IREX

Impact, Learnings, and Recommendations for Virtual Exchange in Higher Education

What is the impact of virtual exchange for college students and faculty?

Acknowledgements

This impact report would not have been possible without the incredible faculty and students who participated in the Global Solutions program from Iraq, Jordan, and the United States. They provided ongoing feedback that supported the learning included in this report. We also thank the team at RTI International, who provided an evaluation of our program, of which excerpts are included. And, of course, we thank the Stevens Initiative, without whom this report would not be possible. Since September 2017, Global Solutions has been supported by the J. Christopher Stevens Virtual Exchange Initiative (JCSVEI). JCSVEI is a U.S. Department of State's Bureau of Educational and Cultural Affairs program administered by the Aspen Institute. Additional thanks are due to the members of the IREX team for their contributions to the design of this report.

About IREX

IREX is a global development and education organization. We strive for a more just, prosperous, and inclusive world—where individuals reach their full potential, governments serve their people, and communities thrive. With a projected annual portfolio of more than $100 million and 600 staff worldwide, we work with partners in more than 100 countries in four areas essential to progress: cultivating leaders, empowering youth, strengthening institutions, and increasing access to quality education and information.

About the Stevens Initiative

The Stevens Initiative is an international leader in virtual exchange, which brings young people from diverse places together to collaborate and connect through everyday technology. Created in 2015 as a lasting tribute to Ambassador J. Christopher Stevens, the Initiative invests in virtual exchange programs; shares research, resources, and promising practices to improve impact; and advocates for broader adoption.

The Stevens Initiative is a program of the Aspen Institute and is supported by the Bezos Family Foundation and the governments of Morocco and the United Arab Emirates.

Impact, Learnings, and Recommendations for Virtual Exchange in Higher Education

Executive Summary & Key Findings

## What is the impact of virtual exchange for college students and faculty?

I s virtual exchange an effective tool for increasing global competencies that effectively prepare youth for an ever-changing job market? Can virtual exchange promote inclusion and equity by increasing access to enriching cultural experiences for youth who are traditionally excluded from study abroad programs?

This report demonstrates that virtual exchange is an effective tool, providing faculty opportunities to globalize their curriculum and youth with meaningful authentic experiences to develop essential skills that prepare them for the global workplace. Virtual exchange offers a unique opportunity for community colleges and other higher education institutions to increase access to global experiences for students who are traditionally underserved in international education and excluded from in-person study abroad programs, increasing inclusion, diversity, and equity in cross-cultural exchanges. Virtual exchange is a low-cost, effective tool that institutions should consider mainstreaming as a regular experience for youth as we look to the future.

From September 2017 to June 2023, IREX implemented the Global Solutions program for 10 cohorts, reaching 4,495 students and 252 faculty from 88 higher education institutions across Iraq, Jordan, and the United States. As seen in Table 2 below, the Global Solutions program improved global citizenship for youth. These data demonstrate that youth had gains in cross-cultural collaboration, cross-cultural communication, empathy, problem-solving, leadership, and adaptability. For faculty, the Global Solutions program developed and improved faculty members' skills in supporting innovation and global citizenship for their students and supported institutions in developing enduring connections between diverse colleges, while increasing excitement and investment in cross-cultural business education curricula.

Diverse methods were applied throughout the measurement and evaluation process. IREX gathered information from each cohort through student and faculty surveys, focus groups, site visits, and ongoing coaching provided to faculty and binational teams.
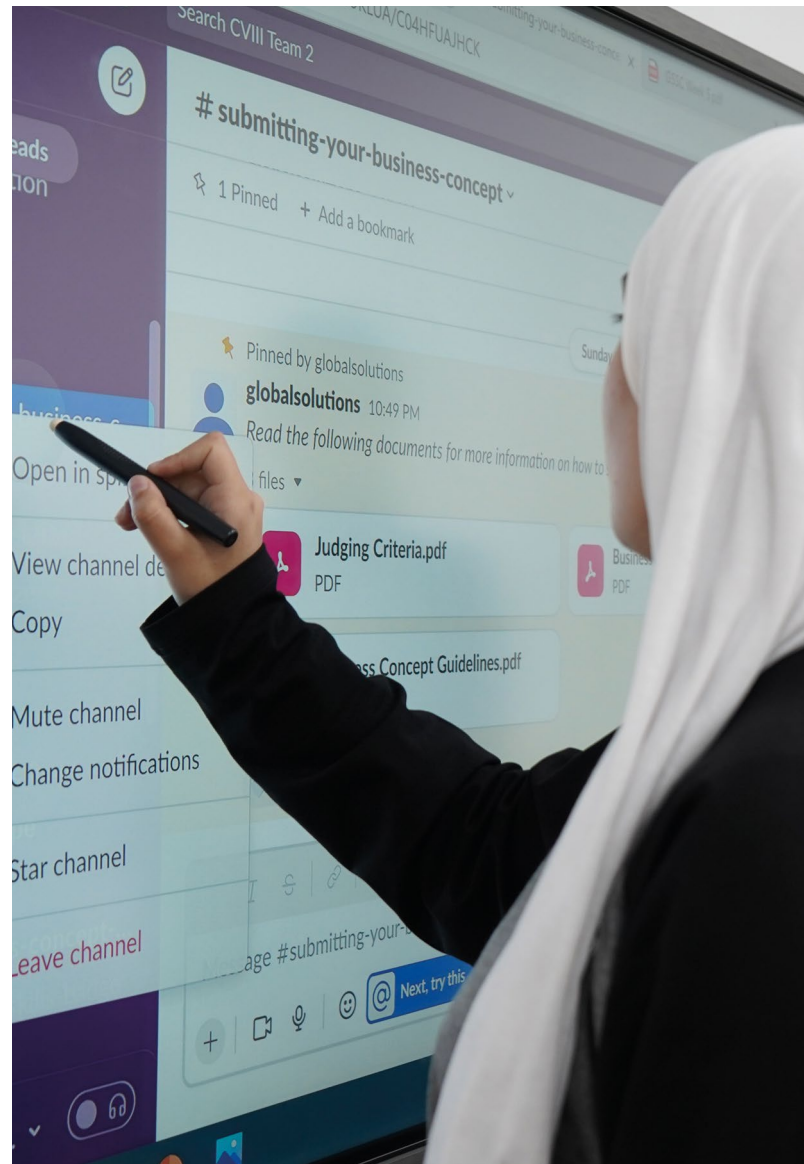
Seeing gains over five years and ten cohorts is an indication that the design of the Global Solutions program is having the desired impact for youth, faculty, and institutions. Virtual exchange is not a replacement for study abroad, but rather a unique tool that can be used to supplement curricula and provide valuable, meaningful, and practical hands-on experiences that support global competencies and workforce readiness.

The below tables highlight key impacts for students and faculty.

TABLE 1: IMPACT FOR STUDENTS

The program strengthened my cross cultural communication skills. *(% Strongly Agree or Agree)*

MENA	93%
US	84%

The program strengthened my leadership skills. *(% Strongly Agree or Agree)*

MENA	84%
US	76%

Through participation in the program, stereotypes I had about the other country were changed. *(% Strongly Agree or Agree)*

MENA	74%
US	67%

The program is beneficial for my future career. *(% Strongly Agree or Agree)*

MENA	84%
US	76%

TABLE 2: IMPACT FOR FACULTY

Participating in Global Solutions developed my skills in innovating the curriculum I use for the program or other courses I teach. *(% Strongly Agree or Agree)*	74%
Participating in Global Solutions increased my institution's excitement and investment in virtual exchange or cross-cultural engagement activities for our students. *(% Strongly Agree or Agree)*	72%
Would you recommend the Global Solutions program to other faculty? *(% Strongly Agree or Agree)*	87%

In this report, we note five key findings:

Key Finding 1:

Virtual exchange increases access to meaningful cultural experiences for youth at U.S. community colleges and Middle East and North Africa (MENA) institutions who are traditionally excluded from international education.

Virtual and cross-cultural collaboration are important skills for students both locally or internationally. Global Solutions provided youth who traditionally would never have considered studying abroad with meaningful cross-cultural experiences that teach these global competencies. The student population of all MENA institutions were primarily learners of English as a second language. From the Fall 2022 Cohort VII, 60% of MENA and 80% of US participants had never studied abroad or engaged in an exchange program.

Key Finding 2:

Virtual exchange increases youth's global citizenship and understanding that one's responsibility and humanity transcends borders.

Youth reported significant consistent gains with effect sizes larger than .20, a reasonable threshold for reporting small effects in the areas of cross-cultural communication, cross-cultural virtual collaboration, and knowledge of others. When youth were asked, "What was the highlight of the program?" responses showed a consistent theme around the opportunity the program provided to learn about another culture. Youth shared that they now have a sense of unity across cultures that did not exist prior to the program.

Key Finding 3:

Virtual exchange is an authentic tool that can model the modern workplace and increase youth workforce readiness skills.

The Global Solutions Sustainability Challenge, one of the tracks within the Global Solutions program, is a project-based model that mimics the modern workplace, engaging students on binational teams to collaborate virtually on a business concept to address real challenges in their communities. Participants consistently responded that they Strongly Agree or Agree on Likert Scale questions asking about their skills in critical thinking, creative problem-solving, empathy, and adaptability. From Cohort I – VIII, 88% expressed the program was beneficial for their future career, and 68% said they applied the Youth Essential Skills (YES) badges to their LinkedIn resumes or CVs to highlight skills gained.

Key Finding 4:

Virtual exchange is an effective, low-cost tool to support faculty in globalizing higher education curricula.

Higher education institutions are looking for ways to globalize their curricula. Traditionally, many institutions aimed to increase the number of students studying abroad, but the COVID-19 pandemic radically shifted the way institutions think about globalization. There has been a new focus on virtual exchange and what it offers. From Cohorts I-VI, 88% of faculty reported that the program supported the globalization of their curriculum by allowing students to develop global citizenship skills, and 37% of faculty from Cohorts I–VIII stated that they modified other curricula they teach to apply elements of the Global Solutions curriculum related to global competencies.

Key Finding 5:

Virtual exchange programs can support institutions in developing diverse meaningful long-term partnerships and can increase engagement in international education and entrepreneurship.

Post-pandemic, institutions are looking for ways to further increase engagement in international education. Seventy-two percent of faculty participating in Global Solutions from Cohorts I-VIII stated that the program increased their institution's excitement and investment in virtual exchange and cross-cultural engagement. Twenty-six percent reported that they had already established ongoing partnerships with their co-facilitator or partner institution after the program, and 46% expressed an interest in establishing an ongoing partnership.

