

SASA NAC 2024 Material Book



Washington, DC
June 23 - 25, 2024



www.mysasa.org

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2024 SASA National Advocacy Conference Agenda

June 23 – 25, 2024

All events located in the Capitol Ballroom at the Holiday Inn Capitol (550 C St SW, Washington, DC) unless otherwise noted. Registration Opens Saturday, June 22nd from 1:00 PM to 6:00 PM in the Hotel Lobby.

Sunday, June 23, 2024

8:00 AM	Registration Open until 1:00pm	Hotel Lobby
9:30 AM	Optional First Timers' Session - Intro to NAC and Advocacy	
11:00 AM	Lunch on your own	
12:30 PM	Capitol Ballroom Doors Open & Informal Networking	
1:00 PM	Welcome	Frank Ferrari and Steve Hyer, SASA
1:30 PM	Kickoff teambuilder	
2:00 PM	Government Overview	Frank Ferrari, SASA
2:15 PM	Policy Legislation	Steve Hyer, SASA
3:15 PM	Break	
3:30 PM	Keynote Speaker	Dan Mantz, <i>REC Foundation</i>
4:00 PM	Appropriations 101	Steve Hyer, SASA
4:45 PM	State Advocacy Conference Process	Ty Vanlerberghe, SASA
5:00 PM	Trivia (Prizes)	Jonah Sementkowski, SASA
5:30 PM	Walk to the Capitol for Team and Group Pictures	
	Adjournment - Dinner on Your Own	

Monday, June 24, 2024

7:00 AM	Breakfast & Networking	Congressional Ballroom
8:15 AM	Welcome to Day 2	Steve Hyer, SASA
8:30 AM	What's Going on in DC?	Noelle Ellerson Ng, AASA
9:00 AM	ESSA and Title IV-A	Leslie Brooks, Afterschool Alliance
9:45 AM	CHIPS and Science Act	James Brown, STEM Ed Coalition
10:15 AM	Break	
10:30 AM	National Defense Authorization Act	James Brown, STEM Ed Coalition
11:00 AM	FIRST Advocacy	Ben Grove, <i>FIRST</i>
11:30 AM	Effective Meetings & Capitol Logistics	
12:15 PM	Lunch and Team Builder	
1:30 PM	Talking Points	Steve Hyer, SASA
1:45 PM	Live Practice Meeting	SASA Interns
2:30 PM	Panel Discussion w/ Q&A	Della Cronin, BPAG; Deb Koolbeck, NEA; Rob Blackwell, Roosevelt
4:00 PM	State Breakout Meetings and Practice	
5:30 PM	Adjournment - Dinner on Your Own	
5:30 PM	Rain Date - Walk to the Capitol for Team and Group Pictures	

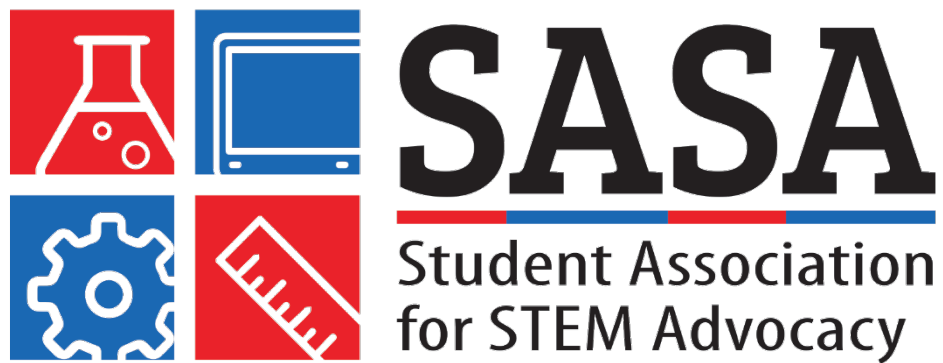
Tuesday, June 25, 2024

8:00 AM	Hill Meetings Based on Your Team and State Schedule	
5:00 PM	SASA NAC Congressional Reception with Robots	Cannon Caucus Room - 390 CHOB
7:00 PM	Reception Ends - Conference Adjournment	



2 – Background Advocacy Documents

2.1 – How a Bill Becomes a Law	8
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How a Bill Becomes a Law

Introduction of Bill

A member of Congress introduces a new piece of legislation or bill. It can be introduced in either the House of Representatives (House) or Senate or both, except that all appropriations or funding bills start in the House. A bill number is assigned (S. 1, for instance, for the first Senate bill introduced; or H.R. 50 for the fiftieth bill introduced in the House).

Committee Consideration

Then the bill goes to the appropriate committee, based on the issue addressed, for consideration. That committee refers the bill to a specific subcommittee, where a hearing is often held and interested parties can testify for and against the bill. After the hearing, a mark-up occurs where amendments are debated and voted on to revise the original bill. The bill then is voted out of the subcommittee to the full committee, where more hearings and another mark-up may take place. The committee votes to decide if the bill will be "reported out" of the committee for consideration by the entire legislative body.

Floor Action

Once the bill is reported out of the committee, the process differs somewhat in the House and Senate. In the House, the bill goes to the Rules Committee, where rules are given to the legislation that regulate time limits for debate and determine whether all members of the House can offer amendments. In the Senate, the bill moves from committee passage to floor debate.

Debate

The speaker of the house and the senate majority leader hold great power due to their responsibility for scheduling floor debate. A common tactic for "killing" a bill is to delay scheduling of the bill so that it may not be voted on. After the bill is scheduled, floor debate occurs and amendments may be offered (if allowed by the rule in the House). The bill is then voted on for final passage. If it passes, the same process occurs in the other chamber.

Conference

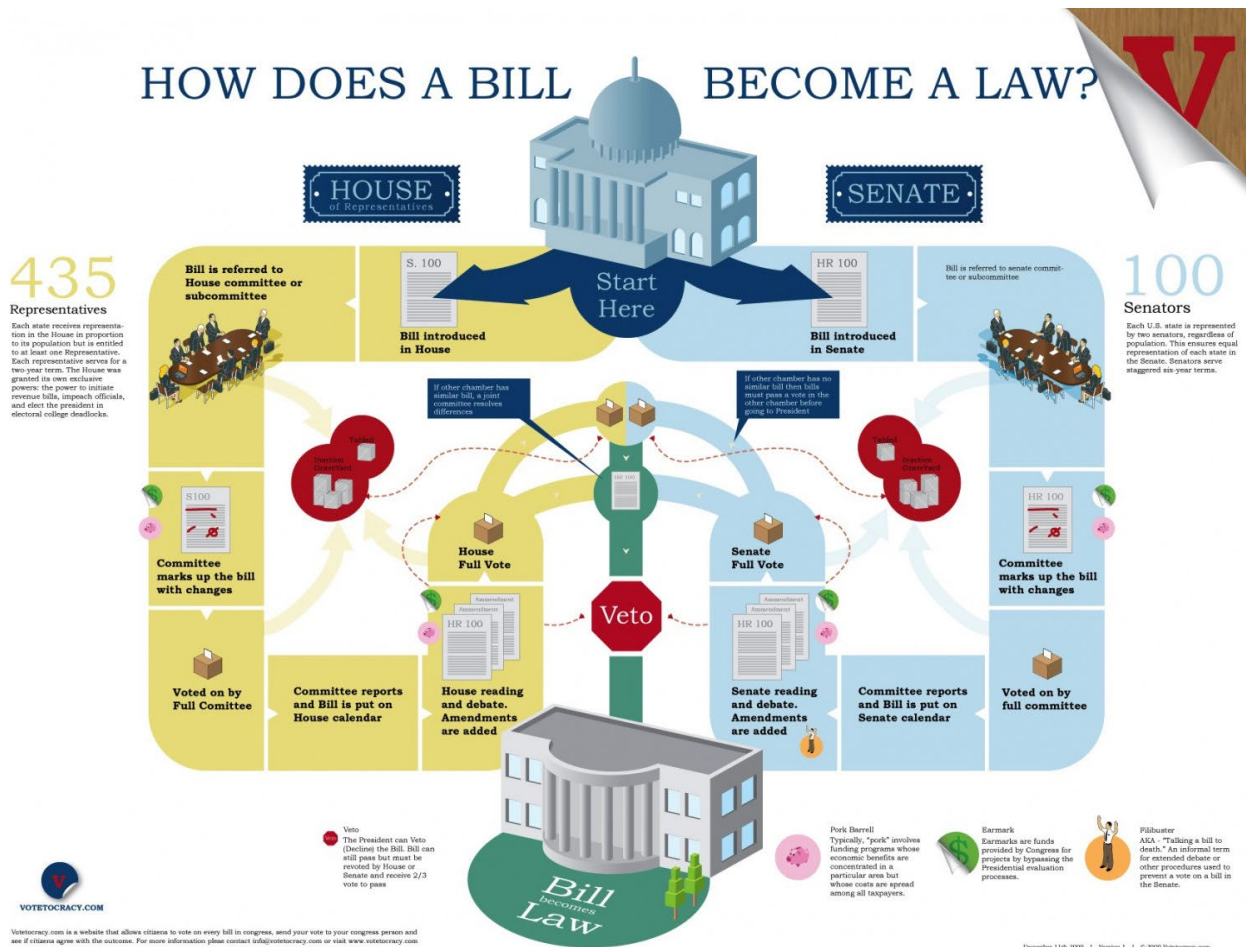
The legislation passed individually by the House and Senate sometimes differs due to the amendments offered in the committees and on the floor. If that's the case, each chamber's version can go to a conference committee made up of members from both chambers in order to work out the differences. A conference report is issued which contains the bill with all agreed upon compromises.

The Bill Becomes Law or is Vetoed

The bill is sent to the president for signature so that the bill can become a law. If the president does not agree with the bill, it can be vetoed and returned to Congress. The bill dies unless the required two-thirds majority in both the House and Senate overrides the veto.

Source: National School Board Association

How a Bill Becomes a Law



Source: votetocracy.com

Face-to-Face with Congress:

Before, During, and After
Meetings with Legislators



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CONGRESSIONAL MANAGEMENT FOUNDATION

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Made possible by grants from

**Blue Cross Blue Shield Association
Professional Women in Advocacy Conference
RAP Index**

About This Report

The data in this report are based on CMF's vast knowledge and experience working with House and Senate staffers during its 37-year history and on four online surveys of congressional staff taken between 2010 and 2013. Staff in the House and Senate were invited to participate in the surveys via email, and almost 450 responses were received from Chiefs of Staff, Legislative Directors, Communications Directors, District Directors, Schedulers, Correspondence Directors, and other mail/legislative staff.

Special Thanks

We are grateful to our sponsors, Blue Cross Blue Shield Association, Professional Women in Advocacy Conference, and RAP Index, who have generously enabled us to produce this report. Their contributions further the important work of CMF's *Partnership for a More Perfect Union* and help promote a more effective and meaningful democratic dialogue.



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Introduction

According to congressional staffers, in-person visits from constituents are the most influential way to communicate with a Senator or Representative who is undecided on an issue. This was just one of the findings in the 2011 Congressional Management Foundation (CMF) report *Perceptions of Citizen Advocacy on Capitol Hill*. Most of the congressional staff surveyed said constituent visits to the Washington office (97%) and to the district/state office (94%) have “some” or “a lot” of influence on an undecided legislator, more than any other strategy for communicating with a Member of Congress.

Members of the House of Representatives consider keeping in touch with constituents to be the most important aspect of their job satisfaction.

Whether someone is a member of an association, an employee of a business, a supporter of a nonprofit or interest group, or just a constituent with something to say, Senators and Representatives want to hear from their constituents. In fact, Members of the House of Representatives consider keeping in touch with constituents to be the most important aspect of their job satisfaction. As described in the 2013 CMF-Society for Human Resources (SHRM) report *Life in Congress: The Member Perspective*, 95% of the Representatives surveyed rated “staying in touch with constituents” as the job aspect most critical to their effectiveness.

Though constituent contact is extremely important to legislators, interacting and building relationships with them can be a challenge, largely due to their hectic lives. The CMF-SHRM report also found that Representatives work an average of 70 hours per week when the House is in session and 59 hours per week when it is not in session. They have approximately 13 meetings per day on a wide array of issues, and they are bombarded from all sides with data and opinions, many of them unsolicited. They also must find time for family obligations, campaign duties, and political party functions. Though Senators and Representatives want to meet with constituents, because of these competing demands, getting on their calendars and influencing the policy decision-making process requires preparation and a little finesse on the part of advocates.

The purpose of this report is to provide research-based guidance for scheduling, conducting, and following up after office meetings with Members of Congress and staff. To develop this advice, CMF used information collected through its long history working with congressional offices and data from surveys conducted with congressional staffers, primarily from the House of Representatives, between 2010 and 2013. Included in the survey were open-ended questions that allowed staffers to report candidly and anonymously on aspects of constituent meetings that they would never reveal to constituents, convey to lobbyists, or whisper to reporters.

Building on its 37-year history of aiding and researching Congress, CMF hopes this information will provide valuable information to advocacy organizations, citizens, and Congress, as well as guidance for conducting effective meetings between constituents and lawmakers and help build better relationships between citizens and their legislators on Capitol Hill.

Planning for a Meeting

The process for an effective meeting with a Senator or Representative begins with advanced planning. In addition to thinking about the goals for the meeting, attendees need to know a little bit about how Congress and congressional scheduling work before they step into a legislator's office.

1. Include constituents.

The United States is a representative democracy, which means that Senators and Representatives are beholden to the people they represent before anyone else in the country. One of the biggest pet peeves expressed by House Schedulers was a constituent “bait and switch,” when a constituent is promised but does not materialize when the meeting occurs. Groups’ reputations with Members have been ruined through this sort of duplicity. If a meeting is scheduled with a constituent, then someone who lives in the Senator’s state or Representative’s district should be in attendance.

“Our number one factor in scheduling a meeting is if a constituent is in the group. Constituents from our district take top priority over any other type of request.”

—House Scheduler

2. Know the congressional schedule.

Though the day-to-day schedule can be unpredictable, each chamber posts its annual calendar online at the beginning of each year, and usually sticks closely to it. When votes are scheduled in the House of Representatives or Senate, legislators will be working in Washington, D.C. When there are no votes, many can be found working back home among their constituents. Meetings back home can also sometimes be scheduled on weekends, since many Senators and Representatives work most weekends attending events, visiting businesses, and meeting with constituents.

3. Be flexible about time and location.

If the date and time for a meeting are rigid, it will be more difficult to schedule with a Senator or Representative. The more flexible attendees can be, the more likely it is that they will be accorded a meeting. “Constituent groups should allow the congressional office to determine the time they will meet with the Member instead of their dictating the best time frame for them,” said one House Chief of Staff. It also helps to be flexible about location. As Figure 1 shows, almost three-quarters

(71%) of the House Chiefs of Staff surveyed said their bosses had no preference as to where they meet with constituents.

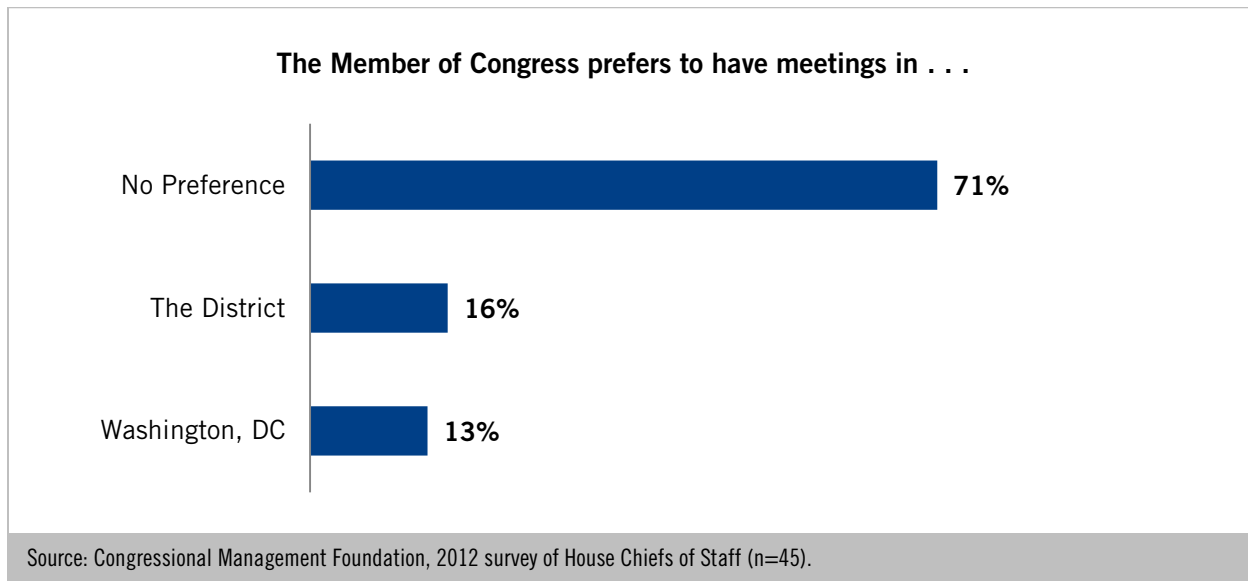
4. Keep the group small.

While Senators usually have larger suites, space is severely limited in most Representatives' offices. In fact, many offices are so cramped that meetings may occur in informal settings like the reception area, cafeteria, hallway or even in an elevator as the legislator is on the way to vote. This is not a sign of disrespect. It is a reflection of the small offices and hectic work lives of Representatives and their staffs. A large group risks overflowing the small spaces and spending the entire meeting making introductions, rather than making its case.

“Don’t bring too many people, four at most is best. Rooms are small and it is easier to appoint one or two people to speak.”

—House Chief of Staff

Figure 1. Meeting Location Preferences



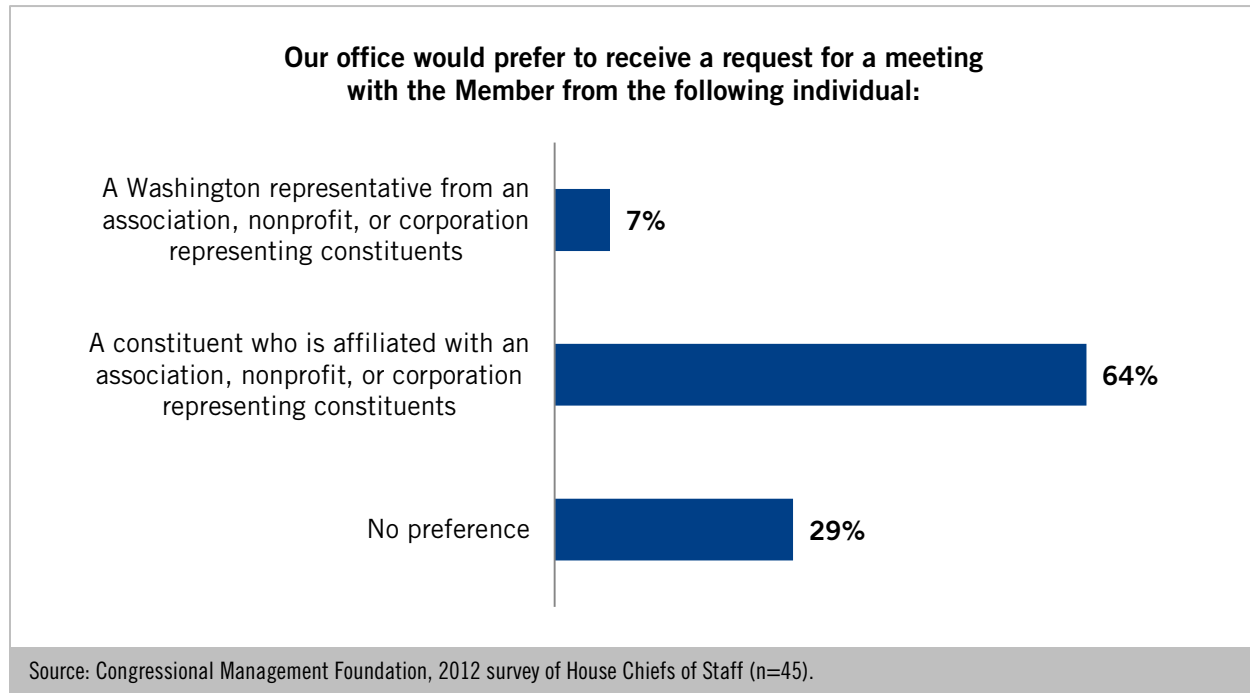
Scheduling a Meeting

Once there is a sense of who will be attending the meeting and where and when it should be, it is time to contact the Senator's or Representative's Scheduler. Most Senate offices have separate Schedulers for Washington, D.C. and the state, and about half of House offices follow this model. The two Schedulers defer to each other based on where the legislator will be at the time of the meeting, so the request must be directed to the appropriate person. The rest of the House offices have a single Scheduler who manages all of the Representative's time. Keep the following in mind when contacting a congressional Scheduler.

1. Have a constituent make the request.

As Figure 2 shows, about two-thirds of the House Chiefs of Staff we surveyed said a request for a meeting with the legislator should come from a constituent. Only 7% said the request should come from a Washington representative of the group, like a lobbyist or coordinator, and the rest had no preference for the source of the request.

Figure 2. Preferences for Source of Meeting Requests

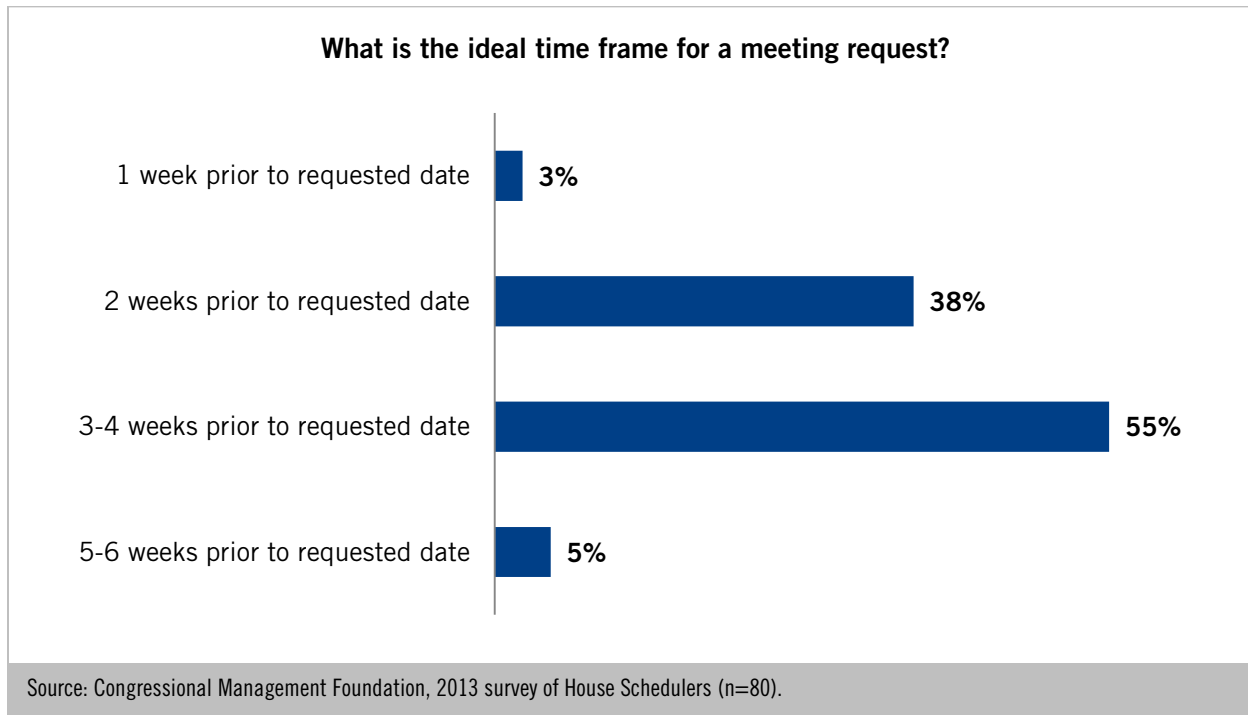


2. Make the request two to four weeks in advance.

Congressional offices are busy places, and Senators and Representatives have many competing demands for their time. Most offices will not commit to a meeting request made too far in advance because it may eventually need to be rescheduled—a result of the erratic congressional calendar. However, last-minute requests will run into an inflexible, full schedule and a frustrated Scheduler. As Figure 3 shows, more than half (55%) of House Schedulers surveyed prefer a request to come 3-4 weeks in advance, and more than one-third (38%) prefer at least two weeks' notice.

“Last minute scheduling requests are my biggest pet peeve.”

—House Scheduler

Figure 3. Ideal Time Frame for Meeting Requests

3. Include all the information the Scheduler needs.

There are a lot of logistics and decisions involved in deciding how a Member of Congress will spend his or her time. In the initial request be sure to provide all the information the Scheduler needs, since it will not be considered until everything is together. As one House Scheduler put it, “I can’t ask my boss if he wants to take this particular meeting until I have all the information. If I don’t get the information in time it won’t go to the Congressman and thus will be set with staff.” Most Schedulers we surveyed require at least the following:

- Meeting topic or reason for the meeting (96%);
- Primary contact’s name (95%);
- Name and short description of the group (92%);
- Requested meeting date (91%); and
- Primary contact’s email address (89%).

Many offices post their scheduling requirements on their websites and in Schedulers’ voicemail messages, so be sure to click or call before you request a meeting.

4. Be prepared to meet with a staffer.

If the Senator or Representative is not available, the Scheduler will often set up a meeting with a staffer. Sometimes the meeting will be with a staffer, even if it was on the legislator's schedule, due to a last-minute schedule change. Meeting with a staffer does not mean the legislator does not care about the meeting or the issue. It simply means the he or she is not available, and the office wants to accommodate the group. Congressional aides are knowledgeable and have the trust of the legislator, so a meeting with them can be as effective as a meeting with the legislator. "A meeting with staff can be VERY beneficial and much more likely to happen. There is only one congressman with only so many minutes in his day. There are usually three to five legislative staffers with more availability than the Member," said one House Scheduler.

"A meeting with staff can be VERY beneficial and much more likely to happen."

—House Scheduler

Conducting a Meeting

Meetings with Senators and Representatives in Washington, D.C. are usually brief (15 minutes or less), often interrupted, and they can be intimidating for a lot of people. As a result, it pays to be well-prepared before setting foot in the office. Meeting attendees will be most effective if they have: clear goals in mind for the meeting; *brief* talking points to convey; a clear sense of what they are asking the legislator to do; and a good idea of what to expect during the meeting. Following are some of the things to keep in mind when meeting with legislators.

1. Be on time.

Individuals who are early for meetings with Senators and Representatives often have to wait until the legislator is available. In most Washington offices, this means crowding into the reception area and having to get out of the way as staffers dart to and fro. If people are late for a meeting, they risk not being able to meet at all. Try to arrive no more than five minutes before an appointment and let the Scheduler know if attendees are going to be even a few minutes late. He or she can help manage the Member's time during the wait or possibly provide another time later in the day if the Member cannot wait.

"Please be in touch with the office if you will be late. Members are scheduled so tight that tardiness can impact the ability of the meeting to occur."

—House Chief of Staff

2. Be flexible.

When meetings are scheduled in Washington, there is no way for Senators, Representatives or their staffers to predict when committee and floor votes will occur. On any given day, legislators can be called to vote at any time. For this reason, it is important to be flexible. If the legislator is unavailable, the group will either be asked to wait or they will meet with a staffer. If they meet with a staffer, they should do and say exactly

what they had planned to with the legislator, and, if he or she walks in during the meeting, there is no need to start again. The legislator will ask questions, as needed, and will follow up with the staffer after the group leaves.

3. Stay on topic.

It can be tempting for attendees, when faced with what might be the only meeting they will ever have with their Senator or Representative, to raise issues other than the one they came for. However, they need to focus on the issue at hand. The limited time allotted should be used to accomplish the goals for the meeting by making a clear, focused, and persuasive case and asking the legislator to do the thing they feel is most important to advance the issue. Future meetings can be scheduled to discuss other issues.

4. Keep politics out of it.

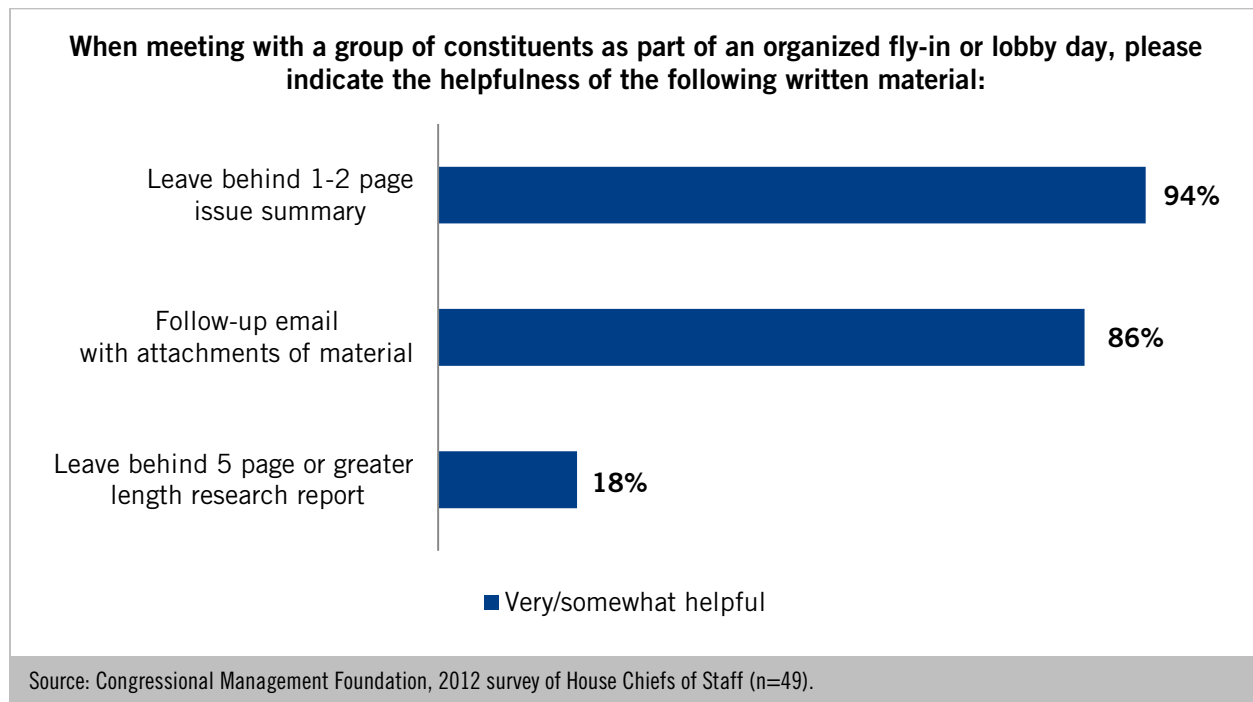
Attendees may disagree with the legislator on some or all of the issues that matter to them, but they need to set that aside if they want the meeting to be as successful as possible. It is important that attendees be respectful and leave general political feelings out of the meeting. Winning a Representative over depends on effective communication, engaging dialogue, and persuasive arguments. A meeting in a legislator's office is not the time or place to bring up elections or campaign contributions unless the meeting is about campaign finance reform.

“Mentioning campaign contributions or other political support should be avoided. It is against the rules and it intimates that they and the Member of Congress are for sale.”

—House Chief of Staff

5. Provide a brief summary document.

Persuasion does not have to stop when attendees leave the office if they leave a summary of their issue and stance behind, as long as it is brief. As Figure 4 shows, it is very helpful to leave a one to two-page summary of the issue and to send some information to a staffer via email after the meeting. These serve as reminders of the group and the issue, and they provide staff with something to refer to as the issue moves through the legislative process. If the meeting is coordinated through an organization (e.g., an association or employer), having clear, concise, Congress-focused information on the organization's website can also extend the usefulness of the meeting. Many people leave reports, marketing folders and longer issue briefs behind, but these are not likely to be read. Keep it simple and short, and it will be useful.

Figure 4. What to Leave Behind

Following Up after a Meeting

Citizens who follow up and keep in touch after they meet with a Senator or Representative can become more trusted resources for the legislator and staff, which makes them more effective advocates for their issues. Some of the things to consider doing after the meeting are below.

1. Answer questions if the office asks them.

Sometimes a legislator or staffer will ask a question during the meeting that the attendees cannot answer or will follow up with a question after the meeting. These questions should be answered, even if the answers do not wholly support the attendees' case. It is better to be reliable and trustworthy than cagey or silent. "In the event that the Member or attending staffer requests technical or specific information it is extremely helpful to receive that information in a future contact. It is surprising how often a constituent, or even a paid lobbyist, will fail to respond to requests for technical information," said one House Chief of Staff.

"It is surprising how often a constituent, or even a paid lobbyist, will fail to respond to requests for technical information."

—House Chief of Staff

2. Follow up with the staffer.

Senators and Representatives almost always have a staffer attend meetings, usually the advisor on the issue being discussed. This person will usually hand out business cards with his or her title and contact

information. Attendees should use that information to send a follow-up email a few days after the meeting. The message should be brief, thanking the staffer for his or her time and reiterating the issue and the request. Including an electronic version of the leave-behind and a link to reliable online information about the issue will serve both as a reminder of the issue and a resource the staffer can easily locate when the issue comes up in the legislative process.

3. Attend events in the district.

If attendees show up, from time to time, at town hall meetings and other public events the legislator is hosting or attending, they start to build a relationship with the office. If meeting attendees are seen visibly engaged in advocacy and public policy in the district or state—especially in a constructive, non-confrontational way—legislators and their staff view those individuals as more trustworthy advocates for their issues. If attendees are in a position to plan an event or site visit for the Member, even better. The Member can see, first-hand, what the group is advocating for and, if other constituents are involved, both the issue and the Member receive broader attention.

“[My Member] prefers to be out in the district meeting with constituents in their own venue. He gains insight to their issues, challenges and needs by being present on the ground.”

—House District Director

4. Keep in touch.

It is unproductive to become what congressional staff call a “pen pal,” or someone who over-communicates with them, but it is a good idea to touch base every once in a while. If new information about the issue is released, attendees should contact the office to call their attention to it. If there is movement on key legislation in committee or a floor vote is expected, attendees can remind the legislator of their stance. If there is a new or creative way for the Member to fulfill the request made during the meeting, attendees should point it out. If communications are informative, respectful, concise and direct they can go a long way toward helping the Member and staffer keep the issue on their radar.

Conclusion

From the founding of our country, in-person meetings with Senators and Representatives have been the most effective way for citizens to shape public policy. Even with the many and diverse communications venues now available, meetings still trump any other interaction between legislators and their constituents. Anyone who wishes to help shape public policy on the issues about which they care deeply should consider scheduling meetings with their Senators and Representatives, using this primer as a guide.

About the Congressional Management Foundation

Established 1977

Who We Are

Citizen trust in an effective and responsive Congress is essential to democracy. Since 1977, the Congressional Management Foundation (CMF) has advanced this goal by working directly with Members of Congress and staff to enhance their operations and interactions with constituents. CMF also works directly with citizen groups to educate them on how Congress works, giving constituents a stronger voice in policy outcomes. The aspirations are: a Congress more accountable, transparent, and effective; and an informed citizenry with greater trust in their democratic institutions.

What We Accomplish

CMF enhances the effectiveness of congressional offices, enabling them to provide better services for their constituents and create better policy outcomes for all Americans.

CMF promotes transparency and accountability in Congress, affording citizens data and tools to become more informed about decisions that affect them, their families, and communities.

CMF educates and motivates individuals to become active and informed citizen-advocates, providing them with an understanding of Congress, the skills to influence public policy, and the value of citizen engagement.

CMF enhances the public's understanding of how the Congress really works, providing a window into our democratic institutions through its unique relationship with lawmakers and staff.

How We Do It

CMF conducts professional development training and consultations for all levels of congressional staff to strengthen their office operations and management. CMF provides research, training, and publications to citizens and groups so they can better to enhance their interactions with Congress. CMF critiques and explains Congress—demystifying its operations. CMF conducts primary research on Congress and provides best practices guidance on office operations.

