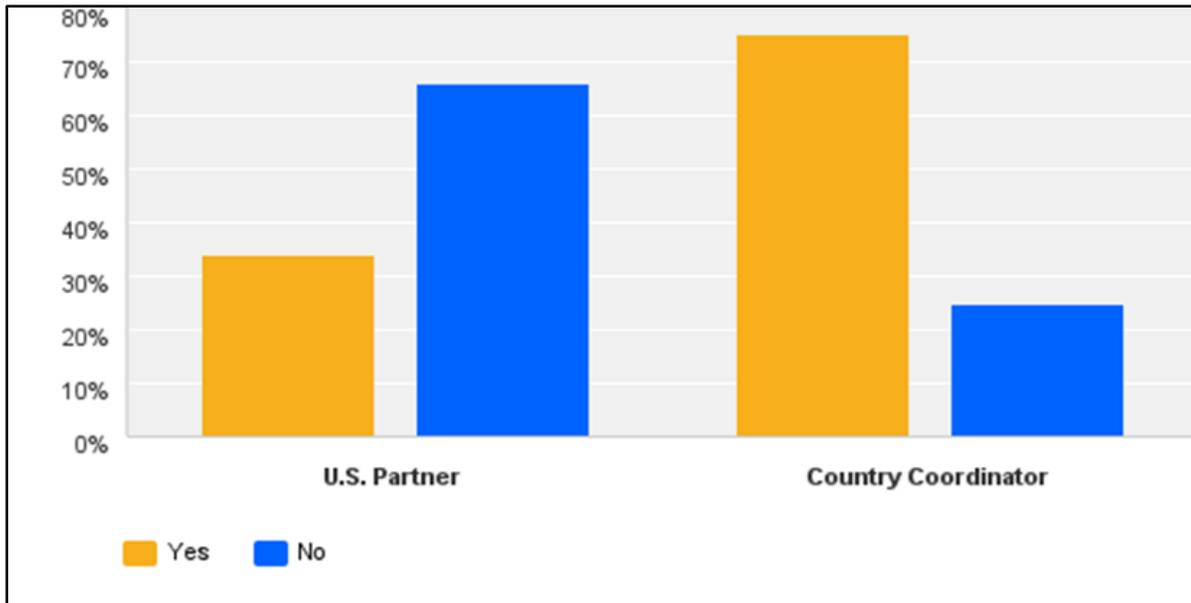


Figure 9. Q20: Do you monitor the participation of GLOBE schools and teachers in your service area? (Note: n = 137)

Partnership Activities: Funding

Securing funding to support GLOBE-related activities in the local service area ranked fourth among priorities for partnership activities for 25 percent of the respondents. Despite the importance of having financial support for engaging in GLOBE-related activities, many GLOBE Partners do not have the time or support systems (i.e. grant/proposal writing) that would enable them to find funding to support their work.

When asked to estimate their annual funding/budget for GLOBE, close to one-third of survey respondent indicated that they received zero dollars for carrying out activities such as training workshops and support activities for GLOBE-trained teachers. Sources for funding varied considerably between U.S. Partners and Country Coordinators who received funding for management and operation. (See Figure 10.)