Key Finding 6:

The Global Solutions program is a scalable, faculty-led model for virtual exchange.

IREX took the Global Solutions program from a pilot reaching 119 students in the first cohort, to reaching 809 students in Cohort IV. Prior to the pandemic, from the pilot program to Cohort IV, IREX saw a nearly 50% increase in the number of students every two cohorts. During Cohorts V–VIII, we consistently engaged 450–650 participants. The program also started seeing each cohort comprising nearly 50% returning faculty. Fifteen percent of faculty (n = 38) participated in two cohorts, 10% (n = 26) participated in three cohorts and 13% (n =32) participated in four or more cohorts, demonstrating the effectiveness and desirability of the program among faculty.

Demographics

TABLE 3: STUDENT DEMOGRAPHICS

	Program Total	Iraq	Jordan	United States
College Students	4,495	1,351	803	2,341
Gender				
Female	2,483	719	390	1,374
Male	1,958	632	392	934
Non-binary	16	0	3	13
Other	4	0	0	4
Did not provide	34	0	18	16

Acknowledging the impact of the COVID-19 Pandemic

The number of student participants plateaued when the pandemic began in Spring 2020, during Cohort II. While IREX maintained consistent engagement throughout the pandemic, it did impact our ability to scale. The effects of the pandemic are still being felt, including a decrease in student enrollment primarily in the United States. Amidst these challenges, the number of participants in each cohort has consistently been in the 450-650 range since the start of the pandemic.
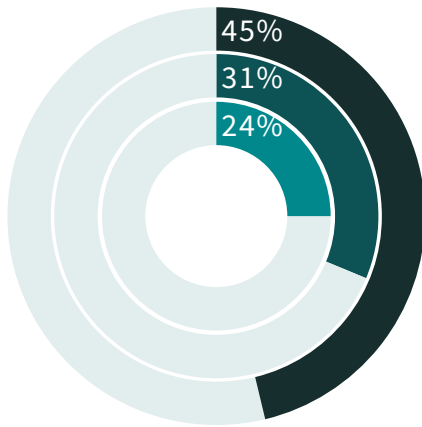
TABLE 4: FACULTY DEMOGRAPHICS

	Program Total	Iraq	Jordan	United States
Faculty Participants	252	69	56	127
Gender				
Female	134	22	23	89
Male	117	47	33	37
Non-binary	1	0	0	1

TABLE 5: INSTITUTION DEMOGRAPHICS

	Program Total	Iraq	Jordan	United States
Institutions	88	14	7	67

US INSTITUTIONS

45%
31%
24%

55%
45%
21%

77%
18%
.5%

- Suburban *45% (N 30)*
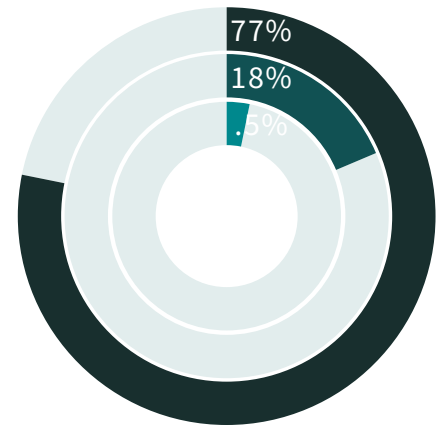- Urban *31% (N 21)*
- Rural *24% (N 16)*
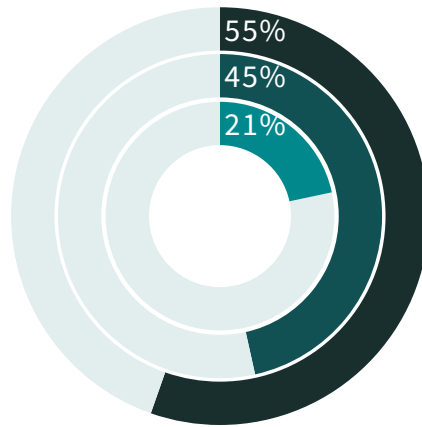
- Minority Serving *55% (N 37)*
- Pell Grants *45% (N 30)*
- Both Pell Grant and Minority Serving (included in the pell grant 30) *21% (N 14)*

- Community College *77 % (N 52)*
- University *18% (N 12)*
- Technical / College *0.5% (N 3)*

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Director Letter

I vividly remember our first faculty training workshop many years ago for the Global Solutions pilot cohort, the moment that our colleagues in Jordan popped up on the screen on Zoom. There was a current of excitement that ran throughout the room as colleagues from Jordan and the United States began chatting eagerly with one another. Fast forward to today where virtual cross-cultural collaboration is part of most of our every day lives and the ability to communicate and collaborate virtually and with people from different backgrounds is an essential skill for all young people.

The magic of the Global Solutions program is that it intentionally builds cross cultural collaboration skills through a creative design thinking process so students develop innovative business solutions to real world problems such as climate resilience and building sustainable cities. Students develop meaningful relationships that disrupt stereotypes through teams working together towards a common goal. One young woman shared that she had never met someone from another country before or engaged in project-based learning – and from this program she knows she could make a difference. Another wrote a meaningful blog about how practicing empathy and cross-cultural communication has helped her navigate a politically divided local community. Several program alumni have shared how participating in Global Solutions helped them get a job. At the height of the pandemic students and faculty from Jordan, Iraq, and the U.S. shared photos, stories, quotes, and exercises on a virtual bulletin board about how they were taking care of their mental health and to encourage one another. And many faculty and students have continued to develop meaningful relationships across oceans.

Virtual exchange democratizes global learning so that it can be accessible for all students – not just those with the resources and time for study abroad. It also empowers students in the midst of an everchanging world that they can make a difference in their communities and that they are not alone. As I reflect on the past six years I'm grateful for how much the field of virtual exchange has grown and look forward to where we are heading in the future.

Sincerely,
Sarah Bever
Senior Technical Advisor, IREX

Introduction

This report is a summary of IREX's learnings and recommendations in the field of virtual exchange during the five years of implementing the Global Solutions program from September 2017 through June 2023. We define virtual exchange as the use of technology to bridge or connect people across countries and cultures that supports the development of knowledge, skills and attitudes. Virtual exchange is a growing topic of discussion within higher education, as it is increasingly identified as a tool for increasing inclusion, equity, and access to valuable cultural experiences for youth who may traditionally be excluded from in-person study abroad programs. This report seeks to provide evidence of the impact on both students and faculty participating in virtual exchange and recommendations for practitioners in higher education.

Background Context: Overview of Global Solutions

A faculty-led virtual exchange program engaging college students in Iraq, Jordan, and the United States

From a pilot program to scaling

IREX launched Global Solutions as a pilot program in September 2017 through its first award under the Stevens Initiative, engaging 315 college students, six faculty and six partner institutions in the United States and Jordan. IREX designed Global Solutions based on the model of World Smarts, a project-based virtual exchange connecting high school students in the U.S. and Ghana. After the pilot program, IREX scaled Global Solutions through two separate awards under the Stevens Initiative and expanded to include students in Iraq. Between September 2017 and June 2023, IREX implemented the program for 10 cohorts, reaching 4,495 students across Iraq, Jordan, and the United States.

While many virtual exchange programs focus on facilitating conversations on culture, the Global Solutions program provides an authentic virtual collaboration, energized by human-to-human connections abroad in an environment that models the modern global workplace.

Two program tracks: project-based and dialogue-focused virtual exchange

Global Solutions encompasses two virtual exchange tracks that explore challenges to and solutions for global sustainability.

Global Solutions Sustainability Challenge (GSSC) is an eight-week virtual business competition that pairs students on binational teams to collaborate using the design thinking process and both develop and pitch an innovative business concept that addresses a United Nations Sustainable Development Goal (UN SDG). Students engage via Slack and Zoom for both asynchronous and synchronous collaboration. The project-based program culminates with a Virtual Global Business Expo where the top five teams present their pitch live to a panel of experts in entrepreneurship. The top three teams are awarded a small grant to further develop their business concept.

Global Solutions Conversations (GSC) connects young people on binational teams over six weeks for live discussions about their culture and global issues, which culminates in a joint session engaging all participants to celebrate their innovative ideas and share lessons learned. Students engage via Zoom and Padlet for synchronous and asynchronous communication. Students learn about different cultures as they brainstorm solutions to challenges in their local communities related to the UN SDGs.

Overall program objectives

Global Solutions was designed to impact both faculty and students. Objectives include:

Objectives for students:

1. Improve global citizenship by demonstrating that one's responsibility and humanity transcends borders;
2. Strengthen problem-solving skills;
3. Develop cross-cultural collaboration and competency;
4. Develop job readiness skills through online collaboration.

Objectives for faculty:

1. Develop and improve facilitators' skills in supporting innovation and global citizenship for their students;
2. Strengthen students' technical and non-technical workforce development skills;
3. Develop enduring connections between diverse colleges in the U.S., Jordan, and Iraq based on classroom content and meaningful collaboration;
4. Increase community excitement and investment in cross-cultural communication and business-related education for youth.

Ensuring inclusion—engaging a diverse audience

A goal of Global Solutions is to provide youth who traditionally would not engage in in-person study abroad with access to international education experiences. IREX focused recruitment on rural, urban, and suburban community colleges and technical institutions across the United States and institutions with a high percentage of minorities and Pell grant recipients, as well as institutions in Jordan and Iraq serving youth where English is a second language and serving refugees.

Provided structure and benefits

Through the program, IREX supports all logistics from start to finish and there is no cost to faculty, students, or institutions. Faculty apply on behalf of their students and then recruit students to participate. Faculty participating in the program receive training on the curriculum and best practices in implementing virtual exchange, ongoing coaching support, continuing education units (CEUs) for training on virtual exchange, technology stipends, and an honorarium. Youth receive certificates of completion and Youth Essential Skills (YES)[1] badges that they can add directly to their LinkedIn resumes. They also become alumni of the U.S. Department of State, affording them additional opportunities for professional development.

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1. "Youth Essential Skills: Training Youth to Succeed in School, Work, and Leadership," IREX, accessed June 15, 2023, https://www.irex.org/project/youth-essential-skills-training-youth-succeed-school-work-and-leadership. IREX's Youth Essential Skills (YES) methodology is a comprehensive approach to training young people for the opportunities and challenges of the future by strengthening crucial soft skills.

