



THE GLOBE PROGRAM

A Worldwide Science and Education Program

GLOBE COUNTRY COORDINATOR EVALUATION ACTIVITIES & NEEDS SURVEY

2023

Aggregate Data & Regional Findings



THE GLOBE PROGRAM

A Worldwide Science and Education Program

Data as a Learning Tool

This report serves two roles – it is a summary of the type of evaluation work carried out by GLOBE participants and a learning tool. You can see and learn from regional data as well as data from the entire GLOBE network.

- What can you learn about evaluation in your region and the activities in your regions?
- How can you use that information to improve programs and documenting your successes?
- What can you learn from seeing the data from other regions and/countries?



Throughout this report you will see Thinking Prompts, as noted by the icon to the left. These prompts can function as a place to start discussion of the data.

Why is GLOBE evaluation important?

Evaluation supports our efforts to:

Guide and improve GLOBE programming to better serve students and educators

Understand and address the needs of the GLOBE community

Demonstrate GLOBE Program outcomes



THE GLOBE PROGRAM

A Worldwide Science and Education Program

GLOBE Evaluation Activities & Need Survey

A collaboration of the GLOBE Program Office at NASA (GPO), GLOBE Implementation Office at UCAR (GIO), and GLOBE Evaluation Working Group (Eval WG) designed to:

Learn about what GLOBE countries are currently doing to evaluate GLOBE implementation

Understand GLOBE countries' evaluation needs and interests

Inform the development of questions about evaluation to include in future regional reports

Survey Dissemination and Response Rates

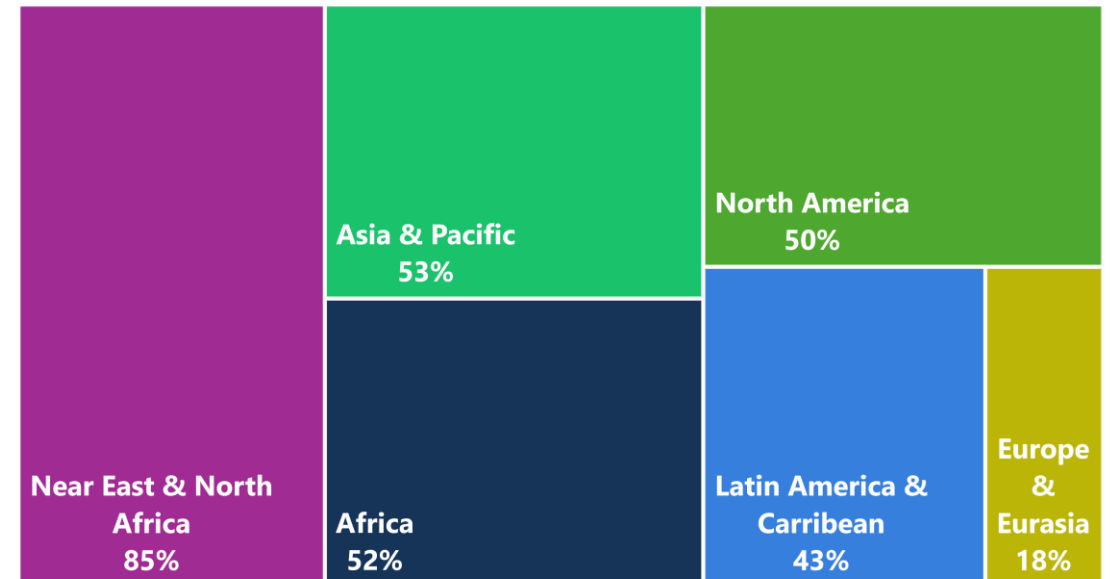
Distributed by the GIO to all Country Coordinators via Google Forms

Open April - June 2023

Country response rate 42% (53 countries of 127 in total)

Eval WG members conducted preliminary data analysis for their region with support from GIO staff

Response Rates by Region





THE GLOBE PROGRAM

A Worldwide Science and Education Program

AGGREGATE DATA FROM THE GLOBE COUNTRY COORDINATOR SURVEY RESPONDENTS

A snapshot of all data from all regions.



THE GLOBE PROGRAM

A Worldwide Science and Education Program

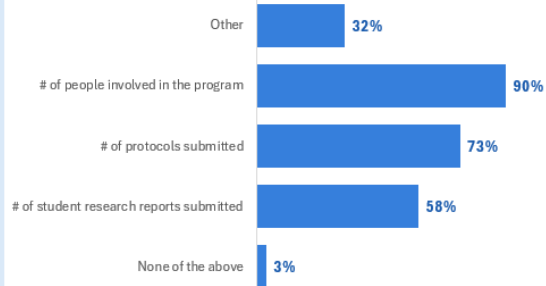
ALL REGIONS

SAMPLE SIZE
60

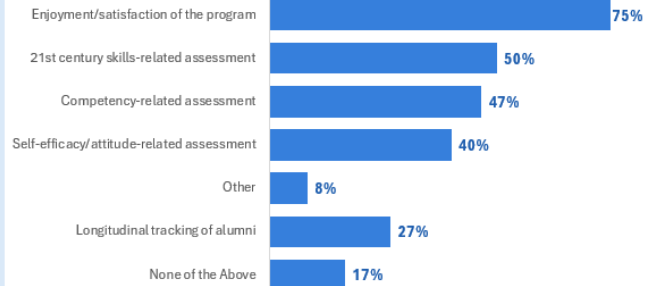


CURRENT DATA COLLECTED

Data collected to assess GLOBE implementation

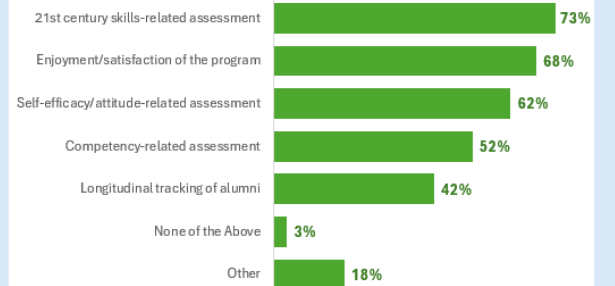


Student outcome and participation experience data collected



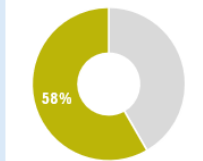
AREAS OF FUTURE DATA COLLECTION

What data would you like to collect in the future?



HOW DATA IS COLLECTED

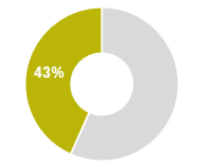
Classroom Observation



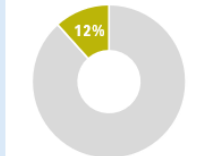
Focus Group / Interview



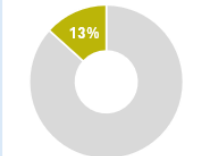
Survey



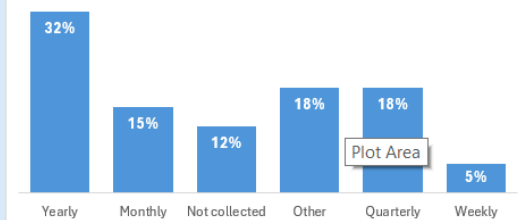
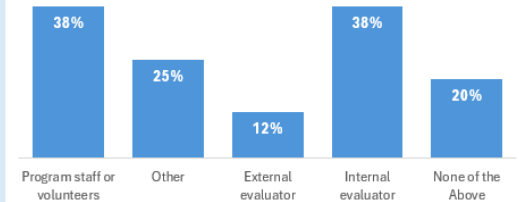
Other Method



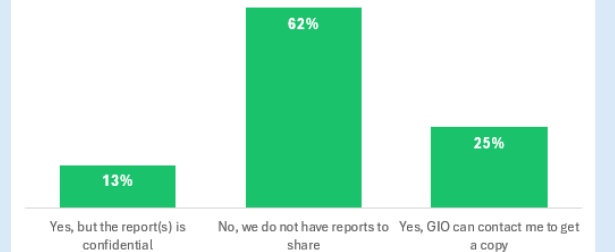
None of the Above



WHO COLLECTS & HOW OFTEN



SHARING INFORMATION



Respondents are most likely to collect data about the number of schools, teachers, students, citizen scientists involved in the program.