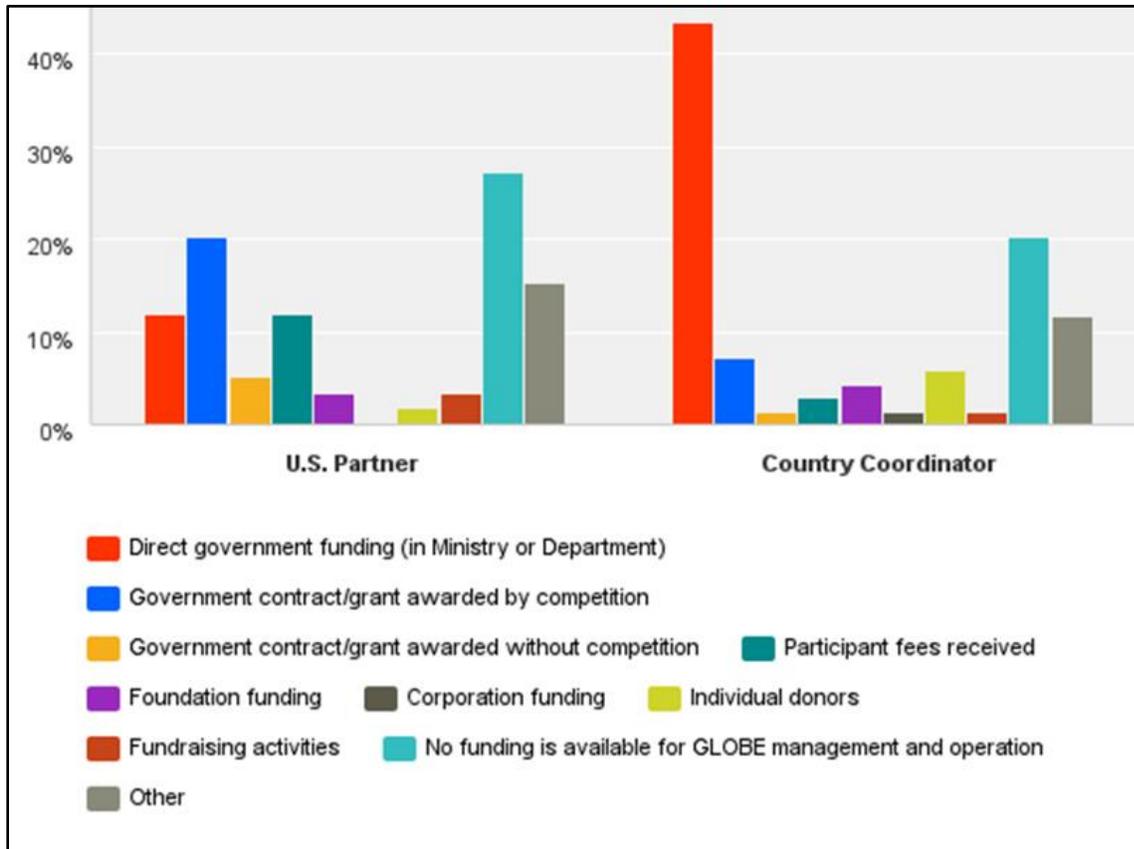


Figure 10. Q34: Which of the following best describes the primary source (more than 50%) of funding for GLOBE management and operation in your organization or country? (Note: n = 127)

Partnership Activities: Collaboration and Communication

GLOBE Partners form an important community of practice. As such, many efforts within the GIO have been targeted toward strengthening and building this community. When asked about prioritizing partnership activities that are more collaborative in nature (such as activities engaging in GLOBE communications via social media, and developing and maintaining collaborative relationships with other GLOBE Partners), survey respondents rated this as a lower priority relative to other partnership activities.

Currently, more than one-third (38 percent) of survey respondents are involved in collaborative GLOBE-related projects with other GLOBE Partners, while slightly more than one-half (53 percent) collaborate with government agencies and/or non-governmental organizations and programs, such as the U.S. Peace Corps, the Environmental Protection Agency (EPA), or the World Meteorological Organization (WMO).

Although collaboration among GLOBE Partners may be relatively low, partners are interactive. Close to one-half of the survey respondents indicated that they communicate with other GLOBE Partners on a monthly basis, with e-mail as the primary venue of communication for 85 percent of the survey respondents. GLOBE Partners also participated in a number of GLOBE events last year, with the majority of survey respondents (44 percent) participating in GLOBE regional meetings, and approximately one-third (33 percent) participating in the GLOBE Annual Meeting. (See Figure 11.)

Answer Choices	Responses
Campaigns (i.e. SCRC, Surface Temperature)	18.67% 28
GLOBE Annual Meeting	32.67% 49
GLOBE Webinars	31.33% 47
GLOBE Regional meetings	44.00% 66
GLOBE Competitions (i.e. Video competition, calendar competition)	18.00% 27
Regional GLOBE events	23.33% 35
Satellite missions (i.e. CloudSat)	10.67% 16
None, I did not participate in any GLOBE events last year	22.00% 33
Total Respondents: 150	

Figure 11. Q6: Which of the following GLOBE events did you participate in last year? (choose all that apply) (Note: n = 150)

There were, however, some significant differences between U.S. Partner and Country Coordinator survey respondents regarding their participation in GLOBE events (See Figure 12.) Country Coordinator responses indicated higher levels of participation in GLOBE Regional Meetings, GLOBE competitions, and Regional GLOBE events, while U.S. Partners showed higher levels of participation in GLOBE webinars. (See Figure 12.)