Discussion of Key Findings

Evidence that virtual exchange supports youth in developing global competencies and workforce skills, while supporting institutions in globalizing their curricula and increasing access for youth traditionally excluded from international education

O ver the course of the program, IREX, in collaboration with the Stevens Initiative and RTI International, conducted ongoing monitoring and evaluation to measure the impact of virtual exchange.

Methodology

IREX applied a robust monitoring and evaluation plan with a diverse set of tools and methods for learning. This included pre- and post-program surveys with questions developed by IREX designed to measure workforce skills, as well as a set of questions provided by RTI International that measured participants' global competencies during their participation in the program. IREX also carried out site visits and focus groups with faculty and students from each cohort. This report includes analysis conducted by IREX as well as excerpts from independent evaluations conducted by RTI International.[2]

Some statistics in this report include effect sizes, which are a measure of the magnitude of change in average survey responses. A positive effect size indicates an increase in the specific domain whereas a negative effect size indicates a decrease in that domain. Effect sizes of at least 0.2 (20% of a standard deviation) are sometimes considered a reasonable threshold for reporting small but meaningful effects. Effect sizes of 0.50 are considered a medium effect and 0.80 are considered large. Effect sizes that are statistically significant are marked with an asterisk (*). A positive effect size indicates that the trend was in the desired direction, demonstrating an increase in global competency. Some domains included are retrospective. Retrospective survey items ask participants on the post-program survey to "think back to before you started Global Solutions." Retrospective responses are compared to the post-program response to measure change. To consolidate data across five years of programming, some data is combined across all cohorts. In other places, data represents specific cohorts.

We also included anecdotes from participants throughout this discussion on key findings. While testimonials about lives touched are difficult to quantify, these anecdotes support the key findings and share the impact of the program in ways that data and statistics cannot.

Modifications in measurement tools

To continually improve the evaluation process, IREX made slight modifications to measurement tools from one cohort to the next. Questions largely remained the same; however, IREX adjusted or added questions as the curriculum was modified and in order to better assess impact. During the Spring 2022 Cohort, the Stevens Initiative and RTI International recommended grantees use only post-program surveys. In light of this, some data in this report reflects all ten cohorts, while other data reflects subsets of cohorts. It is also important to note that not all participants responded. However, based on the consistency of data from one cohort to the next and an average response rate of 50% or more, we are confident that the key findings shared in this report convey an accurate picture of the program's impact.

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2.   Since 2016, RTI International (RTI) has conducted an independent evaluation of the Stevens Initiative's grantee programs. A collaborative approach is taken with the Stevens Initiative and grantees, using a developmental approach to evaluation with the intent of providing support to practitioners implementing programs.

Key Finding 1:

Virtual exchange increases access to meaningful cultural experiences for youth at U.S. community colleges and Middle East and North Africa (MENA) institutions who are traditionally excluded from international education.

Globalization is no longer an emerging trend in higher education. It is required for being an informed global citizen. Students who study abroad often gain meaningful cultural, communication, and career skills that help them thrive in an increasingly global world. Yet should access to meaningful experiences only be for those who have the resources for study abroad programs? According to a recent report from UNESCO on Virtual Student Mobility (VSM), the number of internationally mobile students in higher education has

grown dramatically from 0.3 million in 1963 to 2 million in 2000 and up to 6 million in 2019.[3] However, this represents just 2.6% of the total world student population. Furthermore, less than 1% of graduating community college students in the U.S. have studied abroad.[4] Often, marginalized or low–socioeconomic status youth either do not have access to or do not choose international education activities.[5] Barriers such as finances, time, family, and work obligations, as well as simply lack of awareness, impact engagement in study abroad and international experiences on campus. Yet these marginalized youth still need opportunities to develop essential global workforce skills. *Post-pandemic, institutions are re-examining what international education can and should look like. As they do so, they should be considering how they can leverage virtual exchange programs to increase access for marginalized youth.* "Although universities continue trying to diversify study abroad programs, the reality is international offerings are often not available in certain disciplines and that some groups of students are vastly underrepresented," commented Paloma Rodriguez, director of the Office of Global Learning at the University of Florida International Center, who shared that, in the 2018–19 academic year, nearly 70% of U.S. students who participated in study abroad programs were white women.[6] *Engagement among marginalized youth would increase, and virtual exchange participants would better represent a college's student population, if exchange experiences were offered within existing courses across a variety of disciplines.*[7]

3.   "Virtual Student Mobility," UNESCO IESALC, accessed May 4, 2023. https://www.iesalc.unesco.org/en/vsm/.

4.   Wayne Wheeler, "Global Connections: Trends in Study Abroad," *Community College Daily: American Association of Community Colleges*, August 30, 2018. https://www.ccdaily.com/2018/08/global-connections-trends-study-abroad/.

5.   Sarah Carr, "As Study Abroad Becomes More Crucial, Few Low-Income Students Go," *The Hechinger Report*, May 8, 2014. https://hechingerreport.org/study-abroad-becomes-crucial-low-income-students-go/.

6.   Susan D'Agostino, "Virtual Exchanges Promote Equity in Global Learning," *Inside Higher Ed*, August 30, 2022, https://www.insidehighered.com/news/2022/08/31/virtual-exchanges-enhance-access-global-learning.

7.   D'Agostino, "Virtual Exchanges."

TABLE 6: PERCENTAGE AND NUMBER OF PARTICIPANTS WITH EACH LEVEL OF PRIOR EXPERIENCE WITH INTERNATIONAL EXCHANGE[8]

	None		Virtual exchange		In-person exchange	
	MENA	US	MENA	US	MENA	US
Fall 2021 CV	60% (N87)	80% (N56)	27% (N39)	13% (N9)	10% (N14)	6% (N4)
Spring 2022 CVI	63% (N145)	73% (N83)	22% (N50)	18% (N21)	9% (N21)	5% (N6)
Fall 2022 CVII	63% (N112)	74% (N119)	25% (N45)	12% (N20)	12% (N22)	12% (N20)

Global Solutions increased access to international education for youth traditionally excluded from these experiences. While we do report on various demographic characteristics of participants, demographics around income level are not directly collected due to the sensitivity of that information. We used the characteristics of institutions to determine potential student demographics. While data was not collected across all cohorts, data on from the Fall 2021 to Fall 2022 cohorts analyzed by RTI International demonstrates that on average 60% of MENA students and on average 75% of US student participants had never participated in international exchange experiences, either in person or virtual.

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8.   Data is from an independent evaluation conducted by RTI International. Reference Annex II: Participant survey response rates for total number of survey responses.

TABLE 7: PARTICIPANT DEMOGRAPHICS, BY REGION[9]

US Participants: Race/Ethnicity[1]	Fall 2021 CV		Spring 2022 CVI		Fall 2022 CVII	
American Indian or Alaska Native	0	0%	2	2%	0	0%
Asian	21	13%	13	12%	14	18%
Black or African American	23	15%	16	14%	10	13%
Hispanic or Latino	46	29%	37	33%	17	22%
Middle Eastern or North African	5	3%	1	1%	1	1%
Native Hawaiian or Other Pacific Islander	2	1%	3	3%	0	0%
White	45	28%	30	27%	18	24%
Some other race	1	1%	1	1%	1	1%
Two or more races (not including Hispanic or Latino)	5	3%	4	4%	9	12%
I do not wish to respond	10	6%	5	4%	6	8%
US Participants: Disability Status						
Has a disability	10	6%	9	8%	15	20%
Does not have a disability	142	90%	100	88%	55	73%
Prefer not to answer	6	4%	4	4%	5	7%
US Participants: Parents' highest level of educational attainment						
Bachelor's or higher degree	66	42%	56	49%	40	53%
Less than a bachelor's degree	78	49%	48	42%	31	41%
I don't know	8	5%	2	2%	2	3%
Prefer not to answer	6	4%	8	7%	3	4%
MENA Participants: Parents' highest level of educational attainment						
Bachelor's or higher degree	*	*	114	48%	77	54%
Less than a bachelor's degree	*	*	89	37%	45	32%
I don't know	*	*	6	3%	5	4%
Prefer not to answer	*	*	30	13%	15	11%

*Was not asked for this cohort.

9. Data is from an independent evaluation conducted by RTI International. Reference Annex II: Participant survey response rates for total number of survey responses.

Among participating U.S. institutions, 44% (n = 30) had high numbers of Pell recipients and 55% (n = 37) were minority serving. From the 67 U.S. institutions, 78% (n = 56) were community colleges, 4% (n = 3) were technical colleges and 18% (n = 13) were universities.

Providing an anecdotal story will present a fuller picture of how Global Solutions increased access to international experiences for underrepresented youth. Elisa Queenan, a Business and Economics professor at Porterville College, is a champion facilitator who participated in GSSC Cohorts IV, V and VI. According to the 2020 American Community Survey, the poverty rate in Porterville, California is 10.5% above the national average.[10] **Fifty-nine percent of the parents of students at Porterville College hold high school diplomas as their highest level of education, with 36% of that population having never earned a diploma. Participating in Global Solutions allowed Elisa to provide access for her students to what she calls "social capital through the skills of empathy, critical thinking, and collaboration," which center on the "quantity and quality of relationships acquired and the advantage they give us in the society where we function."[11]** *"This social capital gives students a competitive edge in the labor market," wrote Elisa.*

You can read more of Elisa's story in a blog written in collaboration with the Stevens Initiative. In Elisa's own words, *"The value of these experiences cannot be overstated for either the student or the educator. As an instructor, I've realized through this experience that the only barriers in my classroom instruction have been of my own creation. The lack of control, spirit of collaboration, and depth of experience in a virtual environment has led to a far more holistic view of teaching for me."[12]*

> "The value of these experiences cannot be overstated for either the student or the educator. As an instructor, I've realized through this experience that the only barriers in my classroom instruction have been of my own creation. The lack of control, spirit of collaboration, and depth of experience in a virtual environment has led to a far more holistic view of teaching for me."[12]

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10. Elisa Queenan, "Change the World as a Learner with Your Students," Stevens Initiative, accessed June 15, 2023, https://www.stevensinitiative.org/change-the-world-as-a-learner-with-your-students/.

11. Queenan, "Change the World."

12. Queenan, "Change the World."

Key Finding 2:

Virtual exchange increases global citizenship and understanding that one's responsibility and humanity transcends beyond borders for youth.

Data show that youth made significant gains in global citizenship skills. This was measured by asking students questions related to self-other overlap, knowledge of other, perspective-taking, cross-cultural communication and cross-cultural collaboration.[13] The program saw consistent effect sizes between 0.21 and 0.60 from Cohort I to Cohort VII. While there were variations from cohort to cohort, from GSSC to GSC, and from U.S. to MENA, trends are generally positive, indicating an increase in global citizenship.