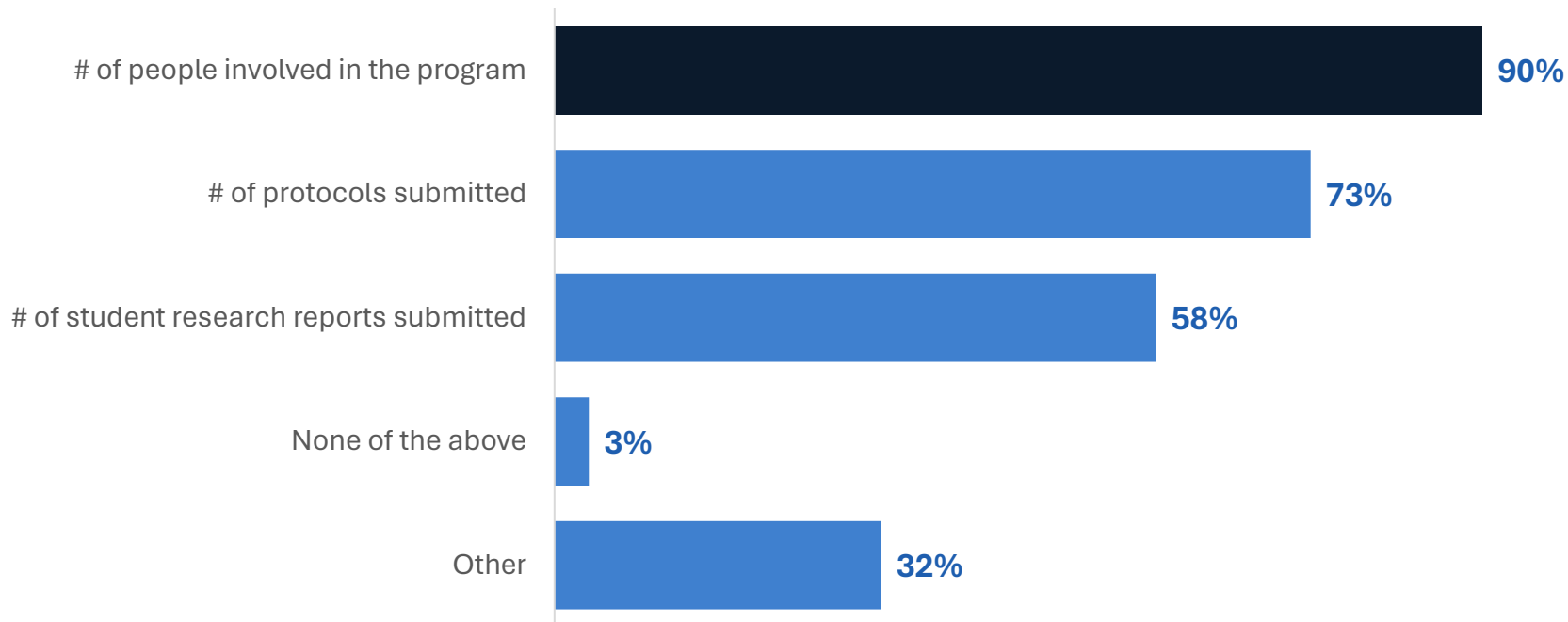


Is this the data that is helpful to GLOBE?

What other data would help strengthen the program?

Can we help develop instruments and support respondents?

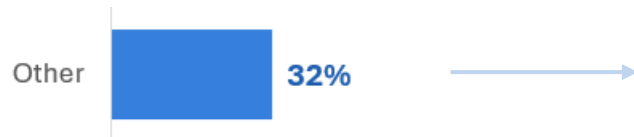
Data collected to assess GLOBE implementation



Throughout this report, percentages indicate the percent of respondents who marked that response

Respondents shared other methods of collecting data.

Data collected to assess GLOBE implementation



The level of interaction between the family and society and their children's motivation for environmental science. The level of partnerships, support and sponsors of GLOBE by entrepreneurs and companies.

The annual conference shows how many schools and students have deep understanding of what they are doing on GLOBE.

Globe activities done by the students or the teachers or training activities.

Globe observer app.

I write invitation letters to the public and schools yearly to access the GLOBE status.

Identificación de dificultades, sugerencias, necesidades.

Newspaper, media and magazines publications.

Number of realized activities with the community such as beach cleaning, exhibition, ...

Number of training workshops and teacher engagements.

Number of Student Research Reports from in-person meetings of students and uploaded to the website.

Pre-post paper and pencil is given.

Publications about and public events related to the GLOBE activities.

Scientific experiments in laboratories and standard comparisons with universities and municipal laboratories.

Sometimes we ask the teachers to capture the students' classroom performance when they start to take part in the GLOBE programme and few months later. The information is used to assess if there is a correlation between the students' academic performance and the students' participation in the GLOBE programme. We also ask the students to write the report indicating what they have done and their experiences regarding the GLOBE programme.

The number of GLOBE projects presented to the National Science Fair.

The number of implemented GLOBE offers and research projects.

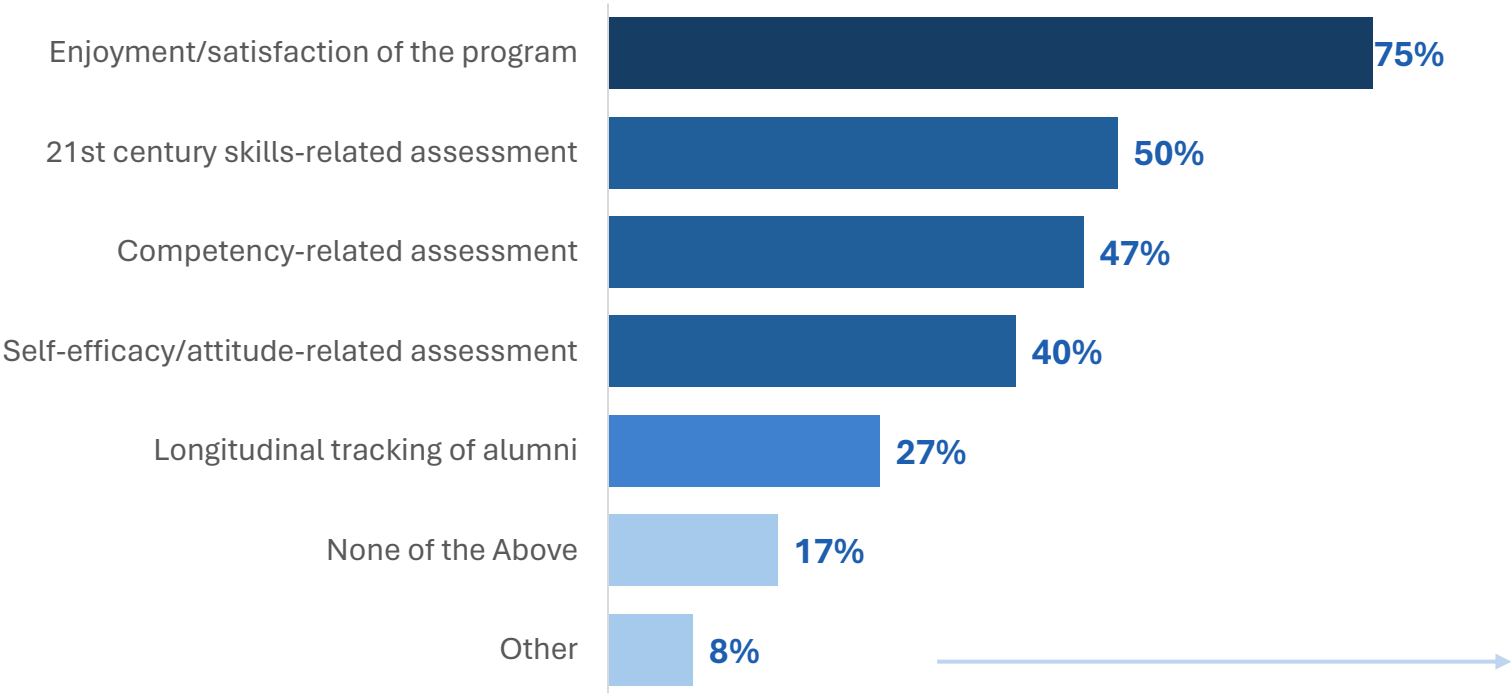
We assess the number of disciplines that integrate GLOBE elements into the educational process.