Quick Facts

- More than 350 congressional offices participated in the 70 training programs CMF conducted in 2013.
- In 2013, CMF conducted 56 educational sessions with groups involving thousands of citizens on effective interactions with Congress.
- Since CMF has been assessing congressional websites and urging more transparent practices, the percentage of Members of Congress who post their voting record online has doubled.
- Since 2000, CMF has conducted more than 500 strategic planning or other consulting projects with Members of Congress and their staffs.

For more information, contact CMF at 202-546-0100 or visit www.CongressFoundation.org.

THE PARTNERSHIP FOR
A More Perfect Union
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CONGRESSIONAL MANAGEMENT FOUNDATION

“We in America do *not* have government by the majority.
We have government by the majority who participate.”

—Thomas Jefferson

Become a Partner in Enriching the Relationship Between Citizens and Congress

The *Partnership* is a subscription program within CMF that seeks to further our nation’s progress toward “a more perfect union” by fostering the genuine and effective exchange of ideas between Members of Congress and citizens.

We conduct communications best practices research and help forge relationships between congressional staff, advocates, and citizens through presentations, webinars and videos based on CMF research.

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How to Lobby

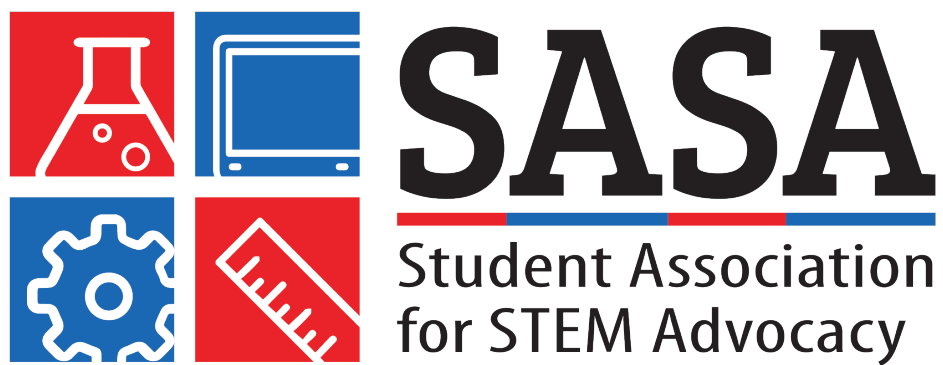
12 Tips for Effective Lobbying

How to Lobby	
Start where they are, not where you are	Beginning from a place of understanding is the best way to convince. Your task is to convince your legislator; it's not their job to agree.
Do your homework	Before contacting legislators, review as much of the available background material on the bill or issue as possible, including its current status in the legislative process.
Listen carefully	Try to understand their point of view and engage in a dialogue, not a lecture.
Stay focused on the issue	Keep to the issue or business at hand. Don't spend too much time on social conversation.
Be positive	You won't always agree but turning negative during a meeting is a sure way to shut down the dialogue.
There are no permanent friends and no permanent enemies	Alliances can shift depending on issues. Try to understand your legislators to know when they can be helpful.
Be sure to have a clear proposal to offer	Give substantive reasons for making changes and factual information to justify your positions if you are proposing amendments to a bill or an alternative solution to a problem.
Relate examples	Politics are local. Give your legislator examples of how legislation will affect your district.
Select one or two people to speak	If you have more than two members in your group, select one or two spokespeople.
Show appreciation for support	It is usually a waste of time (for both of you) to lobby legislators who are in support of your position, although your legislator may be helpful in making suggestions for your lobbying efforts. It does help to let them know you appreciate their support.
Keep your cool	Try to avoid prolonged or controversial argument. Allow your legislator to express doubts, questions or opinions without interruption. A calm, reasonable attitude and well-prepared reasons for your position may change minds.
Know when to stop	Sometimes you won't convince your legislator that you're right. Recognize the impasse and move on.



3 – SASA Platform

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SASA Public Platform

Public Platform

Promoting the Expansion of and Access to
STEM Programs

Purpose

The Student Association for STEM Advocacy (SASA) was founded in 2020 as a way to further and expand STEM advocacy efforts nationwide.

Our mission is to develop student advocates to expand access to STEM opportunities. We envision a future where students enter the workforce engaged in the democratic government of the United States because they were involved in some kind of Advocacy effort to expand and promote STEM Education in high school or college.



To achieve our mission and realize our vision, SASA works toward the following goals:

- Grow the reach and impact of the National Advocacy Conference.
- Organize and run State Advocacy Conferences.
- Grow a diverse membership base.
- Compile existing state regulations and laws that fund afterschool STEM engagement activities as a template from which other states can learn.
- Develop tools for schools and programs to understand how current state and federal resources can be used to aid afterschool STEM activities.

Our Core Beliefs

SASA is driven by a core set of beliefs in all of the work we do and relationships we build. We will not support programs or efforts that do not share these beliefs.

Promote and Embrace Effective STEM Programs

The future of the US economy is knowledge-based and depends on workers trained with STEM skills. That is why we support the expansion of STEM programs to give more students access to these activities.

We do not believe every student should go into a STEM field, but every student must be afforded the opportunity to experience STEM and choose that as their future path. Moreover, the skills students learn while participating in STEM programs will translate to any career path on which they decide. Promoting STEM engagement activities for students will increase the ability of our future workforce to effectively participate in our knowledge-based economy, regardless of their profession.

We want to remove the stigma that STEM education is hard and promote the idea that it is a collaborative problem-solving method that anyone can learn and use.

As an organization, we invite-in and support students from all backgrounds. We do not believe in just one STEM program, but instead, we support any and all effective curricular and extracurricular STEM programs. We believe students, schools, and administrators should be empowered to decide what STEM program is

Public Platform

Promoting the Expansion of and Access to
STEM Programs

best for them. Our drive is to make sure STEM programs are available and accessible across the nation so that all students are exposed to them.

Data-Based Decision Making

We believe in using objective data-based decision making to evaluate STEM programs, legislation, and outcomes. We believe in using data above politics and partisan ideologies to create policy. SASA supports applying the scientific method to solve problems.

Democracy Requires an Engaged, Educated Citizenry

We believe that the strength of our nation and its democracy requires an engaged and educated citizenry. That is why, as an association, we promote student civic engagement to ensure strong participation in our democracy for future generations. We believe it is essential that our members understand how the government works to be able to effectively influence the process.

Furthermore, we believe that creating an engaged citizenry requires building relationships with policymakers and elected officials.

STEM is Not Exclusive

Nothing in our organization's platform excludes the arts and humanities or STEAM. Real-world careers are interdisciplinary. The application of STEM concepts to the arts and humanities is not a new idea and has led to profound human progress, from people such as Leonardo Da Vinci to the Wright Brothers. STEM programs teach students how to problem-solve by thinking critically, creatively, and collaboratively. These

skills can and should be used to tackle real-world problems in every industry.

We believe that STEM and the arts are not mutually-exclusive, and we do not support the promotion of STEM at the expense of other programs. STEM is an interdisciplinary approach to problem-solving, but it is not the only thing.



Policy Priorities

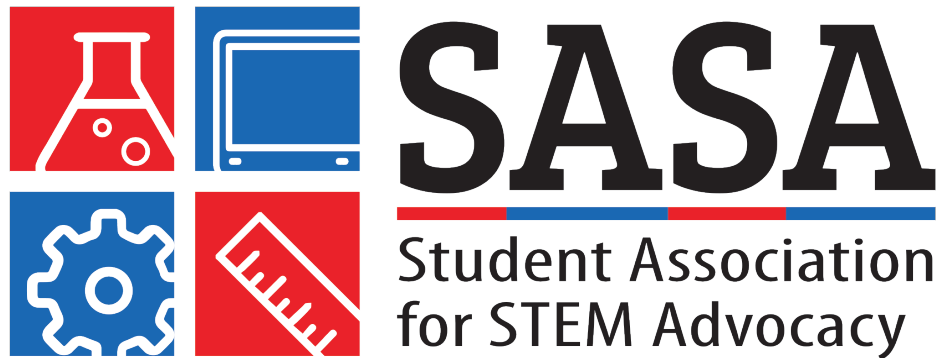
SASA calls on states, Congress, and the Administration to meaningfully incorporate policies that ensure every student has equitable access to STEM engagement programs. Legislation and regulations must:

- ✓ Ensure that all schools have adequate funding to provide STEM-based programs, especially in underserved and underrepresented communities.
- ✓ Align teacher professional development requirements and programs with participation in STEM activities.
- ✓ Increase funding for grants used for STEM engagement activities at every level, including raising funding for the Student Support and Academic Enrichment (SSAE) Grants in ESSA Title IV-A to its authorized level of \$1.6 billion and STEM Education Programs run through the National Science Foundation to its authorized level of \$1.95 billion.



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Elementary and Secondary Education Act Issue Brief

Updated April 2024

History

The Elementary and Secondary Education Act (ESEA) is the largest piece of federal education legislation and provides funding to K-12 schools across the United States. The act was initially passed by the 89th Congress and signed into law by President Lyndon Johnson in 1965 in an effort “to strengthen and improve educational quality and educational opportunities in the Nation’s elementary and secondary schools” (Elementary and Secondary Education Act, 1965). Since its initial passage, the law has been reauthorized eight times in an effort to update its requirements and promote the intent of the original bill in ensuring equal access to a quality education for K-12 students.

The 1994 reauthorization, the Improving America’s Schools Act, established standards and accountability measures for states and school districts that received funding under ESEA. In 2001, Congress passed the seventh reauthorization of ESEA, titled No Child Left Behind (NCLB), with overwhelming bipartisan support to reform America’s education system. NCLB further developed and raised the previous reauthorization’s accountability provisions, holding states and school districts accountable for student outcomes.

Historically, ESEA was reauthorized every 5 years to modernize the law, update provisions that were not working as intended, and extend the authorization of funding. ESEA was supposed to be reauthorized in 2007, but because of political differences and the upcoming presidential election, Congress missed that deadline. This delay resulted in the Department of Education (ED) creating ESEA

Flexibility waivers in 2011 for states to bypass some of NCLB’s requirements, including a statistically impossible Adequate Yearly Progress (AYP) measure that required schools show 100% proficiency in reading and math by the 2013-14 school year. While necessary, the ED waivers replaced one set of unattainable standards with another set of burdensome requirements.

Finally on December 10, 2015, fourteen years after NCLB was signed into law and eight years overdue, Congress passed the Every Student Succeeds Act (ESSA) as the latest reauthorization of ESEA. ESSA was designed to give states and local school districts more control over education policy and accountability measures and increased opportunities for local input and flexible decision-making based on what communities and states need.

The Current Legislation

Compared to its predecessor, NCLB, the Every Student Succeeds Act marks a shift from major federal authority over education to increased flexibility for states and local school districts. With ESSA, states do not need to focus solely on state reading and math scores to evaluate schools, and they instead must take into consideration four more holistic academic factors and one school-quality factor. ESSA eliminates the troublesome Adequate Yearly Progress measure, as well as the Highly Qualified Teacher (HQT) requirement to allow states to come up with their own definitions of what it means to be an effective teacher. Further, the new authorization removes prescribed interventions and allows funds to be

blended and transferable to meet a state and school district's needs.

ESSA contains nine titles, as outlined below. SASA's primary focus is on Title IV, so it is the first section listed. However, the other eight titles have been outlined, as well.

Title IV – 21st Century Schools

Title IV authorizes a range of activities including a block grant program, a program to support learning opportunities at community learning centers, programs to enhance and assist charter and magnet schools, a family engagement in education program, an Education Innovation and Research (EIR) program, and programs to provide community support for student success, among other activities.

Of particular interest to SASA is Title IV Part A: Student Support and Academic Enrichment (SSAE) Grants. These grants are distributed directly to state education agencies (SEAs), the departments of education that run the education systems of their states and distribute these grants to local education agencies (LEAs, school boards, school districts, etc.). These grants are distributed based on the same formula used by the Title I-A grant program, meaning that grants are targeted to schools with the highest numbers or proportions of low-income students. Title IV-A consolidates many previous federal programs from NCLB into a single program.

SSAE grants must be used for activities in three broad areas:

1. Providing students access to well-rounded educational opportunities (e.g. college and career counseling, STEM,

music and arts, civics, IB/AP curriculum).

2. Supporting safe and healthy students (e.g. comprehensive school mental health, drug and violence prevention, training on trauma-informed practices, health and physical education).
3. Supporting the effective use of technology (e.g. professional development, blended and personalized learning, devices).

SEAs are required to make allocations of at least \$10,000 to each school district, and LEAs that receive grants of \$30,000 or more must use at least 20% of funds for a well-rounded education, 20% of funds to support safe and healthy students, and at least some funds to support the effective use of technology.

Title I – Improving the Academic Achievement of the Disadvantaged

The purpose of this title is “to provide all children significant opportunity to receive a fair, equitable, and high-quality education, and to close educational achievement gaps.”

According to the Education Department, Title I “provides financial assistance to LEAs and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards. Federal funds are currently allocated through four statutory formulas that are based primarily on census poverty estimates and the cost of education in each state.” Title I funds made up 62% of all appropriations for ESEA programs in 2020. This title also outlines the standards, assessments,

and accountability requirements SEAs must create to receive funding.

Title II: Preparing, Training, and Recruiting High-Quality Teachers, Principals, or Other School Leaders

This title supports professional development.

The purpose of Title II is “to provide grants to State educational agencies and subgrants to local educational agencies to:

1. Increase student achievement consistent with the challenging State academic standards.
2. Improve the quality and effectiveness of teachers, principals, and other school leaders.
3. Increase the number of teachers, principals, and other school leaders who are effective in improving student academic achievement in schools.
4. Provide low-income and minority students greater access to effective teachers, principals, and other school leaders.”

Title III: Language Instruction for English Learners and Immigrant Students

This title supports English language learners.

The purpose of Title III is to provide grants to SEAs to develop high levels of academic achievement for English language learners, including immigrant students.

Title V: State Innovation and Local Flexibility

This title supports state and local flexibility. The purpose of Title V is to allow SEAs and LEAs the flexibility to direct federal funds to the programs that most effectively address their unique needs. Part B of this Title is titled the Rural Education Initiative and provides funds for schools with small populations in lower-density areas to be used toward any allowable use of funds under ESSA Title I Part A, Title II Part A, Title III, **Title IV Part A**, or Title IV Part B.

Title VI: Indian, Native Hawaiian, Alaska Native Education

This title targets the needs of American Indian, Alaska Native, and Native Hawaiian students. The purpose of Title VI is to support the efforts of local educational agencies, Indian tribes and organizations, postsecondary institutions, and other entities.

Title VII: Impact Aid

This title provides extra funds for school districts that incur lower tax revenue or increased costs due to their location on or near federal property or activities.

Title VIII: General Provisions

This title contains seven unrelated parts.

- Part A: Provides definitions of a variety of terms used frequently throughout the law.
- Part B: Authorizes SEAs and LEAs to consolidate and jointly use funds available for administration under multiple ESEA programs.
- Part C: Authorizes SEAs and LEAs to consolidate plans and reports for ESEA formula grant programs.

Elementary and Secondary Education Act

Issue Brief

- Part D: Enables the Secretary of Education to waive requirements if they choose to and it is requested by a SEA.
- Part E: Includes provisions related to secretarial approval of state ESEA plans and SEA approval of LEA plans.
- Part F: Authorizes private schools to participate in ESEA programs where allowable.
- Part G: Authorizes ED to reserve funds for program evaluations.

Title IX: Education for the Homeless and Other Laws

This title reauthorized the McKinney-Vento Homeless Education Assistance Act.

The purpose of Title IX is to provide grants to help SEAs ensure that homeless children, including preschoolers and youths, have equal access to free and appropriate public education

(FAPE). The program also supports an office for coordination of the education of homeless children and youths in each state, which gathers comprehensive information about homeless children and youths and the impediments they must overcome to regularly attend school.

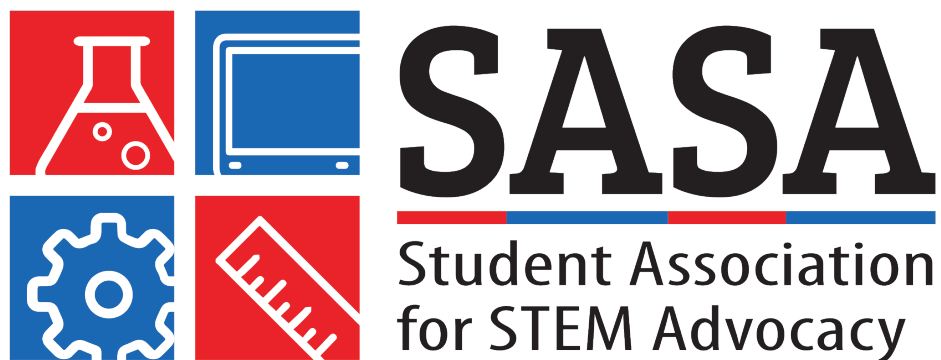
Key Issues

SASA calls on states, Congress, and the Administration to meaningfully incorporate policies that ensure every student has equitable access to STEM engagement programs. Legislation and regulations must increase funding for grants used for STEM engagement activities at every level, including raising funding for the Student Support and Academic Enrichment (SSAE) Grants in ESSA Title IV-A to its most recently authorized level of \$1.6 billion included in the 2015 Every Student Succeeds Act.

Relevant Funding Levels

Relevant ESEA Program Appropriations, FY2018-24

Program	Most Recent Authorization	FY18 Appropriation	FY19 Appropriation	FY20 Appropriation	FY21 Appropriation	FY22 Appropriation	FY23 Appropriation	FY24 Appropriation
Grants to LEAs (Title I-A)	\$16.18 billion	\$16.44 billion	\$16.54 billion	\$17.00 billion	\$17.26 billion	\$18.23 billion	\$19.09 billion	\$19.11 billion
SSAE Grants (Title IV-A)	\$1.60 billion	\$1.10 billion	\$1.17 billion	\$1.21 billion	\$1.22 billion	\$1.28 billion	\$1.38 billion	\$1.38 billion



CHIPS and Science Act Issue Brief

Updated May 2024

History

The history of the CHIPS and Science Act is complex and full of twists, turns and Senate intrigues. The bill began as one of the signature legislative efforts of Majority Leader Chuck Schumer, who wanted to produce a bill that would help the US become more technologically competitive with China. The bill aimed to solve a few key issues, those being that the US had become progressively less competitive in producing semiconductors, that the US was too reliant on sometimes fragile international supply chains and that the US was losing its edge in innovation.

The first version of the legislation, the US Innovation and Competition Act was introduced by Senator Schumer in April 2021, and was passed that June in a 68-32 vote. The House introduced its Endless Frontiers Act shortly after, which was then transformed into the COMPETES Act, which did not pass until it left the House on a tight 222-210 vote in February 2022. Significant differences between the two acts led to a monthslong conference committee process that stretched through NAC 2022, where student advocates like you talked to legislators working on reconciling differences between the two acts.

That conference process stalled before it could produce any final legislation, and the final CHIPS and Science Act was instead a product of a legislative maneuver that allowed Majority Leader Schumer to pull the legislation out of the committee process while avoiding threats to hold up the legislation over concurrent efforts

to pass the Inflation Reduction Act. The CHIPS and Science Act ended up being a slimmed down version of some of its more expansive predecessors but kept their core foci of improving semiconductor production and research and expanding STEM innovation across the country.

The Legislation

Even though CHIPS is more focused than its predecessors, that does not mean it is a small bill. This sweeping legislative effort touches on every part of the US STEM landscape, from manufacturing to artificial intelligence, to education. We will focus here on some of the provisions most relevant to STEM student advocates but will give a brief overview of all the major provisions included in the act.

Title III – National Science Foundation for the Future

This title creates a host of new programs under the National Science Foundation (NSF), including many that provide additional funding and security for research, and attempt to broaden participation in it. Almost all the major provisions included in the bill relating to STEM Education are included in Title III. Listed below are some of those key sections of this title.

Section 10311 Part B - Supporting PreK-12 Informal STEM Opportunities

One of the most important provisions for student advocates is this title's Section 10311 (b). This section supports research into informal STEM Opportunities outside of the school day through grants to schools and non-profit

organizations. Applicants can use grants authorized under this section for programs that include: cooperative and hands-on learning, exposure to STEM role models, educator training, STEM academic and career advice, connections to real-world applications of STEM concepts, the purchase of parts and supplies in preparation for competitions, engagement with families, leadership training, and/or coordination with STEM focused non-profits. What differentiates these grants from other grants for STEM afterschool programs is that they require a plan for evaluating the program's success. Evaluation plans must include a yearly report on student outcomes, which must be written either to advance the body of research on informal STEM education as a whole or to help improve the program and keep the people running it accountable.

Section 10311 Part C - National STEM Teacher Corps Pilot

The National STEM Teacher Corps Pilot, as the name implies, is a program that creates a national corps of STEM teachers selected from applicants across the country based on their deep knowledge of STEM content and teaching, passion for STEM education, and experience in increasing student achievement in rural and high-need schools. Members of the corps will receive a stipend and continue teaching while contributing to research on STEM education and participating in training activities.

Section 10395 – Scaling Innovations in Pre K-12 STEM Education

This section directs the Director of the National Science Foundation to establish multidisciplinary Centers for Transformative Education Research. The NSF will establish these centers either at institutions for higher education or with non-profits based on whether they will establish local partnerships, build STEM education infrastructure to connect to other institutions and spread their innovations, research how to scale and expand STEM Education programs, focus on under resourced learners and learners with disabilities, and research how to support both urban and rural students.

Title V – Broadening Participation in Science

This title is focused at providing more opportunities for a broader subsection of the country to participate in science and creating more and healthier research environments.

Subtitle B – Rural STEM Education Research

This subtitle supports research into improving STEM education in rural areas. Its provisions include funding research into rural teaching and into professional development programs for teachers. The subtitle funds research into online programs as a tool for improving rural education. It also creates regional rural cohorts of students meant to help facilitate peer learning, hands-on STEM experiences and mentorship. Finally, the subtitle creates a competition to promote innovation in technology for deploying rural broadband.

Division A – The CHIPS Act of 2022

We've covered the sections of the bill most relevant to student advocates, so from here we'll give a brief explanation of CHIPS' other provisions.

Division A is the bread and butter of what CHIPS is all about, hence the title, and it provides over \$50 billion in funding to encourage semiconductor manufacturing, research into semiconductors, programs designed to expand the workforce for semiconductor manufacturing, laboratories designing and producing semiconductors for defense applications, and research into cutting-edge wireless technologies.

Division B – Research and Innovation

Title I – Department of Energy Science for the Future

This title funds research into basic energy sciences meant to improve the ways we produce and store energy, and the ways we remove waste products like CO₂. It also funds environmental research, physics research into the fundamentals of the universe, high-end and quantum computing research, and several efforts at growing the STEM workforce through scholarships, fellowships, recruitment and student and teacher engagement.

Title II – National Institute of Standards and Technology for the Future Act

This title funds research at the institute in biometrics, cybersecurity, greenhouse gas measurement, premise plumbing, advanced communications, and AI. The title also funds

educational outreach, as well as support programs for manufacturers.

Title IV: Bioeconomy Research and Development

This title supports research into the practice, safety, security, and ethics of bioengineering. It also funds efforts to translate bioengineering discoveries into technological innovations.

Title VI – Miscellaneous Science and Technology Provisions

This title contains many miscellaneous programs supporting research. These include a fellowship program that allows early-career scientists to begin research at an institution of their choice, a requirement that the Office of Science and Technology Policy produce a four-year national science and technology strategy, a directive to the Commerce Department to create twenty regional innovation hubs, measures against foreign talent recruitment in publicly funded research projects, support for ocean and coastal acidification research, and support for quantum computing research. The title also requires the Office of Science and Technology Policy to hire a specialist to advise the president on blockchain technologies, establishes the Foundation for Energy Security and Innovation, supports the commercial application of clean energy technologies and supports nuclear research at the university level, supports the research and development of microelectronics and low-carbon steel.

Title VII – National Aeronautics and Space Administration Authorization Act

This title directs NASA to establish a Moon to Mars Office to achieve the goal of humans exploring Mars, and extends the authorization of several other NASA programs, such as the International Space Station, the Office of STEM Engagement, and the Planetary Defense Coordination Office. The title also authorizes research into unmanned aircraft, greener and quieter airplanes, nuclear propulsion, and the search for extraterrestrial life. The title also requires NASA to report to Congress about its industrial base, supply chains and workforce.

Division C – Supplemental Appropriations to Address Threats to the Supreme Court of the United States

This division authorizes emergency appropriations to ensure the security of the Supreme Court.

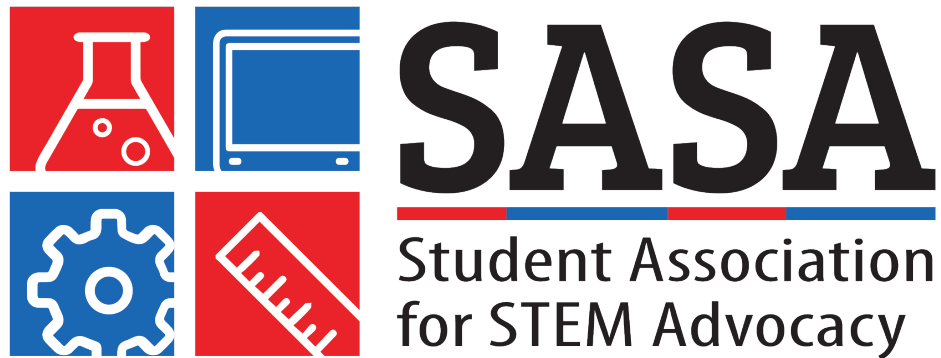
Key Issues

SASA calls on states, Congress, and the Administration to meaningfully incorporate policies that ensure every student has equitable access to STEM engagement programs. Legislation and regulations must increase funding for grants used for STEM engagement activities at every level, including raising funding for STEM Education Programs run by the National Science Foundation, including grants for research into hands-on STEM learning under Section 10311 of the CHIPS and Science Act.

Relevant Funding Levels

Program	Most Recent Authorization	FY19 Appropriation	FY20 Appropriation	FY21 Appropriation	FY22 Appropriation	FY23 Appropriation	FY24 Appropriation
NSF STEM Education Funding* (Section 10311, 10395, etc.)	\$1.95 billion	\$910 million	\$940 million	\$968 million	\$1.01 billion	\$1.15 billion	\$1.17 billion

*The Advancing Informal STEM Learning program (Section 10311b) and other STEM Education programs run by the NSF and included in the CHIPS and Science Act are funded through the existing appropriation for education programs run by the NSF. The appropriation for FY23 and future appropriations will include these key programs.



National Defense Authorization Act (NDAA) Issue Brief

Updated May 2024

Overview

At some level, everything that the U.S. military does is dictated to it by one document, the National Defense Authorization Act. Everything the U.S. military does costs money, and the National Defense Authorization Act allows the appropriations committees to appropriate that money to the military for specific purposes. The NDAA establishes military programs, gives guidance on how they should operate, and authorizes the appropriations committees to appropriate funding for them. Along the way, the NDAA can set policy for the entire military to follow, ranging from regulations on how the military can engage in contracts with weapons suppliers to fundamental changes to how the military justice system operates. Given the massive scope of the US military as a domestic institution, the way the military conducts its business can have far reaching impacts on disparate policy arenas, including that of STEM education. In this brief we will discuss the history of the NDAA, how Congress pulls off the feat of passing such a massive bill every year, and how the NDAA can help the innovators of tomorrow achieve their educational goals.

History

As many mainstays of the congressional calendar have, the NDAA began as part of a territorial dispute between different congressional factions. Before fiscal year 1961, Congress had no need for a National Defense Authorization Act, because funding for military programming did not need to be authorized.

Instead, the appropriations committees would simply consult with the administration to determine what the military's funding needs were, and which programs needed money to be appropriated to them.

The one exception to this was construction, and in a piece of authorizing legislation for military construction in 1961, the Armed Services Committees sought to stake their claim over the defense funding process by inserting a rider that would require funding for procuring missiles, planes, and ships to be authorized into a bill authorizing military construction funding during the Berlin Crisis of 1961.

Since then, the size and scope of the NDAA has only grown. The cost of the bill has increased from \$12.5 billion (~\$130 billion in today's dollars) in 1961 to \$874.2 billion today, and the bill has expanded to cover most of the country's defense programming.

The NDAA Process

The process of creating the NDAA, a nearly 1,000-page document chock full of defense policy, takes a high level of coordination between the administration and both chambers of Congress across most of the calendar year. In this section, we will provide you with a roadmap for this process, so you can make sure your advocacy is moving in the right direction.

The President's Budget Request

On the first Monday of February each year, the administration is supposed to release its budget request for defense alongside its budget request for the rest of the government, though

in practice this is often delayed. Regardless, the release of the budget request in early Spring marks the beginning of the NDAA process. Like the appropriations budget request, the President's budget here is not binding, but merely serves to express the administration's priorities for the negotiations going forward, informing Congress of where the military's biggest needs are.

Alongside budget requests, the administration will also submit policy proposals they would like to see implemented in this year's NDAA, changing the legal restrictions on how the military should operate and structure itself. The armed services committees in the House and Senate will keep these proposals and the budgets requested by the administration in mind when it begins to draft the NDAA.

The Committees

No discussion of the NDAA is complete without a description of the authorizing committees. The House and Senate Armed Services Committees have jurisdiction over the NDAA process, and each have seven subcommittees, which are listed below.

House:

- Cyber, Information Technologies, and Innovation
- Intelligence and Special Operations
- Military Personnel
- Readiness
- Seapower and Projection Forces
- Strategic Forces
- Tactical Air and Land Forces

Senate:

- Airland (Army, Air Force, and National Guard)
- Cybersecurity
- Emerging Threats and Capabilities
- Personnel
- Readiness and Management Support
- Seapower
- Strategic Forces

Hearings

These committees begin the NDAA process with hearings aiming to squeeze more information out of the administration's budget request. Top military officials will be questioned by the full committee on the state of programs within the armed forces, the reasoning behind the levels of funding requested, and other pressing military issues. Subcommittees will focus on their areas of interest, grilling senior officials on cybersecurity workforce pipeline issues or Air Force procurement practices. What lawmakers uncover during these hearings can be incorporated into the first drafts of that year's NDAA.

Markup

In late April or May, if on schedule, the Armed Services Committees' staff members in the House and Senate will have prepared a first draft of the NDAA, called a "Chairman's Mark", which can then be presented to the various subcommittees for specialized markups. Here, subcommittee members will offer amendments to the proposal to be voted on, and by the end of the meeting the subcommittee will vote to report their amended proposal back to the full committee.

After all of the subcommittees have reported their amended portions of the NDAA draft back to the full committee, the full committee will consider their changes and take votes on whether to keep, remove or change the amendments offered in subcommittee, as well as whether to make new amendments. The chair will also offer their own markup covering cross-cutting issues affecting the military as a whole, and this markup will be voted on as well. At the end of the process, the full committee will vote on whether to report the amended NDAA out to the full chamber. Advocates should also look for the reports and summaries issued alongside the bill text, which clarify things like funding levels, the committee's intent, and guidance for agencies.

The House and Senate also mark up the NDAA in different ways. The House more tightly controls procedural aspects of the markup, requiring members to submit community funding requests ahead of the markup, preventing members from attempting to refer the bill to other committees, and usually requiring that amendments that increase spending offset that new spending somewhere else. The Senate, meanwhile, is focused on protecting national security secrets by closing most markups to public viewing.

Floor Consideration

Floor consideration is one of the last practical places for an advocate to make a difference in the NDAA process, as this is one of the last places where it is possible to amend the bill. Because of the size of the two chambers and the size of the bills themselves, leadership will

use a special rule in the House and unanimous consent agreements in the Senate to control the flow of debate and filter amendments leadership wants to come up for a vote. Even so, the NDAA can still go through a grueling floor process with hundreds of amendments being offered and many being voted on en bloc, leaving plenty of room for advocates and their friends in Congress to make a difference in defense policy.

Key Issues

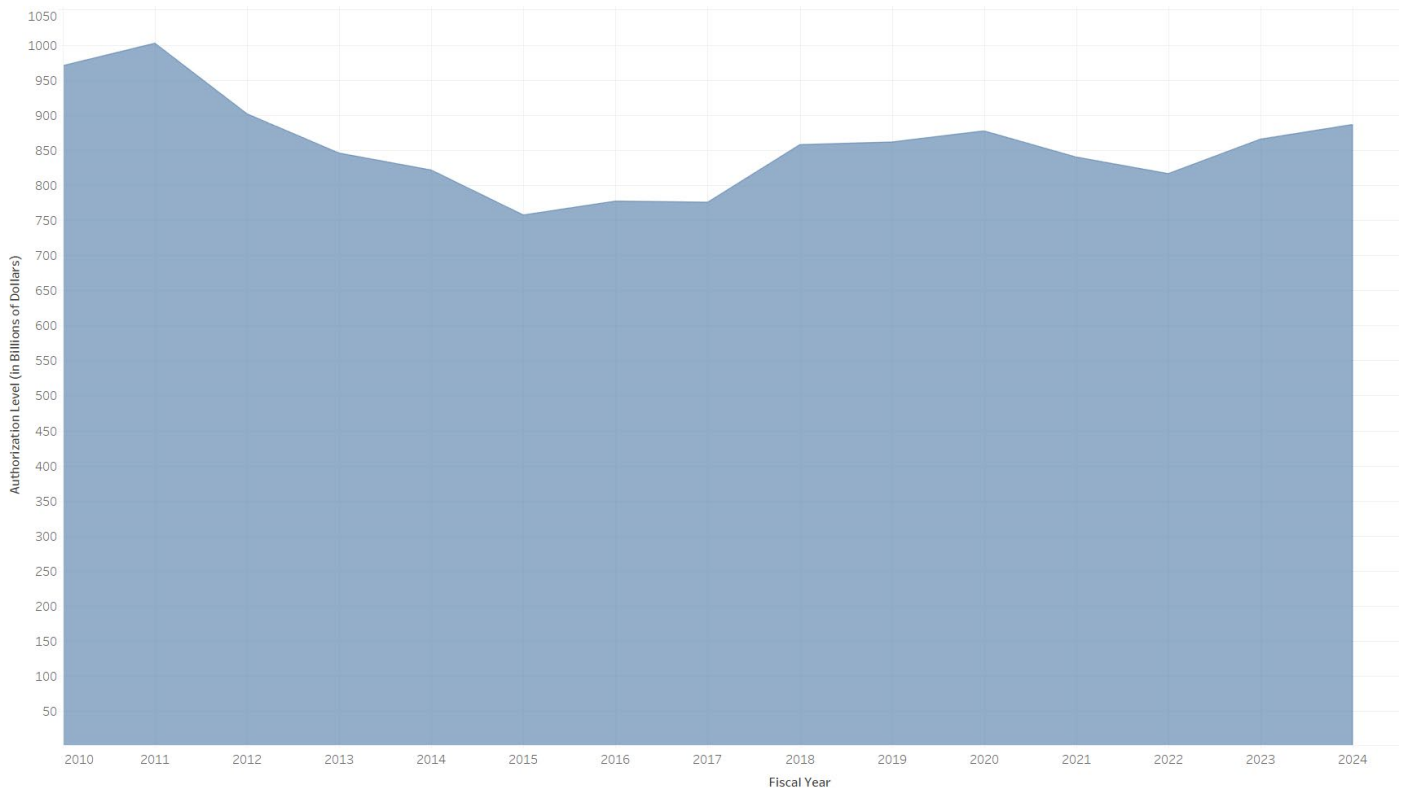
The Department of Defense needs a career pipeline for future STEM innovators in order to stay competitive, and Congress should use the NDAA to require the department to invest in students. In fiscal year 2023, the Department of Defense awarded more than \$470 billion in contract awards, but at the same time too little funding goes to supporting the STEM innovators of tomorrow. To resolve this, Congress should include a requirement in the NDAA that just one quarter of one percent of all contracts with the Department of Defense be dedicated and spent on high-quality STEM education programs. This modest requirement would have made \$1.175 billion available for STEM education in fiscal year 2023, and would go a long way towards shoring up the STEM workforce pipeline. This is a novel proposal that is very early on. The details of which programs would qualify and how this would work are still to be determined. There is currently no legislative vehicle for these ideas in 2024, but we want to start the conversations and lay the groundwork for potential changes to the NDAA in the 2025 authorization process.