TABLE 8: SELF OTHER OVERLAP[14]

Please choose the picture that most closely represents YOUR relationship (i.e., how close or distant you feel) with each of the groups below. We want to understand how much overlap there is between you and the group of people from that country.[15]
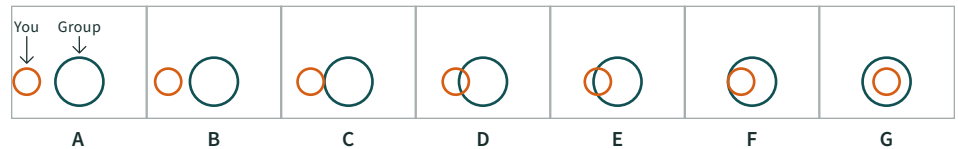
> "Something we didn't expect was that we were all able to relate to each other on our binational team. We were all of Hispanic or Latin descent and had experience with refugees and were able to relate to our partners in Iraq having refugees. The Empathy Interview activity was honestly amazing. We actually made real connections and have new friendships among each other."
>
> Giselle, United States

		Self Other Overlap	
		Effect Size	N
CI	GSSC	–	–
CII	GSSC	-0.06	–
CIII	GSSC	0.51*	–
CIV	GSSC	0.51*	–
	GSC	0.38*	–
CV	GSSC	0.041*	91
	GSC	0.41*	168
		Self Other Overlap Retrospective	
CVII	GSSC	0.21*	54
	GSC	0.60*	93

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13. IREX was asked by RTI to include at least one scale in each of the following groupings of competencies.

14. Data is from an independent evaluation conducted by RTI International. Reference Annex II: Participant survey response rates for total number of survey responses.

15. Students from the U.S. were asked to respond for either Jordan or Iraq, depending on the country they were working with. MENA students were asked to respond for the United States.

Global Solutions generally saw consistent gains in effect size related to self-other overlap, demonstrating that students saw themselves more like their peers in the other country at the end of the program than at the beginning. The highest gain was in Cohort VII GSC with 0.60. When asked about the experience, youth often expressed their surprise in seeing commonalities between cultures. One participant shared, *"There's so much more that unites us than divides us."* Another participant commented, *"I loved the Empathy Interviews. They gave us all an avenue to connect with each other. To see past our differences and see we are all still students, sisters and brothers, daughters and sons."*

TABLE 9: KNOWLEDGE OF OTHER[16]

I knew some of the cultural traditions in [the United States/Iraq/Jordan].
I understood common issues facing young people in [the United States/Iraq/Jordan].
I knew some of the customs and norms around verbal communication or nonverbal communication.

		Knowledge of Other		Knowledge of Other Retrospective	
		Effect Size	N	Effect Size	N
CI	GSSC	0.75*	202	0.73*	205
CII	GSSC	0.27*	-	-	-
CIII	GSSC	0.77*	-	-	-
CIV	GSSC	0.74*	-	-	-
	GSC	0.54*	-	-	-
CV	GSSC	0.59*	93	-	-
	GSC	0.73*	175	-	-
CVI**	GSSC	-	-	0.55*	204
	GSC	-	-	0.54*	152
CVII	GSSC	-	-	0.39*	57
	GSC	-	-	0.61*	90

Global Solutions saw consistent gains in effect size related to knowledge of other, demonstrating students' increased knowledge of the other culture during the program. Not only were gains consistent, they were consistent in significance as well, with every cohort except two above 0.50.

> "The most memorable part of the program was the joyful smile and cheery laughter of Fatima, my teammate in Jordan, who I was meeting through Zoom. Fatima is truly the nicest and most wholesome person I ever met. We learned about each other's cultures, like our favorite foods, interests, and majors, and are still friends after the program ended."
> Nelly, Student, United States

16. Data is from an independent evaluation conducted by RTI International. Reference Annex II: Participant survey response rates for total number of survey responses.
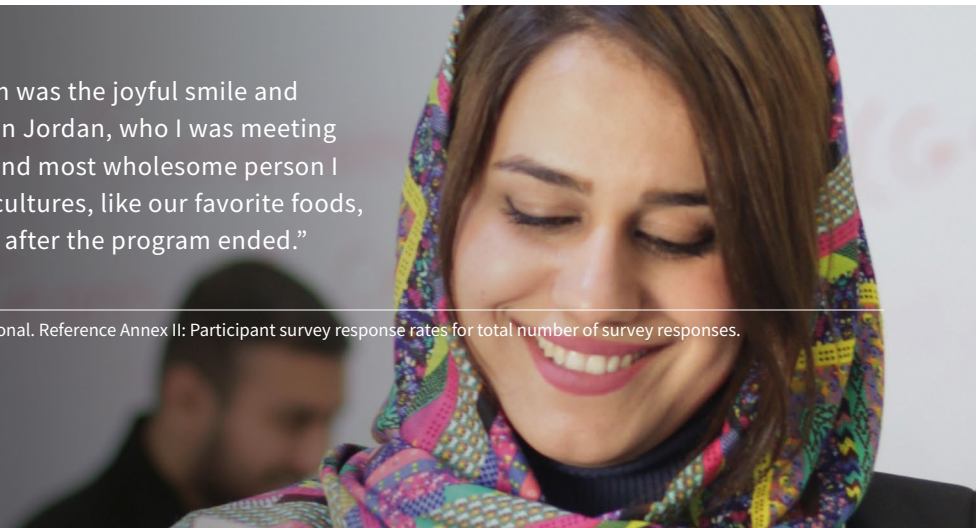
"Through this program, we got to know real people from different countries. All we know about people from Iraq or Jordan is what the media has shown. All we know is war. But from this program, we got to know the real minds of Iraqi and Jordanian people, to learn about their culture. I've met young innovators who want to make a difference in their country. This program provides a safe space. It's the perfect opportunity to have important communication that we need in order to learn about another culture. We need conversations like this!"

Student, United States

TABLE 10: PERSPECTIVE TAKING[17]

When talking to people who are different from me, I try to see things from their point of view.
I imagine how things look from other people's perspectives to understand them better.
I think about why others might have different beliefs than me.
When I disagree with someone, I put myself in their shoes to understand their thinking.

		Perspective Taking		Perspective Taking Retrospective	
		Effect Size	N	Effect Size	N
CI	GSSC	-0.11	203	-0.22	204
CII	GSSC	0.30*	-	-	-
CIII	GSSC	0.14*	-	0.31*	-
CIV	GSSC	0.12	-	0.21*	-
	GSC	0.06	-	0.37*	-
CV	GSSC	0.23*	99	0.36*	97
	GSC	0.22*	190	0.23*	190
CVI	GSSC	-	-	0.28*	206
	GSC	-	-	0.28*	153
CVII	GSSC	-	-	0.24*	57
	GSC	-	-	0.28*	92

17. Data is from an independent Leant evaluation conducted by RTI International. Reference Annex II: Participant survey response rates for total number of survey responses.

Through participation in the program, stereotypes I had about the other country were changed.

MENA **74%**
US **67%**

Percentages are based on 1,615 MENA and US student responses on post program surveys from CI – VI, Fall 2019 – Spring 2022.

Global Solutions saw consistent significant gains greater than 0.20 in effect size related to perspective-taking, demonstrating growth in empathy and being able to see another's point of view. The program supported students' development of new narratives about those from different backgrounds, with 74% of MENA and 67% of US student participants communicating that the program changed the initial stereotypes they had held. One student conveyed, *"I learned from the program how to work as a team with people from different cultures. I developed skills that allow me to consider others' opinions and keep my point of view in perspective of others."* *–Student, Jordan*

> "This program helped me understand that I don't need to look at other countries as what they're shown in the media. Instead, I should make an active attempt to connect with members of a nation before I pass any judgment."
> Mike, Student ,Untied States

TABLE 11: CROSS-CULTURAL COMMUNICATION

Please indicate how much you agree or disagree with the following statements after having participated in the program, "The program strengthened my cross cultural communication skills."

MENA **93%**
US **84%**

Percentages are based on 1,615 MENA and US student responses on post program surveys from CI – VI, Fall 2019 – Spring 2022.

On post program surveys from Cohort I – CVI, 93% of MENA and 84% of US students expressed the program strengthened their cross cultural communication skills. Andres, a student from Miami Dade College told us, *"This challenge has made me understand the importance of clear communication and empathy. After working with everyone, I understood communication is crucial to the success of any team."*

TABLE 12: CROSS CULTURAL COLLABORATION[18]

I like to learn about people from other cultures in order to work together.
I am confident that I can produce work with people from other places around the globe.
I am able to adjust to new people, places, and situations. I can work productively with people whose cultural backgrounds are different from mine.

		Cross Cultural Collaboration		Cross Cultural Collaboration Retrospective	
		Effect Size	N	Effect Size	N
CI	GSSC	0.12	204	0.40	203
CII	GSSC	0.02	-	-	-
CIII	GSSC	0.04	-	0.32*	-
CIV	GSSC	-0.11	-	0.33*	-
	GSC	0.08	-	0.37*	-
CV	GSSC	0.07	100	0.51*	100
	GSC	0.15	191	0.40*	188
CVI	GSSC	-	-	0.40*	204
	GSC	-	-	0.54*	153
CVII	GSSC	-	-	0.39*	58
	GSC	-	-	0.60*	93

Note: Data represents combination of MENA and US responses.

Both MENA and U.S. student participants generally saw consistent significant gains above 0.40 in the area of cross-cultural collaboration from one cohort to the next. Besides increasing their knowledge of another culture, many students referenced the area of cross-cultural collaboration in focus groups and post-program surveys as a highlight of the program.

A student from Cohort V stated, *"Global Solutions helped me be more culturally competent. I never collaborated with anyone from another country in this way. I learned how to effectively direct meetings and communicate my ideas and to accept and welcome different perspectives."* Valerie from the United States noted, *"I felt like there was an immense understanding of how much we can accomplish when we all work together and learn to trust each other, because, had one voice dominated or any one person taken on the burden of the work, I don't think we would have gotten to where we are."*

"I have never participated in something as big as this project. It was unique and one of my best experiences. My favorite part was practicing my role as manager to support our binational teams' communication and guide the team with information. It was a challenging experience, but overcoming the difficulties and accomplishing our goal from one week to the next, was truly the best experience."