Most respondents collect data around enjoyment of the program. Half collect data of 21st century & competency skills.



Is this the right mix of outcomes to document?
Would collecting more long-term tracking data of alumni be helpful?

Student outcome and participation experience data collected



Open ended Responses

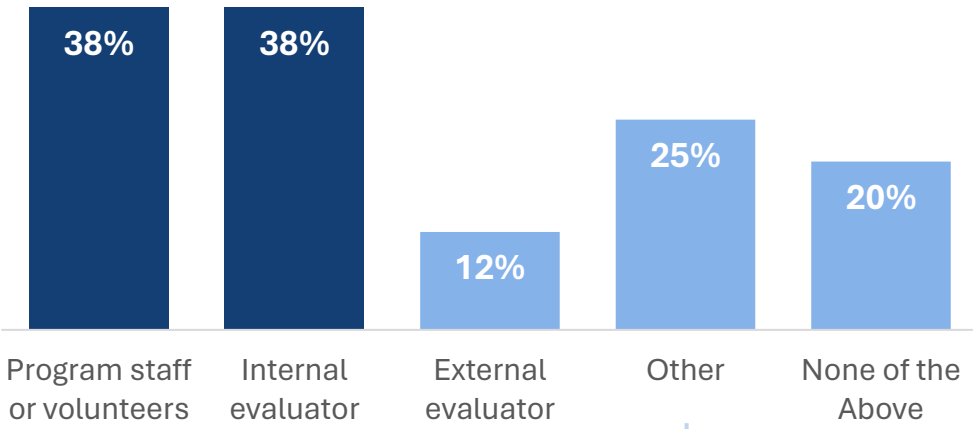
- At the country level we do not collect student performance or assessment data. This is done at school level.
- Data collection on outcomes and impact will be part of research projects of universities on teacher education.
- Follow-up of Globe graduates and benefit from them in training new students.
- Lectura de resumen de noticia mensual, participación en actividades.
- Networking initiatives at the local/national scale with other schools/Universities/NGOs.
- Some of these are collected by individual Partners or projects but not directly by the U.S. Office.
- Student impact in their communities.

Respondents rely on program staff and internal evaluators. There is a wide range of how often respondents collect data.



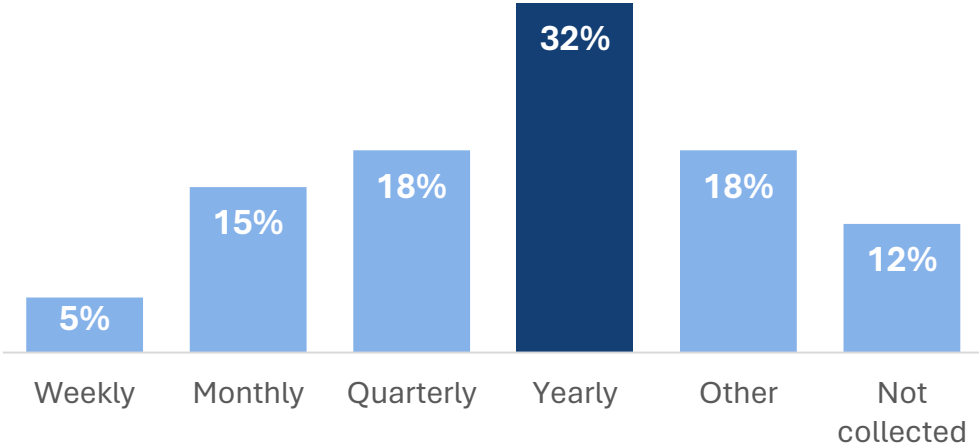
Would it be helpful to establish a calendar for data collection?
Or an expectation that every GLOBE participant collects data?

Who performs data collections?



↓
Many write-ins indicate the Country Coordinator collects data.

How frequently do you collect data?



Respondents use a range of evaluation methodologies.

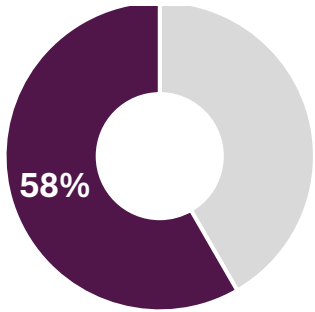


Would it be helpful to have consistent instruments that GLOBE participants use to collect data?

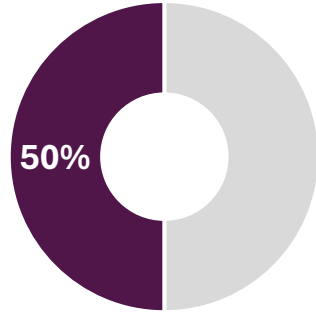
Perhaps the instruments could include several consistent questions while still allowing participants to add individual questions that map their needs.

Evaluation methods used to collect data

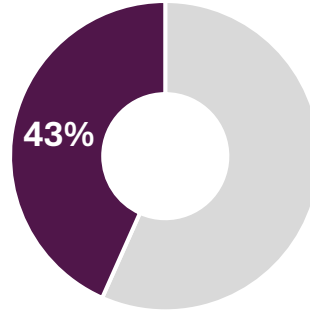
Classroom Observation



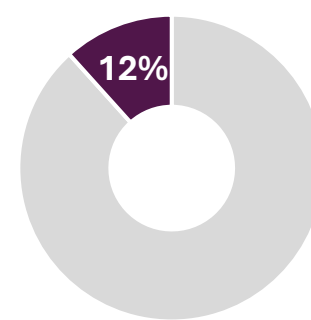
Focus Group / Interview



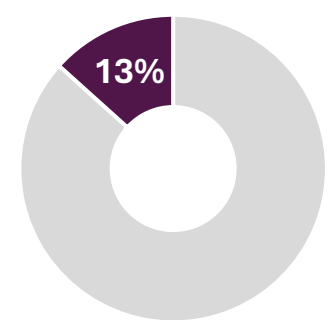
Survey



Other Method



None of the Above



Organizing scientific events and evaluating results by local Globe arbitrators. Holding interactive workshops to develop attractions for student and teacher learners and assessing their effectiveness and impact.

Reunión o taller sincrónico virtual

Checking GLOBE data base: School Status Report, # of submitted measurements, date of last submitted measurement.

Some of these collected by Partnerships/projects

Correspondence with the schools

Teacher made formative and summative assessment.

Evaluation forms prepared by the work team

WhatsApp is also helpful

Workshops/Seminaras

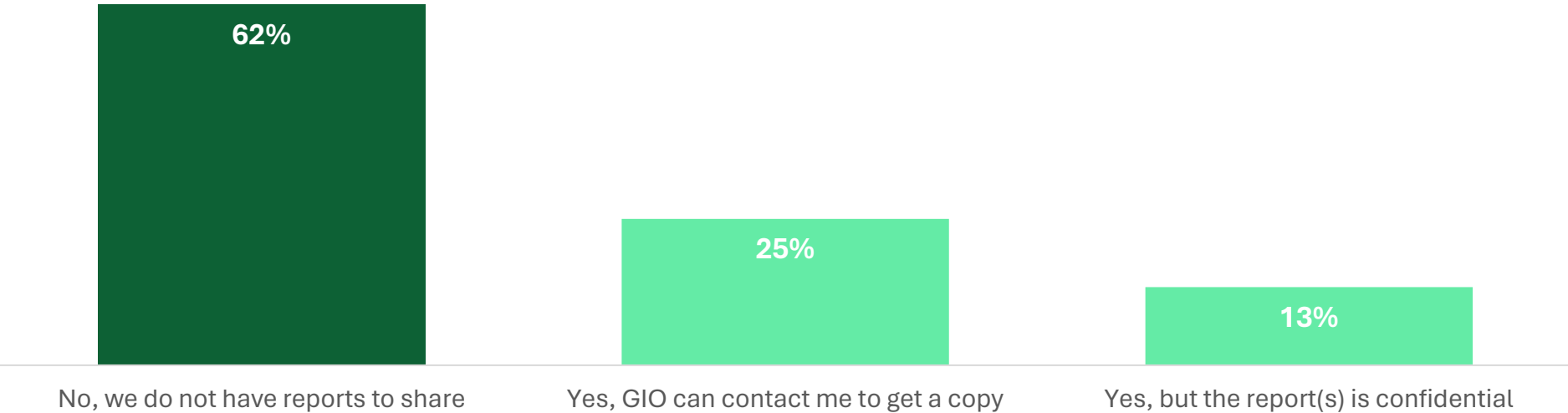
Most respondents do not have reports to share.