Relevant Funding Levels

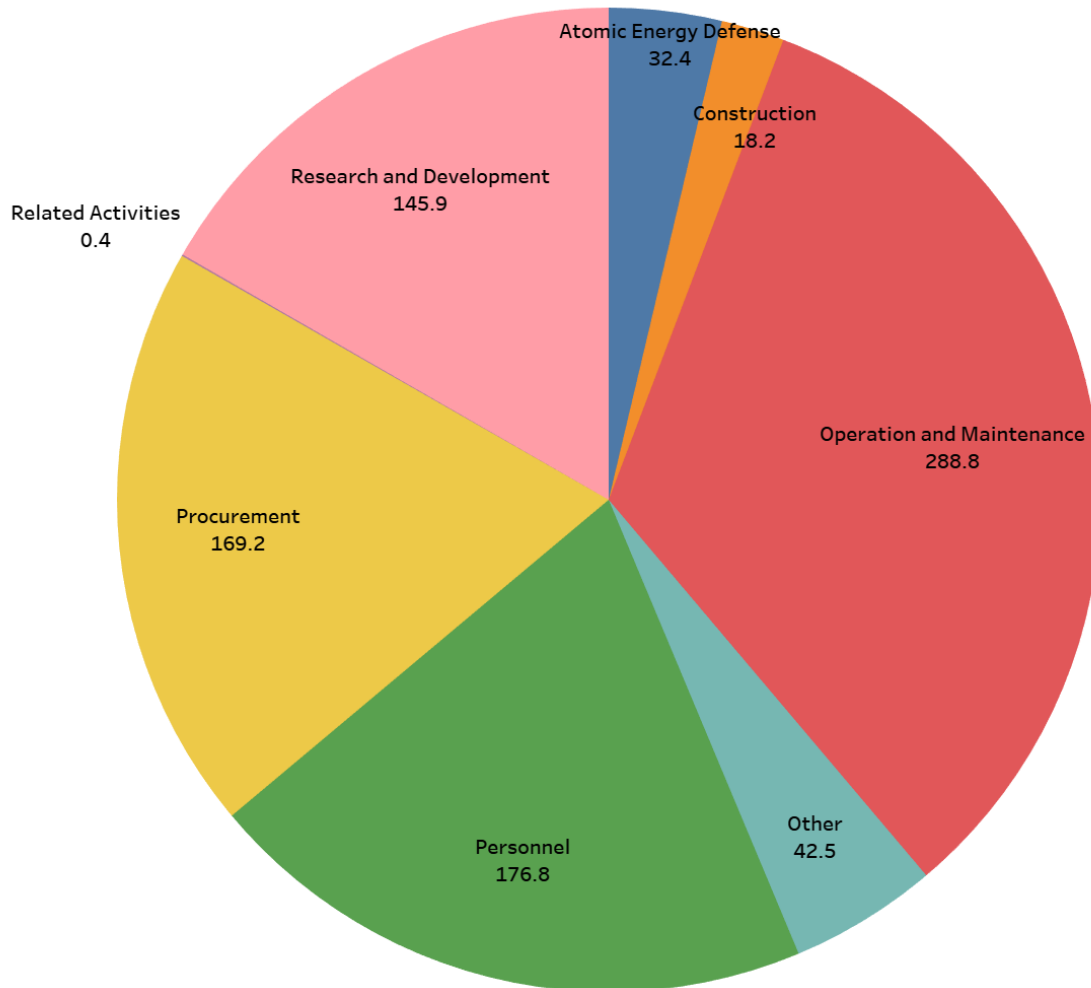
NDAA Authorizations, in 2024 Dollars, FY2017-24

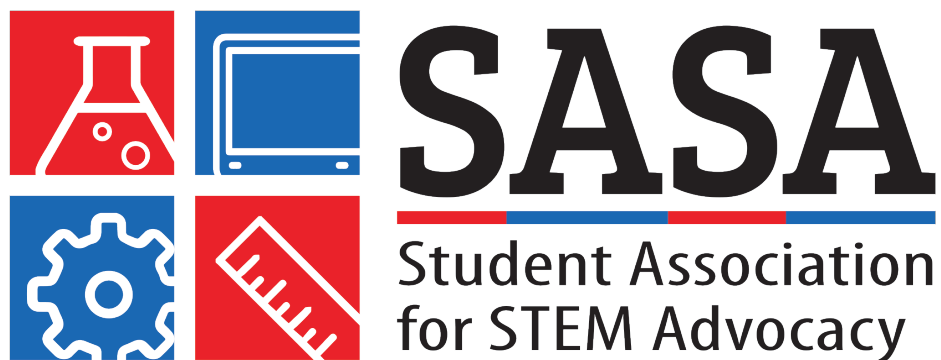
FY17 Authorization	FY18 Authorization	FY19 Authorization	FY20 Authorization	FY21 Authorization	FY22 Authorization	FY23 Authorization	FY24 Authorization
\$775.60 billion	\$857.62 billion	\$861.44 billion	\$877.32 billion	\$839.97 billion	\$816.37 billion	\$865.50 billion	\$886.35 billion

NDAA Total Authorized Funding Level Over Time, Adjusted for Inflation



NDAA Authorization Levels by Title (in Billions of Dollars)





Appropriations Process Brief

Updated June 2023

Boundaries of the Process

Before we dive into convincing our representatives to take full advantage of the appropriations process to help teams like yours, we first have to look at what is tying their hands in the process. Lawmakers have to take into account their committees' jurisdictions, whether the programs they want to fund are mandatory or discretionary and the constraints of their total budgets going into the process.

Discretionary vs. Mandatory Spending – What Funding is in Play?

Besides for interest on the debt, federal spending is generally split into two broad categories, mandatory and discretionary spending. Mandatory spending programs have their funding set by law, so no action is needed to keep them going generally. The appropriations process mostly concerns discretionary spending, programs whose laws ask Congress to set their funding level each year. The largest portion of discretionary spending each year goes to the military, approximately half of it in 2019, but discretionary spending is also used to fund Pell grants, federal aid to schools, NIH and NSF research, and the \$1.28 billion that goes to Title IV-A Support and Academic Enrichment Grants which in part help fund teams like yours, among a variety of other vital programs. The Title IV-A grant program is elaborated on further in the brief on the ESEA.

The President's Budget

The President is required to submit a budget to congress outlining how they think the government ought to be funded. While this

document is helpful to Congress and clearly communicates the President's priorities, it is not binding, and Congress may ignore it.

The Budget Committees and Resolutions – The Actual Amount of Funds Available

Upon reviewing the President's budget, the Budget Committees in the House and Senate draft a budget resolution setting the maximum amount of spending that can go towards nineteen different areas, or budget functions, of both mandatory and discretionary spending, as well as the amount of revenue the government expects to collect over at least the next five years, though Congress usually attempts to describe the next decade in their budget resolutions. These budget functions are then distributed among the various congressional committees through a table of 302 (a) allocations. The budget resolution is one of the few types of legislation not subject to the Senate Filibuster, and is a concurrent resolution, meaning that it does not need to be sent to the President after passing both chambers and cannot enact any spending or tax changes.

The Budget Functions

The budget functions mentioned above are National Defense, International Affairs, General Science, Space, and Technology, Energy, Natural Resources and Environment, Agriculture, Commerce and Housing Credit, Transportation, Community and Regional Development, Education, Training, Employment, and Social Services, Health, Medicare, Income Security, Social Security, Veterans Benefits and Services,

Administration of Justice, General Government, Net Interest, Allowances, Undistributed Offsetting Receipts, and Overseas Deployments and Other Activities

302 (b) Allocations – How the Budget Resolution is Enforced

The Appropriations Committee redistributes its 302 (a) allocation to its twelve subcommittees in 302 (b) allocations defining how much each of those subcommittees can spend during the appropriations process. Under the Congressional Budget Act of 1974 (H.R.7130), any member in either chamber can call a point of order on a piece of legislation if it exceeds their committee or subcommittee's 302 allocation, but while this can be waived by a majority vote in the House, Senate Rule 44 requires them to be resolved by a vote of three-fifths of the Senate, or sixty senators. Since these points of order are easy to raise but difficult to move past, the Senate is encouraged to stay within the allocations made during the budget process.

Inside the Process

Hearings and Fly-Ins – Members Gather Information

Beginning as early as March after the President submits their budget request, Appropriations Subcommittees call witnesses in to testify about Presidential budget requests, the needs and efficacy of their agencies, important issues that the appropriations process can address, and requests from individual members' districts. During this time, they will hear from

department heads, high ranking executive officials, and outside experts. While these hearings are important, Congress and its staff need information from outside the Washington bubble, and that's where we, and other advocates, step in. Advocates fly in from all over the world into Washington D.C. to advise Congress about what the country's funding needs are. Without advocates like you coming to Washington, the Appropriations process would be stumbling around in the dark trying to figure out where to allocate funds. Know that you are not just helping teams like yours get federal funds but are also playing a crucial role in the Appropriations process.

Dear Colleague Letters

Dear Colleague letters are petitions circulated through members of Congress who can then sign onto the letter to express support for a policy. These letters allow members outside of the appropriations subcommittees who have a very small direct role in the crafting of appropriations bills to influence the process. Members sign these letters to put pressure on members and their staff within these subcommittees to include their priorities in their final bill, and to signal that these measures have broad congressional support. These letters are important to SASA's advocacy at the National Advocacy Conference in June, because not all of your representatives in Congress will be part of an appropriations subcommittee, given that only 59 out of the 435 Representatives in the House are part of the House Appropriations Committee and only 30 out of the 100 Senators in the Senate are part of the Senate Committee on Appropriations. If

your Congressperson does not have a direct role in the process, they can still sign onto letters pushing their colleagues to step up to bat for STEM education. In the past, letters have been circulated expressing support for increases in funding for Title IV-A funding for STEM extracurriculars to great effect.

Appropriations Subcommittees – Where the Bills are Written

The subcommittees were created in 1921, and roughly correspond to the different parts of the federal government over which they have jurisdiction. Currently, the House and Senate parallel each other in the jurisdiction of their committees so that appropriations bills coming out of each subcommittee always have an equivalent in the other chamber.

Appropriations bills begin in the subcommittees, with the staff of subcommittee members dividing their 302 (b) allocations among the various programs under their jurisdiction. Members and their staff will consult the President's budget proposal, past appropriations bills, and the opinions and ideas of advocates and lobbyists that come to the Hill to determine how funds ought to be allocated. Mixing these testimonials and the needs of the members' states and districts and members' personal and political priorities, subcommittee staff will labor to produce an appropriations bill for the programs under their jurisdiction, generally during the summer before the fiscal year for which they are writing the bill. A key subcommittee to look out for is the powerful Appropriations Subcommittee on Labor, Health and Human Services, and Education, or Labor-H committee, which handles grants important to

SASA's mission such as the Title IV-A Student Support and Academic Enrichment Grants.

Markup and Riders – How the Bills are Edited

Committee and subcommittee markups are the final formal step before a bill is released to the floor or the full committee. Committee chairs refer the completed draft of their subcommittee's bill for markup, where members will offer and vote on amendments, with markup concluding by a majority vote to report the bill to the full House or Senate Appropriations Committee. Here the process will repeat before the full committee sends the bill to the floor. Due to the pressure on Congress to pass appropriations bills on time, they are often easy ways for members to score easy policy wins by attaching germane (technically on-topic) amendments that make policy changes outside of the scope of changing program funding. While both chambers of Congress have rules against legislative riders, which are non-germane and invent new programs to fund, the rules still allow limitation riders, which limit what agencies can do with the money that Congress has appropriated for them. These riders tend to frustrate other members of Congress by moving bills that otherwise would not have passed, and irritate presidents who cannot veto the rider without vetoing the entire appropriations package.

Omnibus and Minibus Packages – How the Bills are Passed

Once on the floor, it was intended that each bill would pass in "regular order", where each bill receives individual attention from the whole

Appropriations

Process Brief

chamber in which it is debated, where members outside of the Appropriations Committees can offer amendments to these bills, before they pass each chamber and are sent to the President. However, in the modern Congress, bills are usually advanced in omnibus and minibus packages, which are bundles of appropriations bills that can be passed in a single vote and session of debate, limiting the ability of members to slow and derail the process. An omnibus typically contains all the appropriations bills while a minibus typically has two or more. These are just terms Congress uses to describe their procedures. Omnibus bills present advantages for congressional leadership. They move faster to the President's desk, they distance members from the controversial parts of the appropriations bill that they would be directly exposed to in a smaller bill, and they put pressure on the President to pass the bill even if they have reservations, to not grind the entire process to a halt. These political advantages are also policy

hindrances though, as omnibuses reduce accountability for the content of the bill, make it more difficult for members outside of the Appropriations Committees to give input, prevent deeper oversight over the bill's contents, and short-circuit the role of the President in the appropriations process. Despite these issues, the omnibus is likely here to stay, as it is difficult to pass appropriations otherwise due to the obstacle of the filibuster in the Senate and the tight schedule of Congressional appropriations. Omnibus bills pass in the same way other bills do, with the bills being debated and passed with a majority vote in the House and a majority vote in the Senate after cloture is invoked on debate in the chamber to proceed to a vote. Once the omnibus bill is passed by both chambers of Congress and reconciled, if it has not been reconciled already, it will be sent to the President's desk, where it will either pass or be vetoed and sent back to Congress to be passed with a supermajority vote.



5 – *FIRST* Effectiveness & Impact

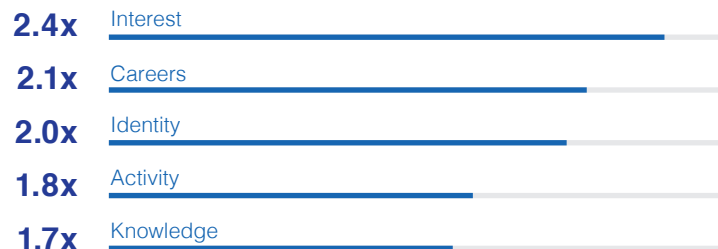
5.1 – <i>FIRST</i> 21st Century Learning	54
5.2 – <i>FIRST</i> Impacts on Learning.....	55
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5 Ways *FIRST* Aligns to Goals for Learning Outcomes with 21st Century Students

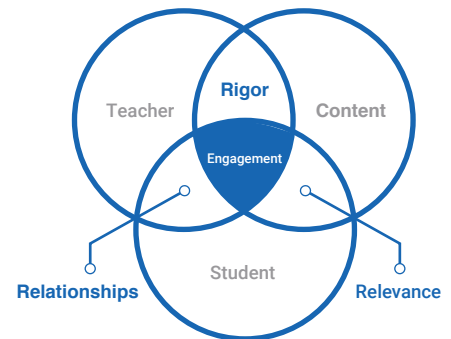


FIRST Student Outcomes

FIRST students are significantly more likely to show gains in STEM outcomes than comparison students.



Rigor, Relevance and Relationships



Rigor

Facilitators guide a student-led, engaging experience involving activities related to robotics, coding, engineering, research, or innovative design that is experienced in a cross-curricular environment.

Relevance

Students acquire technology literacy by experiencing authentic activities with ties to STEM careers that build technical and holistic skills through real-world problem solving.

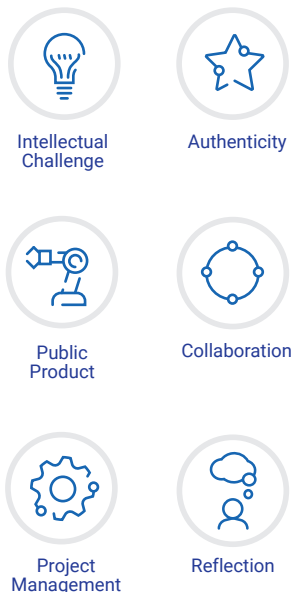
Relationships

Students are engaged in a mentor-based program that fosters pathways to STEM careers with the mission of building a better society and activating students to action in their communities.



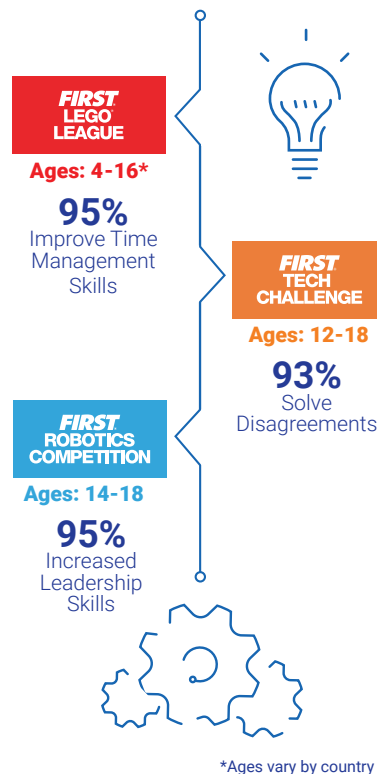
Project-Based Learning

FIRST seeks to blend training and education through project-based learning that creates authentic learning opportunities through experiences provided by our programs, both competitive team and classroom-based opportunities.



More Than Robots

Education today in the U.S. is more than teaching facts and figures. Social and emotional learning in practice happens during participation in *FIRST*.



Career Readiness

FIRST strengthened post-high school success

83% of students report feeling more confident in leadership roles

74% of students feel more prepared for college courses

72% of students gained access to mentors and peers in STEM



FIRST® Impacts on Learning

FIRST® uses evidence-based strategies for STEM learning to prepare students for the new world of work. The FIRST program model includes strategies known to increase student interest in STEM: hands-on learning, working as a team on real-life problems, exposure to careers and caring adult mentors, emphasis on FIRST Core Values, and a culminating celebration where students can showcase what they created and learned. These program strategies and design result in an experience that helps all kids bridge the global achievement gap and achieve positive outcomes beyond high school graduation.

EVIDENCE-BASED STRATEGIES AT FIRST

STRATEGY	FIRST ALIGNMENT
Community-Based Projects	FIRST participants tackle real-world issues and connect to the community for mentorship and knowledge.
Integrated Kinesthetic or Cognitive Growth	STEM skills come to life when applied through hands-on learning across FIRST programs.
STEM-Based Programs	Robotics and Engineering activities introduce students to all types of STEM careers to help hone their passion.
Integration of Public-Private Partnerships	Companies lend financial support, mentors to work side-by-side with the students, and support partner school districts around the country.
Standards-Aligned	FIRST programs are aligned with core academics, computer science, and a variety technology education across grade levels.
Themed Enrichment	Annual theme around a STEM-focused topic drives yearly design of FIRST games across programs at all levels.
Student Voice and Choice	Small groups work to design/build/program robots, students choose desired areas of concentration and project theme and do the work associated with the program.
Social-Emotional Learning	Gracious Professionalism®, Coopertition®, and FIRST Core Values build cognitive/behavioral competencies such as social awareness and relationship skills.
Student-Connected Learning	Students gain purpose and belonging through connection to peers and caring adults serving as mentors.
Building 21 st Century Skills	FIRST uses an interdisciplinary approach to learning through teamwork, focused on a STEM-based challenge requiring youth to innovate, collaborate, communicate, problem solve, and use critical thinking.
Combination Physical Activity & Social-Emotional Learning	Prototyping, fabricating, and coding a robot as a group takes hard work, leadership, self-management, and social skills.
Project-Based Learning	Use sustained inquiry to solve authentic real-world challenge, have voice/choice in solutions, publicly present solutions and robots at culminating events.
Transdisciplinary Learning	Learners explore challenging 21 st century content that requires deep thinking, using the context of inquiry and application.
Career Connections	Students in FIRST explore careers, have access to industry professionals, and are engaged in relevant topics that build strong foundations for STEM literacy and prepare them with skills needed in the workforce of the future.
Computational Literacy	FIRST empowers participants from PreK to Grade 12 to be capable of solving complex problems with data through active and engaging activities that build computational thinking and programming skills.
Robotics & Engineering	Students in FIRST programs have access to increasingly challenging problems that provide technical rigor at an age-appropriate level using relevant technology tools used in a high-tech workforce.
Partnerships with Colleges and Universities	Colleges run workshops, host events/build spaces for teams, and offer \$80 million in scholarships to FIRST students.
Professional Development	Professional learning that explores the techniques and instructor tools needed to facilitate FIRST programs is provided in our FIRST professional development series.
Equity, Diversity, and Inclusion	FIRST is committed to fostering, cultivating, and preserving a culture of equity, diversity, and inclusion. We embrace and encourage differences in race, ethnicity, national origin, sex, gender, gender identity, gender expression, sexual orientation, disability, age, religion, income, language, learning difference, or any other characteristics that make our adult-force and students unique.

FIRST Core Values We express the FIRST philosophies of *Gracious Professionalism®* and *Coopertition®* through our Core Values:

DISCOVERY We explore new skills and ideas.	INCLUSION We respect each other and embrace our differences.
INNOVATION We use creativity and persistence to solve problems.	TEAMWORK We are stronger when we work together.
IMPACT We apply what we learn to improve our world.	FUN We enjoy and celebrate what we do!

Check out firstinspires.org/impact for information on the lasting impact FIRST has on all participants.

Empowering Untapped Communities



How I Found My Path Forward

While DeAnna's home life in Chicago's South Side was going through turmoil, she struggled to stay engaged in school – until *FIRST* gave her an environment and mentorship that **helped her stay connected and find purpose**. After joining a *FIRST*® Tech Challenge team and learning from her team mentor, DeAnna graduated, went to college, and landed her dream job, and now the *FIRST* alum helps younger members of her family find their own paths forward.



Building STEM culture in Compton

Compton Unified School District in California received a 2017-2018 *FIRST*® STEM Equity Community Innovation Grant to provide greater access to STEM pathways to underserved and underrepresented students by expanding its robotics programs in 20 elementary and middle schools.

Fostering Arts, Culture, & Creativity



Emma Dumont

Actor & *FIRST* Alum

"I have learned so many skills in *FIRST* that have carried over to my acting career. *Gracious Professionalism*, on its own, is one of the most important things that I use every single day of my life. Another value *FIRST* instills is how to give back. That's why immediately after graduation I started mentoring. The *FIRST* community is diverse and spans across so many different countries and cultures. It reminds us all that no matter our differences, innovation and teamwork have no boundaries. **It changed my life.** I can honestly say that *FIRST* has made me a better person, and now I hope to pay it forward."



Jason Rudolph

Emmy Award Winning Screens Producer & Lighting Director

"I wouldn't be where I am today if *FIRST* hadn't changed the game for me early on, teaching me how to take a large group of people and pull off a project under extreme stress and a short timeline."

Strengthening STEM in the Classroom



Jonathan Carpenter

Fourth Grade Teacher, Gossler Park School

"I already knew I loved how robotics increases STEM interest and skills like coding, but my students taught me that STEM project-based programs like *FIRST*® LEGO® League Explore can also have remarkable – and somewhat unexpected – benefits. I saw an **increase in reading and writing skills**, increased student engagement for students who typically struggle in the classroom, and development of important skills like collaboration and problem solving that address the needs of the whole child."



Zandra Jo Galván

Superintendent Greenfield Union School District

"In stakeholder surveys, our students said, 'We need more hands-on. We love science; we love doing things with our hands.' They learn so much conceptually by being able to build and design. They're able to use reading and mathematics and writing and the languages they're learning as it applies to engineering and designing their robots."

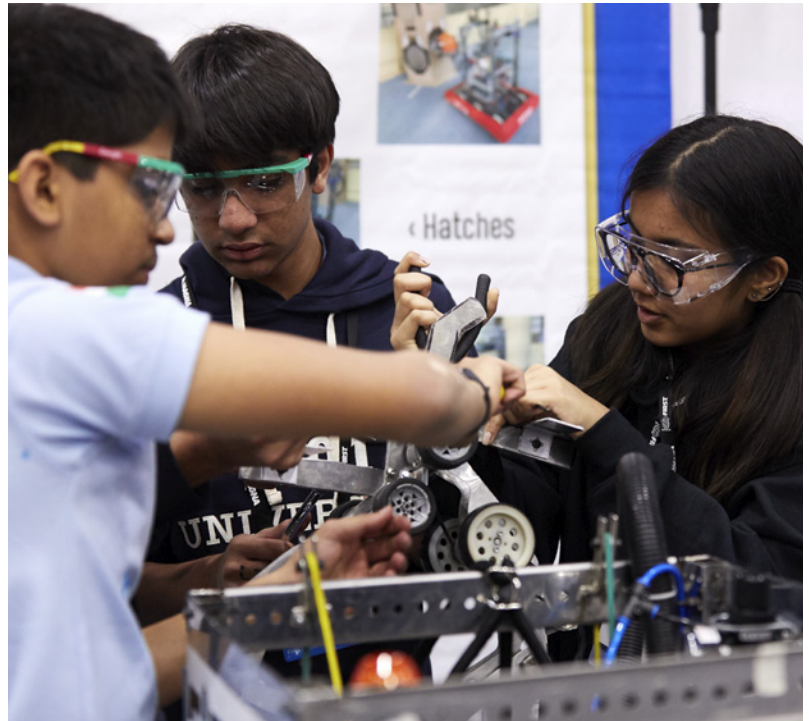
Check out firstinspires.org/impact for information on the lasting impact *FIRST* has on all participants.

How to prepare young people for the New World of Work

FIRST® AS A SOLUTION TO BUILDING A 21ST CENTURY WORKFORCE

Rapidly changing technology is outpacing the capabilities of the workforce, leading to a shortage of qualified workers to fill these roles in both technical skills and more holistic 21st century (e.g. critical thinking, problem solving, communication, collaboration, creativity) skills. In our society, the new world of work requires young people to enter the workforce “career ready” with a strong foundation of knowledge, skills, and capabilities needed for work in the 21st century in order to make meaningful contributions in their respective pathways.

The 21st century economy is producing new professions at a rapid rate. Employers struggle to find candidates with the skills they require. The need for tech-savvy workers who have critical thinking and problem-solving skills is urgent across multiple industries. Employers report difficulty in identifying potential employees with essential skills.



ESSENTIAL SKILLS STUDENTS BUILD WITH FIRST

1. Critical Thinking and Problem Solving

2. Collaboration

3. Adaptability

4. Innovative Thinking

5. Entrepreneurship

6. Communication

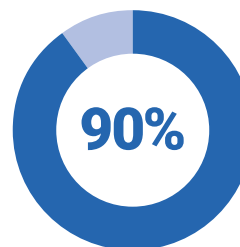
7. Accessing and Analyzing Information

8. Curiosity and Imagination

GAINS IN SKILLS

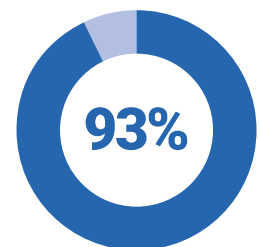
Communication

90% of students reported gains



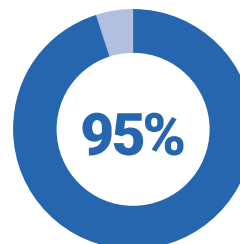
Conflict resolution

93% of students reported gains



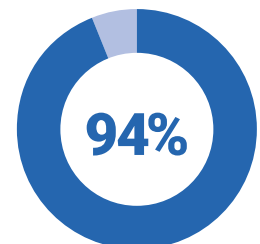
Time Management

95% of students reported gains



Problem-solving

94% of students reported gains



ADDITIONAL INFO ➔

WORKFORCE SKILLS



FIRST is one of the world's leading organizations providing experiential workforce development skills in a STEM setting.

For 30 years companies have invested in FIRST to develop their workforce. Today, we're one of the world's leading organizations providing experiential workforce development skills for STEM industries.

Industry professionals as coaches and mentors

Regionally based internships and apprenticeships

Using FIRST experience toward work-based learning credits

Earning industry certifications and credentials through access gained as part of a competition team

Career exploration that builds curiosity and awareness of future career opportunities

Integrated industry-relevant practices in program design such as the use of machine learning and artificial intelligence

Experiential opportunities to use key Industry 4.0 technologies

FIRST ALUMNI



Declared a major in STEM

81% of FIRST alumni declared a major in STEM compared to 58% in the comparison group.



Declared a major in engineering or computer science

68% of FIRST alumni declared a major in engineering or computer science compared to 26% of the comparison group.



Declared majors in STEM by their 4th year in college

69% of female FIRST alumni declared majors in STEM by their 4th year in college compared to 49% of the comparison group.



Positive impacts are evident for all FIRST students regardless of race, gender, income, or community type.

Detailed information about the study can be found at www.firstinspires.org/impact

Sources: FIRST Longitudinal Study: Findings at 84-Month Follow-Up, Brandeis University, March, 2021.
Brandeis University, 2011 FIRST® Tech Challenge – FIRST® Robotics Competition Evaluation and 2013 FIRST® LEGO® League Evaluation

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Research shows *FIRST*® drives STEM engagement and outcomes

FIRST® is a mission-driven global robotics community that prepares young people for the future and inspires today's kids to build tomorrow's leaders.



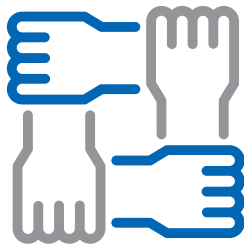
Research from a multi-year longitudinal study shows *FIRST* is advancing its mission to increase the number of students interested in STEM — and that interest is influencing their educational and career choices.

FIRST students are prepared for greater success in the classroom and workforce.

At *FIRST*, we understand that interest, rather than academic proficiency, is a greater predictor of children pursuing studies and careers in STEM fields. Our evidence-based programs use strategies known to increase student interest and engagement in science, technology, engineering, and math (STEM), including:



HANDS-ON LEARNING



WORKING AS A TEAM
ON REAL-LIFE PROBLEMS



EXPOSURE TO CAREERS
AND ADULT MENTORS



EMPHASIS ON *FIRST*
CORE VALUES



CULMINATING CELEBRATION WHERE STUDENTS CAN
SHOWCASE WHAT THEY CREATED AND LEARNED

OUR PARTNERSHIP WITH BRANDEIS UNIVERSITY

FIRST is partnering with Brandeis University to conduct a multi-year longitudinal study measuring STEM-related impacts.

The study included 822 *FIRST* students and 451 comparison group students. The comparison group included students who did not participate in *FIRST* programs, but were enrolled in science and math classes at the same schools. All students received a baseline survey and follow-up surveys each year.

OVERALL, 74% OF STUDENTS REMAINED IN THE STUDY AT YEAR SEVEN.



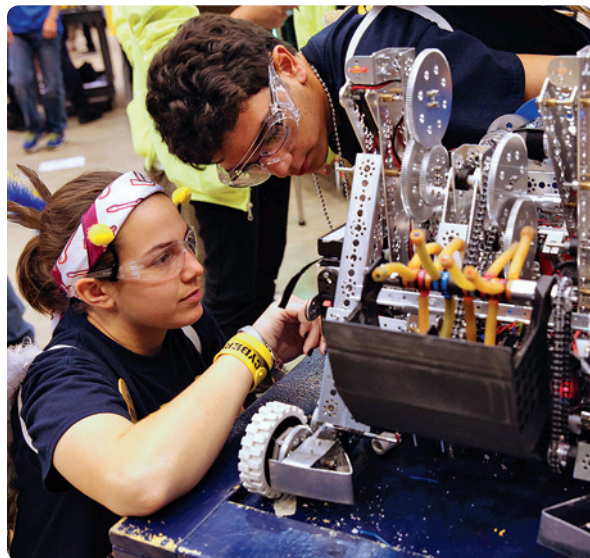
Research Highlights

FIRST prepares students for a STEM future

Gains in Workforce Skills

FIRST participants show significant gains in workforce skills such as teamwork, communication, and problem-solving.

"FIRST has given me life skills and tools to work well with others and be a team player and always do my personal best with *Gracious Professionalism*®. These are skills I will use in my daily life and beyond!"



FIRST Alumni

By their fourth year of college, FIRST alumni are more likely to be majoring in STEM fields than comparison group peers.



DECLARE A MAJOR IN STEM (SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH)

FIRST ALUMNI

81%

COMPARISON GROUP

58%

DECLARE A MAJOR IN ENGINEERING OR COMPUTER SCIENCE

FIRST ALUMNI

68%

COMPARISON GROUP

29%

Women in FIRST

Young women in FIRST have significant gains in all STEM areas including STEM interest, career interest, activity, knowledge, and identity compared to young women in the comparison group.

DECLARE A MAJOR IN ENGINEERING OR COMPUTER SCIENCE

FEMALE FIRST ALUMNI

51%

FEMALE COMPARISON GROUP

16%

MORE LIKELY TO TAKE COURSES IN ENGINEERING OR COMPUTER SCIENCE

3.4x

Computer Science

2.6x

Engineering

"x" = times as likely



Benefits of FIRST

FIRST students are two times more likely to show an increase in STEM-related attitudes and interests than comparison group students. Positive impacts are evident for all FIRST students regardless of race, gender, income, or community type.