Diyari, Student, Iraq

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18.   Data is from an independent evaluation conducted by RTI International. Reference Annex II: Participant survey response rates for total number of survey responses.

Key Finding 3:

Virtual exchange is an authentic tool that can model the modern workplace and increase youth workforce readiness skills.

Sarwan Hasan from Soran University shared, "Students shared that since they participated in the program, their perspectives changed. They now want to start new businesses applying design thinking. They are now open minded and think critically and believe it's important to think outside the box. Our students who participated in Global are more competitive in the job market. None of my students who participated in the program are jobless. Some have their own small business, some work at schools, some in the private sector and some with international organizations. This is a great achievement of the program. The program opened a gate for them to be in a different world."

According to a recent survey, 96% of Chief Academic Officers at U.S. institutions think they are doing a good job preparing young people for the workforce. However, only 41% of U.S. college students and only 11% of business leaders shared the same view.[19] Not only is there a gap in the U.S., but a recent report by IREX demonstrates the gap in Iraq as well.

"Fresh graduates usually have the academic knowledge without the ability of applying it in real work environments. Their skills and abilities should be improved, like communication and teamwork skills." –IREX University Linkages Program Labor Market Report

The Global Solutions Sustainability Challenge program helps bridge the gap between student skill development and what is needed in the workplace both in the U.S. and MENA. During the Fall 2019 Cohort, we started granting participants Youth Essential Skills (YES) badges upon completion of the program. A badge was provided for each skill developed so that students could clearly communicate these competencies on their CVs and in job interviews. Participants received badges for: critical thinking and creative problem-solving, empathy, cross-cultural communication, cross-cultural collaboration, adaptability, and entrepreneurship.

In post-program surveys, students were asked to respond to a series of Likert Scale[20] questions modified from the IREX YES assessment toolkit. Student participants consistently reported that they Strongly Agree or Agree to statements reflecting skills in problem-solving, critical thinking, leadership and adaptability, as well as the ability to use technology. Additionally, 84% of Jordan and Iraq students and 76% of U.S. students felt that the program was beneficial for their future career, and 68% of students overall said that they added the YES badges to their resumes.

Some students conveyed that Global Solutions was a stepping stone to transferring from community college to a four-year school, changing their career path, receiving a prestigious scholarship, starting a new job, or participating in other international exchange experiences. For example, several students were awarded the prestigious Jack Kent Cooke scholarship after including Global Solutions on their application.

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19. Diana El-Azar, "4 Trends That Will Shape the Future of Higher Education," World Economic Forum, February 7, 2022, https://www.weforum.org/agenda/2022/02/four-trends-that-will-shape-the-future-of-higher-education/.

20. Susan Jamieson, "Likert scale," in *Encyclopedia Britannica*, December 16, 2013, https://www.britannica.com/topic/Likert-Scale.

These gains may be attributable to the active learning model of Global Solutions. Through binational teams, students engage in emotional and social learning as they apply new knowledge through meaningful experiences.

To truly understand these improvements in global competency and workforce skills, we must hear from students themselves. Students were asked, "How did the Global Solutions program impact you? How did you change from the beginning of the program to the end?"

"My involvement with the Global Solutions Sustainability Challenge gave me the ability to participate in a group effort that opened not only borders but also our perceptions of other cultures. The skills I gained helped me secure a job within a sustainable business. The ability to work alone or in a team has been an invaluable lesson learned." – Student, United States

"This program helps us improve the knowledge and skills to adjust to the various changes in the industry. These improvements will positively affect the productivity of us as students, and as workers in the future when we graduate. We will be employees with experience working as a team and managing others." –Qais, Student, Iraq

When asked what they would tell a friend to invite them to join the program, an Iraqi student said, *"I would tell my friends if they join the program they will not only help their society and be impactful but it will also help them start their own small business because the Challenge gives real life experience with all the steps on how to start and think about your own business."*

Many alumni used their experience in Global Solutions to launch new community initiatives or small businesses focused on sustainability. Learn more about their stories here.

Along with the qualitative data shared above, the below tables demonstrate the impact of the program on specific workforce skills.

"A valuable lesson I learned throughout the Challenge is the importance of working together as a binational team. We learned how to hold each other accountable, be empathetic, and have appreciation for our cultures and ideas. The impact this Challenge had for me is huge. I will be forever proud for all the work we have accomplished."

Brenda, Student, Miami Dade College, United States

TABLE 13: CRITICAL THINKING AND CREATIVE PROBLEM-SOLVING

Please indicate how much you agree or disagree with the following statements after having participated in the program.
%Strongly Agree & Agree Combined

	US		MENA	
	GSSC	**GSC**	**GSSC**	**GSC**
I apply critical and creative thinking to address problems that involve risk and things that are unknown.	93%	-	85%	-
I am confident in my ability to identify multiple approaches for solving a problem.	90%	-	92%	-
I can look at ideas from different angles or connect ideas to come up with novel solutions.	91%	-	90%	-
I ask clarifying and effective questions in order to obtain a comprehensive understanding about a problem/issue.	89%	67%	85%	64%
I am able to innovate to solve real world problems.	63%	-	72%	-
I am confident in my ability to identify and acknowledge conflict and stay engaged in order to resolve it.	89%	92%	89%	89%

For Cohorts V–VIII, students consistently Strongly Agreed or Agreed to statements related to skills in critical thinking and creative problem-solving. In the future, IREX plans to improve measurement of self-reported skills by using pre- and post-program surveys to more effectively measure how these competencies were developed during the program.

"I think one of the best experiences throughout this whole program was the fact that I don't think anyone who entered this Challenge thought they could actually find a solution to a global problem. When they started with problem-solving, defining a problem statement and then a solution statement, it gets you thinking, wow, you can just be a normal human being and actually solve such a huge problem! I feel this was such a great experience and a great achievement!"

Student, Iraq

TABLE 14: EMPATHY, ADAPTABILITY, AND ENTREPRENEURIAL THINKING

Please indicate how much you agree or disagree with the following statements after having participated in the program.

	US		MENA	
	GSSC	**GSC**	**GSSC**	**GSC**
I make a point of listening to the other person's viewpoint, even if it differs from mine.	95%	94%	94%	95%
I think about the personality and attitudes of the person I am talking to as I try to communicate and connect with them.	94%	93%	83%	95%
I understand and control my own biases when judging what others say.	92%	88%	88%	85%
I have the ability to shift actions and mindset in response to expected or unexpected changes in circumstances.	92%	-	82%	-
I am able to be resourceful and identify opportunities.	90%	-	90%	-

Please indicate how much you agree or disagree with the following statements after having participated in the program, "The program strengthened my leadership skills."

MENA	88%
US	75%

Percentages are based on 1,615 MENA and US student responses on post program surveys from CI – VI, Fall 2019 – Spring 2022.

From Cohorts V - VIII, students consistently responded that they Strongly Agree or Agree to statements related to empathy and adaptability. Eighty-eight percent of MENA and 75% of US student respondents expressed the program strengthened their leadership skills. Ninety percent of MENA and 90% of US student respondents also expressed they are able to be resourceful and identify opportunities, key elements of entrepreneurial thinking.

> "It's an opportunity to grow as an individual and to really define what empathy means. This challenge enlightened me on how to not only incorporate my strengths as an individual to a group project, but also understand the value in someone else's strengths, and how working together we can combine our strengths to develop an amazing result."
>
> Jessica, Student, United States

Key Finding 4:

Virtual exchange is an effective, low-cost tool for faculty in globalizing their curricula.

Higher education institutions are looking for ways to globalize their campuses. Traditionally, this has included increasing the number of students engaged in study abroad. However, the pandemic radically shifted the way institutions think about globalization, especially community colleges in the U.S. There has been a new focus on virtual exchange. Structured, faculty-led virtual exchange programs provide added value for institutions by promoting international education that is free for students at no cost to the institution. Virtual exchange programs like Global Solutions can be a useful tool for faculty as they re-visit teaching methods developed for the time and space constraints of traditional classrooms and consider what future hybrid learning could look like.

TABLE 15: FACULTY INNOVATE CURRICULA

Participating in Global Solutions developed my skills in innovating the curriculum I use for the program or other courses I teach. *(% Strongly Agree or Agree)*	**74%**

Total Responses = 141 (Cohot I – VIII)

Not only did Global Solutions support faculty in globalizing the curriculum used in the program, but it also inspired faculty to globalize curricula for other courses they teach. On post-program surveys, when asked if *"Participating in Global Solutions developed my skills in innovating the curriculum I use for the program or other courses I teach,"* 74% of respondents Strongly Agreed or Agreed that it did develop their skills. Thirty-six percent of respondents stated that they used the Global Solutions curriculum themes and activities related to culture, SDGs, and design thinking to modify other curricula that they teach. There are positive ripple effects for institutions who have faculty participating in virtual exchange. Faculty receive training on new technology and inspiration for activities that support development of global competencies. When asked, *"How did you modify other curricula you teach,"* the top three responses were: cross-cultural connection and collaboration, design thinking, and virtual communication platforms. Sarwan Hasan from Soran University expressed,

"We believe in the Global Solutions program because it provides a unique project based teaching style for students outside of lectures. Participating in Global Solutions caused us as an institution to review our. For example, you couldn't find a course called 'Entrepreneurship' prior to Global Solutions. We've now added several new courses for students on entrepreneurship. Most importantly, the program caused us to think that the university teaching is not only about knowledge, but making connections for our students to the real world in order to prepare them for the future so they are top candidates to receive jobs."

Sawsan al Najjar from Khawarizmi Technical University College who participated in every cohort since Fall 2019, expressed, *"One of the most interesting things about this program is that it is not theoretical. It is based on real-world problems facing all our global communities. Students have the chance to develop a solution with their binational team that could improve the lives of people not only in their communities but also around the world. Using the platforms that are offered by this program enables them to collaborate with team members from different cultures and backgrounds."*

An example of the impact of Global Solutions inspiring faculty to globalize curriculum is Richard Johnson, a faculty member at Harper College in Illinois. Richard participated in three cohorts of the Global Solutions Conversations program. He now plans to design a new 'plug and play' intercultural communications module faculty can use in their courses in combination with virtual exchange, largely inspired by his experience with Global Solutions and other virtual exchange initiatives he's participated in.