Should there be a minimum amount of data sharing?

Perhaps each GLOBE participant shares the results of 1 or 2 questions with the entire network to develop a culture of learning?

Do you have evaluation reports you can share?

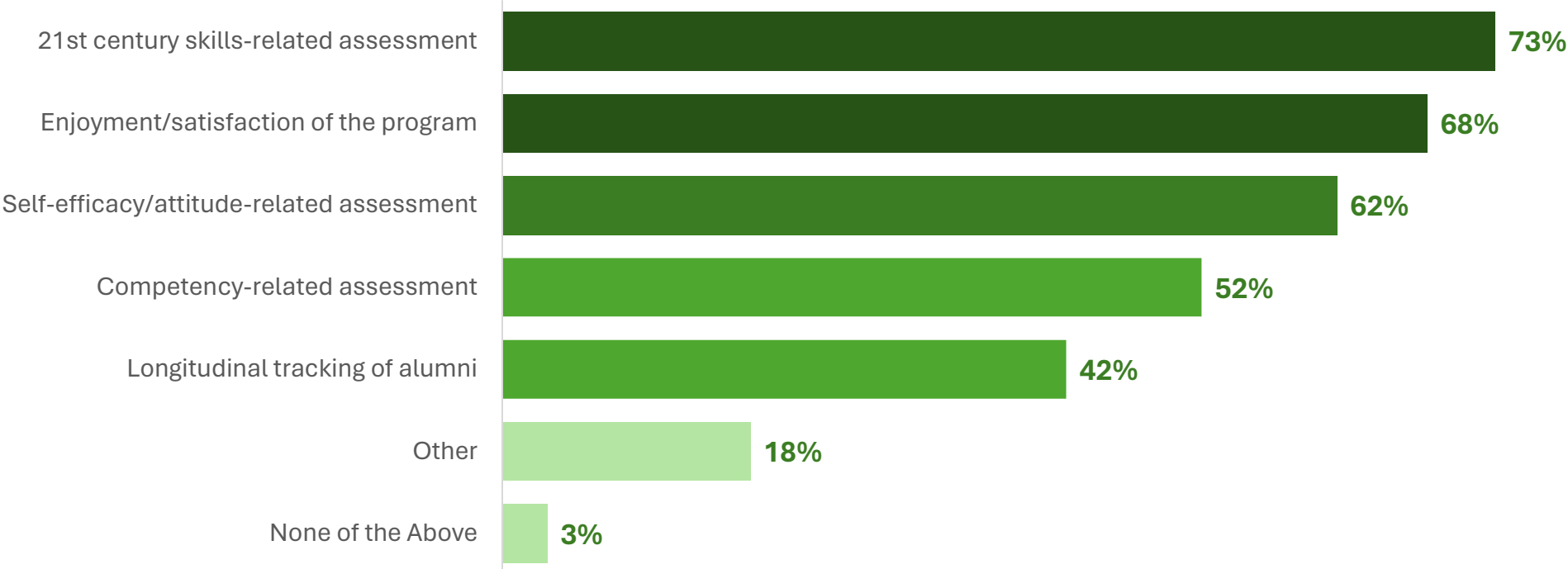


Respondents would like to collect data on a range of outcomes.



How can the Evaluation Working Group support GLOBE program level evaluation as it looks to collect more/different types of data in the future?

What outcomes would you like to monitor in the future?



Respondents shared other areas they would like to monitor in the future.

Future areas of data monitoring



I think it is very important to consider the specific evaluation of the processes and the know-how.

If GLOBE activities are included to existing curriculum, I would like to go for attitude related assessment.

Integration of GLOBE elements (approach, materials,...) into national curriculum

L'étude des effets de serre dans le sahel

Questionnaire form that schools can fill and submit to know how much they know about GLOBE and what to do to improve active participation

Students research and projects

The activities of the GLOBE observers/ citizen scientists. Currently we are not able to see what this category of GLOBE implementers do, who they are, where they are located. Their information on the GLOBE website is hidden and it makes it difficult to monitor their activities.

The monitor uses a method where interactivity finds its place. theory and practice go hand in hand

The percentage of schools /Educators and Students who have sustained the GLOBE program

We are unable to collect data on any of these.

Why students are not very enthusiastic in GLOBE data collecting

Workshop, competition, student research symposium

26 respondents shared additional thoughts, many specifically related to evaluation. Many called for a standard evaluation form and shared metrics and spoke of difficulties in getting responses and lack of evaluation funding.

An overall or **general format or metrics for doing country report** prior to answering the annual CC Survey questionnaire is henceforth necessary.

Assessment becomes possible only when you are given a task to perform over a period. When it comes to GLOBE, **we don't have common tasks where you can assess or evaluate to know who is not doing what**. Also, there **is no funding** for in-country activities, so how will you be able to even carry out an effective evaluation of the program? What will you be evaluating? If it becomes possible to do any assessment, it should come early in the year, a specific task should be given with its expected outcomes, and a baseline assessment forms should be given.

Based on the number of teachers student and schools using globe, but in Lebanon we are doing globe games only.

Evaluation group could **provide the standard evaluation form** for GLOBE schools evaluation .

Find strategies for member countries' equipment and face-to-face training workshop organizations.

How does CC understand the program supported by GIO in their country like regional meetings, science symposiums, etc.? How to figure out the technical and financial needs to organize the programs, like contribution by GIO and the contribution need from the host country. **What are the expected outcomes of GIO from the programs?**

I think it would be a good idea for the GLOBE Program to **have a standard evaluation/ assessment of globe program implementation** for their respective countries.

In the design of this survey, the feasibility criteria (financial, access to information and quality and professional level of the collaborators for the evaluation) are not relieved. I think it's an important thing to consider.

Integration of GLOBE elements (approach, materials,...) into **national curriculum**.

It would be helpful if the country coordinators could have access to the GLOBE observers/ citizen scientists' information and activities on the GLOBE website. If the country coordinator knows who the observers/citizen scientists are and what they do, it would be possible for the country coordinator to link the observers with the nearby GLOBE schools to assist where necessary. In our country we have many inactive schools and observers/citizen scientists. Linking them up may help each other to implement the GLOBE programme.

It would be useful to assess the social/environmental attitude of GLOBE school students once they graduate and become members of the society, for instance if they do volunteer work, if they get involved in environmental NGOs, if they have ecological habits in their daily life, etc.

The biggest challenge I've encountered over the past three years while coordinating GLOBE in Australia has been the eLearning process. Having spoken with several teaching professionals, all agree the program has a lot to offer. However, on top of their busy schedule and the need to complete a minimum level of professional development to maintain teacher registration. The preparatory slide-deck containing 50-60 slides and, in some cases, more than 60 appears to be a barrier to most registrants.

26 respondents shared additional thoughts, many specifically related to evaluation. Many called for a standard evaluation form and shared metrics and spoke of difficulties in getting responses and lack of evaluation funding.

Que los países con mayor experiencia **compartan sus evaluaciones** y puedan servir de modelo para adaptarlo según las características de cada país.

School status reports could be more used if there could be an opportunity **to make data counts per custom period**.

Sending a questionnaire to schools to ask about GLOBE, how much they know and involve in the program worldwide, and what they think can be done to involve more school's participation.

Successful stories will help a lot to inspire the next generation of scientists. We can share some.

The influence of student's voices in society and politics.