FIRST STUDENTS ARE SIGNIFICANTLY MORE LIKELY TO SHOW GAINS IN STEM OUTCOMES THAN COMPARISON STUDENTS

2x

STEM Interest
STEM Career Interest
STEM Knowledge

STEM Activity
STEM Identity

Detailed information about the study can be found at www.firstinspires.org/impact

All differences statistically significant, $p \leq .05$

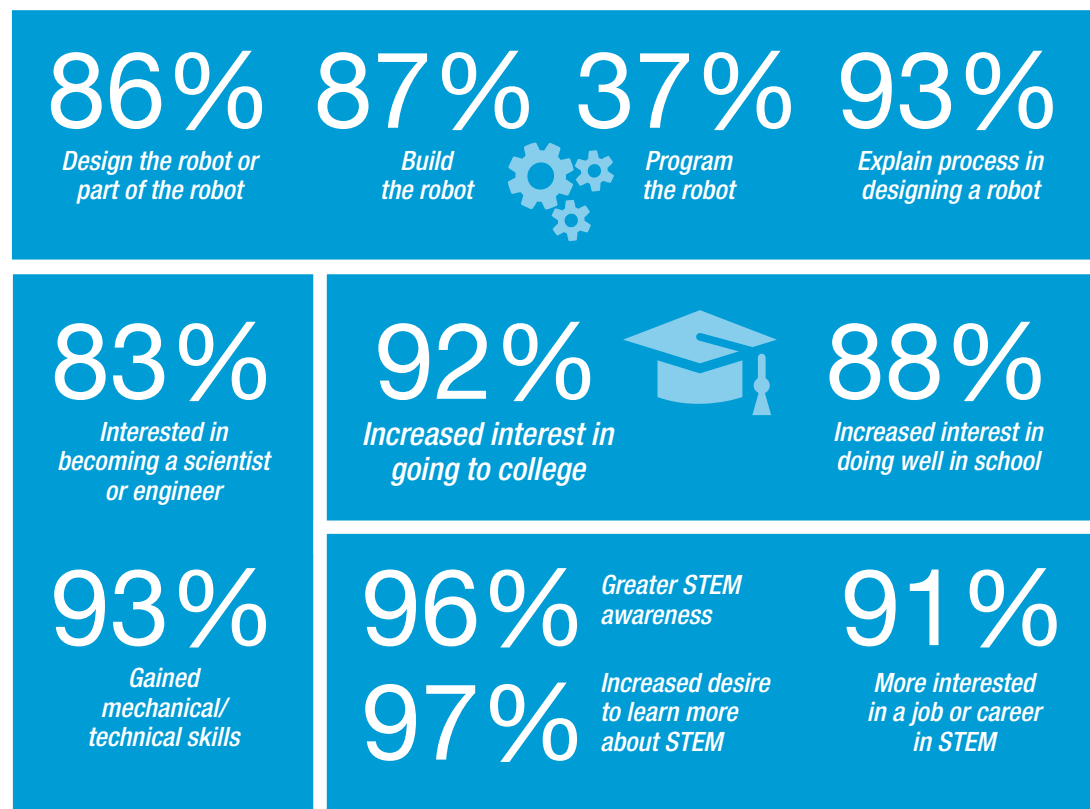
FIRST®, the FIRST® logo, FIRST® Robotics Competition, FIRST® Tech Challenge, and Gracious Professionalism® are trademarks of For Inspiration and Recognition of Science and Technology (FIRST). LEGO® is a trademark of the LEGO Group. FIRST® LEGO® League is a jointly held trademark of FIRST and the LEGO Group. ©2021 FIRST. All rights reserved. D1010



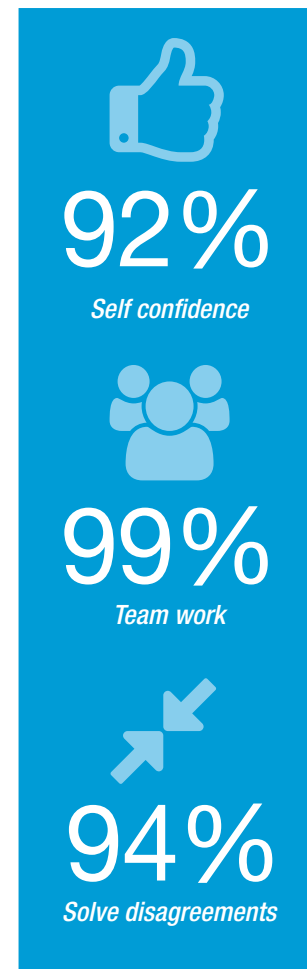
FIRST® Robotics Competition IMPACT

The majority of *FIRST* Robotics Competition participants participate in key STEM activities on the team and experience gains in a number of outcomes, for example:

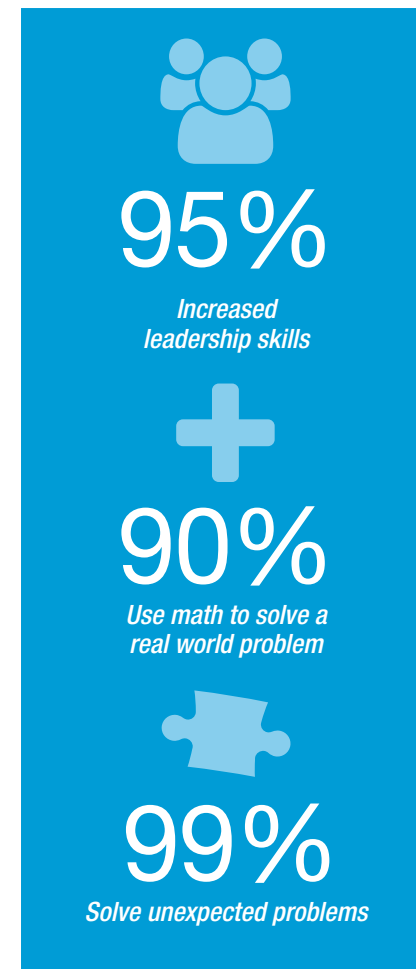
STEM AWARENESS, SKILLS, INTENT



21ST CENTURY WORK-LIFE SKILLS



LEADERSHIP, INNOVATION, ENTREPRENEURSHIP



Source: Cross Program Evaluation of the *FIRST*® Tech Challenge and *FIRST*® Robotics Competition (2011). Center for Youth and Communities, The Heller School for Social Policy and Management, Brandeis University



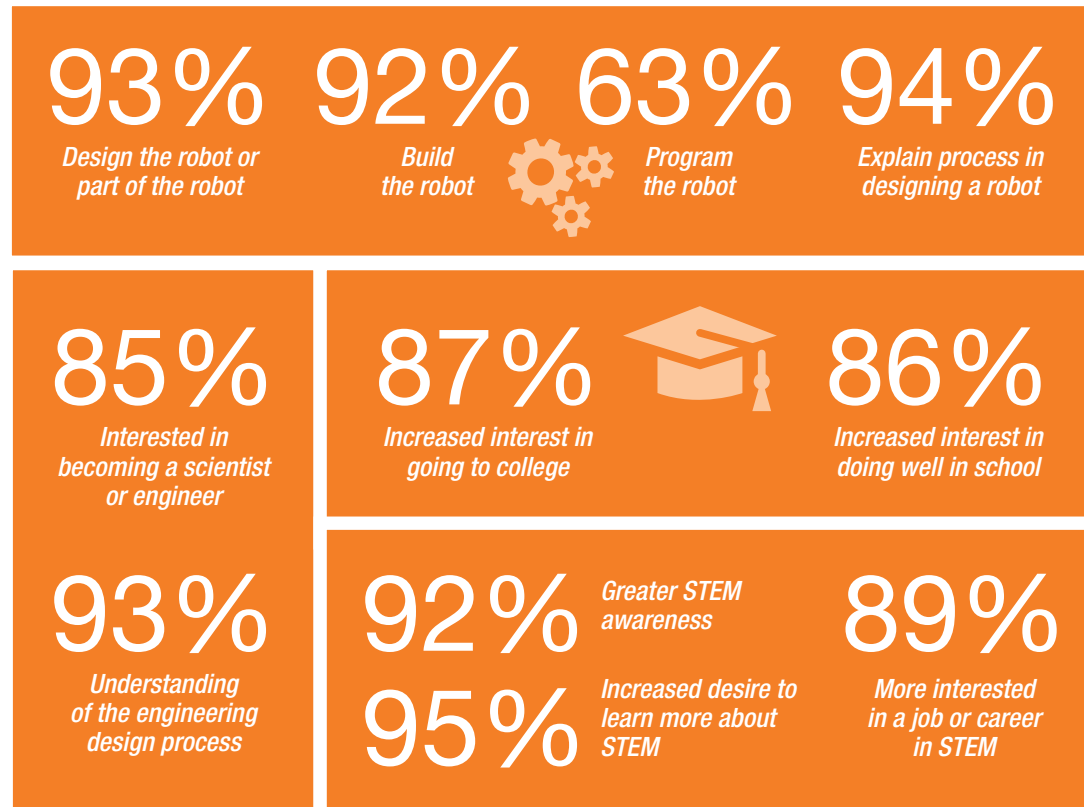
FOR INSPIRATION & RECOGNITION OF SCIENCE & TECHNOLOGY

firstinspires.org

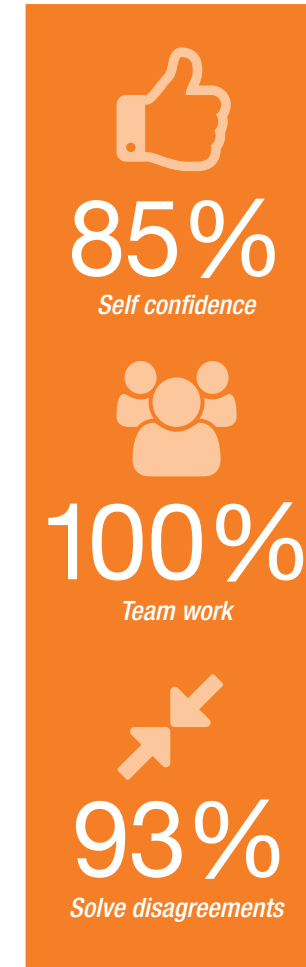
FIRST® Tech Challenge IMPACT

The majority of *FIRST* Tech Challenge participants participate in key STEM activities on the team and experience gains in a number of outcomes such as:

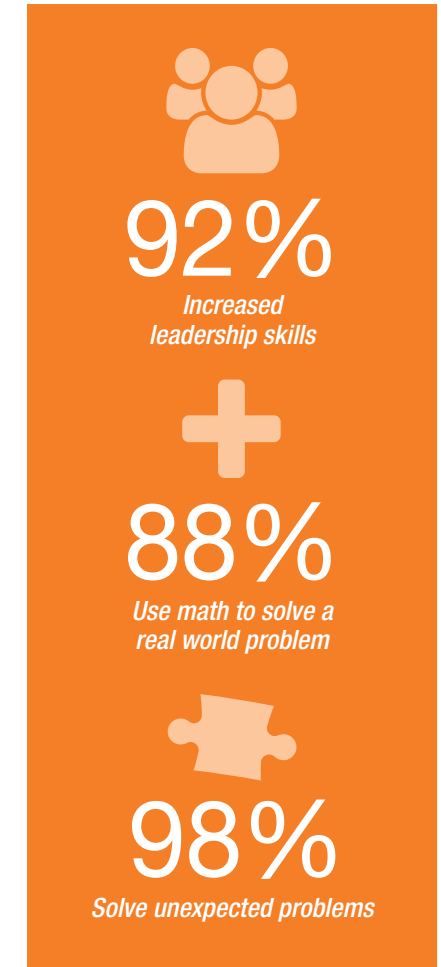
STEM AWARENESS, SKILLS, INTENT



21ST CENTURY WORK-LIFE SKILLS



LEADERSHIP, INNOVATION, ENTREPRENEURSHIP



Source: Cross Program Evaluation of the *FIRST*® Tech Challenge and *FIRST*® Robotics Competition (2011). Center for Youth and Communities, The Heller School for Social Policy and Management, Brandeis University



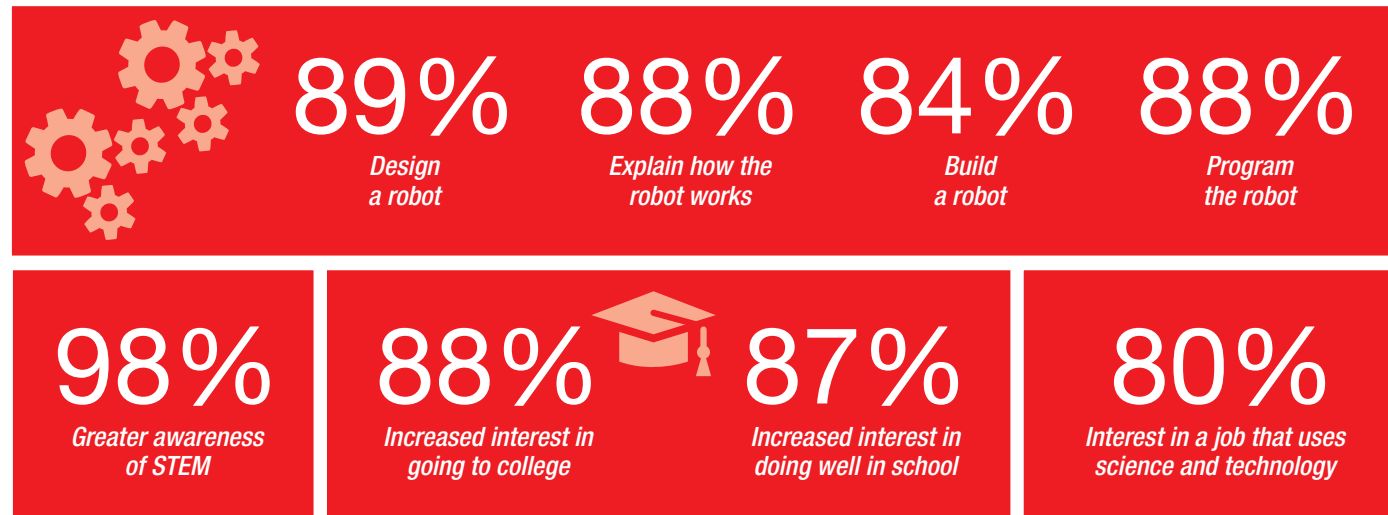
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FIRST® LEGO® League IMPACT

The majority of *FIRST* LEGO League participants participate in key STEM activities on the team and experience gains in a number of outcomes such as:

STEM AWARENESS, SKILLS, INTENT



21ST CENTURY WORK-LIFE SKILLS



LEADERSHIP, INNOVATION, ENTREPRENEURSHIP



Source: Evaluation of the *FIRST*® LEGO® League Senior Solutions season (2012-2013). Center for Youth and Communities, The Heller School for Social Policy and Management, Brandeis University



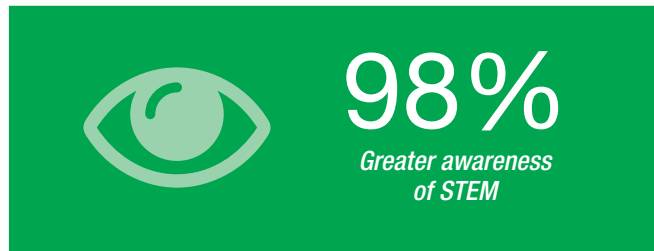
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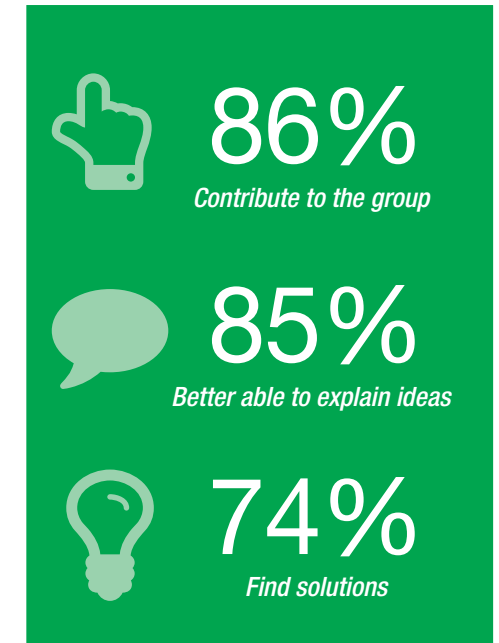
FIRST® LEGO® League Jr. IMPACT

Coaches indicate that the majority of team members experienced gains on a number of outcomes as a result of participating in FIRST LEGO League Jr.:

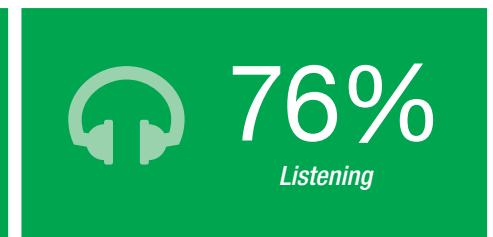
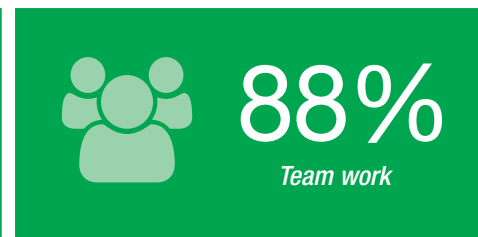
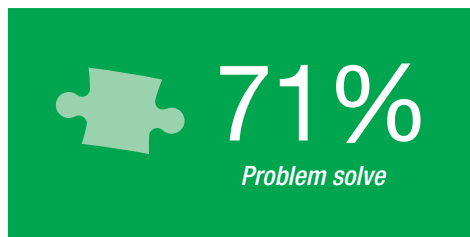
STEM AWARENESS, SKILLS, INTENT



LEADERSHIP, INNOVATION, ENTREPRENEURSHIP



21ST CENTURY WORK-LIFE SKILLS



Source: FIRST® LEGO® League Jr. Evaluation Study (2014), The Research Group, Lawrence Hall of Science, University of California, Berkeley



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***FIRST*[®] Longitudinal Study:
2022 Survey Results (108-Month Follow-Up)**

Prepared by:

**The Center for Youth and Communities
Heller School for Social Policy and Management
Brandeis University
Waltham, MA**

**Tatjana Meschede, Principal Investigator
Marjorie Erickson Warfield, Co-Principal Investigator
Matthew Hoover, Sr. Research Associate
Zora Haque, Research Associate**

Prepared for:

***FIRST*[®]
Manchester, NH**

February 2023

FIRST® Longitudinal Study: Findings at 108-Month Follow-Upⁱ

*"FIRST helped me understand that **working together** is something natural and healthy for us humans to do, and has helped me to become a more social and outgoing person." (FIRST female participant)*

*"I think participating in FIRST at such a young age **opened my mind to loving science and math**. Before I wasn't very inclined to gravitate towards it but now I think I do." (FIRST male participant)*

KEY FINDINGS AT 108-MONTH FOLLOW-UP

- *FIRST®* participants continue to show positive impacts on STEM-related interests and attitudes nine years (108 months) after they entered the program. Impacts include higher interest in STEM, involvement in STEM-related activities, STEM identity, STEM knowledge, and interest in STEM careers when compared to a matched comparison group.
- Participants from all major population groups and community types show positive impacts, including both males and females, underrepresented racial/ethnic groups, youth from lower and higher income families, and from urban, rural, and suburban communities.
- Impacts on STEM attitudes and interests continue to be significantly greater for young women in *FIRST* than those for young men.
- *FIRST's* impacts persist into college. Through the fourth years of college, *FIRST* alumni:
 - continue to show significantly greater scores on STEM-related attitudes than comparison students;
 - are significantly more likely to be interested in majoring in computer science and engineering;
 - are two to nearly three times more likely to take computer science and engineering courses in college; and
 - are significantly more likely to declare a major in computer science, engineering, or a STEM-related field than comparison students. By the end of their 4th year of college, 81% of *FIRST* alumni had declared a STEM major; compared to 64% of comparison group study participants.
- In their 4th year of college, female *FIRST* alumni continue to pursue STEM-related courses and majors at a high rate in college. Female *FIRST* alumni were 3 times more likely to major in engineering than their comparison group counterparts.
- Preliminary data on early career positions show *FIRST* alumni at significantly greater rates in engineering positions, with 61% of them working in a STEM field compared to 44% of the comparison group.

Impacts 108-Months After Program Entry

In this report, we summarize trends on the long-term impact of participating in *FIRST* (please see the Appendix for study details). The results are based on nine years of data, including survey data from

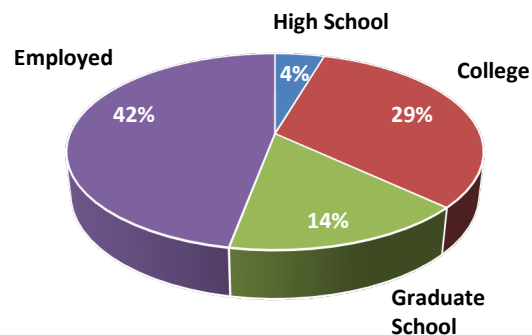
Data Collection through 108-Month Follow-Up

GROUP	Baseline	12-Month Follow-Up (Post-Program)	24-Month Follow-Up	36-Month Follow-Up	48-Month Follow-Up	60-Month Follow-Up	72-Month Follow-Up	84-Month Follow-Up	96-Month Follow-Up	108-Month Follow-Up
<i>FIRST</i> Participants	822	677	665	636	611	602	550	554	570	559
Comparison Group	451	259*	411	409	406	397	386	389	385	379
Total	1273	936	1076	1045	1017	999	936	943	955	938

*The initial group of comparison students did not complete a post-program survey but have participated in all subsequent follow-up surveys.

baseline and post-program surveys and seven rounds of annual follow-up surveys. As such, it reflects the impacts of participation in *FIRST* nine years after study participants entered the program. Of the 1,273 students who began the study, 938 students (74%) completed the 108-month follow-up survey, including 559 *FIRST* participants (68% of those at baseline) and 379 comparison students (84% of those at baseline). Of the *FIRST* participants responding to the follow-up survey, 96% were post high school and 5 (<1%) were still active in the program.ⁱⁱ

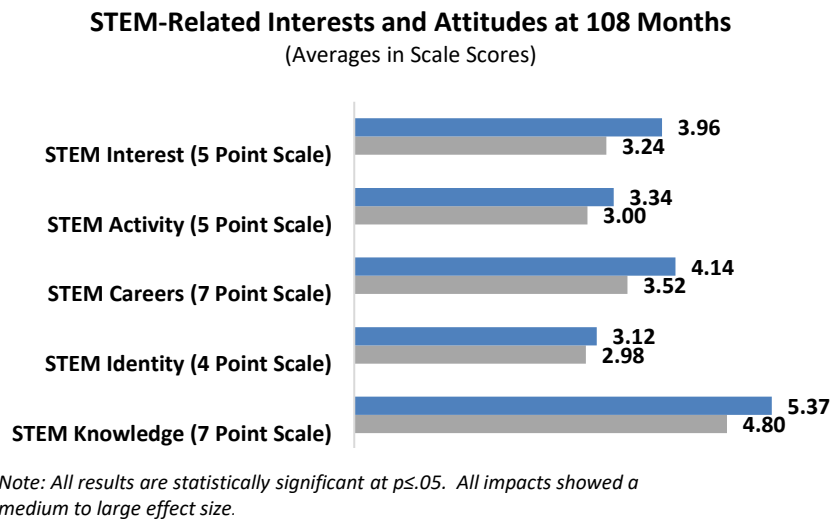
108-Month *FIRST* Survey Respondents



The findings from the 108-month follow-up surveys extend and underscore the positive impact findings from the prior (2015-2021) annual impact reports: ***FIRST* participants continue to show significantly greater average levels on STEM-related attitudes and interests than comparison students and are statistically significantly more likely to show higher levels in STEM-related education and employment outcomes than students in the comparison group.** These positive impacts hold true for participants who originally enrolled in any one of the three *FIRST* programs in the study (*FIRST* LEGO League Challenge, *FIRST* Tech Challenge, and *FIRST* Robotics Competition), across key demographic groups, and for those living in different types of communities (urban, rural, suburban).ⁱⁱⁱ Data on students in their first four years of college also point to positive, statistically significant long-term impacts. **Through their fourth year of college, *FIRST* alumni show stronger STEM-related attitudes and interests than comparison students; are more interested in majoring in key STEM-related fields (engineering, computer science, and robotics); are more likely to take engineering and computer science courses; and are more likely to have declared majors in engineering and computer science. By the fourth year of college, of the *FIRST* alumni who had declared a major, 81% were majoring in a STEM-related field.** In most cases, these college impacts apply to both male and female *FIRST* alumni. Major findings are as follows.

Impacts on STEM-Related Attitudes (All Participants)

At 108 months, *FIRST* participants continue to show positive, statistically significant impacts on all of the STEM-related attitude measures in the study, including interest in STEM, involvement in STEM-related activities, STEM identity, STEM knowledge, and interest in STEM careers. *FIRST* participants are approximately twice as likely to show higher levels on STEM-related measures nine years after entering the program as students in the comparison group.



- ***FIRST* participants continue to show significantly higher levels on all measures of STEM-related interest and attitudes than members of the comparison group.** In each case, the “effect size” (a measure of the magnitude of the impact being measured) was large enough to indicate a *practical* difference in attitudes and interests.^{iv} The STEM-related measures include:
 - Interest in STEM,
 - Involvement in STEM-related activities (e.g. reading or watching science programs)
 - Interest in STEM careers (such as scientist, engineer, STEM educator),
 - STEM identity (for example, “I see myself as a math, science, or technology person”), and
 - STEM knowledge/understanding (items include: “I want to learn more about science and technology,” “I have a good understanding of how engineers work to solve problems,” and “I can use math and science to make a difference in the world”).

After controlling for differences in baseline characteristics and baseline scale scores, *FIRST* participants are 2.2 times more likely than comparison students to be interested in STEM, from baseline to 108-month follow-up.^v

FIRST participants are also:

- 1.9 times more likely to report a stronger *STEM identity*;
 - 1.9 times more likely to score higher in *STEM knowledge/understanding of STEM*;
 - 1.5 times more likely to show higher involvement in *STEM activity*; and
 - 1.4 times more likely to show higher interest in *STEM careers*.
- ***The 108-month data also continue to show positive, statistically significant impacts on STEM-related outcomes for participants from all three FIRST programs in the study (FIRST LEGO League Challenge, FIRST Tech Challenge, FIRST Robotics Competition).*** Participants from each of the three *FIRST* programs (program type at entry into *FIRST*) show significantly higher scores on STEM-related measures than comparison students from the same age/grade span.

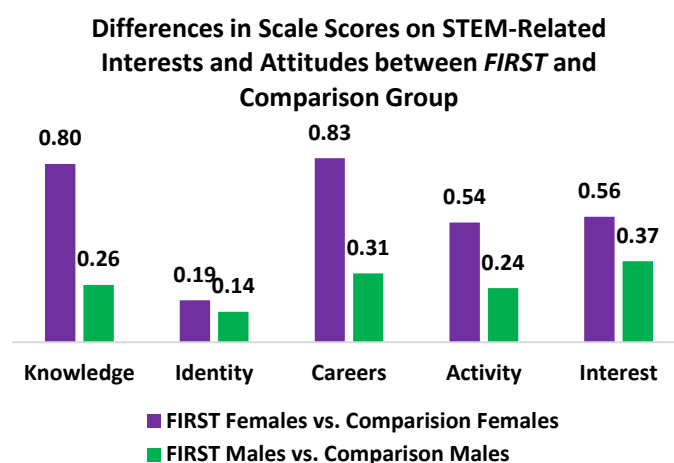
- **STEM-related impacts continue to be evident across all major population groups and among students from historically underrepresented communities (compared to similar students in the comparison group).** Each of the following groups – males and females, lower and higher income students (family incomes below and above \$50,000), White youth and historically underrepresented racial and ethnic groups in STEM (Black or African-American, Native American, Hawaiian/Pacific Islander, Multi-Racial, and Latinx), and urban, suburban, and rural youth – shows significantly greater levels in STEM related attitudes for *FIRST* participants over counterparts among comparison group students.

Positive and Significant Impacts for Underrepresented Communities

Outcomes	Girls and Young Women	Economically Disadvantaged	Underrepresented Racial/Ethnic Groups	Urban	Rural
STEM Interest	+	+	+	+	+
STEM Activity	+	+	+	+	+
STEM Careers	+	+	+	+	+
STEM Identity	+	+	+	+	+
STEM Knowledge	+	+	+	+	+

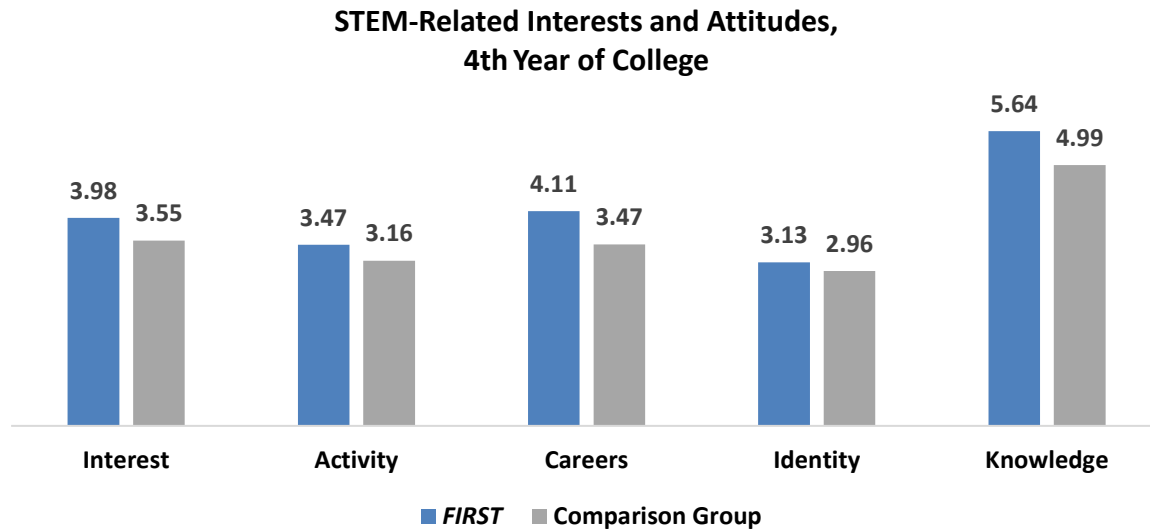
Note: + indicates a positive, significant impact at $p \leq .05$. Impacts are relative to comparable subgroups in the comparison population (for example, girls and young women among *FIRST* participants are compared to girls and young women in the comparison group). Economically Disadvantaged is defined as those whose family income is below \$50,000. Underrepresented Racial Groups include Black or African-American, Native American, Hawaiian/Pacific Islander, Multi-Racial, and Latinx. The number of youth who responded as non-gender-binary was too small for analysis.

While the data show positive impacts for both male and female *FIRST* alumni, *FIRST* female participants continue to show significantly larger impacts than male participants on all of the STEM-related attitudinal measures. The chart to the right shows the differences in outcomes for young women in *FIRST* compared to young women in the comparison group, and for young men in *FIRST*, compared to young men in the comparison group. While all of the differences between *FIRST* participants and comparison students are statistically significant, the impacts for female participants in *FIRST* on each measure are also significantly greater than those for male participants, as evidenced by the higher purple bars in the graph to the right.

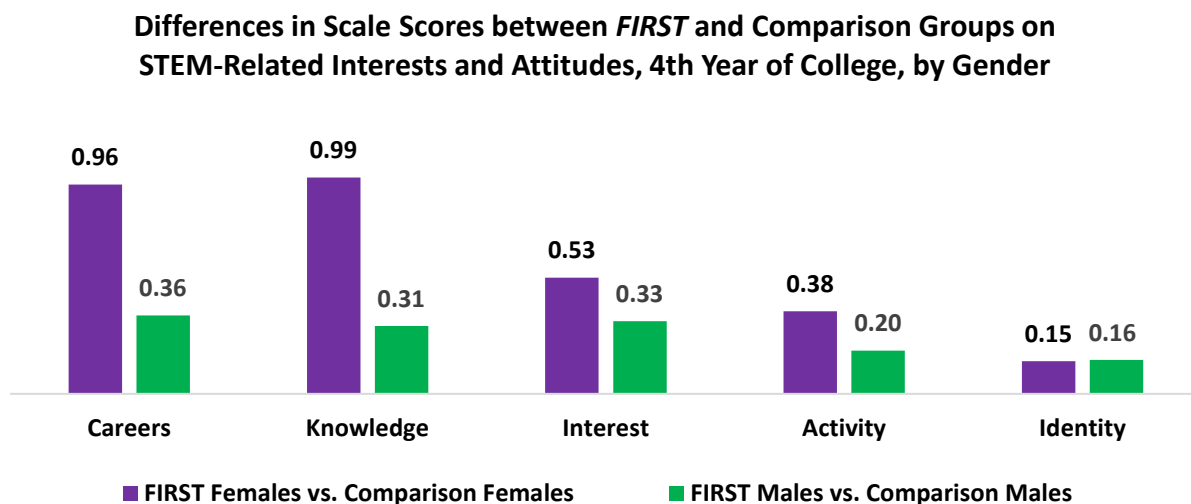


Note: Values on the chart represent the differences in outcomes (estimated scale scores) between *FIRST* participants and students of the same gender in the comparison groups (i.e., the difference in scores between males in *FIRST* and males in the comparison group and between females in *FIRST* and female comparison students). All differences are statistically significant at $p \leq .05$.

The impact of FIRST on STEM-related attitudes and interests persists into college. FIRST alumni continue to show consistent significantly higher scores than comparison students on measures of interest in STEM, STEM activity, interest in STEM careers, STEM identity, and STEM knowledge and understanding through the fourth year of college. Both male and female alumni show significant impacts; however, female FIRST alumni continue to show significantly higher levels than male alumni on all STEM measures.



FIRST participants consistently show significant higher levels on STEM outcomes than comparison students of the same gender. These differences are greatest for young women, especially for the careers and knowledge scales, when comparing FIRST participants with female comparison group members.



Note: Values on the chart represent the differences in outcomes (estimated scale scores) between FIRST alumni and students of the same gender in the comparison groups (i.e., the difference in scores between males in FIRST and males in the comparison group and between females in FIRST and female comparison students). All differences are statistically significant at $p \leq .05$.

Impacts on College Pathways through Four Years of College

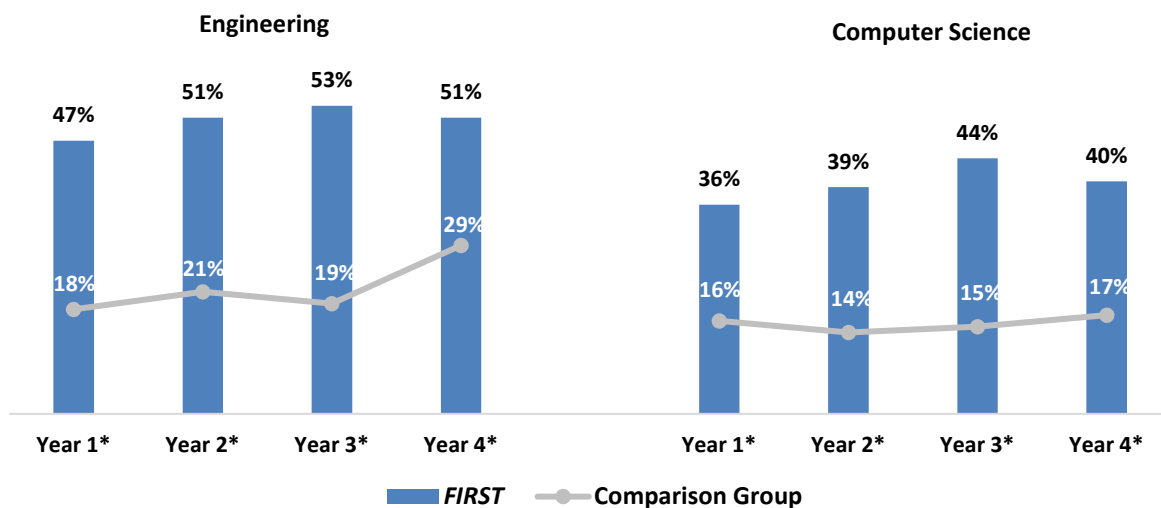
In addition to its impacts on STEM-related interests and attitudes, participation in *FIRST* has a significant impact on the education trajectories of *FIRST* alumni attending college.

Through their fourth year of college, *FIRST* alumni are significantly more interested in majoring in engineering and computer science than comparison students; are significantly more likely to take engineering and computer science courses; and are significantly more likely to have declared majors in engineering and computer science. By the fourth year of college, 81% of *FIRST* alumni were majoring in a STEM-related field compared to 64% of comparison students; 59% had declared a major in engineering or computer science versus just 24% for comparison students.

# of Students by Year in College	N
4 years completed	466
3 years completed	668
2 years completed	801
1 year completed	933

- ***FIRST* alumni report significantly stronger interest in majoring in engineering and computer science than comparison students through four years of college.** *FIRST* alumni were significantly more likely than comparison students to be “very interested” in majoring in engineering and computer science than comparison students.

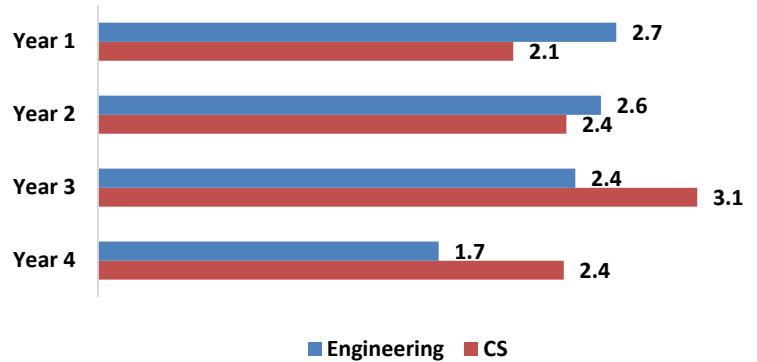
Interest in Engineering and Computer Science Majors, Years 1-4 in College
(Percent “Very Interested”)



Note: Based on a question asking students to rate their interest in majoring in each of the listed subjects. Values shown are percent of students who are “very interested” in the specified major (i.e., reporting 6, 7 or “already declared” on a scale from 1 “Not Interested at All” to 7 “Very Interested”). Asterisk () indicates statistically significant at $p \leq .05$. *FIRST* alumni also showed significantly stronger interest in majoring in robotics (not shown) in all four years.*

- Except in Year 4 for engineering, **FIRST participants are at least twice as likely to be interested in either engineering or computer science**
- Unlike in Years 1 and 2 in college, when the interest in Engineering was greatest for *FIRST* participants, **in Year 3 interest for computer science was greatest** and it remained greater than interest for engineering in Year 4.