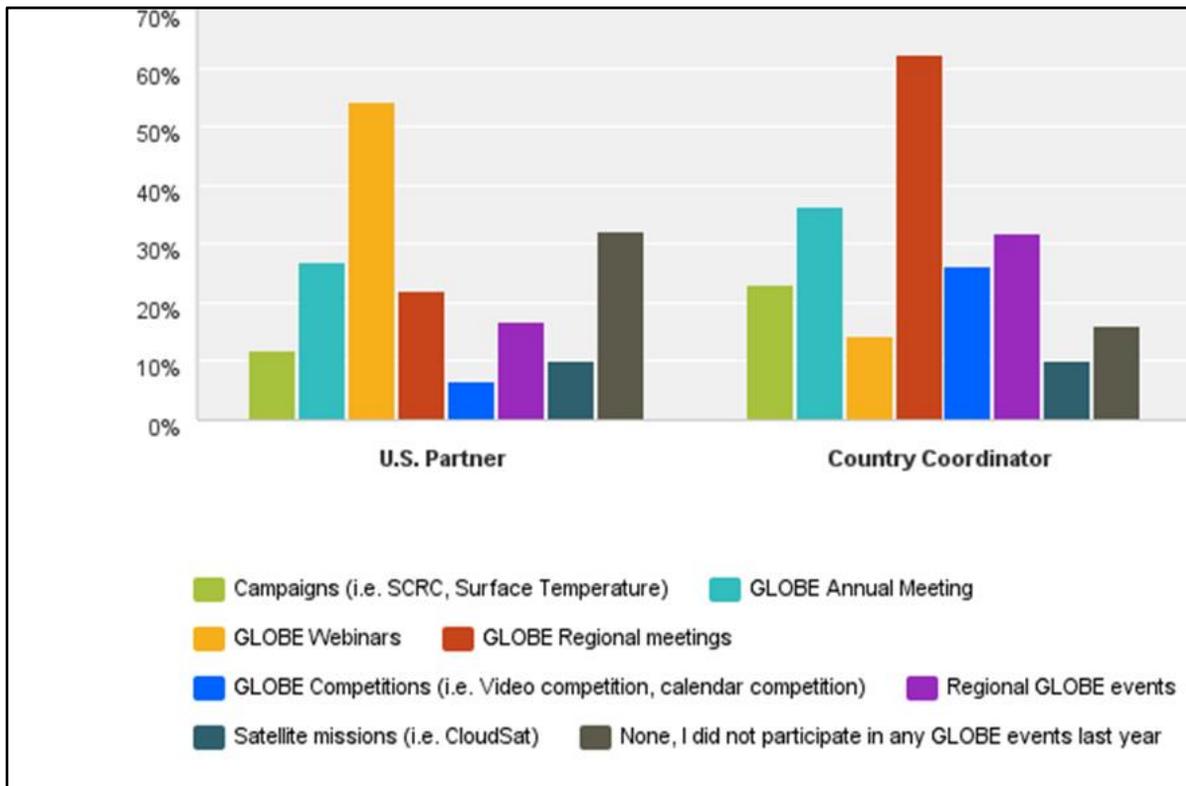


Figure 12. Differences between U.S. Partners and Country Coordinators Participating in GLOBE events

Partnership Activities: Science and Student-Related GLOBE Projects

It is the role of all GLOBE Partners to recruit GLOBE schools, and to train and mentor teachers in the use of GLOBE science protocols and in the implementation of research projects. Currently, there are over 50 science protocols; however, teachers only use a subset of these protocols on a consistent basis. The survey asked GLOBE Partners to identify the protocols within each investigative area that are most relevant to teachers in their local service area.

Across all investigative areas, the Cloud Protocol was judged to be the most relevant to teachers, by over one-half of the survey respondents. Investigative areas such as Land Cover and Earth as a System each had only one protocol that was determined relevant for teachers. For the remaining protocols in these investigative areas, the majority of responses from partners were “I have not been trained in this protocol.” (See Table 4.)