This form helped us to realize that to improve the functioning of the GLOBE program, it **is important to continuously monitor its implementation** as well. We see reserves mainly in detecting changes in attitudes, skills of the students involved and their further direction (further study and its focus), especially through personal meetings with students in various forms (during the COVID period at the beginning of Globe in Slovakia, we were not allowed to do this)...

This initiative is appreciated and **gave us additional ideas on how to evaluate our work with GLOBE**. We will be looking into how to implement more evaluation activities in the future.

This year I started doing students' evaluation after the visits to the schools, I leave the form to the teacher and then, the next class they spend a time answering it in an anonymous way and the teacher sends me the forms by e-mail. **I must modify the form each time depending on the group** I am working with, and the protocols and activities implemented in that specific visit.

Two problems for sharing evaluation reports, 1) Language: they are in German, French and/or Italian and 2) Not ready yet: we are evaluated by an external company over two years. Report is ready in 2024. Additional evaluations are in preparation (impact on students).

We must assess why the students are not very enthusiastic to collect GLOBE data.

We have **trouble collecting data on the GLOBE program** implementation from schools as it is because only a few schools respond. Requiring more would make it worse. Instead, we should rely more on what could be automatically collected by the GLOBE website and database system, as well as eliminate any duplication in reporting and data collection.

We only evaluate the program when we have funding for implementation on a project basis. In what manner could the American Embassy help in promoting the program more on a government level, so that it can be better implemented overall.

We rely on skills and experience in collaborative learning and the transfer of experiences between cities and schools through the establishment of central programs that feed the knowledge value and practical experience of the Globe team.

Would be nice to **have external personnel** from the RIO, GIO and/or GPO to visit occasionally to attend national workshops and **carry out external evaluation**.

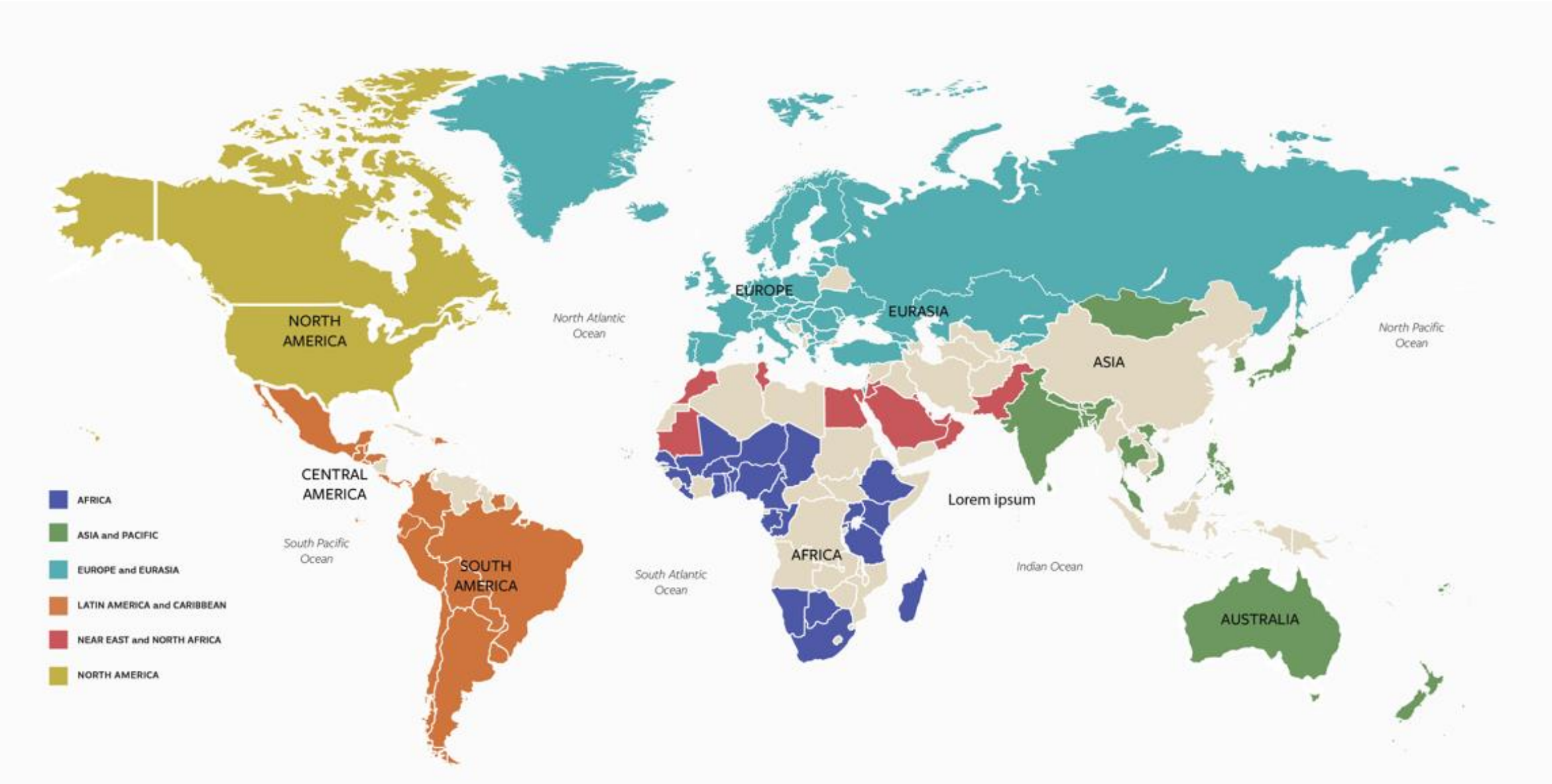


THE **GLOBE** PROGRAM

A Worldwide Science and Education Program

DATA BY REGION

Map of GLOBE regions.



A snapshot of all data from Africa.



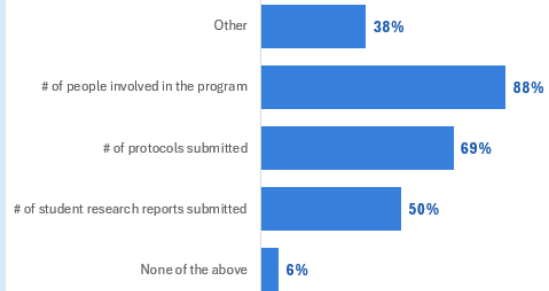
THE GLOBE PROGRAM
A Worldwide Science and Education Program

AFRICA

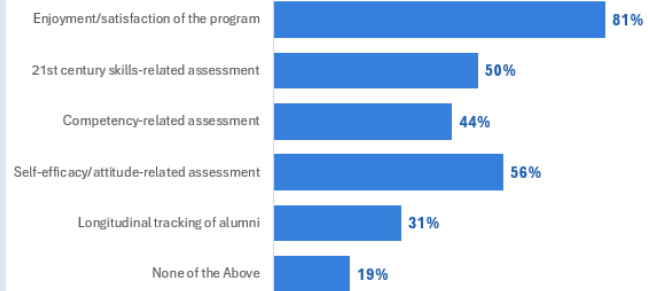
SAMPLE SIZE
16

CURRENT DATA COLLECTED

Data collected to assess GLOBE implementation

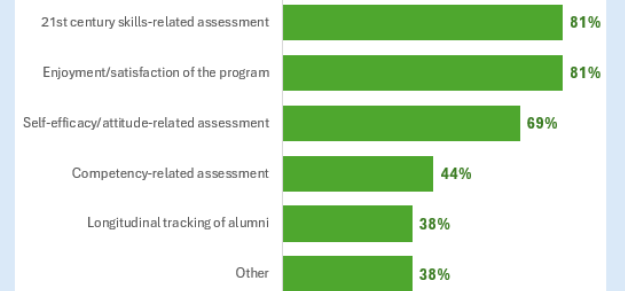


Student outcome and participation experience data collected



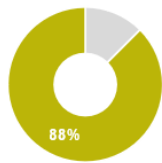
AREAS OF FUTURE DATA COLLECTION

What data would you like to collect in the future?