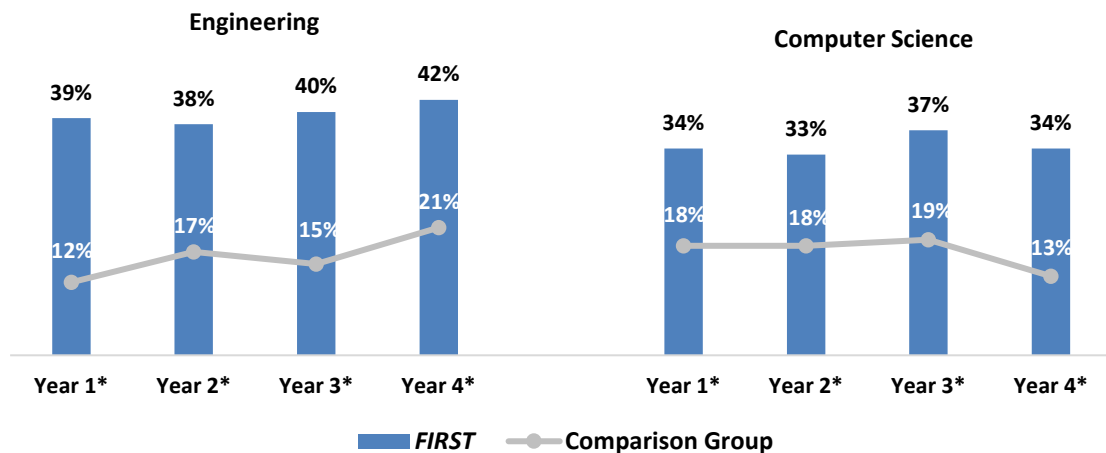
FIRST Participants Likelihood* of Interest in Engineering & Computer Science Majors



**Note: Logistic regressions estimates on the interest in majoring scale controlling for Gender, Race, Honors Courses, Family Income, and Parental Support for STEM*

- **FIRST alumni are consistently significantly more likely to take engineering or computer science courses during their four years in college than comparison students.** In their first year of college, 39% of *FIRST* alumni were taking an engineering course, compared to 12% in the comparison group, and 34% a computer science course, compared to 18% of comparison students. In their second college year, 38% of *FIRST* alumni were taking engineering and 33% computer sciences courses, compared to 17% and 18% of comparison students. By the third year of college, 40% of *FIRST* alumni reported taking at least one engineering class and 37% reported taking at least one computer science course compared to roughly 15% and 19% of comparison students. And by the fourth year of college, 42% of *FIRST* alumni reported taking an engineering course and 21% for the comparison group. For computer science in the same year, 34% of the *FIRST* alumni reported taking a computer science course, compared to just 13% among the comparison group.

Engineering and Computer Science Course-Taking Years 1-4 in College

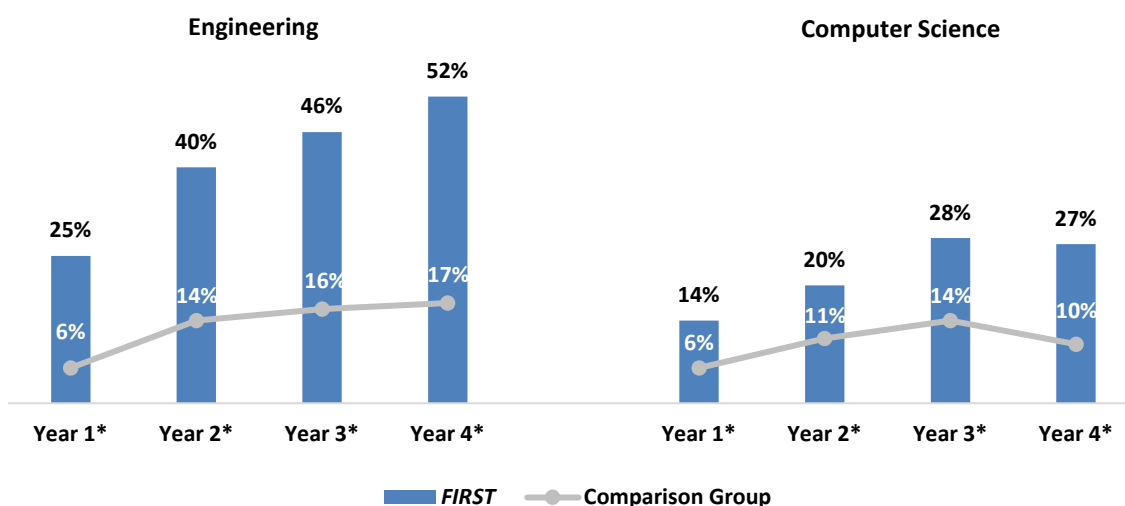


Note: Percentage of full-time students who reported taking at least one course in engineering and/or computer science. Asterisk () indicates statistically significant at $p \leq .05$.*

- In Year 4, *FIRST* alumni were 1.7 times more likely to have taken an engineering course, and 2.4 more likely to have taken a computer science course than the comparison students.
- **Consistent with their greater interest in engineering and computer science majors and increased course-taking in those fields, *FIRST* alumni are significantly more likely than comparison students to declare a major in engineering or computer science. They are also significantly more likely than comparison students to declare a major in a STEM field generally by the end of their fourth year of college.**
 - *Engineering majors:* *FIRST* alumni were significantly more likely to declare a major in engineering in all four years of college than comparison students: 25% vs. 6% in the first year of college, 40% vs. 14% in Year 2, 46% vs. 16% in Year 3, and 52% vs. 17% in Year 4. In Year 4, *FIRST* alumni were nearly twice as likely to major in engineering as comparison students.
 - *Computer science majors:* In all four years of college, *FIRST* alumni declared a major in computer science at a significantly higher rate than comparison students: 14% vs. 6% in the first year of college, 20% vs. 11% in Year 2, 28% vs. 14% in Year 3 and 27% vs. 10% in Year 4. In Year 4, *FIRST* alumni were more than twice as likely (2.4 times) as comparison students to major in computer science.

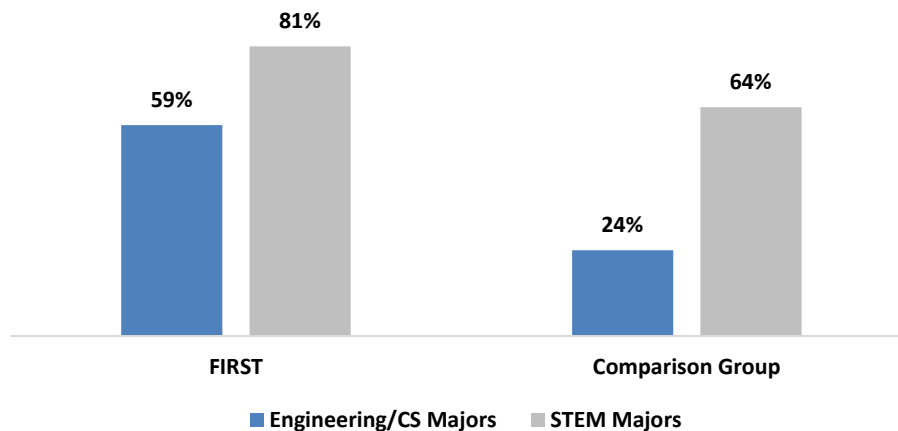
Engineering and Computer Science Majors Years 1-4 of College

(Percent of those who Declared Majors)



Note: Percent of students who declared a major in specified fields as a percentage of all those who declared a major in that year. Asterisk (*) indicates statistically significant at $p \leq .05$.

Engineering/Computer Science Majors & STEM Majors - Year 4



Note: Data represents percentages of those who declared a major in years 1-4 of college. All differences are statistically significant, $p \leq .05$. STEM fields include: biology, computer science, engineering, health professions, mathematics, physical sciences, vocational/ technical fields, and robotics.

- *Engineering/Computer Science:* By Year 4, 59% of *FIRST* alumni had declared a major in either computer science or engineering vs. 24% of students in the comparison group.
- *STEM majors overall:* *FIRST* alumni were also more likely to declare a major in a STEM field generally. By the end of Year 4 in college, of those who had declared a major, 81% of *FIRST* alumni overall had declared a major in a STEM-related field compared to 64% of comparison students.

Gender Differences in College

The impacts on college pathways were shared by both male and female *FIRST* alumni for all three outcome measures at the college level: interest in majoring, course taking, and declaring a major in engineering or computer science. A larger proportion of male and female *FIRST* alumni reported higher degrees of interest in majoring, course taking, and declaring a major in engineering or computer science, although not statistically significant in all years, as detailed below.

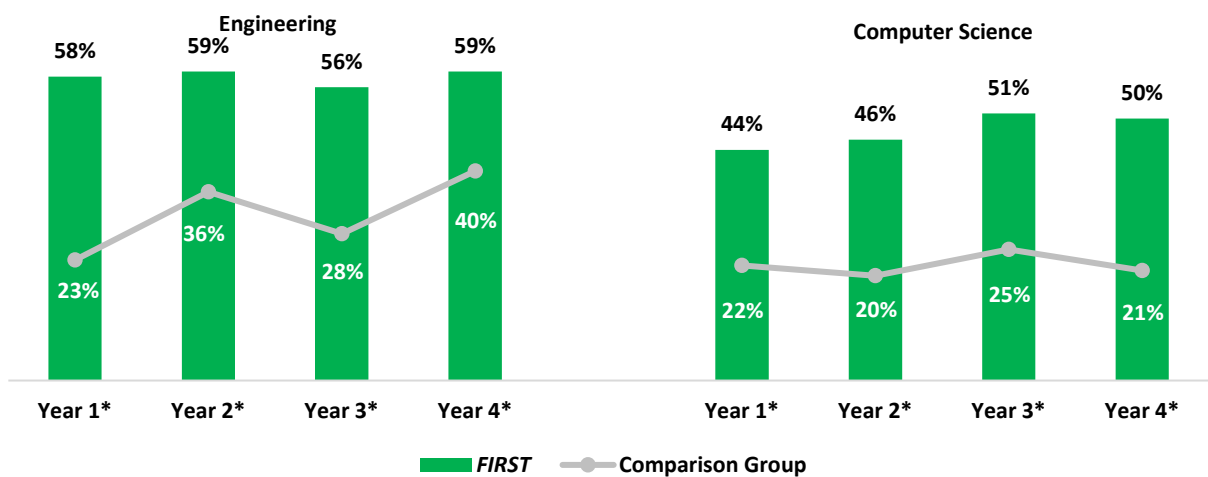
At the same time, the college outcome data show somewhat different patterns of impact between males and females. In general, the gap between *FIRST* and comparison group males in interest in engineering and computer science majors, engineering and computer science course-taking, and declared majors remained the same or narrowed slightly, mostly due to an increase in the comparison group, and these differences are not always statistically significant.

In contrast, **the gap between female *FIRST* alumni and comparison students started to widen, with female *FIRST* alumni significantly more likely to be interested in engineering and computer science, to take engineering and computer science courses, and to major in engineering.** These differences are strongest for engineering. Next, we present these patterns in more detail.

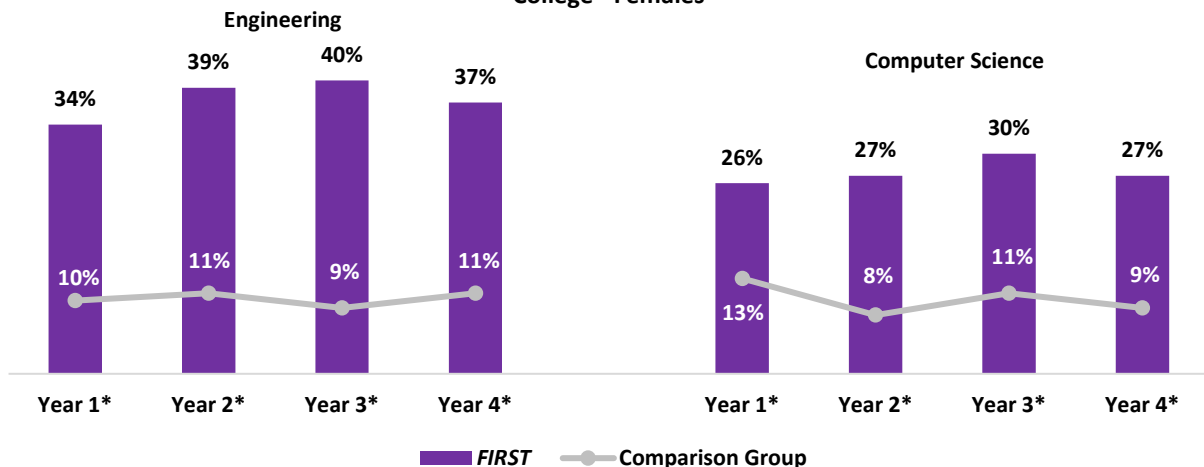
- **While FIRST alumni were significantly more likely to be highly interested in majoring in engineering and computer science than comparison students, the patterns for male and female alumni were different.**

Over four years of college, the gap in interest in engineering majors narrowed between male FIRST alumni and male comparison group members as interest grew among comparison group members; however, the difference in interest remained significant over the course of four years. The same is true of interest in computer science majors. Female FIRST alumni were significantly more interested in both engineering and computer science majors through all four years of college, with the differences in engineering more substantial in comparison to computer science.

Percent "Very Interested" in Engineering and Computer Science Majors in Years 1-4 of College - Males

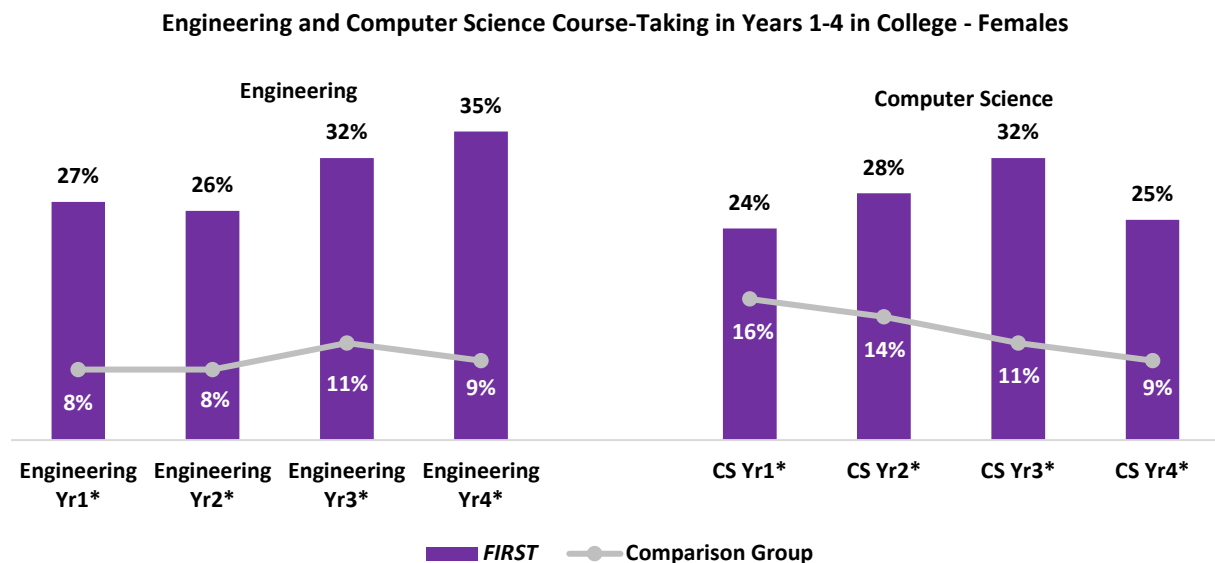
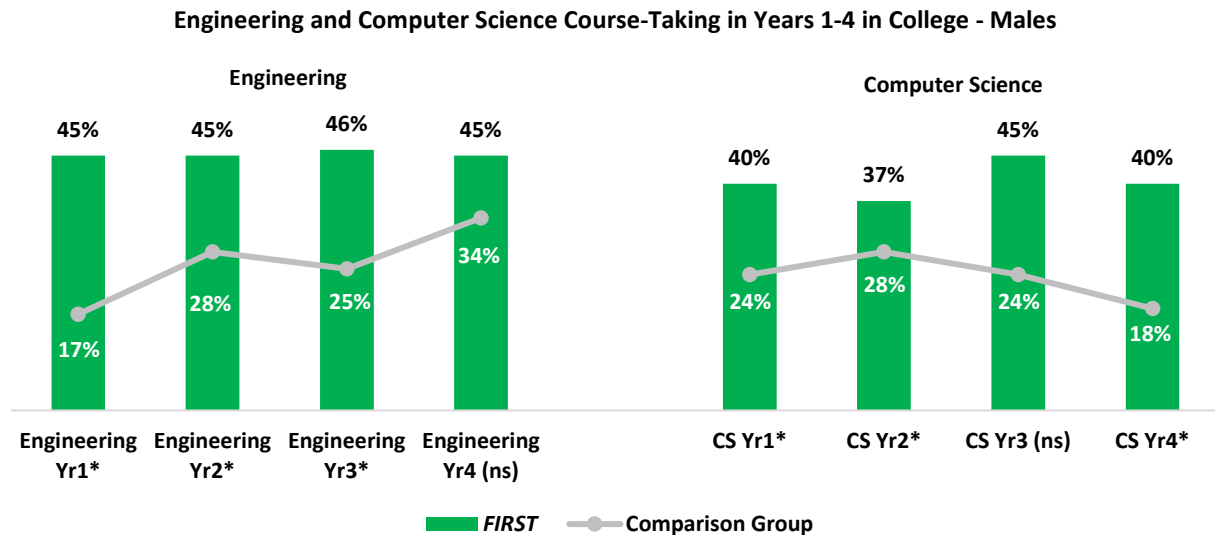


Percent "Very Interested" in Engineering and Computer Science Majors in Years 1-4 of College - Females



Note: Percent of students who declared a major in specified fields as a percentage of all those who declared a major in that year. Asterisk () indicates statistically significant at $p \leq .05$.*

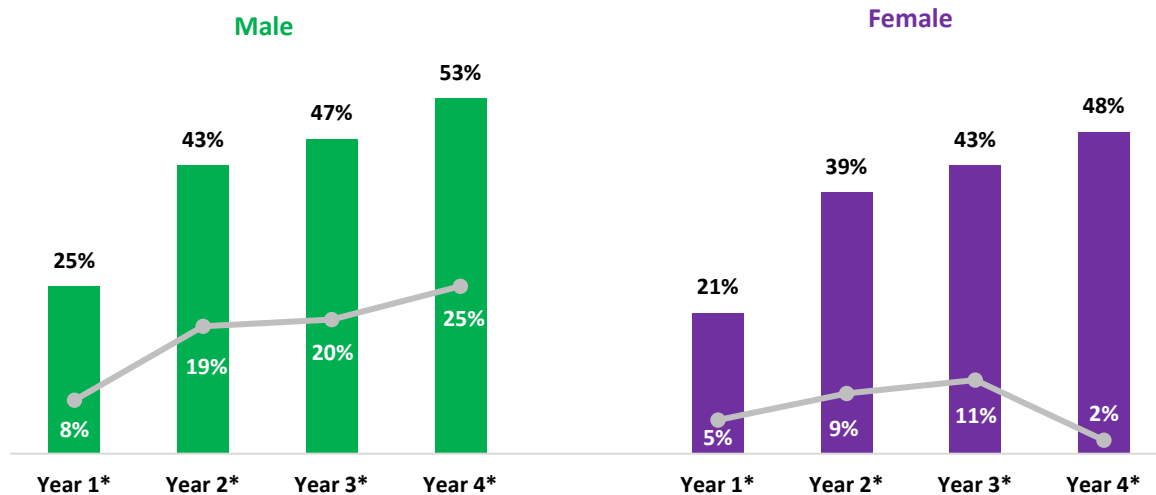
- Over the first 4 years of college, the gap in engineering and computer science course-taking remained relatively stable and significant for males (not significant in Year 4 for engineering, nor Year 3 for computer science), but grew and became statistically significant between female *FIRST* alumni and comparison young women. By Year 4, the percentages of female *FIRST* alumni taking courses in engineering and computer science were both three times higher than that for young women in the comparison group (35% vs. 9% in engineering and 25% vs. 9% in computer science).



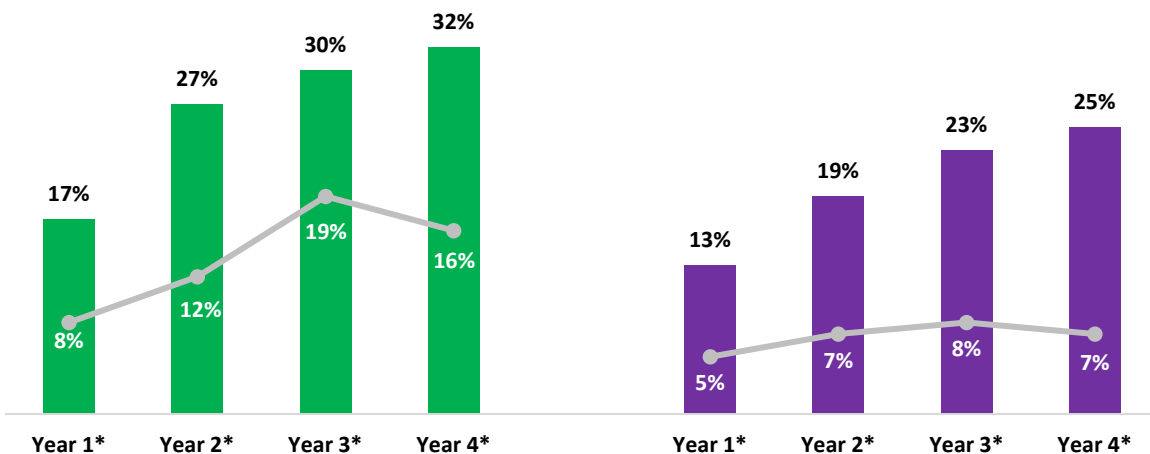
Note: Percentage of full-time students who reported taking at least one course in engineering and/or computer science. Asterisk (*) indicates statistically significant at $p \leq .05$. NS indicates that differences are not statistically significant.

- In terms of declared majors, the gap in declared majors in engineering between male *FIRST* alumni and comparison males narrowed over the four years of college, largely as a result of a substantial increase in engineering majors among comparison males in Year 2. From Years 1 through 4, the difference between male *FIRST* alumni and male comparison group members remained significant.
- Among young women, however, the gap widened substantially, and female *FIRST* alumni continued to declare majors in engineering at a significantly higher rate than women in the comparison group. Notably, by Year 4, 48% of female *FIRST* alumni had declared majors in engineering, a rate twenty-four times higher than female counterparts in the comparison group.

Declared Majors in Engineering, Years 1-4 in College

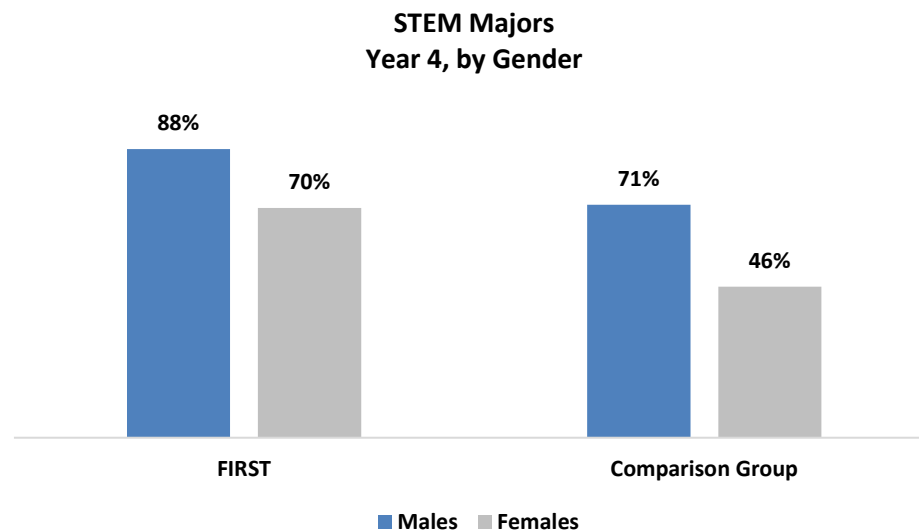
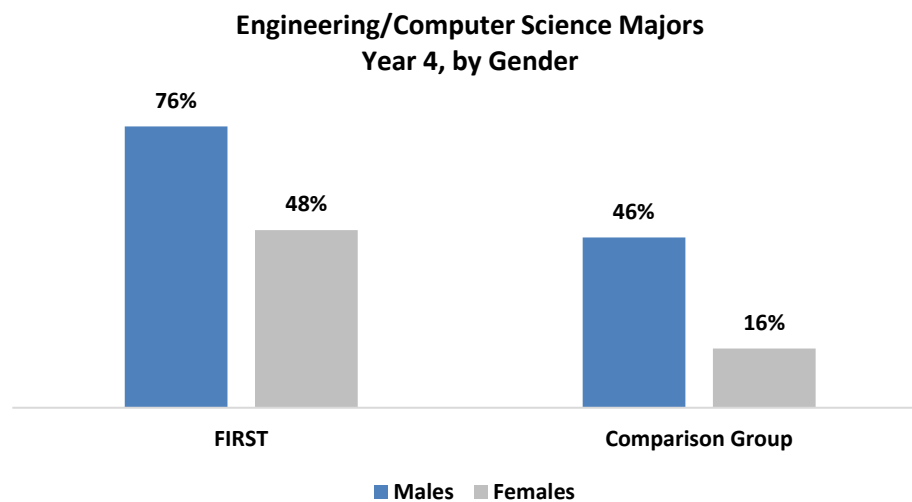


Declared Majors in Computer Science, Years 1-4 in College



Note: Percentage of students who declared a major in years 1-4 of college. Asterisk (*) indicates statistically significant at $p \leq .05$.

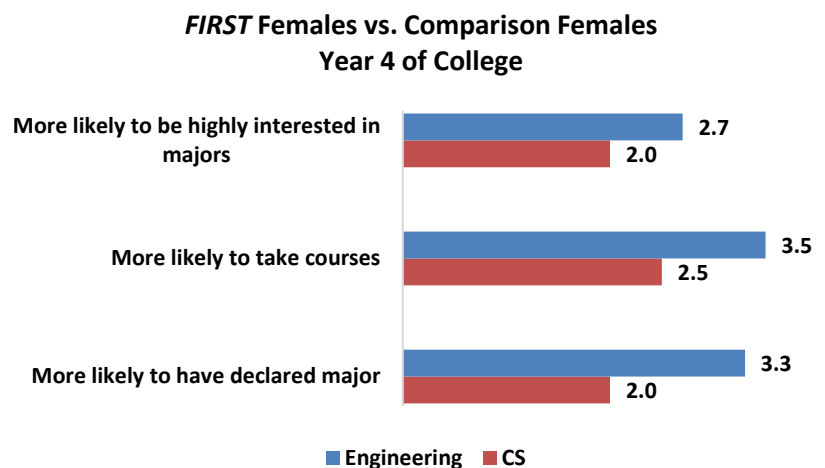
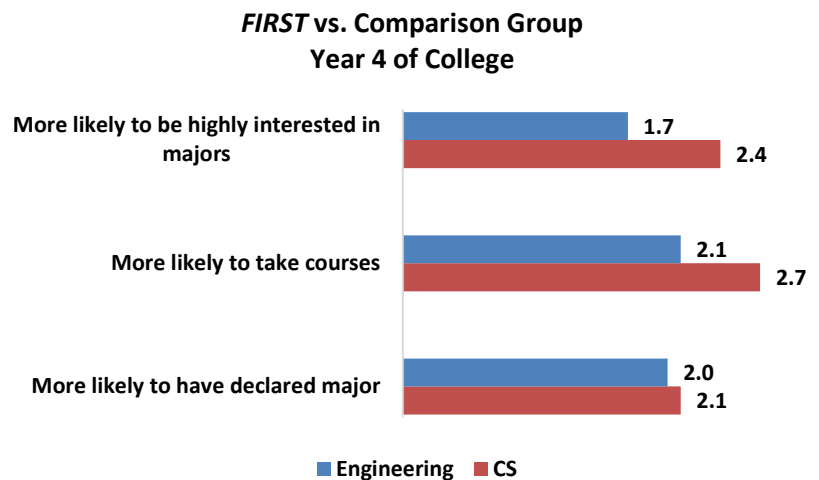
- **In computer science, the pattern was similar:** by Year 4, the gap in computer science majors between female *FIRST* alumni and female comparison students had grown. The differences for *FIRST* males and their comparison group, as well as *FIRST* females and their comparison group, remained significant all four years.
- **Finally, while there are variations between results for male and female *FIRST* alumni when engineering and computer science majors are looked at separately, when engineering and computer science majors are combined and when looking across STEM majors as a whole, both male and female *FIRST* alumni are significantly more likely to major in STEM fields than their comparison group counterparts.** Overall, 76% of male and 46% of female *FIRST* alumni declared a major in engineering or computer science by the fourth year of college (compared to 48% and 16% of comparison students respectively); 88% of male and 70% of female *FIRST* alumni declared a major in a STEM-related field (compared to 71% of male and 46% of female comparison group members).



Note: Data represents percentages of those who declared a major in years 1-4 of college. All differences are statistically significant, $p \leq .05$. STEM fields include: biology, engineering, computer science, health professions, mathematics, physical sciences, vocational/ technical fields, and robotics.

In the next section, we examine differences in interest in, taking courses, and majors in Year 4 of college.

- When observing differences between overall group and gender group comparisons, we find *FIRST* females exhibit greater interest in engineering:** In comparison to previous years of analysis, where all *FIRST* and comparison participants showed higher interest, likelihood in course-taking, and likelihood in declaring majors in engineering, the reverse became true at the 96-month follow-up and holds true for the 108-months follow-up. By their 4th year of college, *FIRST* participants as a whole showed greater likelihood in all three areas in computer science, rather than engineering.
- FIRST* females, however, continued to show greater levels of interest in majors, courses, and declaring majors in engineering.** For example, by their 4th year of college, *FIRST* females were nearly more than 3 times (3.5) as likely than comparison females to take engineering courses and 3.3 times as likely to declare an engineering major over the comparison group. In the same years, they were only 2.5 times more likely to take computer science courses and 2.0 times as likely to declare computer science as their major than comparison females.



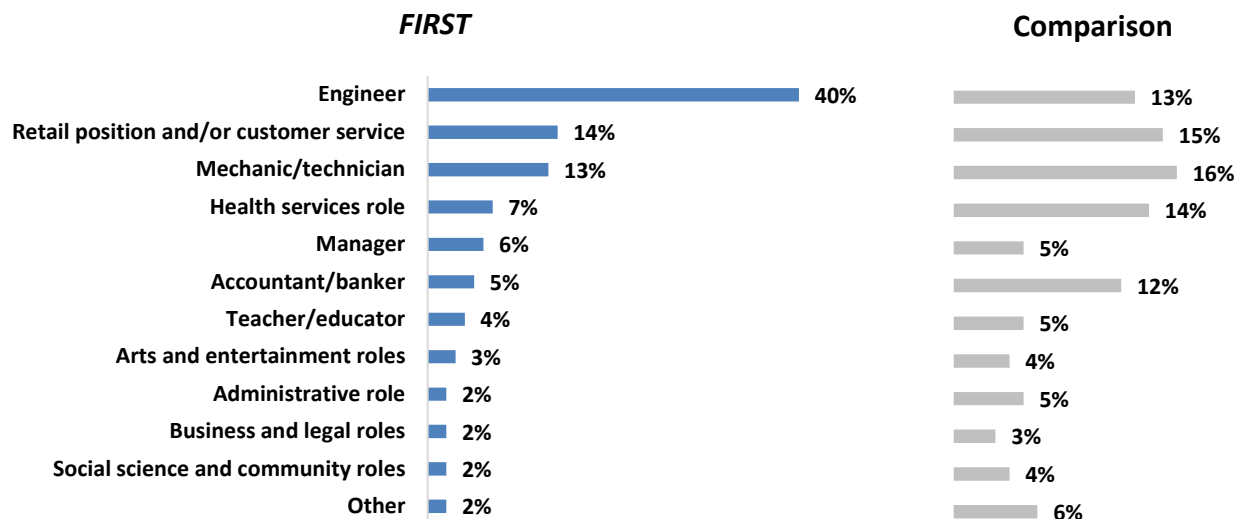
Note: Controlling for Gender, Race, Honors Courses, Family Income, and Parental Support for STEM

Engineering Majors Sub-Fields

We added a question on type of engineering fields selected for college majors to the 108-month survey. Mechanical and electrical engineering are most popular among *FIRST* alumni, and proportionately, comparison group students leaned more towards civil engineering. The comparison group tended to be more interested in biomedical engineering, albeit the small sample sizes do not allow for conclusive results.

Employment in STEM

Entering Employment

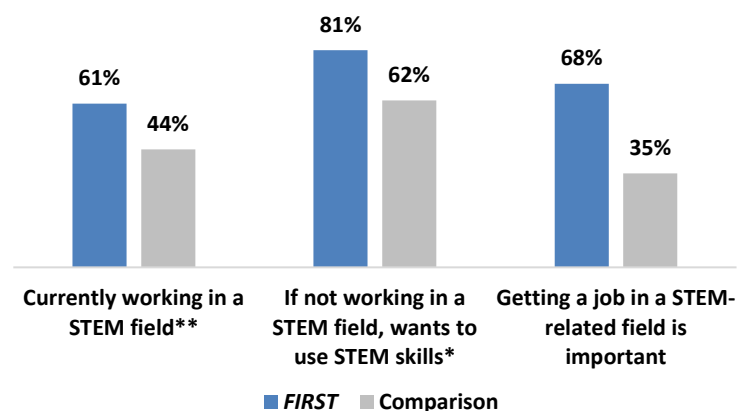


As the study participants begin to move beyond college, we are interested in their early careers. Above we show differences between *FIRST* and the comparison group along self-identified job titles. *FIRST* alumni are notably more likely to be working as an engineer.

The survey included a series of questions on STEM-related jobs. While the sample of respondents employed post-graduation is still small (total N=398), these results should be treated as preliminary. Regardless, we observe significant differences between *FIRST* alumni and comparison group survey respondents.

***FIRST* alumni are significantly more likely to work in a STEM field** than the comparison group. More than half among them, 61% were working in the STEM field, compared to 44% of comparison group respondents.

For those not working in a STEM field, ***FIRST* alumni are significantly more likely to want to work in STEM** and to use their STEM skills. 81% among them reported wanting to work in STEM, compared to 62% among comparison group respondents.

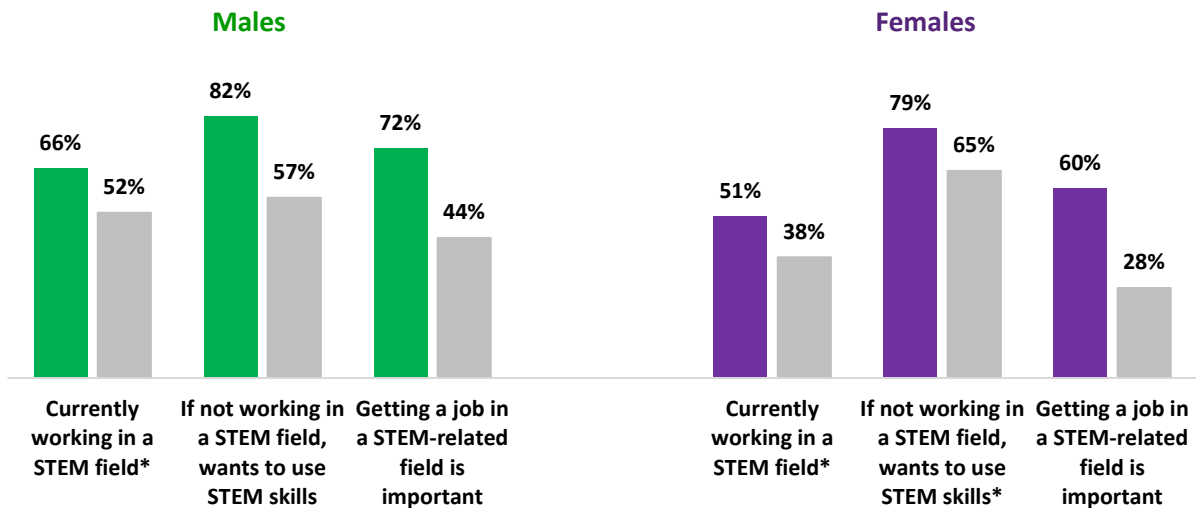


Note: Differences are statistically significant at $p \leq .05$. (*) or $p \leq .01$. (**).