Richard Johnson, Facilitator, Harper College, Cohort V, VII, VIII

"During the pandemic, I began to incorporate 'virtual exchange' in my Freshman Composition classes as a means of extending the 'walls' of my classroom. Since then, I have worked with a number of different providers of online student-to-student interactions, and IREX Global Solutions Conversation (GSC) has been the most inclusive and impactful of those programs. In course surveys, students indicate that they developed a deeper understanding of the perspectives of others around the world on important socio-political issues, a skill I would argue is vital to the future of humanity. The genius and beauty of the GSC program is that it offers a flexible framework for transformative faculty and student engagement."

Read more of what Richard has to say about the program here.

Key Finding 5:

Virtual exchange programs like Global Solutions support institutions in developing diverse, meaningful long-term partnerships and increasing engagement in international education and entrepreneurship.

Education does not look the same it did prior to the pandemic. The field of education is continually shifting to ensure it is equipping youth with the skills to be successful in a global marketplace. Student enrollment has decreased and student engagement is not what it used to be. Institutions are seeking ways to adjust. **Post program surveys and focus groups revealed that virtual exchange programs are well positioned to spark partnerships and deepen engagement in this new higher education context.** Faculty communicated their experiences co-facilitating binational teams had a positive impact that led to meaningful long-term partnerships between institutions beyond the duration of the program.

TABLE 16: PARTNER FACILITATOR EXPERIENCE

Please describe your experience with your partner facilitator.

We had a very successful working relationship. — (66%) (N 91)

Other options were:

Did you establish an ongoing partnership with your co-facilitator's institution after participating in the program? Or do you plan to maintain your partnership with your co-facilitator or their institution in the future?

Yes — (26%) (N 37)
Maybe — (46%) (N 65)
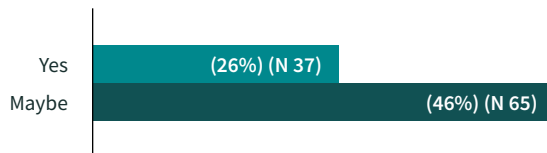
Total Responses = 141 (Cohort I–Cohort VIII)

Data in Table 16 demonstrates that Global Solutions is having an impact in reaching a desired long-term objective of creating sustained institutional partnerships and impact beyond individual faculty. For example, two co-facilitators from the Fall 2021 Cohort V at Porterville College and Salahaddin University have been collaborating together with the Ministry of Education in Iraq on a research project focused on women in education. Many faculty expressed interest in developing new virtual exchange or collaborative online international learning (COIL) programs with their partner institutions, starting new research initiatives, or collaborating on joint presentations for their institutions highlighting the impact of global partnerships.

TABLE 17 – INSTITUTIONAL EXCITEMENT

Participating in Global Solutions increased my institution's excitement and investment in virtual exchange or cross-cultural engagement activities for our students.

Strongly Agree or Agree — 72% (N 102)

Would you recommend the Global Solutions program to other faculty?

Strongly Agree or Agree — 87% (N 123)

Total Responses = 141 (Cohorts I–VIII)

Seventy-two percent of faculty from Cohorts I–VIII who responded to the survey stated that Global Solutions effectively increased their institutions' excitement and investment in virtual exchange. Bryan Shuler from Hillsborough Community College noted, *"Global Solutions is a superb opportunity for community college students to interact with their peers across the globe, thus embedding globalization into any subject, any curriculum. The thoroughly organized program only enhances the faculty's ability to create a successful international experience for students without any financial burden or leaving the classroom."*
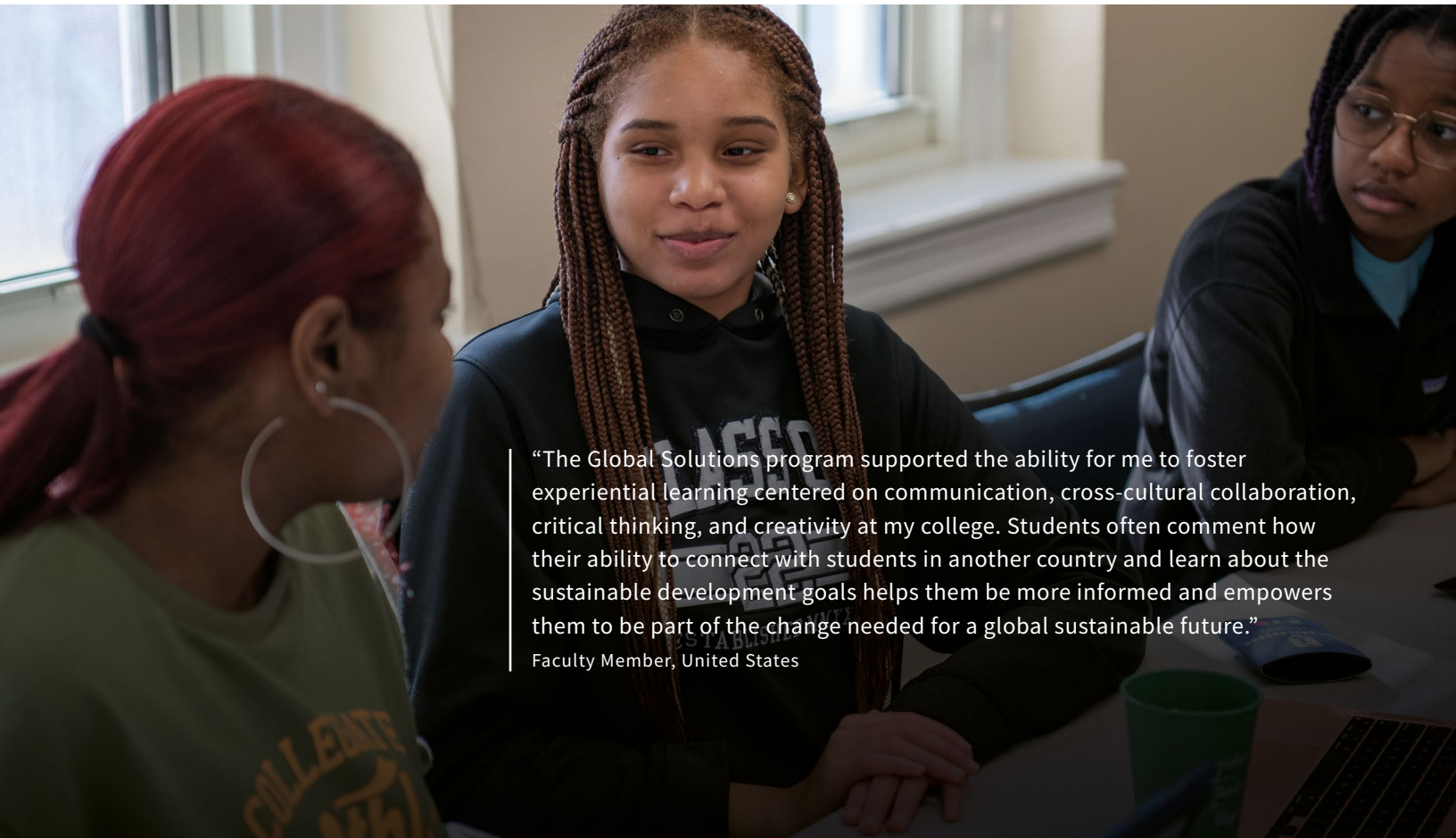
"The Global Solutions program supported the ability for me to foster experiential learning centered on communication, cross-cultural collaboration, critical thinking, and creativity at my college. Students often comment how their ability to connect with students in another country and learn about the sustainable development goals helps them be more informed and empowers them to be part of the change needed for a global sustainable future."
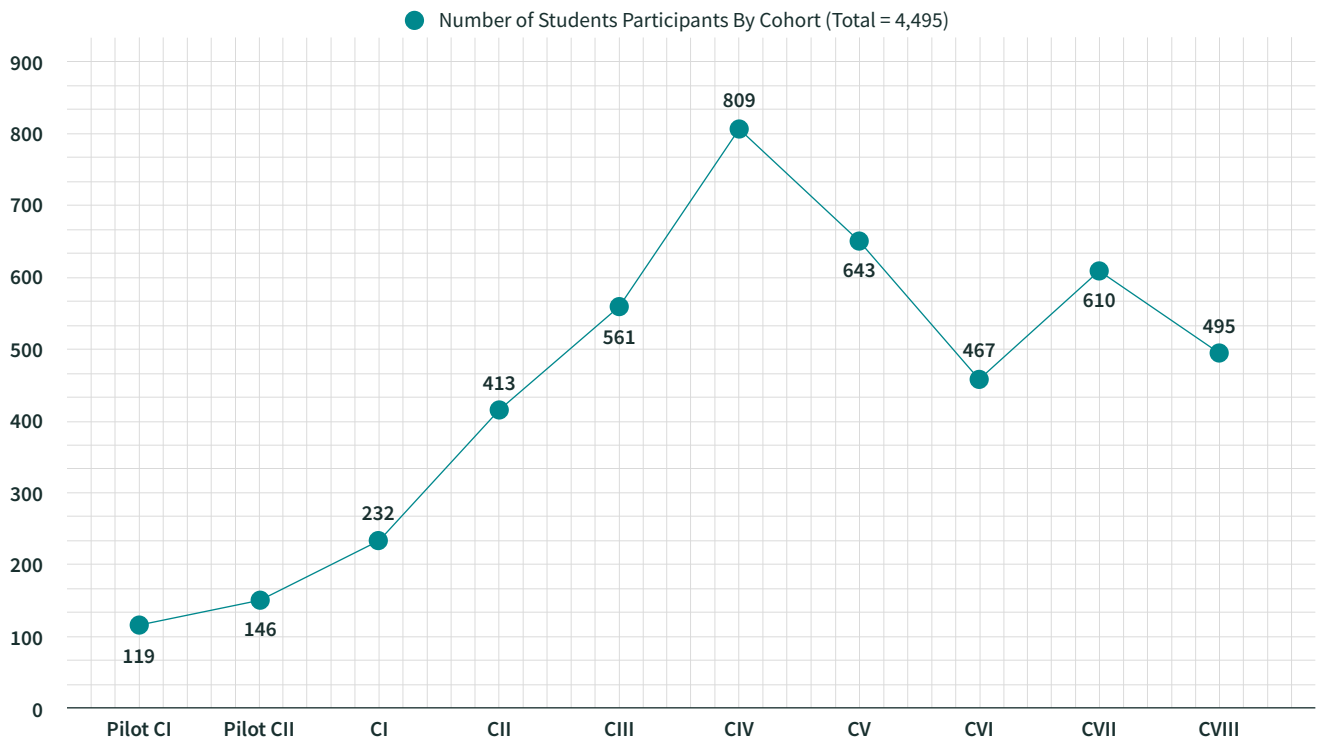Faculty Member, United States

Key Finding 6:

The Global Solutions program is a scalable faculty-led model for virtual exchange.