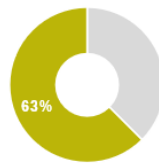


HOW DATA IS COLLECTED

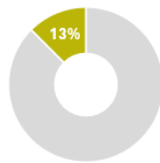
Classroom Observation



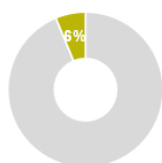
Focus Group / Interview



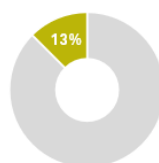
Survey



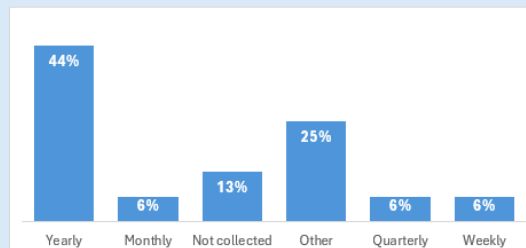
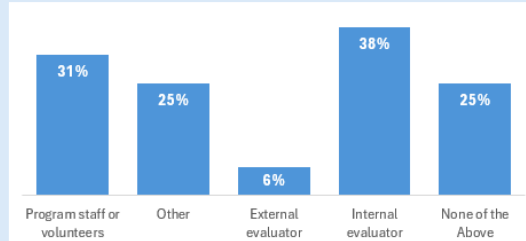
Other Method



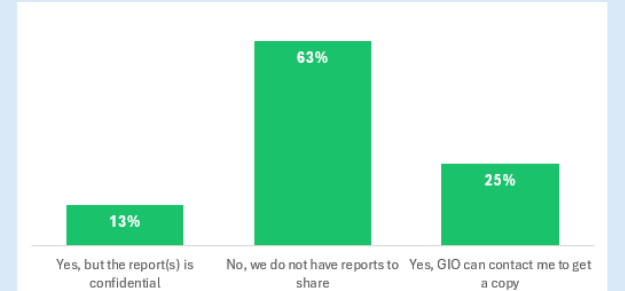
None of the Above



WHO COLLECTS & HOW OFTEN



SHARING INFORMATION



A snapshot of all data from Asia and Pacific.



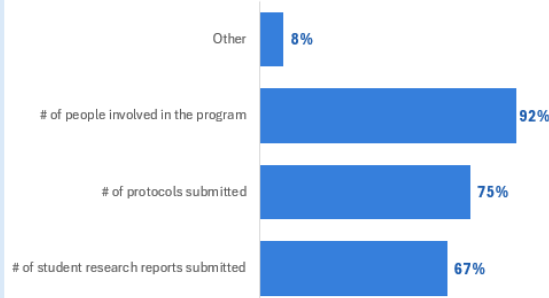
THE GLOBE PROGRAM
A Worldwide Science and Education Program

ASIA & PACIFIC

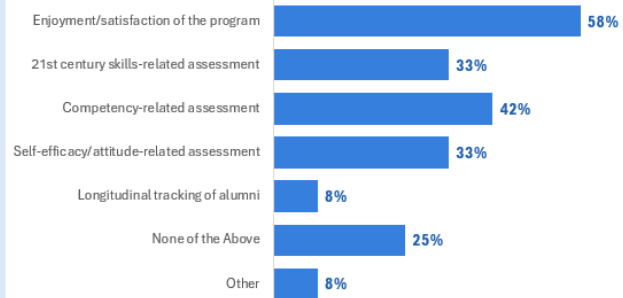
SAMPLE SIZE
12

CURRENT DATA COLLECTED

Data collected to assess GLOBE implementation

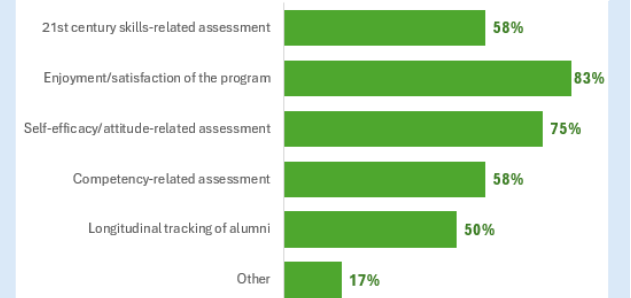


Student outcome and participation experience data collected



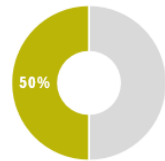
AREAS OF FUTURE DATA COLLECTION

What data would you like to collect in the future?

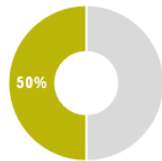


HOW DATA IS COLLECTED

Classroom Observation



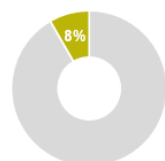
Focus Group / Interview



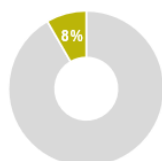
Survey



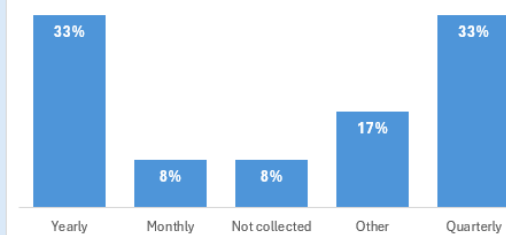
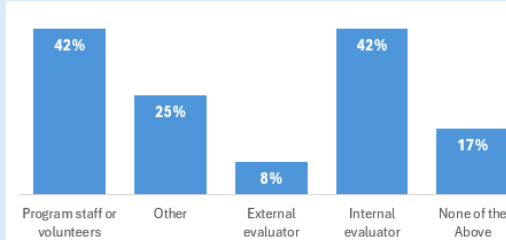
Other Method



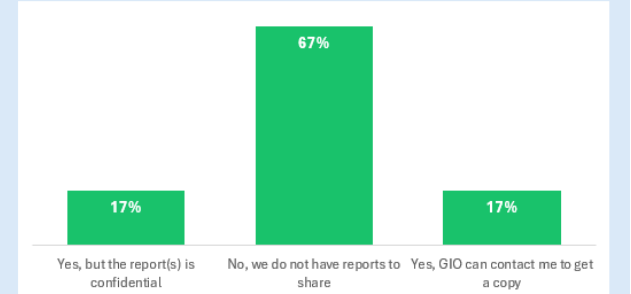
None of the Above



WHO COLLECTS & HOW OFTEN



SHARING INFORMATION



A snapshot of all data from Europe and Eurasia.



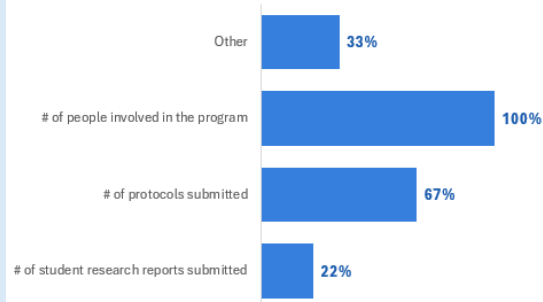
THE GLOBE PROGRAM
A Worldwide Science and Education Program

EUROPE & EURASIA

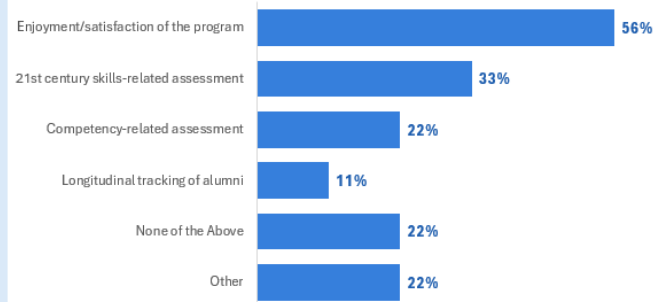
SAMPLE SIZE
9

CURRENT DATA COLLECTED

Data collected to assess GLOBE implementation

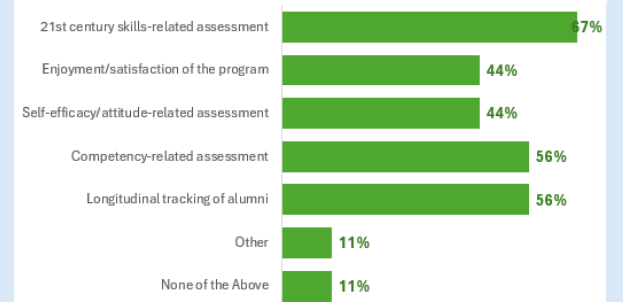


Student outcome and participation experience data collected



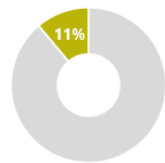
AREAS OF FUTURE DATA COLLECTION

What data would you like to collect in the future?