Table 4. Relevant GLOBE Science Protocols

Area	Most Relevant Protocols	Percentage Survey Respondents
Atmosphere		
	Cloud Protocol	57.7%
	Precipitation Protocol/Air Temperature Protocol	26.2%/26.2%
	Precipitation Protocol	23.1%
Land Cover/Biology		
	Land Cover Sample Site Protocol	47.7%
Earth as a System		
	Budburst Protocol/Green-up and Down Protocols	49.2%
Soil		
	Soil Characterization	47.7%
	Soil Temperature	33.9%
	Soil pH	33.1%
Hydrology		
	Water Transparency Protocol	34.6%
	Water Temperature Protocol	24.6%
	pH Protocol	31.3%

Regarding whether there were any student-related GLOBE projects targeted toward environmental benefits in the local service area, slightly more than one-third of the respondents (36 percent) answered “yes.” This response, however, differed between U.S. Partners and Country Coordinators, with close to one-half (45 percent) of Country Coordinators responding “yes,” and only one-quarter of U.S. Partners (25 percent) responding “yes.” (See Figure 13.)

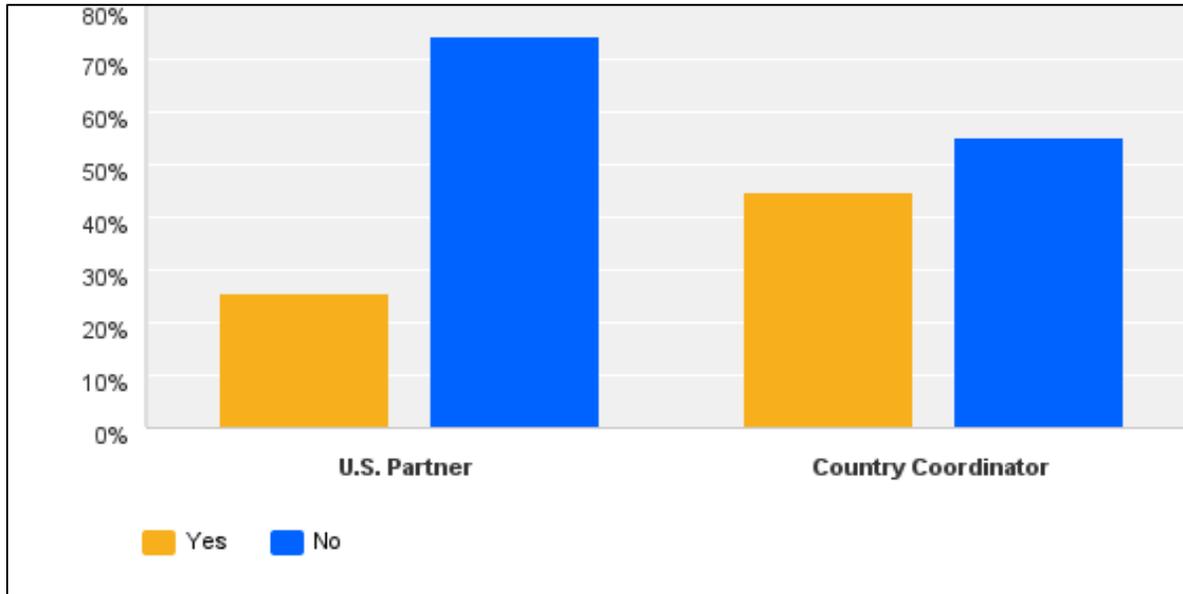


Figure 13. Q28: In 2014, were there any student-related GLOBE projects within your local service area (or country) targeted toward environmental benefit? (Note: n = 127)

These projects ranged across all investigative areas, including projects assessing the impacts of temperature change on larval mosquito outbreaks, the connections between aerosols/pollution and asthma, and the effects of temperature on sprouting of seeds, oyster (*Crassostrea belcheri*) growth rate and different water quality, as well as the use of macrophytes to improve the quality of stream water.