Regardless of working or not working in a STEM field, ***FIRST* alumni are more likely to report that getting a job in a STEM field as important** to them, though the difference to comparison participants is not

statistically significant, most likely due to the small sample size for this question. 68% among them reported a STEM job as important, compared to 35% among comparison group respondents.

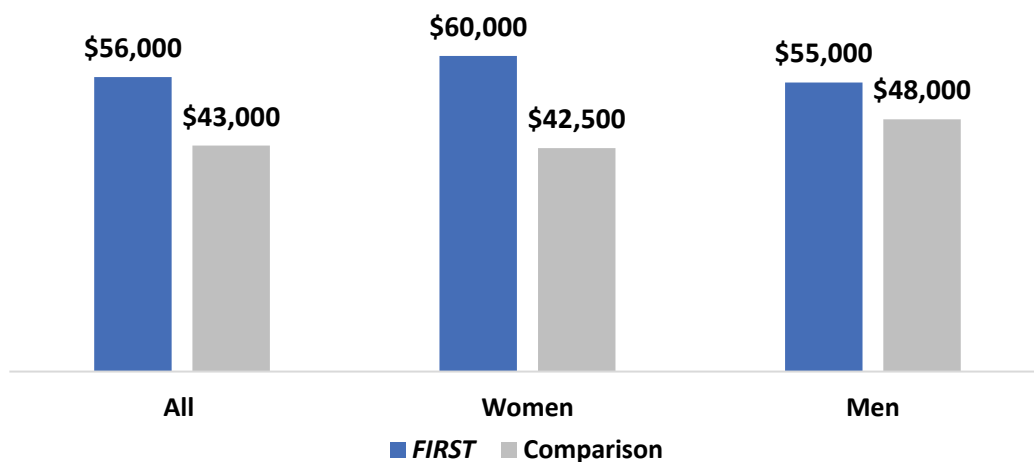
We observe similar trends for male and female *FIRST* alumni. For both groups, *FIRST* alumni are significantly more likely to work in a STEM field. In addition, ***FIRST* females are significantly more interested in wanting to use their STEM skills when currently not working in a STEM field.** For both groups, getting a job in a STEM field is not significantly different from the comparison group.



Note: Differences are statistically significant at $p \leq .05$. (*).

Median Annual Income

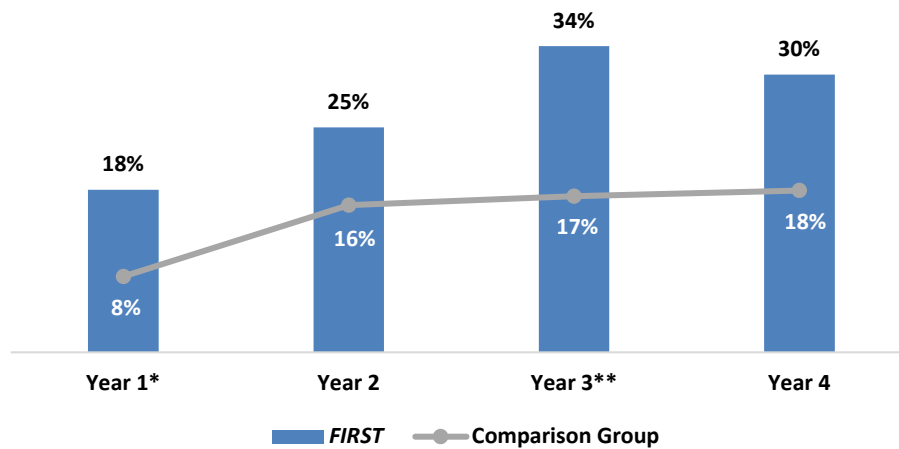
For those employed, we compared their median annual income and found overall higher incomes for *FIRST* alumni. These differences are however not statistically significant.



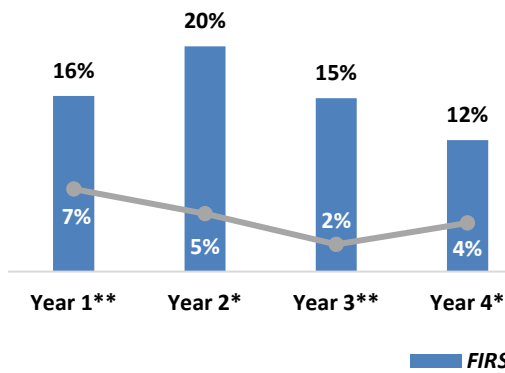
STEM-Related Activities

In each year of college, *FIRST* students were significantly more likely to participate in STEM-related activities than the comparison group. While the gap decreased slightly in regards to participation in STEM internships, *FIRST* participants still engaged in these activities at least 1.5 times more than comparison participants. For computer and engineering clubs, however, *FIRST* participants not only participated at much higher rates than the comparison group, but did so in a manner that widened the gap substantially. Differences were statistically significant for internships, computer, and engineering clubs.

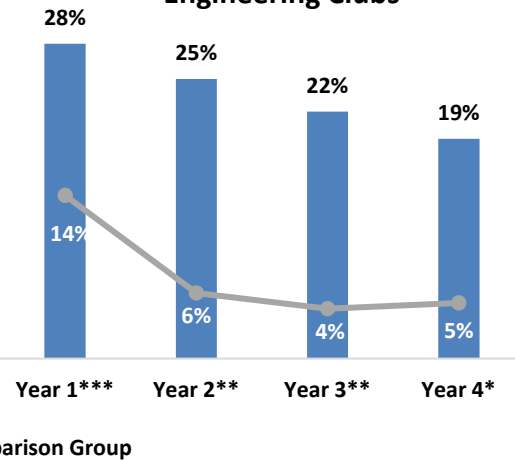
STEM-Related Internships



Computer Clubs

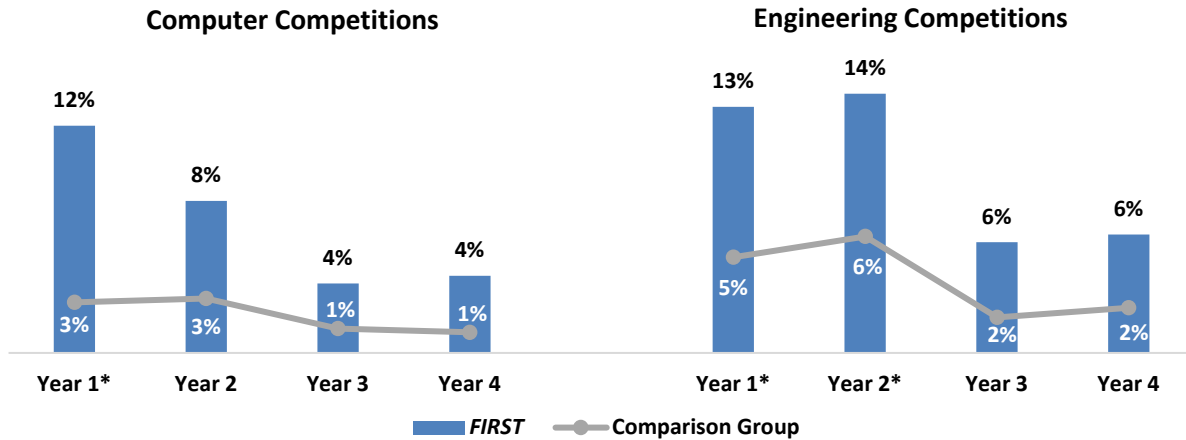


Engineering Clubs



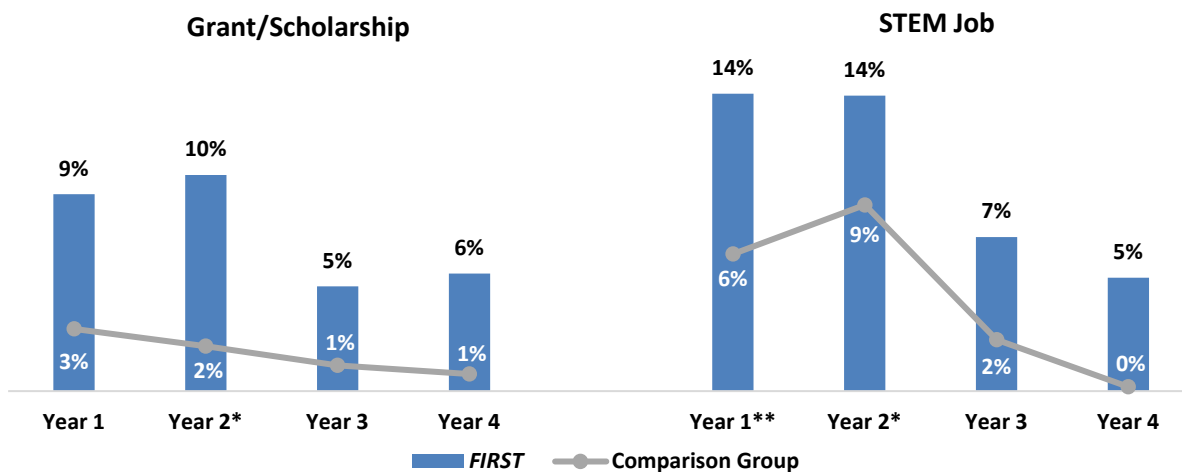
Note: Differences are statistically significant at $p \leq .05$. (*) or $p \leq .01$. (**).

FIRST alumni are also significantly more likely to participate in computer and engineering competitions. Gaps between *FIRST* and comparison group participants remained wide over the course of all four years, and increased over time.



Note: Differences are statistically significant at $p \leq .05$ (*) or $p \leq .01$ (**).

In regards to STEM-related scholarships and jobs, *FIRST* participants were once again significantly more likely to receive engineering-related grants or scholarships, and to work in a STEM-related summer job.



Note: Differences are statistically significant at $p \leq .05$ (*) or $p \leq .01$ (**).

Very few comparison group participants received grants or scholarships in STEM fields, and were similarly engaged in STEM-related jobs to a low degree; in the case of the 4th year of college, no comparison group students worked in such positions.

Membership in Professional Organizations and Professional Certification

Among those currently employed, comparison group participants were significantly more likely to report membership in professional organizations and to have acquired a professional certificate.

	<i>FIRST</i>	Comparison Group
Membership Professional Organizations*	9.2%	23.8%
Professional Certification**	20.8%	25.4%

Note: Differences are statistically significant at $p \leq .05$. (*) or $p \leq .01$. (**).

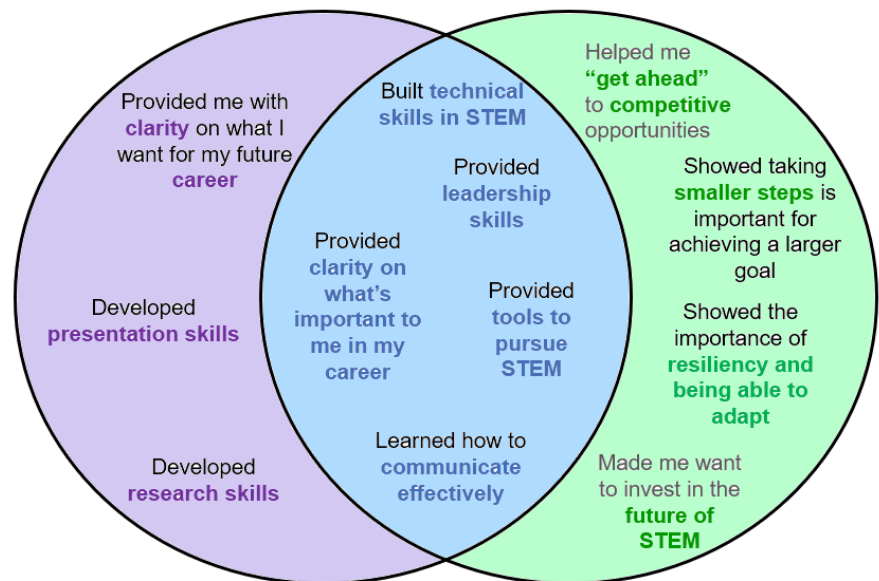
Participants' Assessments on *FIRST* impacts: Differences by Gender

FIRST participants were asked for an example of how their *FIRST* experience has made an impact on them. Below is an analysis of differences by gender.

Impacts on Careers

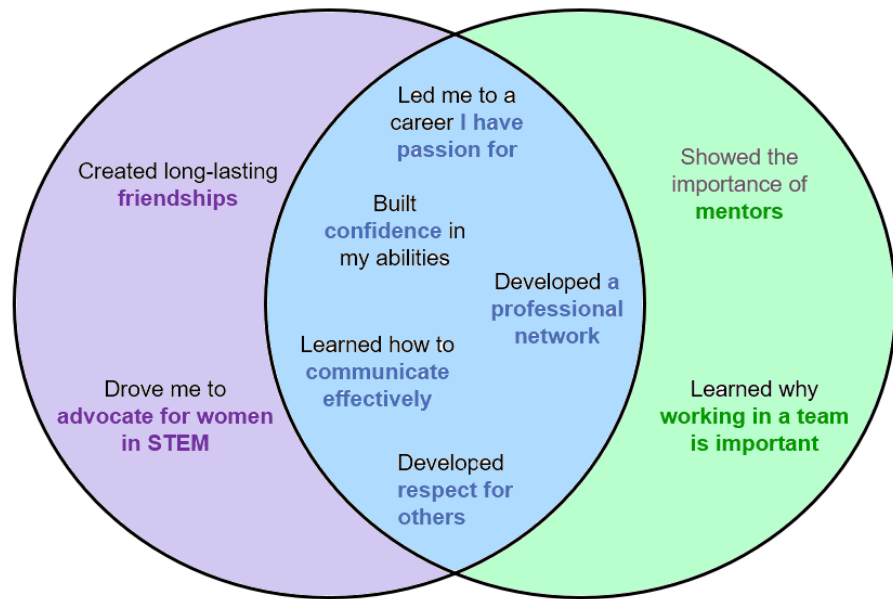
Males and females highlight impacts of *FIRST* on their careers, with some overlap but also notable differences. Overlap of themes included gaining of STEM skills, leadership and communication skills in professional capacities, and resources for pursuing STEM fields. Both groups also discussed gaining a clearer sense of what they wanted to prioritize in their career.

FIRST female alumni highlighted that *FIRST* taught them research and presentation skills. *FIRST* women also discussed having gained a better understanding of what it was that they wanted to incorporate into their future career, as a result of their participation in the program. For males, commonly mentioned areas included gaining skills in resiliency and developing road maps towards larger goals, developing an investment in the future of STEM fields, and gaining academic and professional opportunities that would give them a competitive advantage later in their career.



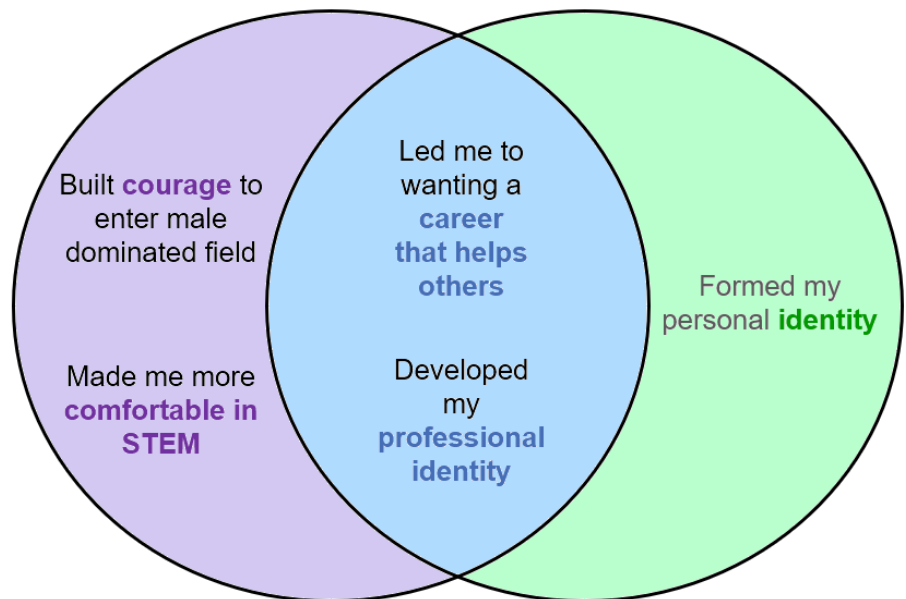
Impacts on Interpersonal Skills

FIRST males and females discussed the ways their program experience influenced their interpersonal skill development. While females often mentioned the ways *FIRST* led to their gaining of new friendships, as well as a desire to advocate for women in STEM fields, males learned about the importance of teamwork and mentorship. Both females and males gained more confidence, communication skills, and mutual respect for others; and found themselves in careers in which they felt emotionally invested. Both groups also discussed how *FIRST* helped them develop professional networks, and how the process of forming such networks improved their social skills.



Impacts on Identity

FIRST program participation influenced male and female participants' identity developments. Women discussed how their participation allowed them to feel more comfortable in entering STEM fields, cited as being more "male dominated" areas. Men spoke to how *FIRST* impacted their personal identity development, more generally speaking. Both groups felt inspired to pursue careers that would allow them to engage in more philanthropic efforts and activities, while also feeling as though their professional identities were molded by their *FIRST* experience.



Below, young women describe how their *FIRST* experience made lasting impacts:



"Because of FIRST I was able to see how an engineer would work with different people. I also learned how to build and design. If it wasn't for FIRST I probably wouldn't have picked engineering as a career path."

"Being able to work in a team and under pressure."

"Emphasis on lifting everyone up around you, creating opportunities and sharing knowledge is huge for me. I apply it day to day in whatever I do. I hope to help people grow and be successful."

"FIRST has given me a group of amazing friends that I still speak to today and, as a mentor, it gives me the ability to network and meet new people who are interested in science, education, and other interests of mine. As a female, I've had to deal with quite a few instances of misogynistic people within FIRST that believe I can't do certain things because I don't have enough experience or they just generally think they are more qualified than me – these experiences have made me want to advocate for girls in STEM and has been an integral part of why I am in science and mentoring today."

"FIRST has given me the courage to pursue a male dominated industry and gain a degree in the field."

"It helped with my leadership and public speaking skills. In my nonprofit service organization, I often have to give speeches and make presentations, skills I worked on during my involvement with FIRST."

Conclusions

Nine years after entering *FIRST*, program participants continue to show consistently greater STEM-related interests and attitudes than similarly positioned students in the comparison group. Positive impacts on STEM-related attitudes and interests are evident across all three *FIRST* programs in the study and across all of the major population groups. The impact of *FIRST* on STEM-related attitudes is particularly strong for female participants who generally show significantly greater levels over the comparison group than those experienced by male program participants. Data on students through their first four years of college show that the positive impacts of *FIRST* on STEM-related attitudes and interests continue into postsecondary education, with *FIRST* alumni continuing to show positive impacts on STEM-related attitudes through the fourth year of college.

For those in college, the data from the study also show that *FIRST* has a positive impact on students' engagement in college pathways in engineering, computer science, and STEM-related fields in general. Through the fourth year in college, *FIRST* alumni are significantly more likely to be interested in technology-related majors, take courses in engineering and computer science, and declare majors in engineering, computer science, and STEM-related fields more broadly. Here, too, while both male and female *FIRST* alumni show positive impacts on interest, course-taking and declared majors, the results for female *FIRST* alumni are particularly strong, with female alumni consistently engaging in STEM-related fields at a rate significantly higher than female comparison students.

Preliminary data on employment post college highlight the impact of *FIRST*. A larger proportion of *FIRST* alumni work in a STEM field and report that getting a job in a STEM field is important. Eighty-one percent of *FIRST* alumni currently not working in a STEM field report wanting to use their STEM skills.

While the study will continue to follow students through postsecondary education and their early post-graduation careers, the results to date already indicate that *FIRST* is making a lasting difference in career interests and educational choices for the young people who participate in the program.

Appendix

Study Background

FIRST® (For Inspiration and Recognition of Science and Technology) is a global nonprofit organization that operates after-school robotics programs for young people ages 4-18 in the United States and internationally. The mission of *FIRST* is to inspire young people to be science and technology leaders by engaging them in exciting mentor-based programs that build science, engineering and technology skills, inspire innovation, and foster well-rounded capacities including self-confidence, communication, and leadership. *FIRST* programs include *FIRST* LEGO League Discover (ages 4-6), *FIRST* LEGO League Explore (ages 6-10) and *FIRST* LEGO League Challenge (ages 9-14), *FIRST*® Tech Challenge serving grades 7-12, and *FIRST*® Robotics Competition, serving high school-aged youth (grades 9-12). *FIRST* estimates in 2019-2020, the programs reached over 679,000 young people worldwide.¹

In 2011, *FIRST* contracted with the Center for Youth and Communities at Brandeis University's Heller School for Social Policy and Management to conduct a multi-year longitudinal study of *FIRST*'s middle and high school programs. The goal of the study, building on more than a decade of short-term evaluation studies by Brandeis University and others, is to document the longer-term impacts of *FIRST* programs on participating youth and to do so through a design that meets the standards for rigorous, scientifically-based evaluation research. Three major questions guide the study:

- **What are the short and longer-term impacts of the *FIRST* LEGO League, *FIRST* Tech Challenge, and *FIRST* Robotics Competition programs on program participants?** Specifically, what are the program impacts on a core set of participant outcomes that include: interest in STEM and STEM-related careers, college-going and completion, pursuit of STEM-related college majors and careers, and development of 21st century personal and workplace-related skills?
- **What is the relationship between program experience and impact?** To what extent are differences in program experience – such as time in the program, participation in multiple programs, role on the team, access to mentors, quality of the program experience – associated with differences in program outcomes? What can we learn about “what works” to guide program improvement?
- **To what extent are there differences in experiences and impacts among key subpopulations of *FIRST* participants?** In particular, are there differences in impacts for young women, youth of color, low-income youth, and youth from urban or rural communities? If there are differences, what can we learn about why those differences occur and their implications for the program in the future?

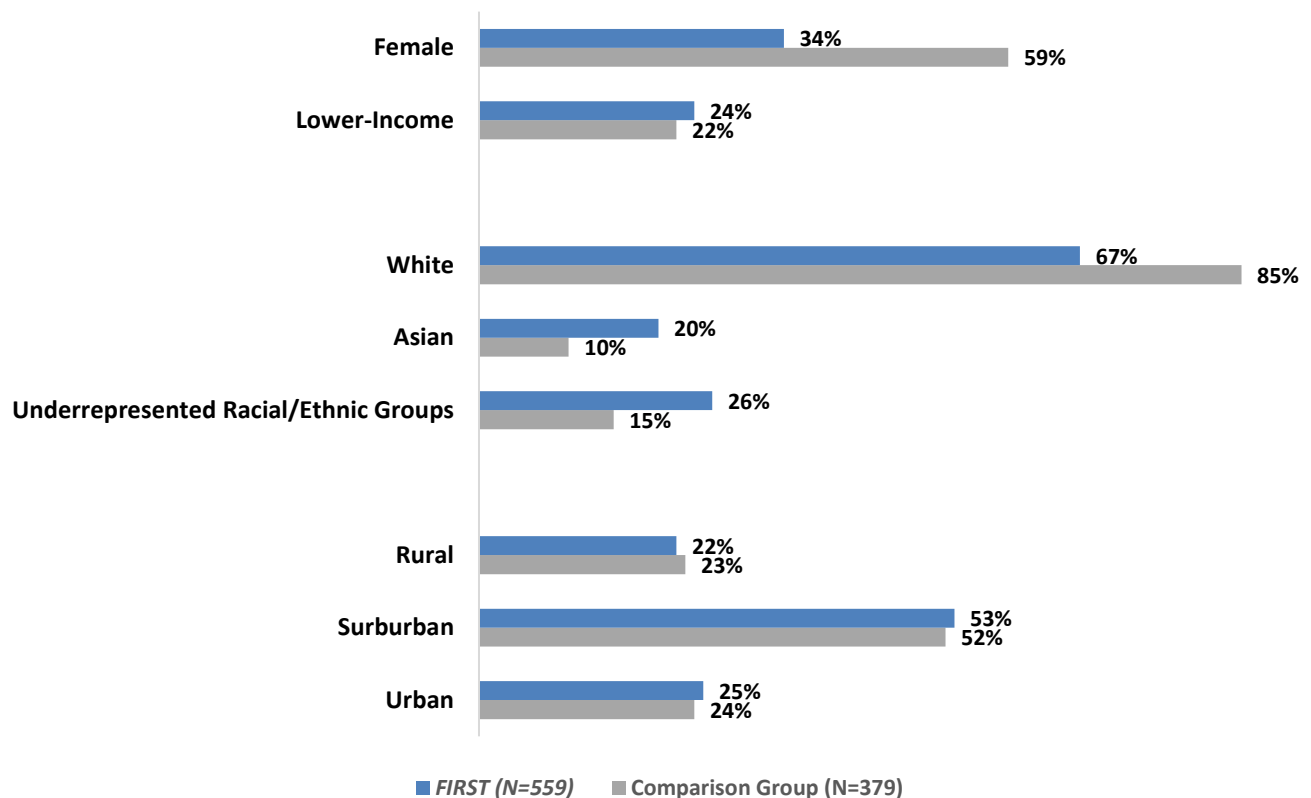
To address these questions, the *FIRST* Longitudinal Study has been tracking 1,273 students (822 *FIRST* participants and 451 comparison students) over a nine-year period beginning with entry of the *FIRST* participants into the program. Team members were recruited to the study from a nationally representative sample of “veteran” teams from the *FIRST* LEGO League, *FIRST* Tech Challenge, and *FIRST* Robotics Competition programs over a two-year period spanning the 2012-13 and 2013-14 school years. Comparison group students were recruited from math and science classes in the same schools and

¹ <http://www.firstinspires.org/about/at-a-glance>

organizations where the *FIRST* teams were located. Once recruited into the study, team members and comparison students were surveyed at baseline and post-program in their first year, with annual follow-up surveys each spring thereafter. A baseline survey of parents provided additional background information on the family context for team members and comparison students, and Coach/Mentor surveys at the end of the first year of team involvement in the study provided additional contextual data on the *FIRST* teams. In several study years, team member surveys have also been supplemented by interviews and focus groups with team members and comparison group students.

Below we show the baseline characteristics at the 108-months follow-up survey for the *FIRST* participant and comparison groups. Overall, both groups match well. The comparison group has more female students and more White respondents than we find among the *FIRST* participants. We control for all these differences in our analyses.

Participant Characteristics at 108 months



ⁱ This report is based on data from the ninth round of follow-up surveys, which were administered approximately 108 months after students entered the study (baseline).

ⁱⁱ Of the 570 *FIRST* participants responding to the 108-month follow-up survey, most (486 had graduated high school, 4 left without a high school degree) were no longer eligible for *FIRST*. Eighty respondents were still in high school but no longer active in the program and 16 among them were still active in *FIRST*.

ⁱⁱⁱ Note: Throughout this summary, “impact” refers to the differences in outcomes between *FIRST* participants and corresponding members of the comparison group, after controlling for differences between the two groups on key measures at baseline. For example, impacts for *FIRST* participants as a whole are based on the difference in outcomes between all *FIRST* participants and all comparison group members; impacts for female *FIRST* participants are based on the comparison with female members of the comparison group. Impacts that are “statistically significant” are those that are large enough to be unlikely to have occurred by chance (less than a 5% probability).

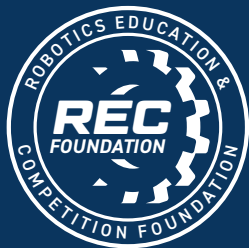
^{iv} Based on “Linear Mixed Models” analysis (“Mixed”). The “mixed” analysis estimates average differences for participants vs. comparison students taking into account differences between the groups at baseline and using data from all available points in time (baseline, post-program, and follow-ups). In this instance, the “mixed” results measure whether the average levels for *FIRST* participants were greater than those experienced by comparison students and whether the differences were large enough to be statistically significant. The effect size (omega squared - ω^2) was “large” for the impact on STEM interest and “medium” for the other STEM outcome measures. Control variables are gender, race, any honors course, parental income, and parental support for STEM.

^v Based on “Logistic Regression” analysis (“Logit”). Logit analysis estimates the relative probability that participants and comparison students will achieve a particular outcome, after controlling for differences between the groups at baseline, including gender, race, any honors course, parental income, parental support for STEM, and interest in STEM at baseline. In this case, the Logit analysis measures whether *FIRST* participants are more (or less) likely than comparison students to show an increase from baseline to follow-up on each STEM-related measure (such as STEM interest) and whether those differences are statistically significant (i.e., unlikely to occur by chance). The “odds ratio” is the measure of the relative likelihood that *FIRST* participants will achieve that outcome (for example, “2.0 times more likely to show higher levels in STEM interest than comparison students”).



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Inspiring students, one robot at a time.

RESEARCH HIGHLIGHTS

The Robotics Education & Competition Foundation provides evidence-based robotics programs that cover Science, Technology, Engineering, & Math all at once!

FUTURE STEM LEADERS

As the world grows increasingly complex, the need for individuals equipped with the knowledge and skills to tackle tough problems by gathering information, evaluating it, and presenting effective solutions continues to increase. Still, relatively few students are proficient in the core subjects of science, technology, engineering, and

mathematics (STEM) and even fewer express interest in pursuing these fields beyond high school. Increasingly, educators and students alike seek hands-on, sustainable, and cost-effective approaches to help engage young people and maintain their interest in STEM through elementary school, middle school, high school, and beyond.

GLOBAL REACH



1 million
STUDENTS



24,000
TEAMS



61
COUNTRIES

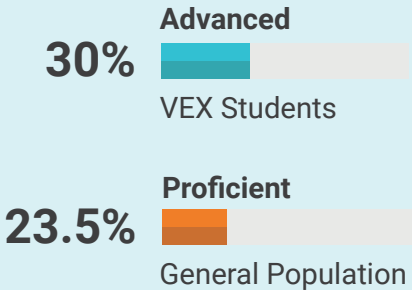
RESEARCH STUDIES



VRC students report positive growth in creative problem-solving, seeing possibilities and opportunities in design challenges.

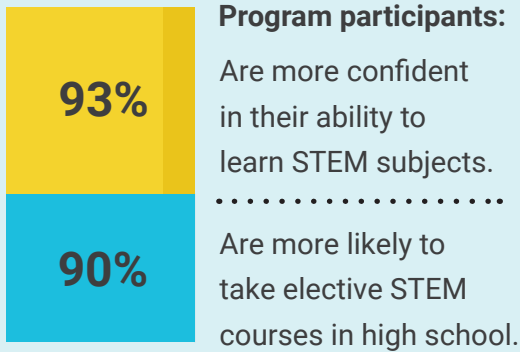
Source: Georgia Institute of Technology - An Evaluation of the VEX Robotics Competition

PROGRAMS



Program participants performed better in math than their peers. Students in grades 6-10 performed higher than their peers on math exams.

Source: Worcester Robotics Consortium

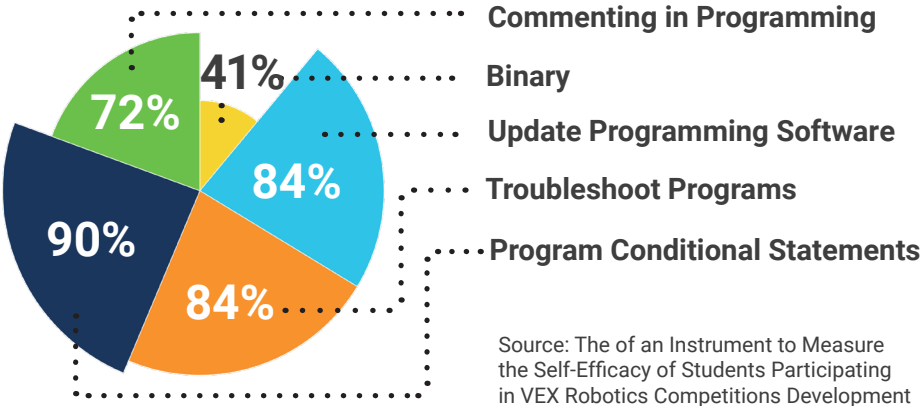


Source: Upfront Consulting 2012 Evaluation Report



WORKFORCE

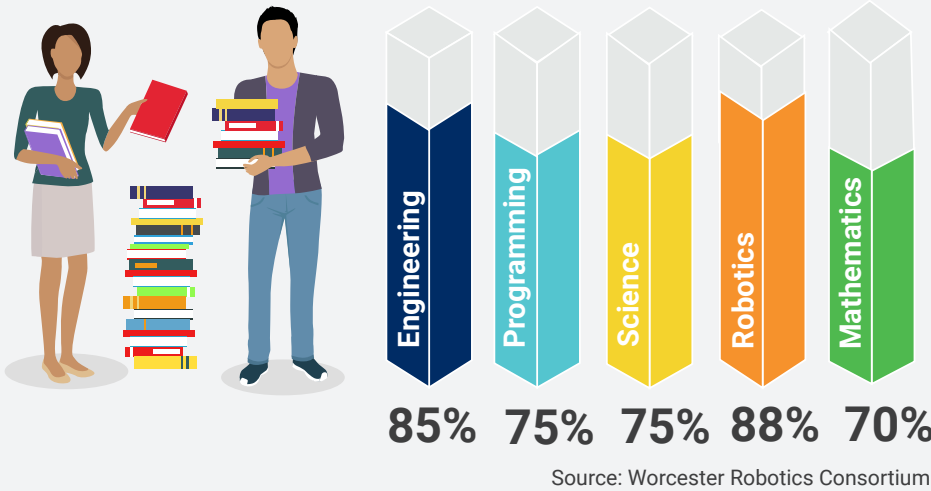
Students learn valuable programming skills that prepare them to enter the STEM workforce.



Source: The of an Instrument to Measure the Self-Efficacy of Students Participating in VEX Robotics Competitions Development

COLLEGE READINESS

VEX Robotics students increase interest in stem careers as a result of their participation in the program:

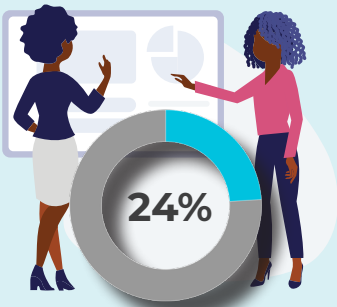


Source: Worcester Robotics Consortium

JOIN OUR COMMUNITY

Discover what the REC Foundation can do for your school, students and business. We are committed to implementing programs that help active learners develop needed skills in STEM fields-literacy, innovation, and within the future workforce.

Let's start our partnership! Start a team, volunteer at a local event, or become a sponsor. Visit roboticseducation.org today to learn more.