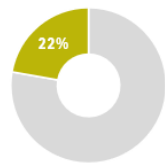


HOW DATA IS COLLECTED

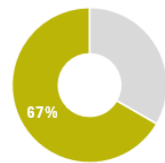
Classroom Observation



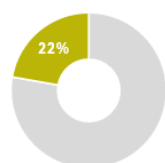
Focus Group / Interview



Survey



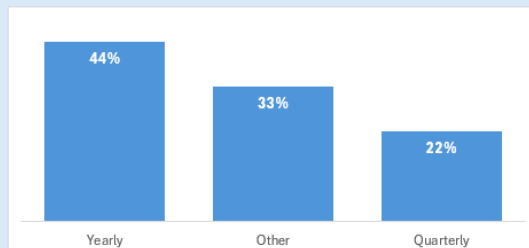
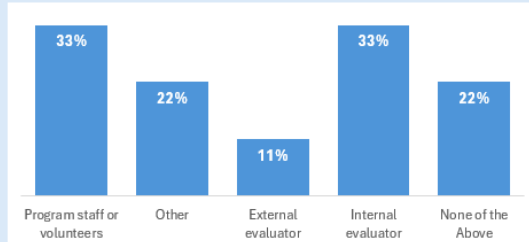
Other Method



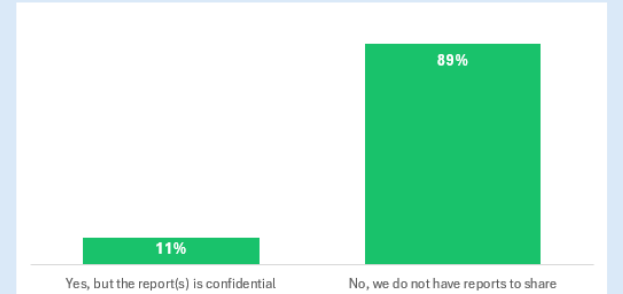
None of the Above



WHO COLLECTS & HOW OFTEN



SHARING INFORMATION



A snapshot of all data from Latin America and Caribbean.



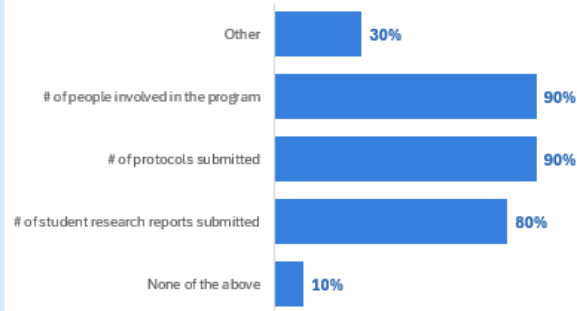
THE GLOBE PROGRAM
A Worldwide Science and Education Program

LATIN AMERICA & CARIBBEAN

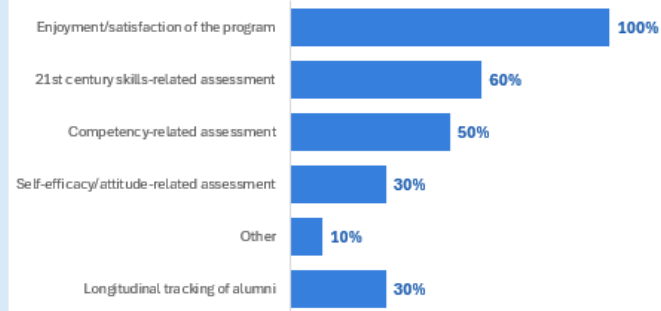
SAMPLE SIZE
10

CURRENT DATA COLLECTED

Data collected to assess GLOBE implementation

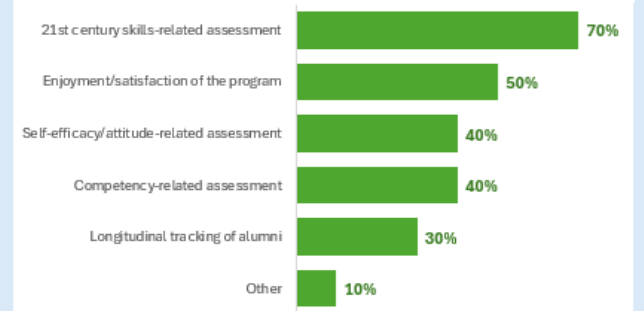


Student outcome and participation experience data collected



AREAS OF FUTURE DATA COLLECTION

What data would you like to collect in the future?

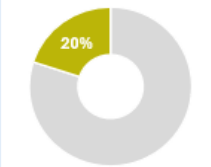


HOW DATA IS COLLECTED

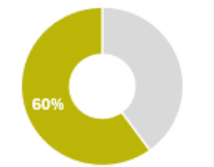
Classroom Observation



Focus Group / Interview



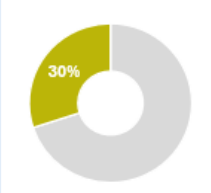
Survey



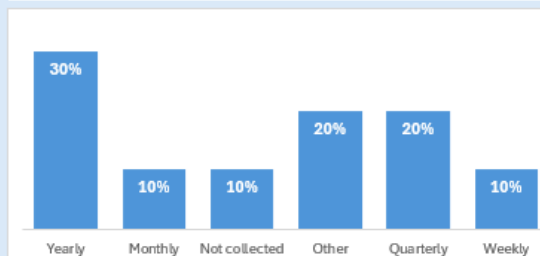
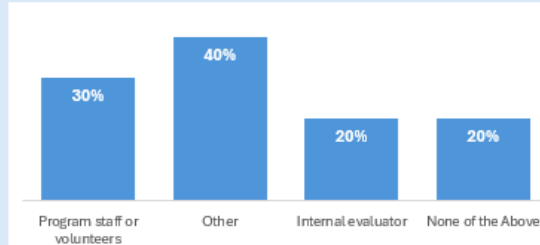
Other Method



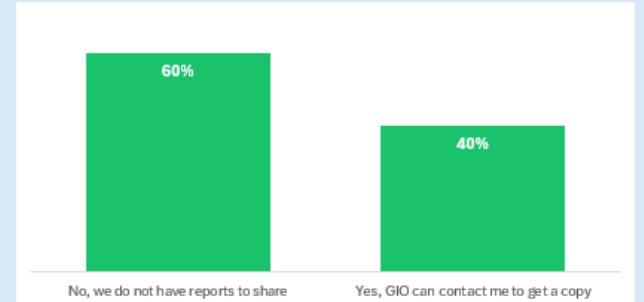
None of the Above



WHO COLLECTS & HOW OFTEN



SHARING INFORMATION



A snapshot of all data from Near East and North Africa.



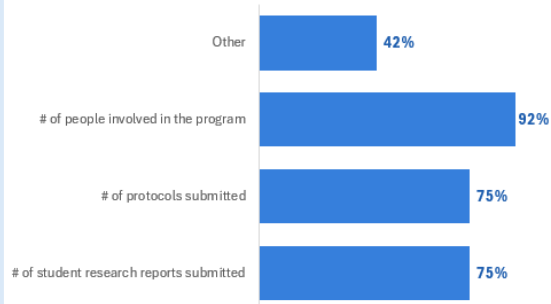
THE GLOBE PROGRAM
A Worldwide Science and Education Program

NEAR EAST AND NORTH AFRICA

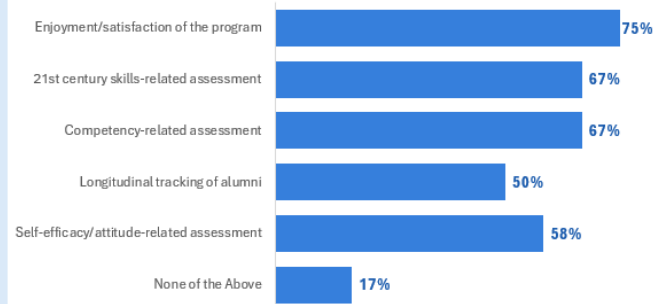
SAMPLE SIZE
12

CURRENT DATA COLLECTED

Data collected to assess GLOBE implementation

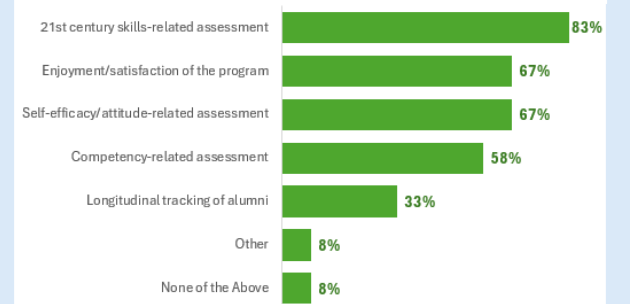


Student outcome and participation experience data collected



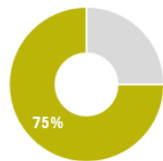
AREAS OF FUTURE DATA COLLECTION

What data would you like to collect in the future?