IREX designed the model and curriculum for Global Solutions with scale in mind. The Global Solutions program incorporates a scalable, versatile model and curriculum, allowing it to be implemented by faculty across disciplines and in various modes. The model provides faculty the flexibility to implement the program that best meets the needs of their institution and students.

TABLE 18: NUMBER OF STUDENTS PARTICIPATING BY COHORT

Number of Students Participants By Cohort (Total = 4,495)

Cohort	Number of Students
Pilot CI	119
Pilot CII	146
CI	232
CII	413
CIII	561
CIV	809
CV	643
CVI	467
CVII	610
CVIII	495

The table above shows the number of student participants each cohort, demonstrating its widening reach and scaling potential. The program scaled through the Spring 2020 Cohort, at which point it plateaued due to the pandemic, and maintained a consistent range of 450–650 participants.
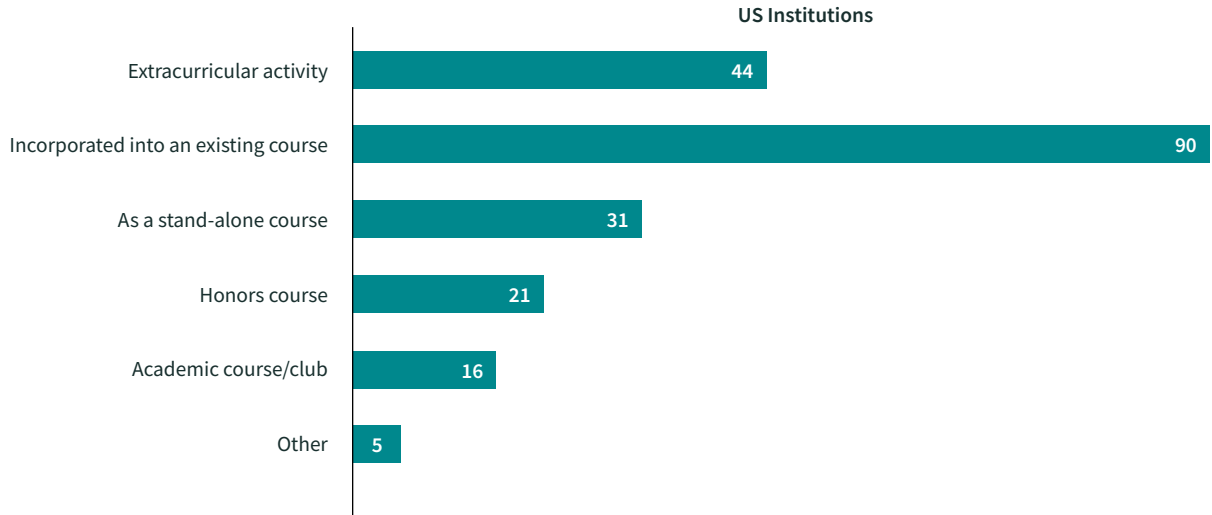
TABLE 19: SUBJECTS TAUGHT BY FACULTY (COHORTS I–VIII)

Row Labels	GSC	GSSC	Grand Total
Iraq	69	94	163
Business & Entrepreneurship	9	13	22
Humanities	36	42	78
STEM	13	21	34
Jordan	32	59	91
Business & Entrepreneurship	9	22	31
Humanities	15	5	20
STEM	4	21	25
US	106	160	266
Business & Entrepreneurship	17	72	89
Humanities	54	63	117
STEM	15	12	27
Grand Total	207	313	520

Note: The total number of subjects is higher than the total number of faculty participating in the program, as faculty self-report this data each cohort, and some faculty may change the discipline they implement the course in.

As seen in the table above, Global Solutions was implemented in a variety of content areas. In the U.S., there was a balance between business and entrepreneurship and the humanities for the GSSC program, with a heavier emphasis on the humanities for the GSC program. In Iraq, the emphasis was on the humanities and STEM for both GSSC and GSC, while in Jordan, courses leaned toward business for GSSC and the humanities for GSC.

TABLE 20: HOW U.S, FACULTY IMPLEMENTED GLOBAL SOLUTIONS (COHORT I–VIII)

US Institutions

| Category	Value
Extracurricular activity	44
Incorporated into an existing course	90
As a stand-alone course	31
Honors course	21
Academic course/club	16
Other	5

Note: The total number of responses is higher than the total number of faculty participating in the program, as faculty self-report this data each cohort, and some faculty may change manner of implementing the course. MENA is not included as all faculty in that region implement the program as an extracurriculuar activity.

Historically, a majority of faculty in the United States incorporated Global Solutions within an existing course. There have been several faculty who found the curriculum robust enough to design stand-alone courses for the program. Many faculty implement the program within an existing course during their first round of participation, then as a stand-alone course for the next cohort. The GSSC curriculum is well suited to a stand-alone 3-credit course, and several faculty implemented the GSC curriculum as a stand-alone 1-credit course. Overall, the Global Solutions model allows U.S. institutions to scale the program by having multiple faculty across disciplines participating, increasing the number of students engaged in meaningful cross-cultural collaboration.

In Jordan and Iraq, due to limitations with the Ministry of Education, faculty must implement the program as an extra-curricular course. This is a potential barrier to scale in the future. It limits the number of faculty willing to take on additional work outside their already overwhelming course loads. The program attracts faculty who want to offer their students experiences missing from the traditional curriculum, but limits the experience to those willing to take on additional work outside a regular class load.

TABLE 21: PERCENTAGE OF RETURNING FACULTY BY COHORT
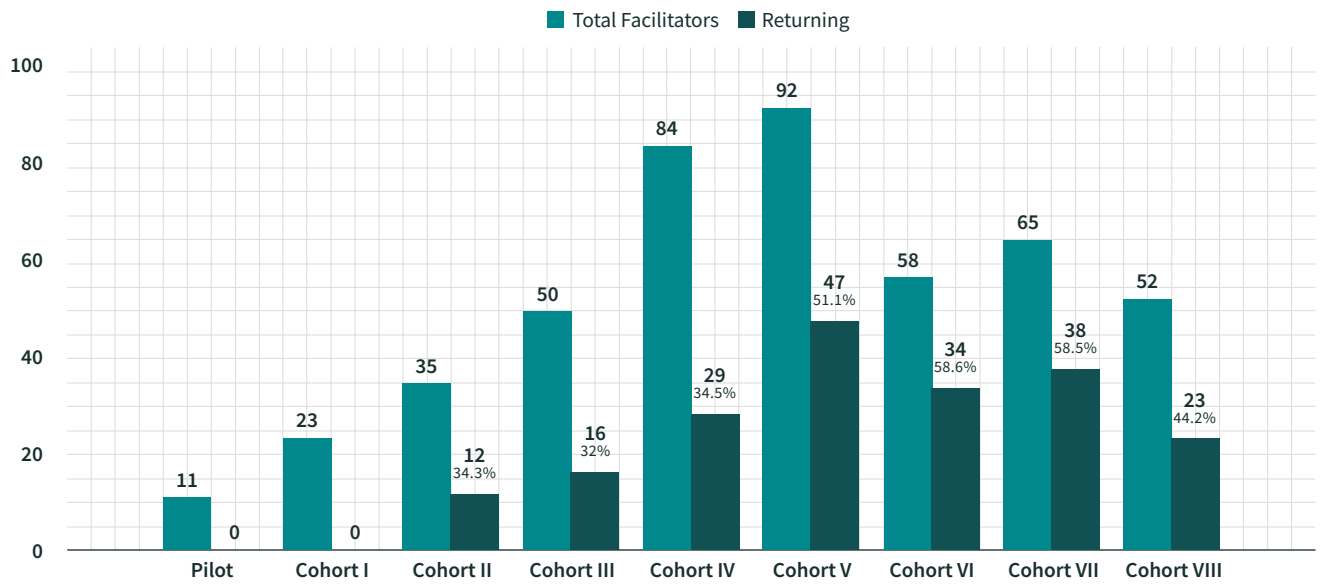
The percentage of returning faculty each cohort demonstrates that Global Solutions effectively supplements existing curricula and supports student learning outcomes. On average, after Cohort V roughly 50% of faculty in each cohort were returning participants. The Global Solutions program model effectively created a lasting impact for students, faculty, and institutions.

TABLE 22: PERCENTAGE OF FACULTY PARTICIPATING IN MULTIPLE COHORTS
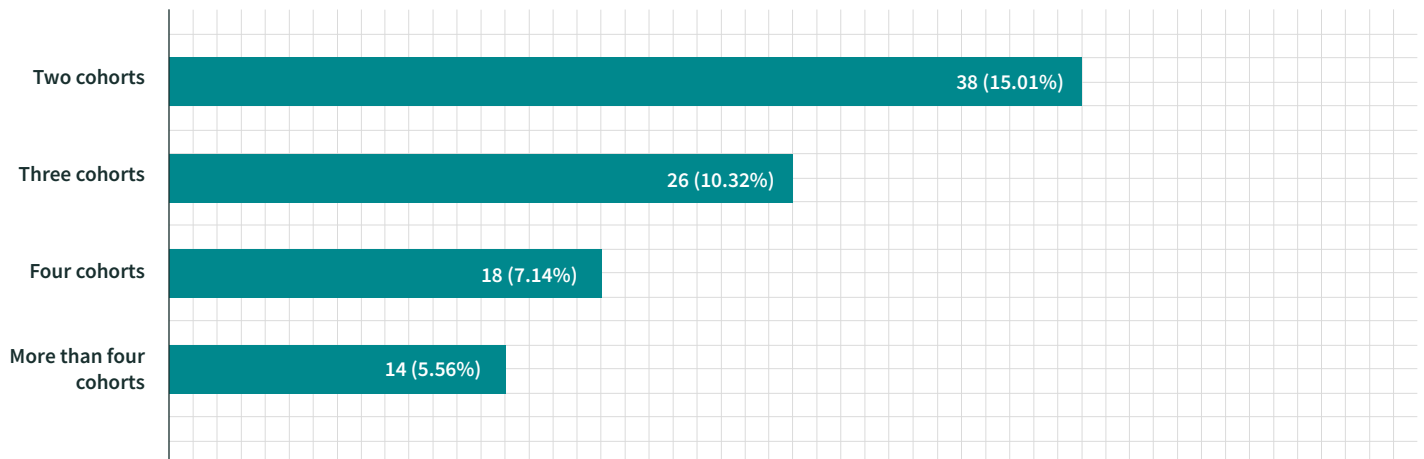
Global Solutions saw 15% (n = 38) of faculty participate in two cohorts, 10% (n = 26) participate in three cohorts, and 13% (n = 32) participate in four or more cohorts. For 40% (n = 27) of U.S. institutions and all institutions in Jordan and Iraq, the number of participating faculty members increased from one to two or more per institution over the life of the program. Five institutions had four or more faculty participate over the life of the program. This shows the program's potential for scaling widely, both by expanding to new institutions and deepening participation within current partner institutions.