Currently, women account for only 24 percent of the STEM workforce, and the number in leadership decreases as the level of leadership increases.*

*Million Women Mentors

Nearly 2.5 Million
STEM jobs in the U.S. are
unfilled.*

*ssec.si.edu/stem-imperative



In 2018, less than 1% of
Native American students
took the computer science
principles AP exam, out of
70,864 students total.*

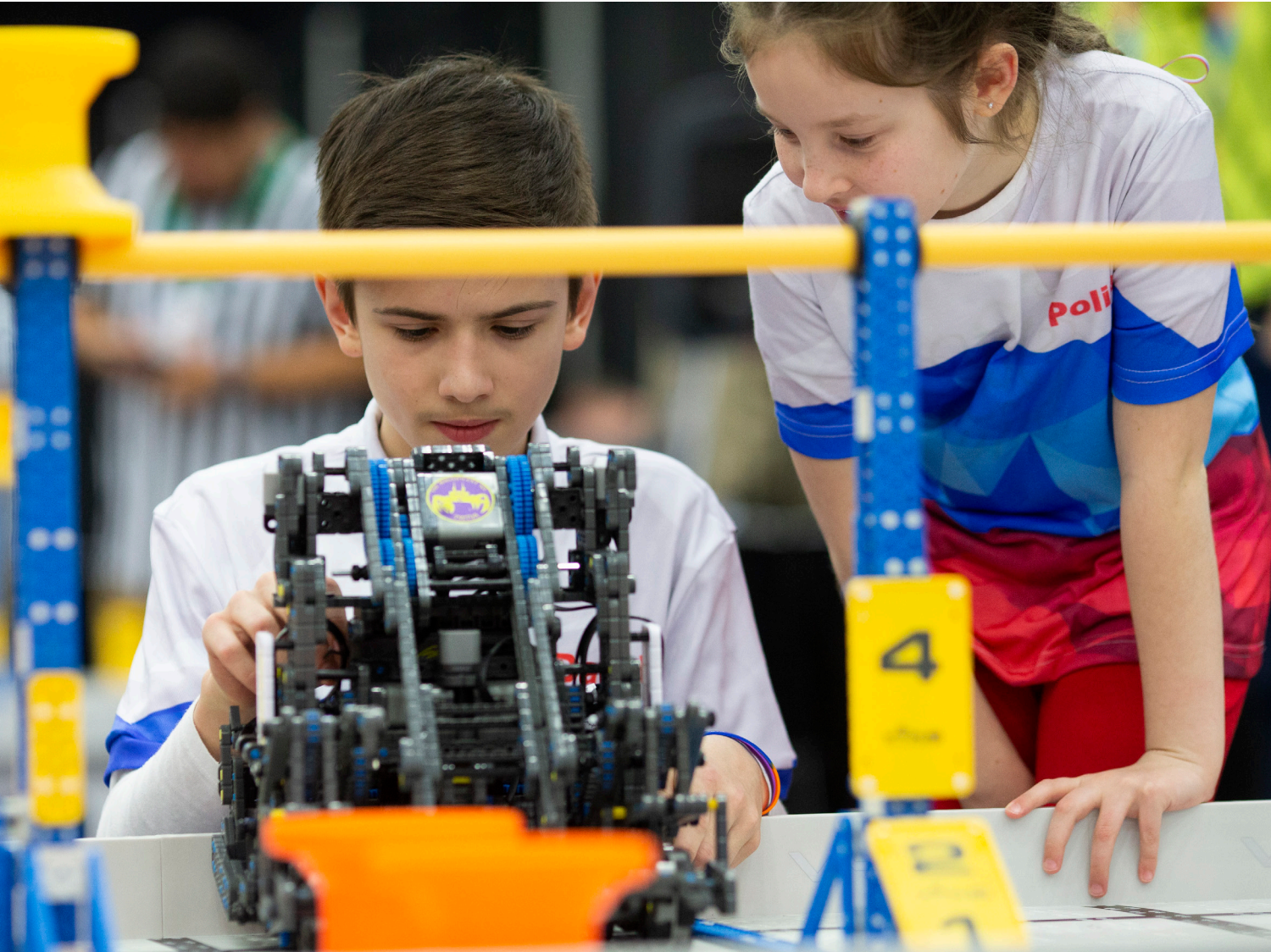
*College Board

88% of students
participating in robotics
are more interested in
pursuing a career in STEM.*

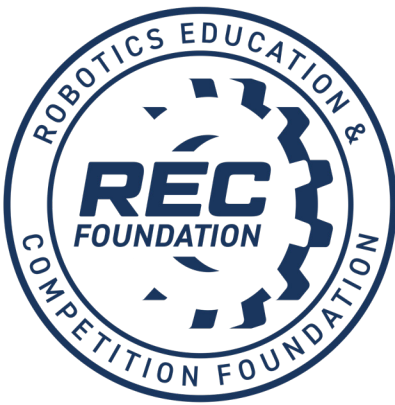
*Georgia Institute of Technology -
An Evaluation of the VEX Robotics Competition

Robotics Education & Competition Foundation
Phone: +903 401 8088 | support@robotevents.com
www.roboticseducation.org | www.robotevents.com





SPONSORED BY



Inspiring students, one robot at a time.

roboticseducation.org

HOW REC FOUNDATION IS INSPIRING THE NEXT GENERATION OF STEM STUDENTS

The Robotics Education & Competition (REC) Foundation’s mission is to increase student interest and involvement in science, technology, engineering, and mathematics by engaging students in hands-on, affordable, and sustainable robotics engineering programs. Recently, Dan Mantz, the CEO and Chairman of REC, sat down with Dallas Business Journal Market President & Publisher Ollie Chandhok to discuss how the Foundation allows students to design and innovate as part of a team, experience failure, persevere and embrace STEM.

OLLIE: Why don’t you tell me about your background, how you got to Texas and how you got started in this business?

DAN: I grew up in rural Pennsylvania, which is why I have a passion for providing STEM opportunities for rural students. I wanted to work in advanced manufacturing, so I went to Kettering University, a 5 year co-op program in Flint, Michigan, that has close ties to the auto industry. I eventually spent over 20 years at FANUC Robotics as a Controls Engineer and later leading the development of new industrial robots.

One of my good friends in Michigan relocated to Dallas. He told me, “North Texas is a great place to live, a great place to raise your family. You don’t have to shovel snow anymore. I think you need to come down here.” So six years ago, I was hired as the President of Rack Solutions, a Texas based developer and manufacturer of data center products and relocated to Texas. When I relocated, I had

the opportunity to start coaching robotics teams. I had a lot of Ideas about robotics education. One of my friends was the President of VEX Robotics. He patiently listened to my suggestions and noted there was an opening on the Robotics Education and Competition Foundation (RECF) board and nominated me to join.

Once I joined the board, I spent the next six months learning more about RECF programs to understand their strengths and where there were growth opportunities. After I reported my findings, the Board asked if I would join the REC Foundation as CEO to implement some of the recommendations such launching workforce development programs. I saw this as an exciting opportunity to use my industrial robot experience to bring emerging technologies to competitive robotics. That all happened two and a half years ago, and it’s been an incredible experience. It’s like I’ve come full circle. I’ve gone from developing robots in the manufacturing world to engaging students in STEM education



Dan Mantz, CEO of REC Foundation (left) and Ollie Chandhok, Dallas Business Journal Market President & Publisher, recently sat down to discuss how STEM impacts the workforce of the future and why businesses need to embrace it to stay competitive.

VEX ROBOTICS WORLD CHAMPIONSHIP

Over
20,000
teams



WORLD'S LARGEST
robotics competition
according to
Guinness World
Records



175,808
competition hours
at the 2019 VEX
Robotics World
Championship



Approximately
1,200
volunteers



Over
30,000
people in attendance from over
50
countries

VEX Worlds directly
impacted around
20,000
students



programs so that they have the skills to develop and implement the next generation of robotics and advance manufacturing systems

OLLIE: Tell me a little more about the REC Foundation, where it started and how did it become what it is today?

DAN: The REC Foundation is based out of Greenville. The beginnings of the organization date to 2008 when the initial focus was to develop and expand VEX Robotics education programs. At that same time, we also started organizing robotics competitions. There were a lot of companies that wanted provide philanthropic support for the competitions. So, in 2011, three employees of VEX Robotics education division launched the REC Foundation. The REC Foundation is now engaging and inspiring over a million plus students in over 70 countries in multiple robotics and work force development programs.

OLLIE: I'm curious to know the impacts that you guys have on individuals ... the community in general. Start at the education level. Who are you working with and what's the impact?

DAN: One of the interesting things is when I joined the REC Foundation, one of the more seasoned employees came up to me and said, "Dan, don't ever forget the "E" ... E is for education and is very important". At that time that REC Foundation was known more for robotics competitions. But it turns out, our biggest impact is actually education. We developed educator resources that teachers can use to teach STEM in their classrooms. Sometimes it's a full course; sometimes it just supplements existing math or science courses. We are providing STEM education and awareness to classrooms across the United States and around the world. The REC Foundation, from its humble roots of three employees in 2008, has grown to be a multinational organization. We have 48 full-time employees in the United States, 18 of which are based here in Texas. We have employees based in China, in Europe, and even in Australia supporting our programs.

OLLIE: I'm curious to hear a little more about the competitions, but before that I would just like to address what you said. On some level, you are educating the educators?

DAN: That's exactly right. Our educators out there are doing fantastic work often with very limited resources. And what we do is we provide very cost effective means for them to provide STEM education and workforce development programs. But a top priority at the REC Foundation is to "prepare" teachers. So we travel across the country providing regional grants to start robotics programs. Unlike other education programs, we don't just provide robot kits. We work with teachers to train them about the process of designing, building and programming a robot. During the three-day training, teachers actually build and program the robot for a small day competition amongst themselves. The students that they are teaching can learn the technical concepts very easily. What we're doing is giving the teachers the confidence to be able to provide robotics programs in their school.

OLLIE: How do you establish relationships with the school districts, with teachers? Do they seek you out?

DAN: Most of the time school districts seek us out. We have a grant process which school districts apply to receive support. Often, schools start out just wanting to start a single team. And we do award hundreds of grants a year to start robotics teams. However, we realized two years ago that starting teams isn't enough. For these programs to be sustainable, we want to create a robotics education ecosystem. We partner with a school district, and instead of just giving a grant to start one or two teams, we'll start 40 to 60 teams. In the case of the Miami-Dade Public Schools, we created hundreds of teams. This approach allows us to have trained teachers serve as a resource for fellow teachers. Additionally, and more importantly, it allows the teams to compete against each other within the school,

and within the school district, without expensive travel costs. The REC Foundation believes that the design process is the most important thing about robotics competitions. Every team in our program, and this year we will be close to 30,000 teams, gets an engineering design notebook. We expect them to document the challenge, strategize, and build a robot to play the game. I travel all over the world and I always ask the students, "Was your robot perfect the first time?" They all laugh because they've all had lots of failures with their robot. As part of our design process, students are encouraged after a competition to reflect: "This is what went well, and this is what can be improved on." The students will do the technical work, building and programming themselves with teachers helping to facilitate. By having an ecosystem of multiple schools together, the students compete more because they don't have to incur expensive travel costs. Students learn a lot by building the robot and collaborating with their school mates. When they start competing against other schools and other students and see what they built, that's where the creative process and the development process really takes off. This is why we feel that by developing ecosystems our students and educators get the maximum benefit to learn and improve technical literacy. For example, Dallas ISD has over 200 VEX Robotics teams. Dallas ISD will have VEX Robotics competitions with just Dallas ISD schools. So, there's no hotel or other expensive travel costs.

OLLIE: Who's providing the materials to build the robots?

DAN: The materials for our REC Foundation VEX Robotics Competition are VEX Robotics parts and kits. What's unique about our program is that every year when we announce the engineering challenge, we also release an entry level robot design that allows you to compete. Now will you end up winning the Texas State Championship with that design? Probably not. But you can go into a competition knowing that you can compete. The students take this basic design, they go on YouTube, they go on the internet



"Robotics transcends any geography. As robotics has grown and automation has grown, so has the REC Foundation."



and see how other teams approach the challenge and they build more advanced robots. We don't allow custom parts because we want a level playing field from all schools. Whether you're in Dallas ISD, you're in the suburbs, or you're in rural Texas, everybody starts with the same set of parts. Now, that doesn't mean that there aren't different quality levels of robots, but everybody has a level playing field.

OLLIE: So obviously, you have great relationships with school districts. I'm curious to hear about your partnerships, corporations and businesses that you work with.

DAN: We couldn't achieve what we're doing as a Foundation without our corporate partners. A huge shout out to the Northrop Grumman Foundation, which is our presenting sponsor. They invested in us ten years ago and really believed in our programs from the very beginning. They provide funding for operations as well as specific programs. Over the years, we've evolved partnerships with great corporations and organizations including NASA, for example. Each partner brings something unique to the REC Foundation. For instance, Texas Instruments has invested in our Girl Powered initiative. They recognized that there weren't enough women in the STEM workforce. They know that our Girl Powered initiative is a great way to introduce girls to robotics and STEM education. Google sponsors a traveling roadshow, where the REC Foundation takes our Girl Powered workshop to 20 different Google locations throughout the United States. These aren't one-day, one-hour seminars but a two-day workshop. The girls come in and they build and learn to program robots.

Organizations like Tesla, which is one of our newer sponsors, are collaborating with the REC Foundation on our workforce development initiatives. Tesla has invested funds to start robotics teams in every school in the state of Nevada. We are also working with Tesla to build STEM labs for students to learn workforce skills that can immediately be utilized for manufacturing jobs. For example, the students start with a basic robot kit to learn how to build a robot

and do basic programming. By the time they complete our program, they're programming large industrial equipment that is used in factories across the country. Tesla recognizes that this is a great pipeline for what they need for their current and future workforce.

OLLIE: So, it sounds like you guys are representing partners who are very invested in the world in front of you, certainly your presenting sponsor. Have you seen some of your students land at some of these companies?

DAN: Absolutely. There's nothing more exciting than when you go to a competition and there is an excited young engineer or robot technician who comes up to you and says, "Dan! I was in this program six years ago. I had little interest in robotics and no interest in mechanical engineering, but I had so much fun, I ended up going to college. And guess what? NASA has offered me a job." Or, "I'm working for Tesla!" or "I'm working for Northrop Grumman designing aerospace products." We have students all over the world that are working as mechanical engineers, robotics engineers, software engineers, and their first interest in STEM education began with the REC Foundation.

OLLIE: Is Dallas a major center for this?

DAN: Yes it is. However, robotics transcends any specific geographic location. Two decades ago robots were used primarily in manufacturing and did dirty or dangerous jobs such as welding. But now when you visit the doctor, it's very possible that there is a robot in the doctor's office. The robotics industry has grown in ways that I could never have imagined. Robots are not just "industrial" and in tech hubs such as Dallas; even the most rural areas have robotics. And that's where the REC Foundation has had to evolve to expand our reach. Our goal is to show students the basic concept of robotics. Not everyone in our programs will earn a four-year engineering degree or an industry certification in computer programming, but when our students graduate high school, they are still very desirable to all types of employers, including

all the major companies here in Dallas. This is because in addition to technical skills, they have great communication and problem-solving skills. Once these students start these good paying jobs and show their high-value, these companies will often pay for them to go get a two-year degree, then a four-year degree, and ultimately, even advanced degrees.

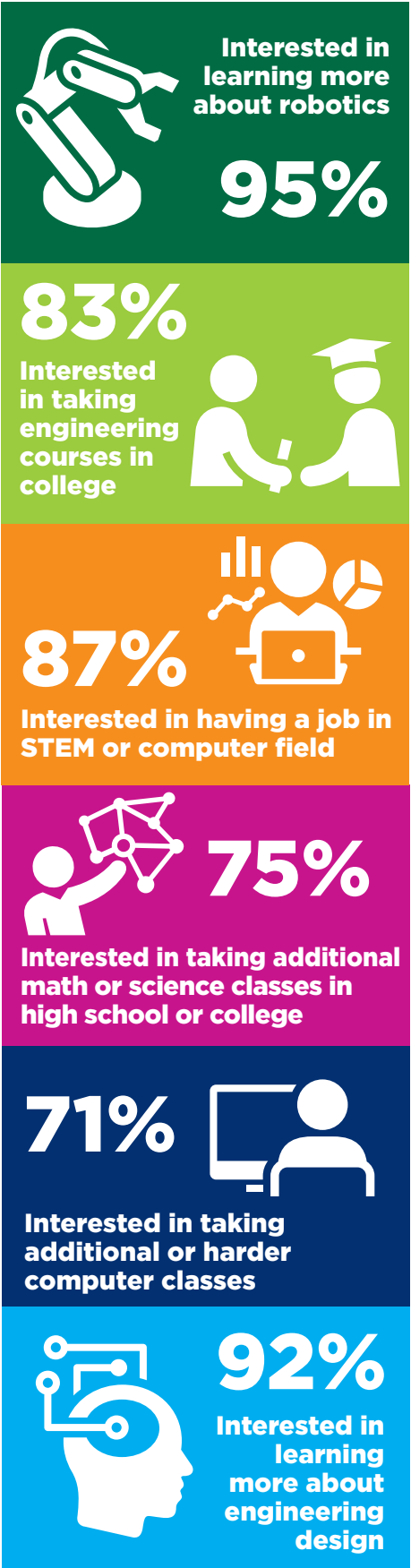
OLLIE: Where else would we find robotics? They're all around us, aren't they? Where else can we find robots?

DAN: Robots, as you said, are everywhere. If we go to any manufacturing facility, you're going to encounter robots that pick things up and move them around. The military is utilizing robots to deliver equipment to soldiers that are in the field. Instead of exposing troops to dangerous situations, robotic vehicles deliver supplies or equipment to minimize risk. We have robots now that vacuum your rugs or mow your lawn. We're just on the precipice of what robots are going to be. We're honestly just touching the surface. Our children will live in a different world where robots are integrated in part of their daily life. However, it's more than just robotics. It's artificial intelligence, data analytics, sensors and more. And as the technology evolves, the REC Foundation evolves with it. It used to be about building a robot but our programs also have a computer programming element. Every one of our competitions has an autonomous mode where the students program a robot and they don't even touch it. So for a minute or two, depending on the competition, the robot runs without driver control. This is an example of the types of real life advance technology skills our program provides.

OLLIE: This is a question that you probably heard many times, what would you say to concerns that robots are taking their jobs or changing the way that they work?

DAN: It's funny because that's the number one question I'm asked. Since the dawn of the industrial age, we've always worried about machines taking jobs. I won't pretend that robots haven't

ATTRIBUTES OF VEX ROBOTICS PARTICIPANTS



“The REC Foundation, from its humble roots of three employees in 2008, has grown to be a multinational organization.”

displaced industrial workers, just like the ATMs replaced bank tellers. But overall, society has benefitted. We have more time to travel. Everybody carries around a supercomputer in their pocket that makes phone calls and takes pictures. Most of us use social media and stay in touch with family and friends. This lifestyle was a dream, 15 years or so ago. So, while robots will displace some very repetitive jobs, they'll create new opportunities for even more exciting jobs. That's why it's so important that there are organizations like the REC Foundation because we need to prepare those students for these highly-technical jobs. In published studies, STEM jobs are growing by 20 percent a year. Non-STEM jobs are only growing by 7 percent a year. We must provide all students with opportunities to pursue STEM-related jobs as the non-automated jobs disappear.

OLLIE: Tell me more about other REC Foundation programs.

DAN: The REC Foundation was initially known for our robotics competitions and we have evolved to provide educational support and hands-on learning opportunities, but we are still not reaching all students. Drones reach students that were not interested in mobile robotics. It is another pathway to provide more students access to STEM education. We are excited to launch our Robotics Aerial Drone (RAD) competition this year and are anticipating hundreds of teams to participate.

OLLIE: You are traveling globally. Talk to me more about what you're doing on these trips.

DAN: As I mentioned earlier, although we are based in North Texas, the REC Foundation has a global presence. Other countries, have the same challenges of not having a tech-savvy and educated workforce. I recently traveled to



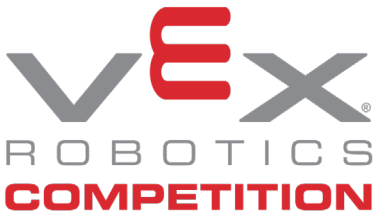
“The REC Foundation will soon be bringing the next generation of innovators to Dallas where we’ll host the world’s largest robotics competition.”

PROGRAMS FOR STUDENTS



**ELEMENTARY & MIDDLE SCHOOL PROGRAM
AGES 8-14**

- Computer Programming Included
- Free Curriculum
- Teamwork Matches
- Robot Skills Challenges
- Snap-Together Assembly
- STEM Research Project
- Local, State, Regional, National and World Competitions



MIDDLE & HIGH SCHOOL PROGRAM AGES 11-18

- Computer Programming Included
- Free Curriculum
- Driver Controlled and Autonomous Robot Challenges
- Online Challenges
- Scholarships
- Local, State, Regional, National and World Competition



COLLEGE & UNIVERSITY PROGRAM AGES 18+

- Gain Desired Industry Skills, i.e. Programming, CAD, and Technical Writing
- Longer Autonomous Period
- VEX U Teams Build 2 Competition Robot
- Fabrication of Unique Parts by Machining or 3D Printing

China to attend the Chinese National Championship, a massive robotics competition where Alibaba asked me to speak about the importance of our programs, STEM education, and workforce development. From there, I visited Singapore, where

Google sponsored a three-day REC Foundation-led robotics workshop for under-served students. The REC Foundation will soon be bringing the next generation of innovators to Dallas where we'll host the world's largest robotics competition.

Starting in 2021, 2,000 teams from at least 70 countries will come here to compete for the world title. We'll be bringing in over 40,000 people to the city of Dallas. The event is free and open to the public and we invite all DBJ readers to attend!

DAN MANTZ
Chief Executive Officer and Chairman of the Board
REC FOUNDATION

Dan Mantz is Chief Executive Officer and Chairman of the Board for the Robotics Education and Competition (REC) Foundation, and has more than 25 years of engineering experience, solving complex problems in the software, electrical, and mechanical fields. The REC Foundation is one of the world's leading science, technology, engineering and mathematics (STEM) nonprofit organizations whose mission is to spark student interest and involvement in STEM by engaging them in hands-on, affordable, accessible and sustainable curriculum-based robotics and workforce development programs.

Dan is a highly respected leader and innovator in the robotics industry. He is on the front lines working with educators, partners and more than 1M students worldwide through the VEX Robotics programs that builds interest

and excitement for STEM-related career opportunities. This includes classroom integration and thousands of yearly robotics competitions - including the world's largest robotics competition. These competitions and programs have a big impact in getting more young learners involved in STEM and preparing them for rewarding careers. Through partnerships with Autodesk, Dell, Google, NASA and Texas Instruments and other well-known partners, students are gaining critical skills and hands-on learning to ignite curiosity and passion for innovation. Prior to joining the REC Foundation in 2017, Dan was President of Rack Solutions, a leading developer and manufacturer of data center and IT products. He previously spent 20 years in the industrial robotics industry at FANUC Robotics, first as an engineer and later as Director of Product Development.

ABOUT REC FOUNDATION

MISSION

The Robotics Education & Competition (REC) Foundation's mission is to increase student interest and involvement in science, technology, engineering, and mathematics (STEM) by engaging students in hands-on, affordable, and sustainable robotics engineering programs.

VISION

We see a future where all students design and innovate as part of a team, experience failure, persevere, and embrace STEM. These lifelong learners emerge confident in their ability to make the world a better place.

CONTACT

(903) 401-8088
support@robotevents.com
Robotics Education & Competition (REC) Foundation
1519 I-30 West, Greenville, TX 75402



AC 2012-2994: THE IMPACT OF PARTICIPATION IN VEX ROBOTICS COMPETITION ON MIDDLE AND HIGH SCHOOL STUDENTS' INTEREST IN PURSUING STEM STUDIES AND STEM-RELATED CAREERS

Prof. Cher C. Hendricks, Georgia Institute of Technology

Cher Hendricks is a Research Scientist II at Georgia Institute of Technology. The focus of her work is on K-12 STEM programs. Prior to her work at Georgia Tech, she was an Associate Professor of educational research at the University of West Georgia (1998-2010) and a special education teacher. In addition to her STEM research, Hendricks is author of the textbook *Improving Schools through Action Research: A Reflective Practice Approach*. The third edition was released in February.

Dr. Meltem Alemdar, Georgia Institute of Technology

Meltem Alemdar is a Research Scientist in Center for Education Integrating Science, Mathematics, and Computing (CEISMC) at Georgia Institute of Technology. Alemdar has experience evaluating programs that fall under the umbrella of educational evaluation, including K-12 educational curricula, after-school programs, and comprehensive school reform initiatives. Across these evaluations, she has used a variety of evaluation methods, ranging from multi-level evaluation plan designed to assess program impact to methods such as program monitoring designed to facilitate program improvement. Her leadership evaluation work includes serving as a lead evaluator on NASA's electronic professional development network (ePDN), a new initiative dedicated to preparing teachers to engage their students in STEM (science, technology, engineering and mathematics) through the use of NASA-developed learning materials and resources. She also serves as the lead evaluator on several NSF-funded Noyce Scholarship programs. She has direct experience leading or contributing to evaluations of leadership, and STEM-related innovations.

Dr. Tamra Williams Ogletree, University of West Georgia

The Impact of Participation in VEX Robotics Competition on Middle and High School Students' Interest in Pursuing STEM Studies and STEM-related Careers

VEX Robotics Competition (VRC) is an international program for middle and high school students that has as its goal to engage student participants in the study of science, technology, engineering, and math (STEM) through a competition in which students build innovative robots to solve a challenge. Currently, over 3500 teams representing 20 countries compete globally each year in VRC. Through the competition, students are expected to devise creative solutions to difficult problems, work as a team, learn sportsmanship, communicate effectively, and build leadership skill.

An important objective of VEX Robotics Competition is to inspire students to pursue STEM-related education and career paths. As explained in the VEX Robotics Competition Gateway manual⁷,

The world needs the students of today to become the scientists, engineers, and problem solving leaders of tomorrow. The constant breakthroughs in chemistry, medicine, materials and physics reveal a new set of challenges and create an even greater opportunity for problem solving through technology. These problems are not academic; the solutions could help save the world and those technology problem solvers will be the ones to make it possible.

This underscores the dramatic challenge we face: there are not enough high school graduates choosing technology related disciplines in college. This does not reflect a lack of capacity for new students on the part of technical schools and universities, but a lack of interested and qualified applicants. In short, we will not have the people we require in the next generation to solve the problems of tomorrow unless the shortage is directly addressed today. Who will solve the world's next great crisis?

Recognizing this dilemma, scores of organizations are creating programs designed to attract and engage young students in the study of science and technology. Many have found that robotics is a very powerful platform to attract and hold the attention of today's multi-tasking, connected youths. Robotics has strong appeal to this intensely competitive generation and represents the perfect storm of applied physics, mathematics, computer programming, digital prototyping and design, integrated problem solving, teamwork and thought leadership. Students with a previously undiscovered aptitude for STEM (Science, Technology, Engineering, and Math) curriculum are flourishing in growing numbers due to the efforts of schools, volunteer organizations, corporations, and governments internationally.

The VEX Robotics Competition, operated by the Robotics Education and Competition Foundation, is a program that inspires thousands of students worldwide to pursue STEM-related education and career paths. (p. 1)

In order to determine whether VRC was meeting its goal of inspiring students to pursue STEM education and career paths, the *Robotics Education and Competition Foundation* contracted with our team to conduct an external evaluation of the competition. This research paper describes findings from the evaluation, which was completed in May 2011. Three hundred forty-one (341) middle and high school students and 345 VRC Team Leaders completed online surveys that measured perceptions of the impact of VRC participation on student interest in STEM education and STEM careers. In addition, 70 students were interviewed in focus groups, and 37 Team Leaders were interviewed one-on-one and in focus groups, which allowed participants to provide in-depth responses about ways VRC participation impacted student interest in STEM education and careers. Although the evaluation covered a much broader set of outcomes (e.g., teamwork, sportsmanship, engagement, self-efficacy), only the results related to STEM interest are included in this paper.

Review of Literature

Though there is no published research on the effects of robotics competitions, several evaluations have been conducted, including studies of *FIRST* LEGO® League (FLL), *FIRST* VEX Challenge (FVC), and *FIRST* Robotics Competition (FRC). A study by Melchior, Cutter, and Cohen (2005a)³ of FLL that focused on low income, urban participants (ages 9-14) found increases in student interest in science and technology. Survey data indicated that 94% of coaches reported gains in interest in science and technology, and 50% reported increased interest in math and science classes. In addition, over 90% of surveyed students said participating in FLL had increased their interest in learning about computers, robotics, science, and technology. Over 70% said their interest in science and technology careers had increased.

These results were comparable to the initial 2003 evaluation of FLL, which used the same surveys and data collection techniques but with a larger, more representative group of participants. A 2009 study of FLL (Melchior, Cutter, & Deshpande⁵) found similar results. For example, 80% of coaches indicated their students were more interested in science and technology careers because of their FLL participation. Approximately 90% reported increased interest in computers and technology. Students reported that their participation in FLL increased their desire to learn about science and technology (89%) and computers and robotics (93%). Additionally 77% of students said they were more interested in a science or technology career, including 63% who indicated they wanted to become engineers. In both the 2005a³ and 2009⁵ studies, parent respondents also indicated that their children's interest in science, technology, computers, robotics, and STEM careers had increased due to FLL participation.

A 2006 evaluation of *FIRST* VEX Challenge (Center for Youth Development¹), a competition for high school students, reported similar findings, with 90% of coaches reporting their students were more interested in science and technology careers and over 80% of students reporting the same. In addition, 93% of students said participation in FVC made them want to learn more about science and technology.

Finally, a 2005 evaluation⁴ of *FIRST* Robotics Competition provided a retrospective view of FRC's impact on students who had graduated from the program. Results revealed that respondents perceived their participation in FRC increased their interest in science and

technology (86%) and science and technology careers (69%). For the 89% of respondents who went on to college, 51% reported taking at least one engineering course, approximately 60% said they had at least one work experience that was science or technology related, and for those who had chosen a major, 41% selected an engineering field, making them seven times more likely than the average college student to become an engineering major. When comparing across races and genders, results revealed that 40% of female FRC participants took engineering classes and 59% had worked a job or internship that was science or technology related. Additionally, 46% of African-American and 53% of Hispanic respondents took engineering courses, and 64% of African-American participants had held a science or technology internship or job.

Evaluation Design and Methods

Utilization-focused evaluation, described by Patton⁶ (2008) as “evaluation done for and with specific intended primary users for specific, intended uses” (p. 37), was the framework for this investigation. Serving as external evaluators, our purpose was to provide data to the *Robotics Education and Competition Foundation* (RECF) about whether VRC students and Team Leaders perceived that VRC participation was affecting students in the areas articulated in RECF’s vision. This purpose aligns with Patton’s broader definition of program evaluation as a “systematic collection of information about the activities, characteristics, and results of programs to make judgments about the program, improve or further develop program effectiveness, information decisions about future programming, and/or increase understanding” (p. 39).

We collected survey and interview/focus group data from VRC student participants and Team Leaders. Early in the evaluation process, we collaborated with RECF to develop the survey, first creating survey matrices for the student and Team Leader surveys. The matrices included the main categories of student impact (e.g., interest in STEM, self-efficacy, engagement, teamwork and sportsmanship). Initially, we operationally defined each category, reviewing pertinent literature as part of the process. Review of the literature helped to identify subcategories in each area, which we used to develop survey items to be added to the matrices. The evaluation team as well as RECF reviewed the items to ensure they measured what we intended to measure. Surveys were then developed and pilot tested with approximately 30 students and 9 team leaders, both in an online format and with a paper-pencil version provided at a VRC event. Feedback from the pilot test was used to clarify items and add logic to the Team Leader survey so that only Team Leaders who were also teachers completed the survey section on comparing VRC students to their Non-VRC peers. The majority of survey items were on a Likert scale, but demographic and open-ended items were also included.

We conducted semi-structured focus group and one-on-one interviews with students and Team Leaders at two events: a regional competition of middle and high school students that took place in March, 2011, in Maryland and the 2011 VEX Robotics World Championship, which took place in April in Florida. We began the interviews/focus groups with a grand tour question (*Tell me about your experience in VEX Robotics Competition*), and then asked more specific follow-up questions (*What’s it like working with your team?*) and probing questions (*When you say it was challenging working with your team, what do you mean? Can you describe one of the challenges?*). All interviews were recorded on digital audio recorders and transcribed. Data from interviews and focus groups, as well as from open-ended survey items, were qualitatively

analyzed using open-coding and axial coding, as described by Corbin and Strauss² (2008), to uncover themes, categories, and patterns.

There were several limitations of this first wave evaluation. First, due to the limited budget and short time frame given for the evaluation, the study was small in scale. The brief time frame allowed only a one-month window for collecting data via the online surveys, and we had to rely on Team Leaders to provide the surveys to students. At the time of the study, there was no existing database with student information, demographics, or contact information. This prevented us from contacting all students and from determining how representative the sample was of the larger population of VRC participants. It should be noted that although these limitations prevent broad generalizations of results, our findings replicate those from earlier studies of FRC, FLL, and FVC.

Participants

Evaluation participants included students and Team Leaders in the United States and Canada. Team Leaders were contacted via email and asked to (1) complete the online Team Leader survey and (2) provide the students on their teams with the link to the online survey. Email notifications were sent three times during the open survey period. To incentivize participation, all participants were entered into a random drawing to win a \$100 VEX credit, which could be used to purchase VEX materials. In addition, the evaluators attended a regional VRC competition and the VEX World Championship for the purpose of observing the competition, making field notes, and interviewing students and Team Leaders.

Student Participants. Three hundred forty-one (341) students completed the online survey, including 210 high school students and 78 middle school students (some students did not provide their grade level). Table 1 provides demographic information for students who completed the survey. The typical male survey respondent was a 15-year old Caucasian on a public school team who had been competing in VRC for a little over a year and had competed in 5 competitions. Based on other student supplied information, the typical male respondent was also an A/B student in school, was college bound, planned to major in a STEM field, and had at least one parent who had earned a graduate degree. The typical female student respondent was Caucasian, was in her first year of VRC, was just under 15 years old, was a straight-A student who planned to attend college and earn at least a Masters degree in a STEM field, and had parents who had completed an undergraduate or graduate degree.

A total of 70 students, representing 19 teams, were interviewed in focus groups at a regional competition in Maryland and at the VEX Robotics Competition World Championship in Orlando. Thirty-three (33) students were at the high school level, and 37 were at the middle school level. Students were interviewed with their teammates. There was wide diversity in the focus groups, as indicated in Table 2, with larger percentages of African-American and Native American students participating in interviews than they did in completing surveys.

Table 1. Demographics of Student Survey Respondents

		Middle School Grades 6-8	High School Grades 9-12	All Students
Age	11 or younger	2.6%	---	2.3%
	12	26.3%	---	7.3%
	13	32.9%	1.0%	9.3%
	14	38.2%	11.4%	18.3%
	15	---	22.4%	15.9%
	16	---	27.6%	19.6%
	17	---	20.5%	14.6%
	18	---	15.7%	11.6%
	Over 18	---	1.4%	1.0%
Gender	Male	73.3%	74.2%	73.6%
	Female	26.7%	25.8%	26.4%
Ethnicity	African-American/Black	1.3%	3.4%	2.7%
	Asian/Pacific Islander	18.4%	18.3%	18.1%
	Hispanic/Latino	11.8%	9.1%	10.0%
	White/Caucasian	51.3%	61.5%	58.9%
	Multiracial	13.2%	5.3%	7.4%
	Some other race	3.9%	2.4%	3.0%
Language Spoken at Home	English	89.3%	84.5%	85.1%
	Non-English	10.7%	15.5%	14.9%
Team Type	Public School Team	61.8%	60.5%	59.1%
	Private School Team	17.1%	16.7%	17.3%
	Homeschool Team	14.5%	7.1%	10.0%
	Club Team	5.3%	8.1%	7.6%
	Other	1.3%	7.6 %	6.0%
Years in VRC	First Year	61.3%	45.2%	49.7%
	1 Year	6.7%	9.0%	8.3%
	2 Years	21.3%	31.4%	28.3%
	3 Years	10.7%	11.4%	11.3%
	4 Years	---	2.9%	2.3%
Total number		78	210	341

Table 2. Demographics of Student Focus Group Participants (n=70)

		Middle School Grades 6-8	High School Grades 9-12	All
Gender	Male	70.3%	54.5%	62.9%
	Female	29.7%	45.5%	37.1%
Ethnicity	African-American/Black	16.2%	12.1%	14.3%
	Asian/Pacific Islander	3.0%	9.1%	5.7%
	Hispanic/Latino	8.1%	6.0%	7.1%
	Native American/Alaskan	5.4%	3.0%	4.2%
	White/Caucasian	67.6%	69.7%	68.6%
Team Type	Public School Team	89.2%	42.4%	67.1%
	Private School Team	---	21.2%	10.0%
	Homeschool Team	10.8%	9.1%	10.0%
	Club/Community Team	---	27.3%	12.9%
Total Number		37	33	70

Team Leader Participants. The Team Leader survey was completed by 345 coaches, mentors, and parent volunteers. The typical Team Leader respondent was a white male with three or fewer years experience in VRC who was a middle or high school teacher and coached a public school team. Table 3 provides additional demographic data on Team Leaders disaggregated by team level coached (middle, high school, or both) as well as aggregated across team level.