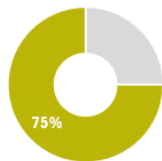


HOW DATA IS COLLECTED

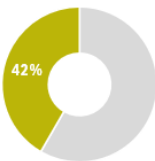
Classroom Observation



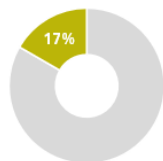
Focus Group / Interview



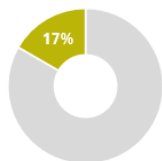
Survey



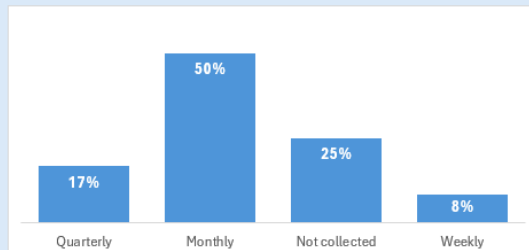
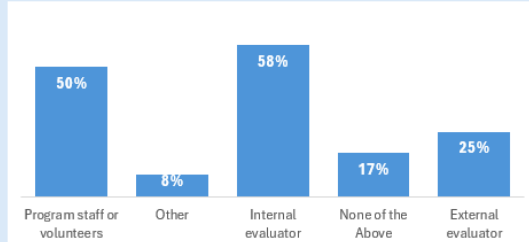
Other Method



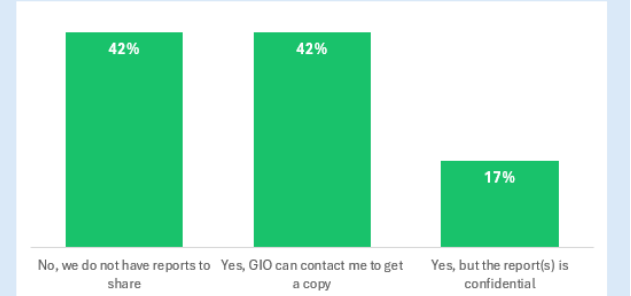
None of the Above



WHO COLLECTS & HOW OFTEN



SHARING INFORMATION



A snapshot of all data from North America.



THE GLOBE PROGRAM

A Worldwide Science and Education Program

NORTH AMERICA

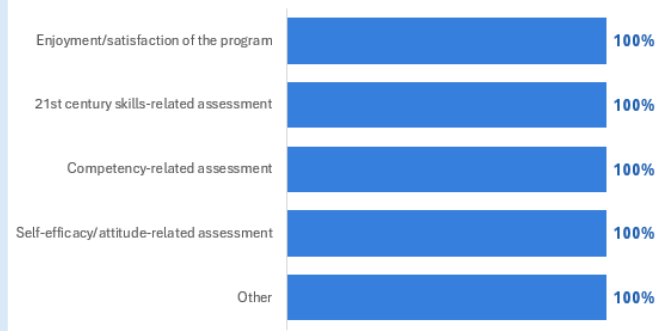
SAMPLE SIZE
1

CURRENT DATA COLLECTED

Data collected to assess GLOBE implementation

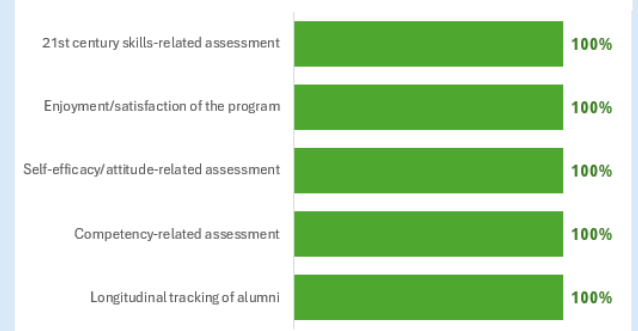


Student outcome and participation experience data collected



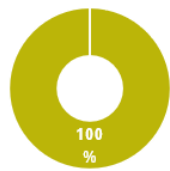
AREAS OF FUTURE DATA COLLECTION

What data would you like to collect in the future?

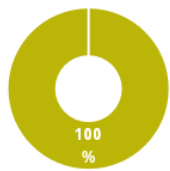


HOW DATA IS COLLECTED

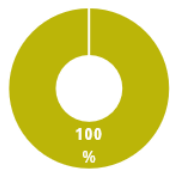
Classroom Observation



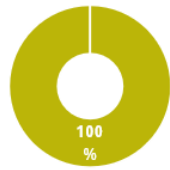
Focus Group / Interview



Survey



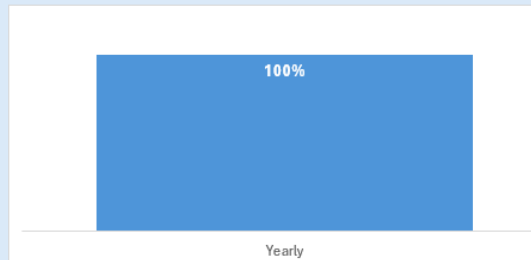
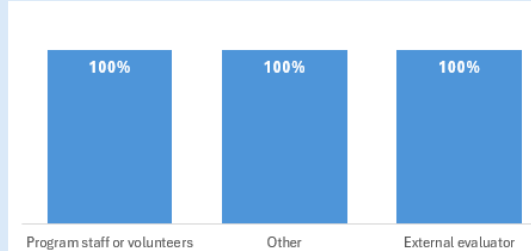
Other Method



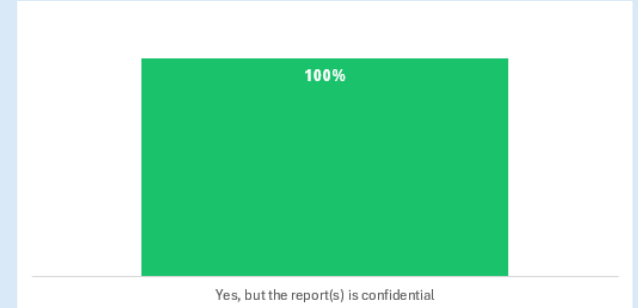
None of the Above



WHO COLLECTS & HOW OFTEN



SHARING INFORMATION





THE GLOBE PROGRAM

A Worldwide Science and Education Program

Data as a Learning Tool

This report serves two roles – it is a summary of the type of evaluation work carried out by GLOBE participants and a learning tool. You can regional data as well as data from the entire GLOBE network.

- What can you learn about evaluation in your region and the activities in your regions?
- How can you use that information to improve programs and documenting your successes?
- What can you learn from seeing the data from other regions and/countries?

Why is GLOBE evaluation important?

Evaluation supports our efforts to:

Guide and improve GLOBE programming to better serve students and educators

Understand and address the needs of the GLOBE community

Demonstrate GLOBE Program outcomes



THE GLOBE PROGRAM

A Worldwide Science and Education Program

SPECIAL THANKS TO:

Yogendra Chitrakar (Chair)

Eleanor Jaffee (Co-chair)

Komla Amega

Ylliass Destin

Marta Irene

Shahina Masood

Estelle Raynal

GPO/GIO Liaison:

Amy Chen

John Ristvey

Consultant:

Laureen Trainer