The majority of respondents (64 percent) indicated that GLOBE data were used in these projects, and over 60 percent indicated that scientists were involved in the projects. When asked whether student reports from these projects were uploaded to the GLOBE website, however, the overwhelming majority (71 percent) replied “no.” The reasons for not uploading student reports differed among U.S. Partner and Country Coordinator respondents. The majority of U.S. Partner respondents (27 percent) indicated that the primary reason was students not writing formal reports, whereas the majority of Country Coordinator respondents (27 percent) indicated that uploading student reports on local websites, rather than the GLOBE website, was the primary reason. (See Figure 14.)

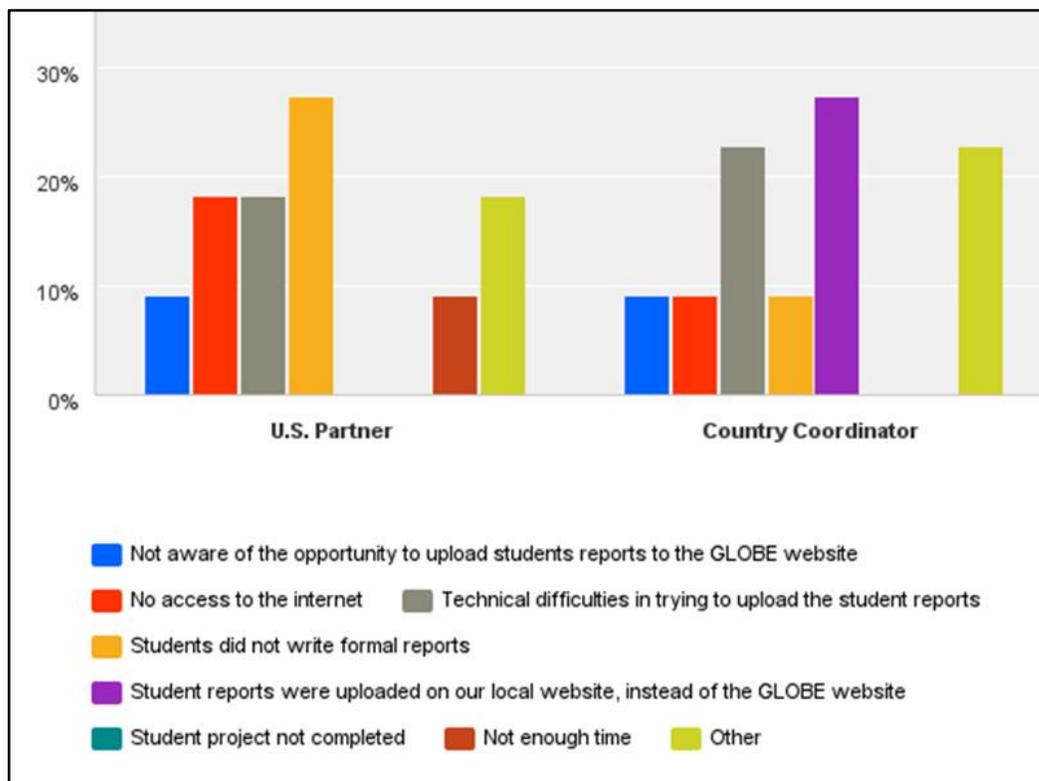


Figure 14. Q32: Please select the option that best describes why student reports were not uploaded to the GLOBE website. (Note: n = 48)

CONCLUSION

The GLOBE Annual Partner Survey is one of the GIO's primary data-collection tools. Initially administered in 2005, this survey gathers information from GLOBE Partners (U.S. Partners and Country Coordinators) on activities related to the GLOBE Program. In 2012, the GLOBE Annual Partner Survey was revised to align with the community-approved 2012-2017 GLOBE Strategic Plan. As the GLOBE Program and its organizational structure continue to evolve, the need to collect data that reports on, and that is relevant to, the GLOBE community will become more important. To that end, the Annual Partner Survey will solicit ideas from the Working Groups to identify questions that will help them move forward in their efforts to support the GLOBE Community.

The GIO would like to thank all of the U.S. Partners and Country Coordinators who took the time to respond to the GLOBE Annual Survey. The primary purpose of the survey is, and will continue to be, a means for gathering descriptive information on the GLOBE community, which, over time, can provide the basis for further in-depth exploration and investigation – and without the assistance of the GLOBE community, this goal could not be achieved.