Challenges, Lessons Learned, and Recommendations

Below is a summary of recommendations and lessons learned for practitioners considering implementing virtual exchanges that came out of challenges we experienced.

1. **Project-based virtual exchange requires structure and ongoing coaching support.**

   Virtual project-based learning requires a leveling up of engagement, especially for new faculty. Success requires coaching to troubleshoot technology issues and overcome cross-cultural hurdles. Support can be tapered off as faculty become more familiar with virtual exchange. **Programs offering full support like Global Solutions, are a great stepping stone for institutions and faculty new to virtual exchange.**

2. **Participating in cross-cultural virtual exchange requires adaptability, flexibility, and empathy.**

   Participating in virtual exchange requires strong soft skills, including adaptability, flexibility, and empathy. One must manage time zones and navigate cultural perspectives. Binational teams faced the challenge of navigating time differences of seven to twelve hours and start and end dates of semesters that did not always align across countries. In an ideal world, virtual exchange programs would fit into class schedules; however, this is not always the case. U.S. students had to be flexible to meet outside scheduled class time and MENA students had to be flexible to meet outside of the timfrane for their semester. **It is important to set clear expectations of potential challenges and the need for flexibility up front to minimize frustrations.**

3. **Engagement is key for success.**

   There is one important element that drives success: engagement. Regardless of the amount of structure, level of training, the curriculum, or amount of coaching provided, it comes down to the willingness of both faculty and students to "show up" and engage. Even with the strongest faculty, if students don't show up, the gains are lower. **In order for virtual exchange to have the most impact, realistic expectations for engagement should be set up front with milestones along the way to ensure engagement remains high.**

4. **It requires time and effort to implement virtual exchange. This time should be acknowledged.**

   There is a common misconception that virtual exchange is easy to implement because participants are "just connecting on Zoom.". This couldn't be further from the truth. There is the valuable human resource of time that goes into making virtual exchange successful. We provided a small honorarium, certificates, and CEUs for faculty, but we recognize more should be done to acknowledge and incentivize faculty for their time and effort. Since Global Solutions must be carried out as an extracurricular activity in MENA, faculty must conduct it outside of class, and students do not receive course credit. While this has not deterred students from participating, it does deter faculty who may be interested but not have time for this work. **Institutions would benefit from thinking about how they can creatively incentivize virtual exchange for faculty to increase engagement. Institutions in the Middle East should consider how to implement the program within the existing curriculum, increase access for faculty and students, and provide credit for successful participation.**

5. **Despite the world's shift to online learning, the field of virtual exchange is still new. There is an untapped audience of higher education faculty unaware of the value of this tool.**

   While we saw a plateau in participation during the pandemic, this was not for lack of interest among faculty members. It was often due to low student enrollment and courses being dropped. Making new faculty and institutions aware of the program was also a challenge. Recruitment and finding the right avenues for sharing the opportunity takes time. **Primarily among U.S. community colleges, there is an untapped audience of potentially interested faculty who simply are unaware of these types of virtual exchange programs. Faculty who may not even have the concept of globalizing their curriculum on their radar would benefit from such a program. Strategic effort is needed to find fruitful methods to bring awareness of the program to these faculty.**

6. **More effort is needed to effectively measure and communicate the impact of virtual exchange.**

    We held several Community of Practice meetings for both U.S. and MENA faculty. When asked, "How can IREX support you?" we often hear, "Virtual exchange is great. We see the impact. But we need a way to communicate this impact to administration so we can ensure the future of these programs." Administration often does not see the value in virtual exchange due to lack of awareness of the benefits of these programs. Faculty asked us for letters advocating for virtual exchange to give to administrators, and we plan to make this a standard part of the program in the future. As an organization implementing virtual exchange, we recognize the need for more effective means of measuring the impact of the program, both on micro and macro levels. _Overall, faculty would benefit from additional tools and methods for measuring the impact of virtual exchange on a micro level (both qualitative and quantitative) and guidance on communication on how to best promote the value proposition to administration and those making decisions at the institutional level. This could include capacity building for faculty on best practices for measuring impact through their own tools. Organizations implementing virtual exchange should seek out opportunities to collaborate on measuring impact on a macro level._

7. **The ripple effects of the pandemic are real. Valuable incentives for students and effective communication on the benefits of virtual exchange are needed to increase engagement among students.**

    Before the pandemic and the world of online learning, Global Solutions was thriving and beginning to scale as a new program in the virtual exchange space. When the pandemic began, our program was one of a few IREX programs that continued on as-is. Our program was designed for online learning. This was something we were proud of. However, as the pandemic continued, even our program experienced the all-too-familiar challenges of Zoom fatigue, students not "showing up," and the effects of emotional exhaustion. We adjusted, increased flexibility, and adapted where we could. While more research is needed, we have seen the ability of virtual exchange to produce gains in global competencies for youth, even amidst a pandemic. However, we also recognize that this next generation's mindset towards education is shifting. _Although we have seen gains, in order to continue scaling, we may need to shift the way we promote virtual exchange to better align with what youth value._

From "Spark" to "Change"
Applying a build-measure-learn approach to programming

Since the inception of the program, starting with the pilot in 2017, the program design and implementation went through a series of adaptations based on the learnings from each cohort using a constant build-measure-learn approach. After every cohort, the program team evaluated each element of the program to optimize all aspects of the curriculum design and implementation. Based on observations and participant feedback, the resulting program model is both robust and scalable. Each adaptation was initiated by a "Spark," or need, that led to a resulting "Change," or action taken. The following are key sparks and changes.

SPARK: What is the optimal scope that facilitates effective virtual collaboration and results in cohesive ideas for a business competition? What discussion topics allow for strong collaboration, spark conversations on culture, and translate across borders?

Change: We centered the theme of the curriculum on design thinking and the UN SDGs, recognizing that they are effective in igniting excitement among youth and creating a sense of shared unity across borders towards a common goal, while also developing global competencies and workforce skills.

COHORT II

COHORT I

PILOT

SPARK: What is the optimal duration for the program that balances adequate time required to complete activities and varying academic calendars across different countries and institutions?

Change: Six to nine weeks is an effective time frame that allows students to develop meaningful connections. The curriculum can be modified to fit different time frames. However, aligning across college schedules in different countries often poses challenges. The program length fluctuated between six and ten weeks, but we recognized that flexibility needs to be built in to the design.

COHORT III

COHORT IV

COHORT V

COHORT VII

COHORT VI

SPARK: The platform Oba simply was not igniting the cross-cultural collaboration we hoped to see in a binational team setting. It did not model the modern workplace and was an unfamiliar platform for students. We asked, "What is an optimal platform for effective virtual exchange that models the modern workplace, that students would be excited to use, and that supports youth in building valuable workforce skills?"

Change: We found Oba (or other platforms such as Canvas) are not as effective as platforms such as Slack. Slack is an effective tool for both asynchronous and synchronous collaboration and project-based virtual exchange that allows for privacy and accountability.

SPARK: While the GSSC curriculum is effective, it is a heavy lift for faculty and difficult to scale due to the amount of coaching support needed. What could be an alternative but similar curriculum that still results in authentic cross-cultural connection and collaboration?

Change: In order to scale, we designed the Global Solutions Conversations curriculum as a second track option. Dialogue-based virtual exchange is more scalable than a project-based program as less coaching support is needed. Both curricula incorporate design-thinking and the UN SDGs, and both are effective for development of cross-cultural collaboration and empathy.

Looking Forward: Where We See Virtual Exchange Heading

What does the future look like for virtual exchange? A program like Global Solutions could scale widely if provided the right funding to expand beyond the Middle East to other countries around the world and to go deeper within institutions. It is a model that can be replicated in most, if not all, countries and disciplines. Virtual exchange is proving itself to be an effective tool that does not replace study abroad, but that institutions can use to complement study abroad and supplement current curricula. Virtual exchange affords increasing access to international education for marginalized youth and has the potential to reduce learning gaps in global competencies. More research is needed, but our program is evidence that virtual exchange increases global competencies and workforce skills. We close with a final word from a student participant:

> "It was amazing to have this conversation discussing real challenges experienced around the world. If all countries could be brought together in these types of virtual exchange programs, years from now, we just may be able to realize the world as one nation. We are together in this journey of life."
>
> Student, United States

Annex I: Participant survey response rates

The below table references survey response rates from Cohort I – VII.

	MENA			United States		
	Number Pre Program Response Rate	Number Post Program Response Rate	Number of matching pre / post surveys and percentage	Number Pre Program Response Rate	Number Post Program Response Rate	Number of matching pre / post surveys and percentage
Cohort I *Fall 2019*	161 (90%)	135 (83%)	115 (71%)	151 (82%)	126 (83%)	101 (66%)
Cohort II *Spring 2020*	140 (74%)	157 (89%)	113 (64%)	204 (78%)	132 (56%)	104 (44%)
Cohort III *Fall 2020*	189 (72%)	164 (64%)	135 (53%)	209 (68%)	148 (48%)	133 (43%)
Cohort IV *Spring 2021*	258 (59%)	216 (52%)	199 (48%)	238 (59%)	204 (52%)	168 (43%)
Cohort V *Fall 2021*	367 (99%)	250 (73%)	152 (44%)	264 (72%)	169 (49%)	139 (41%)
Cohort VI *Spring 2022*	NA	242 (84%)	NA	NA	117 (73%)	NA
Cohort VII *Fall 2022*	NA	151 (51%)	NA	NA	76 (24%)	NA

Pre and post program survey response rates are calculated by dividing the number of surveys by the number of respondents who were asked to complete the survey. The column 'Number of matching pre / post surveys and percentage' shows the total number of pre and post program surveys that had matching IDs, such that they could be included in the pre and post program survey analysis. The percentage is the number of matched surveys over the total number of youth who meaningfully participated in the program. All data included in this chart is from an independent evaluation conducted by RTI International.

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IREX, June 2023