Table 3. Coach/Mentor Demographics of Team Leader Survey Participants

		Middle School Grades 6-8	High School Grades 9-12	MS/HS*	All Team Leaders
Gender	Male	50.0%	73.5%	69.9%	67.0%
	Female	50.0%	26.5%	30.2%	33.0%
Ethnicity	African-American/Black	1.7%	---	3.9%	1.1%
	Asian/Pacific Islander	10.2%	5.8%	2.0%	6.2%
	Hispanic/Latino	1.7%	3.8%	5.9%	3.7%
	Native American	---	---	2.0%	<1%
	White/Caucasian	81.4%	87.2%	84.3%	85.3%
	Multiracial	1.7%	1.9%	2.0%	1.8%
	Some other race	3.4%	1.3%	---	1.5%
Years as Team Leader	First year/1 year	57.7%	48.4%	32.1%	46.7%
	2-3 years	33.9%	32.5%	35.8%	33.6%
	4-5 years	5.1%	13.4%	15.1%	12.4%
	More than 5 years	3.4%	5.7%	17.0%	7.3%
Profession	Middle School Teacher	33.9%	1.9%	5.7%	9.6%
	High School Teacher	1.7%	66.5%	28.3%	44.1%
	Engineer	8.5%	1.3%	9.4%	8.9%
	STEM/Computer Field	11.9%	4.4%	17.0%	8.2%
	Other	44.1%	16.5%	39.6%	28.1%
Team Type	Public School Team	57.6%	71.3%	35.8%	63.0%
	Private School Team	11.9%	15.3%	18.9%	15.5%
	Homeschool Team	15.3%	5.1%	17.0%	9.1%
	Club Team	6.8%	3.8%	7.5%	5.0%
	Other	8.5%	4.5%	18.9%	7.3%
Total		59	158	53	345

*combined middle school and high school team

A total of 37 Team Leaders were interviewed one-on-one or in focus groups at two competition events. The majority of interviewed coaches were Caucasian, male, and from a public school team. Demographic data for Team Leader interviewees are provided in Table 4.

Table 4. Demographics of Team Leader Interviewees

Gender		Ethnicity		Team Type	
Male	73.0%	African-American/Black	2.7%	Public School Team	59.5%
Female	27.0%	Asian/Pacific Islander	2.7%	Private School Team	18.9%
		Hispanic/Latino	2.7%	Homeschool Team	16.2%
		Native American/Alaskan	2.7%	Club Team	5.4%
		White/Caucasian	86.5%		
		Multiracial	2.7%		

Results

Participants were asked the extent to which participation in VRC increased students' interest in STEM areas, including (1) taking additional math or science classes in high school/college, (2) taking engineering courses in college, (3) having a job in a STEM or computer field, and (4) learning more about computer programming, engineering design, and robotics. As shown in Table 5, most students and Team Leaders agreed that VRC participation made students more interested in STEM. Over 75% of students reported they were interested in taking additional math or science classes in high school or college, and almost 83% said they were interested in taking engineering courses in college. Also, 87% of students reported they were more interested in having a job in a STEM or computer field, and just under 75% of Team Leaders perceived students were more interested in pursuing these careers. Students said they wanted to learn more about robotics (92%), engineering (90%), and computer programming (89%) because of participation in VRC. Percentages were also high in these categories for Team Leaders.

Table 5. Student and Team Leader Comparisons on STEM Interest Items

<i>Participating in the VEX Robotics Competition has made me</i>		Strongly Agree		Agree	Disagree or SD	Not sure
more interested in taking additional math or science classes in high school	Students	43.0%	32.8%	16.4%	7.9%	
		75.8%				
	Team Leaders	44.3%	38.8%	4.5%	12.4%	
		83.1%				
more interested in taking math or science classes in college	Students	43.4%	34.9%	13.2%	8.6%	
		78.3%				
	Team Leaders	42.3%	34.5%	4.5%	18.9%	
		76.8%				
more interested in taking engineering classes in college	Students	56.1%	26.4%	12.6%	5.0%	
		82.5%				
	Team Leaders	42.4%	37.8%	3.4%	16.4%	
		80.2%				
more interested in having a job in a STEM or computer field	Students	61.7%	25.7%	9.2%	3.3%	
		87.4%				
	Team Leaders	40.3%	33.4%	5.9%	20.3%	
		73.7%				
want to learn more about computer programming	Students	58.2%	30.3%	8.9%	2.6%	
		88.5%				
	Team Leaders	39.2%	47.9%	10.3%	2.6%	
		87.1%				
want to learn more about robotics	Students	67.3%	25.1%	5.3%	2.3%	
		92.4%				
	Team Leaders	66.6%	28.6%	2.2%	2.6%	
		95.2%				
want to learn more about engineering design	Students	60.5%	29.3%	7.3%	3.0%	
		89.8%				
	Team Leaders	53.5%	37.1%	5.8%	3.5%	
		90.6%				

When comparisons were made between male and female students, higher percentages of males than females agreed that participation in VRC had made them more interested in (1) taking engineering classes in college, (2) having a career in a STEM field, (3) learning more about computer programming, and (4) learning more about engineering design. A higher percentage of girls (96.2%) than boys (91.8%) said VRC participation made them want to learn more about robotics, and a higher percentage of girls (78.5%) than boys (74.9%) said VRC made them more interested in taking additional math or science classes in high school and college. Table 6 provides detailed comparisons by gender.

Table 6. Student Comparisons on STEM Interest Items by Gender

<i>Participating in the VEX Robotics Competition has made me</i>		Strongly Agree		Agree	Disagree or SD	Not sure
more interested in taking additional math or science classes in high school	Males	41.6%	33.3%	18.2%	6.8%	
		74.9%				
	Females	45.6%	32.9%	11.4%	10.1%	
		78.5%				
more interested in taking math or science classes in college	Males	44.7%	35.2%	12.7%	7.3%	
		79.9%				
	Females	39.2%	36.7%	13.9%	10.1%	
		75.9%				
more interested in taking engineering classes in college	Males	60.6%	25.7%	10.1%	3.7%	
		86.3%				
	Females	44.3%	29.1%	19.0%	7.6%	
		73.4%				
more interested in having a job in a STEM or computer field	Males	65.1%	25.7%	6.9%	2.3%	
		90.8%				
	Females	54.4%	24.1%	15.2%	6.3%	
		78.5%				
want to learn more about computer programming	Males	60.3%	28.8%	7.3%	3.7%	
		89.1%				
	Females	50.6%	36.7%	12.7%	---	
		87.3%				
want to learn more about robotics	Males	67.0%	24.8%	5.5%	2.8%	
		91.8%				
	Females	68.4%	27.8%	3.8%	---	
		96.2%				
want to learn more about engineering design	Males	61.6%	30.1%	5.0%	3.2%	
		91.7%				
	Females	58.2%	26.6%	12.6%	2.6%	
		84.8%				

Approximately 60% of Team Leaders wrote responses on the open-ended survey item about ways participation in VEX Robotics Competition directly influenced student interest in STEM. Specifically, they noted changes in students' interest in taking additional STEM classes in high school and in pursuing a STEM college major or career. These areas are described more fully in the following sections.

Interest in Taking Additional STEM Classes in High School. Several respondents provided anecdotes that described how VRC participation influenced their students' interest in taking additional STEM courses in high school. As one Team Leader explained,

Because of our VEX participation this year, I have seen extremely bright students want to participate on a team...they have also worked on this project harder than anything else all year with great enjoyment especially with the programming...they realize how important and fun it can be and all will be enrolled in our AP computer course next year along with AP Physics course.

Another Team Leader wrote that many of his students become interested in pursuing engineering in college and decide to take high school courses to prepare them for that major. He reported,

Our club members LOVE robotics. After a year on a team, most are ready to major in engineering, and sign up for the math and science courses which will get them there. We have former members at U Pitt (biomedical engineering), Embry-Riddle (aeronautical engineering), Cal Poly SLO (mechanical engineering), UC campuses (mechanical engineering), U Penn (computer engineering), USC (computer science) and Cal State (mechanical engineering). Graduating seniors this year have been accepted at MIT (materials science), Stanford (She's yet to decide which field of engineering), and schools to be determined.

Along similar lines, a middle school Team Leader expressed,

My observation is that the kids who participate in VEX are attracted to the program because of their interest in the way machines work and the unique nature of the competition. I believe that once they have exposure to their coaches and mentors they quickly understand the role of STEM and the importance of good grades in math and science while in middle school and the need for an aggressive track of study in upper level courses in high school so that they are prepared for an engineering or science/math college career.

Several Team Leaders reported that their students desired to learn additional math and science concepts so that they could more fully engage in their robotics work. One Team Leader, for example, wrote on his survey, “Students become obsessed with Robotics and spend time looking for solutions to problems they encounter. I have witnessed students learning math well beyond their current class level in order to solve problems they are working on with VEX robots.”

Another Team Leader, a female engineer who serves as a mentor, provided her opinion of the way VRC impacts girls in particular, stating,

With me being a woman in engineering, it has shown the girls that I coach that engineering and robotics is not just for ‘nerds.’ Specifically in the girls, I have seen interest in taking more science classes because they are shown in the VEX program that they are smart enough to succeed in these areas.

A parent mentor also commented on the competition's impact on girls, providing this anecdote about her daughter, whom she believes was motivated to study in STEM areas because of her participation in VRC. On her survey the parent mentor wrote,

My daughter started being involved with VEX because she was interested in robotics ...the VEX club and robotics competitions have been an overwhelmingly positive experience that will likely motivate her to commit to the work associated with study in the fields of Physics, Engineering, and higher math.

Interest in computer courses or computer programming was another area in which Team Leaders reported changes in their students. A high school Team Leader explained, “Some members on my team have sought out independent programming courses as a result of getting ‘the bug’ from work they have done on our robots.” A middle school Team Leader reported:

We are in middle school, so I'm not sure how this affects students once they get in high school and college. Here our students have been very interested in design and how things work. There has also been a lot of interest in learning about programming and even though we had one main programmer, everyone tried to learn some. Students have also expressed an interest in doing more with programming next year.

Another Team Leader wrote,

It's a very engaging process. Programming can be engaging to some, but with the VRC, it gives programming a contextual base—it isn't just data processing but gives control and interaction with the outside environment (outside of the computer) in a way that a teacher or coach can implement without an expensive machine shop or extensive experience in programming.

Team Leaders who were also teachers were asked on the survey to compare VRC students to their non-VRC peers. High percentages of Team Leaders reported that their VRC students were more comfortable using computers (81% agreed or strongly agreed with this statement), more interested in taking additional or harder computer classes (70% agreed or strongly agreed), more interested in taking additional or harder math classes (72%), and more interested in taking additional or harder science classes (70%). Additional data are provided in Table 7.

Table 7. Teacher/Team Leader Comparisons of VRC Students to their Non-VRC Peers

<i>VRC students are more</i>	Strongly Agree	Agree	Disagree or SD	Not Sure	Doesn't Apply
comfortable using computers than their non-VRC peers.	34.5%	46.9%	7.6%	9.7%	1.4%
	81.4%				
interested in taking additional or harder math classes than their non-VRC peers.	21.4%	50.3%	10.4%	15.2%	2.8%
	71.7%				
interested in taking additional or harder science classes than their non-VRC peers.	20.7%	49.7%	11.1%	15.2%	3.4%
	70.4%				
interested in taking additional or harder computer classes than their non-VRC peers.	21.5%	48.6%	9.7%	16.7%	3.5%
	70.1%				

A few Team Leaders provided explanations about these differences on follow-up survey questions. For example, one Team Leader-teacher explained, *“Students at our school absorb more in the way of math and science when they participate in Robotics. It gives them a hands-on learning experience in the fields of Math, Science, and Engineering that they would not normally receive.”* Another Team Leader-teacher who coached a club team that drew students from several different schools wrote, *“I have been told on numerous occasions by math and science teachers in the local schools, that the kids in my program have made a marked improvement and actually tend to excel in their classes.”*

Students also reported benefits of VRC participation in the areas of math and science. One student wrote on his survey, *“[VRC] helps me with school work in the fields of math and science.”* And another commented, *“It has taught me how interesting science and technology can be.”* Other comments included, *“[VRC] helps me so much in my science math and engineering workshop classes!”* and *“Things in math that I thought were useless suddenly become valuable skills to me.”*

Several other students wrote about how much they had learned about programming as a result of VRC participation. Student comments included:

- *It teaches me a lot about programming and robotics.*
- *It improved my programming.*
- *It helped me to learn how to program under stress.*
- *It taught me how to program on some basic level.*
- *Encouraged me to learn 2 more programming languages.*
- *I got interested in programming.*
- *I have also learned how much I enjoy computer programming and want to continue learning new things in that area.*

Interest in Pursuing a STEM as a College Major or Career. Several Team Leaders reported that their VRC students’ interest in STEM majors or STEM fields had increased due to their participation in VEX Robotics Competition. One Team Leader commented, *“I have observed that participation in the competition directly influenced the students interest in these areas by exposing them to computer programming, logical thinking, engineering, team work, math, science, which pipes their interest in related career fields.”*

Several other Team Leaders also reported increased student interest in STEM fields due VRC participation. Some of the most salient of those comments are provided here:

- *I have seen Robotics change [a] student’s choice of major in college. The juniors and seniors ask [prospective] colleges specific questions regarding robotics programs or other scientific practical applications/competitions. I have even seen veteran high school students give opinions and advice to college teams on their robots as they tour the university.*
- *I mostly see students who were vaguely interested in engineering and other technical areas become focused on it. I also see students who joined because their friends did go*

from being non-technical to having some affinity for it, even if they do not change career or educational plans because of their involvement.

- *When they have worked on a design and watched it compete with others, they take pride and ownership in their work. At that point they are hooked and desire similar experiences. For these reasons the experience has galvanized their desire to continue into an engineering field.*
- *One student was sure he wanted to do mechanical engineering because he loves to build, but since competing with VEX, his interests expanded to include electrical and computer engineering as well. His teammate has multiple talents (a lot of accomplishments in music and business) but didn't realize that he would enjoy engineering. His experience with VEX has shown him how much “fun” engineering is and it has opened up this field as an area of interest to him.*

Most of the 37 interviewed Team Leaders also described experiences with their students that indicated an increased interest in STEM areas due to VRC participation, usually in the area of engineering. One coach explained, *“About 60% [of our students] change their minds and want to go into STEM pathways...they get a much more in-depth view of [the kinds of] jobs [available to them].”*

A Team Leader from a team with 100% minority involvement [racial minority, all-girls team] said in his interview,

I have seen kids come out of our robotics program [and] take interest in numerous STEM disciplines of study. Traditionally, students say they want to be a nurse, policeman, [or something like that]. I talk to these same kids in fifth or sixth grade [and they want to go into the same kinds of trades their parents are in], like chicken catcher or factory worker. It's the mindset of the community. Until you change the mindset of the community, you can't change the mindset of the kids. Robotics is the “wow” factor to the community.

Another Team Leader described the new opportunities his VEX students have due to their VRC participation, which encourages and prepares students to examine more college options. On his survey he explained,

Because of our involvement with VEX, our students have had many opportunities to visit the engineering departments at college campuses and they have made contact with a variety of interested adults who encourage their learning and give them a sense of community. They understand how they can further develop their interests and have learned about many options at the university level. This long term perspective helps give their current class work meaning and a sense of urgency, because they want to be prepared when someone is going to offer them another great opportunity to participate in something fun!

Another Team Leader, who coaches minority students in an inner city school, explained in a focus group interview how VRC participation created new options for his students:

We're a Title I high school, 98% free and reduced lunch...and we talk to incoming 9th graders saying, "This is what we can help you do [to get into college]. Two of our students got accepted into Johns Hopkins last year; this could be you. They were both [in] robotics." ...If you're on this team, you know, you've elevated yourself to having a better chance to go to a high quality college or university.

In a focus group interview, a male Team Leader of an all-girls team provided additional evidence of the impact of VRC participation on the girls on his team:

I'm at a public, all girls' college preparatory high school, so it's a unique situation. My girls get a lot out of the science and math tie-ins...I have girls who didn't think they were good at science or math before they came in. Build that confidence...and a lot of the young girls from [my inner city school] who never would have thought of engineering as a career choice or any sort of math or science related major until they take robotics...a lot of them go to engineering-specific [universities] or they go to schools and they really want to become engineers. So I think that's a big thing, to open those opportunities and having them thinking about that...

Students also provided comments about ways VRC participation increased their interest in pursuing STEM fields. On the survey, a student wrote, *"I started programming because my brother needed someone to program his robots. I am good at math so my mother elected me to figure it out. I will be majoring in computer science in college as a result."* A second student wrote, *"It has helped me learn about engineering which I want to learn about in college."* Another student wrote, *"It has given me an idea of what I want to do during college and in life,"* and a fourth responded, *"It has impacted me by wanting to take an engineering class in college."* An interviewed student stated, *"Because of VEX, I'm going to be a computer engineer [and study] at the [local] university."*

Three Team Leaders cautioned that many students who come into VRC are already interested in STEM fields. However, each Team Leader expressed his or her perceptions of the positive benefits for students. One Team Leader explained,

Most of the team members I have worked with were already interested in technology, it's hard to judge if the interest is increased because of the robotics, or if the interest in robotics is due to the members general interest in tech. Regardless, it's a great outlet and allows for practical application of concepts.

A second Team Leader responded on the survey:

Since the program attracts students that would already be interested in STEM career fields, I can't say that the program is having a profound change in the students. But I DO see that the program has challenged them more than without it. They have better opportunities now than they did before. AND there are a few students that it does change their interests in STEM. Likewise there a few also that realize how hard they have to work to succeed in a STEM field, that it isn't just [playing with robots].

Yet another gave a more detailed explanation of the types of kids who compete on his teams and the ways VRC participation may impact their future plans. He explained,

I have 3 main groups of students: the “science kids”, who would have majored in some area of STEM without VRC, the “trade kids”, who probably will attend junior college but never aspire to a BA/BS degree, and the “non-technical kids” who are generally good students, but without a specific plan. For the science kids, VRC sparks their interest in the applications of science. About 10-20% moved from pure science intended majors to engineering-based college majors based on robotics. For the trade kids, VRC encourages them to study things like auto/machine tool technology or electronics, and gives them motivation to do better in school (one moved from a 1.5 GPA to a 2.5 GPA after joining robotics). Some of these students have poor language skills and/or no family support for education (parents never finished high school). The non-technical kids tend to go to college locally without an intended major. They are likely to earn a BA in something like Liberal Studies or business. VRC has affected them in a more personal, but not necessarily professional way. Some have said things like, “I’d like to be a robotics mentor after I graduate.” I have 2 college students in this category who currently mentor our high school robotics team. The main reason that they don’t attempt engineering or a science-based career is that they struggle in math classes (attempted but did not pass calculus) but do very well in other classes (English, history, economics, psychology, etc.). They like robotics because they like to work with their hands.

On a final note, one Team Leader did express a concern about the narrow path that some VRC students take, which can limit their options. As he explained, *“I have observed a focus on VEX Robotics to the exclusion of other pursuits and a path to an engineering career possibly without a wider evaluation of other career options that may be better suited to the student.”* No other Team Leader expressed this concern on the survey, though one similar comment was made during a Team Leader interview.

Conclusions

Results of this study indicate that students who participate in VEX Robotics Competition, as well as their Team Leaders, perceive that participation positively affects student interest in STEM courses and careers. Quantitative survey data, as well as qualitative data from the survey and interview/focus groups, support the impact VRC has on student interest in taking additional STEM courses in high school and college, learning more about computer programming, and considering STEM college majors and careers. Although generalizability of the evaluation results are limited due to the small, non-random sample, results do replicate those found in other evaluations of robotics competitions, including FLL, FRC, and FVC and thus add to the growing knowledge base on the power of competitive robotics teams to inspire students to pursue STEM pathways.

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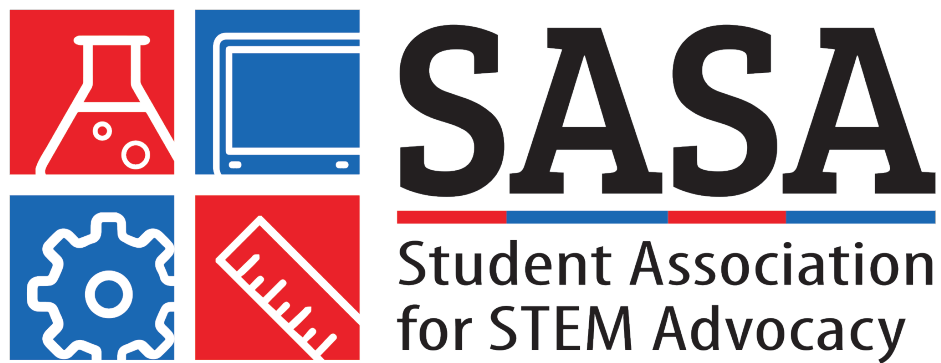
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7 – Key Committees and Terminology

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Please review 7.1 to see if the Members of Congress or Senators you are meeting with are on a key committee. Make a note in your talking points.



2024 Key Committees

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

United States House of Representatives

House Committee on Appropriations

Republicans	District	Democrats	District
Chair Tom Cole	OK-4	Ranking Member Rosa DeLauro	CT-3
Hal Rogers	KY-5	Steny Hoyer	MD-5
Kay Granger	TX-12	Marcy Kaptur	OH-9
Robert Aderholt	AL-4	Sanford Bishop	GA-2
Mike Simpson	ID-2	Barbara Lee	CA-12
John Carter	TX-31	Betty McCollum	MN-4
Ken Calvert	CA-41	Dutch Ruppersberger	MD-2
Mario Díaz-Balart	FL-26	Debbie Wasserman Schultz	FL-25
Steve Womack	AR-3	Henry Cuellar	TX-28
Chuck Fleischmann	TN-3	Chellie Pingree	ME-1
David Joyce	OH-14	Mike Quigley	IL-5
Andy Harris	MD-1	Derek Kilmer	WA-6
Mark Amodei	NV-2	Matt Cartwright	PA-8
David Valadao	CA-22	Grace Meng	NY-6
Dan Newhouse	WA-4	Mark Pocan	WI-2
John Moolenaar	MI-2	Pete Aguilar	CA-33
John Rutherford	FL-5	Lois Frankel	FL-22
Ben Cline	VA-6	Bonnie Watson Coleman	NJ-12
Guy Reschenthaler	PA-14	Norma Torres	CA-35
Mike Garcia	CA-27	Ed Case	HI-1
Ashley Hinson	IA-2	Adriano Espaillat	NY-13
Tony Gonzales	TX-23	Josh Harder	CA-9
Julia Letlow	LA-5	Jennifer Wexton	VA-10
Michael Cloud	TX-27	David Trone	MD-6
Michael Guest	MS-3	Lauren Underwood	IL-14
Ryan Zinke	MT-1	Susie Lee	NV-3
Andrew Clyde	GA-9	Joseph Morelle	NY-25
Jake LaTurner	KS-2		
Jerry Carl	AL-1		
Stephanie Bice	OK-5		
Scott Franklin	FL-18		
Jake Ellzey	TX-6		
Juan Ciscomani	AZ-6		
Chuck Edwards	NC-11		

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

House Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies

Republicans	District	Democrats	District
Chair Robert Aderholt	AL-4	Ranking Member Rosa DeLauro	CT-3
Mike Simpson	ID-2	Steny Hoyer	MD-5
Andy Harris	MD-1	Barbara Lee	CA-12
Chuck Fleischmann	TN-3	Mark Pocan	WI-2
John Moolenaar	MI-2	Lois Frankel	FL-22
Julia Letlow	LA-5	Bonnie Watson Coleman	NJ-12
Andrew Clyde	GA-9	Josh Harder	CA-9
Jake LaTurner	KS-2		
Juan Ciscomani	AZ-6		
Chuck Edwards	NC-11		

House Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies

Republicans	District	Democrats	District
Chair Hal Rogers	KY-5	Ranking Mem. Matt Cartwright	PA-8
Robert Aderholt	AL-4	Grace Meng	NY-6
John Carter	TX-31	Dutch Ruppersberger	MD-2
Ben Cline	VA-6	David Trone	MD-6
Mike Garcia	CA-27	Joe Morelle	NY-25
Tony Gonzales	TX-23		
Andrew Clyde	GA-9		
Jake Ellzey	TX-6		

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

House Committee on Education and the Workforce

Republicans	District	Democrats	District
Chair Virginia Foxx	NC-5	Ranking Member Bobby Scott	VA-3
Joe Wilson	SC-2	Raúl Grijalva	AZ-3
Glenn Thompson	PA-15	Joe Courtney	CT-2
Tim Walberg	MI-5	Gregorio Kilili Camacho Sablan	MP-AL
Glenn Grothman	WI-6	Frederica Wilson	FL-24
Elise Stefanik	NY-21	Suzanne Bonamici	OR-1
Rick Allen	GA-12	Mark Takano	CA-39
Jim Banks	IN-3	Alma Adams	NC-12
James Comer	KY-1	Mark DeSaulnier	CA-10
Lloyd Smucker	PA-11	Donald Norcross	NJ-1
Burgess Owens	UT-4	Pramila Jayapal	WA-7
Bob Good	VA-5	Susan Wild	PA-7
Lisa McClain	MI-9	Lucy McBath	GA-7
Mary Miller	IL-15	Jahana Hayes	CT-5
Michelle Steel	CA-45	Ilhan Omar	MN-5
Ron Estes	KS-4	Haley Stevens	MI-11
Julia Letlow	LA-5	Teresa Leger Fernández	NM-3
Kevin Kiley	CA-3	Kathy Manning	NC-6
Aaron Bean	FL-4	Frank J. Mrvan	IN-1
Eric Burlison	MO-7	Jamaal Bowman	NY-16
Nathanial Moran	TX-1		
John James	MI-10		
Lori Chavez-Deremer	OR-5		
Brandon Williams	NY-22		
Erin Houchin	IN-9		

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

House Education and the Workforce Subcommittee on Early Childhood, Elementary, and Secondary Education

Republicans	District	Democrats	District
Chair Aaron Bean	FL-4	Ranking Member Suzanne Bonamici	OR-1
Glenn Thompson	PA-15	Raúl Grijalva	AZ-3
Burgess Owens	UT-4	Gregorio Kilili Camacho Sablan	MP-AL
Lisa McClain	MI-9	Jahana Hayes	CT-5
Mary Miller	IL-15	Jamaal Bowman	NY-16
Michelle Steel	CA-45	Frederica Wilson	FL-24
Kevin Kiley	CA-3	Mark DeSaulnier	CA-10
Nathaniel Moran	TX-1	Donald Norcross	NJ-1
Brandon Williams	NY-22		
Virginia Foxx	NC-5		

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

House Committee on Armed Services

Republicans	District	Democrats	District
Chair Mike Rogers	AL-3	Ranking Member Adam Smith	WA-9
Joe Wilson	SC-2	Joe Courtney	CT-2
Mike Turner	OH-10	John Garamendi	CA-8
Doug Lamborn	CO-5	Donald Norcross	NJ-1
Rob Wittman	VA-1	Ruben Gallego	AZ-3
Austin Scott	GA-8	Seth Moulton	MA-6
Sam Graves	MO-6	Salud Carbajal	CA-24
Elise Stefanik	NY-21	Ro Khanna	CA-17
Scott DesJarlais	TN-4	Bill Keating	MA-9
Trent Kelly	MS-1	Andy Kim	NJ-3
Matt Gaetz	FL-1	Chrissy Houlahan	PA-6
Don Bacon	NE-2	Elissa Slotkin	MI-7
Jim Banks	IN-3	Mikie Sherrill	NJ-11
Jack Bergman	MI-1	Veronica Escobar	TX-16
Michael Waltz	FL-6	Jared Golden	ME-2
Lisa McClain	MI-9	Sara Jacobs	CA-51
Ronny Jackson	TX-13	Marilyn Strickland	WA-10
Pat Fallon	TX-4	Pat Ryan	NY-18
Carlos Giménez	FL-28	Jeff Jackson	NC-14
Nancy Mace	SC-1	Gabe Vasquez	NM-2
Brad Finstad	MN-1	Chris Deluzio	PA-17
Dale Strong	AL-5	Jill Tokuda	HI-2
Morgan Luttrell	TX-8	Don Davis	NC-1
Jennifer Kiggans	VA-2	Jennifer McClellan	VA-4
Nick LaLota	NY-1	Terri Sewell	AL-7
James Moylan	GU-AL	Steven Horsford	NV-4
Mark Alford	MO-4	Jimmy Panetta	CA-19
Cory Mills	FL-7	Marc Veasey	TX-33
Rich McCormick	GA-6		
Lance Gooden	TX-5		

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

United States Senate

Senate Committee on Appropriations

Democrats	State	Republicans	State
Chair Patty Murray	WA	Vice Chair Susan Collins	ME
Dick Durbin	IL	Mitch McConnell	KY
Jack Reed	RI	Lisa Murkowski	AK
Jon Tester	MT	Lindsey Graham	SC
Jeanne Shaheen	NH	Jerry Moran	KS
Jeff Merkley	OR	John Hoeven	ND
Chris Coons	DE	John Boozman	AR
Brian Schatz	HI	Shelley Moore Capito	WV
Tammy Baldwin	WI	John Kennedy	LA
Chris Murphy	CT	Cindy Hyde-Smith	MS
Joe Manchin	WV	Bill Hagerty	TN
Chris Van Hollen	MD	Katie Britt	AL
Martin Heinrich	NM	Marco Rubio	FL
Gary Peters	MI	Deb Fischer	NE
Kyrsten Sinema (I)	AZ		

Senate Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies

Democrats	State	Republicans	State
Chair Tammy Baldwin	WI	Rank. Mem. Shelley Moore Capito	WV
Patty Murray	WA	Lindsey Graham	SC
Dick Durbin	IL	Jerry Moran	KS
Jack Reed	RI	John Kennedy	LA
Jeanne Shaheen	NH	Cindy Hyde-Smith	MS
Jeff Merkley	OR	John Boozman	AR
Brian Schatz	HI	Katie Britt	AL
Chris Murphy	CT	Marco Rubio	FL
Joe Manchin	WV		

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

Senate Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies

Democrats	State	Republicans	State
Chair Jeanne Shaheen	NH	Ranking Member Jerry Moran	KS
Jack Reed	RI	Lisa Murkowski	AK
Chris Coons	DE	Susan Collins	ME
Brian Schatz	HI	Shelley Moore Capito	WV
Joe Manchin	WV	John Kennedy	LA
Chris Van Hollen	MD	Bill Hagerty	TN
Jeff Merkley	OR	Katie Britt	AL
Gary Peters	MI	Deb Fischer	NE
Martin Heinrich	NM		

Senate Committee on Health, Education, Labor, and Pensions

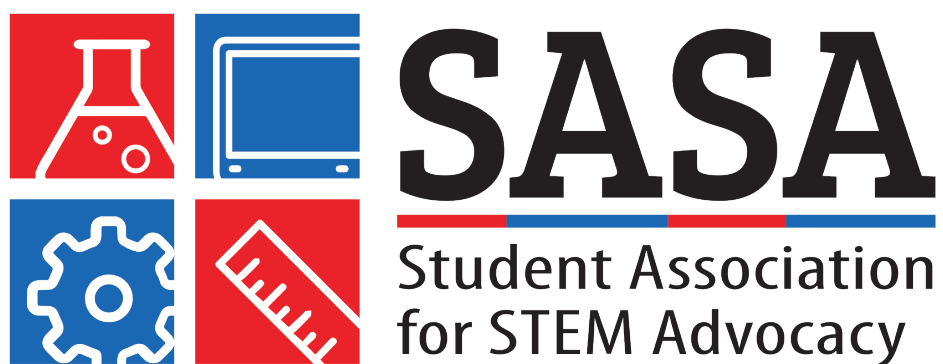
Democrats	State	Republicans	State
Chair Bernie Sanders (I)	VT	Ranking Member Bill Cassidy	LA
Patty Murray	WA	Rand Paul	KY
Bob Casey Jr.	PA	Susan Collins	ME
Tammy Baldwin	WI	Lisa Murkowski	AK
Chris Murphy	CT	Mike Braun	IN
Tim Kaine	VA	Roger Marshall	KS
Maggie Hassan	NH	Mitt Romney	UT
Tina Smith	MN	Tommy Tuberville	AL
Ben Ray Lujan	NM	Markwayne Mullin	OK
John Hickenlooper	CO	Ted Budd	NC
Ed Markey	MA		

2024 Key Committees

Leadership and Membership on Relevant
Committees in the 118th Congress

Senate Committee on Armed Services

Democrats	State	Republicans	State
Chair Jack Reed	RI	Ranking Member Roger Wicker	MS
Jeanne Shaheen	NH	Deb Fischer	NE
Kirsten Gillibrand	NY	Tom Cotton	AR
Richard Blumenthal	CT	Mike Rounds	SD
Mazie Hirono	HI	Joni Ernst	IA
Tim Kaine	VA	Dan Sullivan	AK
Angus King (I)	ME	Kevin Cramer	ND
Elizabeth Warren	MA	Rick Scott	FL
Gary Peters	MI	Tommy Tuberville	AL
Joe Manchin	WV	Markwayne Mullin	OK
Tammy Duckworth	IL	Ted Budd	NC
Jacky Rosen	NV	Eric Schmitt	MO
Mark Kelly	AZ		



Advocacy Glossary

302(a) Allocation: Sets a total amount of money for the Appropriations Committees to spend for a given fiscal year.

Act: A rule or statute that is passed by both Chambers in identical format and signed into law by the president or passed over a veto.

Adjourn: Ends that day's session.

Adjournment sine die: Adjournment on the final day of a session of a Congress.

Administration: The President and actual offices of the Government such as the United States Education Department.

Advice and consent: Senate's role of confirming presidential nominations and international treaties.

Amendment: Proposal to change text or strike out parts in a pending or existing bill.

Amendment in the nature of substitute ("Substitute amendment"): Strikes out the entire text of a bill or other measure and inserts new text.

Amendment tree: A process in the Senate used to limit the number and types of amendments allowed on a bill, typically used to prevent changes to controversial legislation.

Appropriations: Assigned funding for federal agencies to make payments out of the Treasury for specified purposes.

ASCD: Association for Supervision and Curriculum Development - Supports the global community of educators dedicated to excellence in learning, teaching, and leading.

Authorization: Legislation is typically authorized for a period of time and then it gets reauthorized or extended with some tweaks. Within an authorization, there is usually a funding target for each year.

Bill: A proposal to enact or repeal laws.

Block Grants: Lump sums given to the states by the federal government for loosely defined purposes, such as childcare or improving public safety.

Budget: The President develops a budget and Congress is supposed to develop a budget annually (although this hasn't happened for the last 5 to 6 years.)

Budget authority: The authority that Congress provides a federal agency to spend money, granted through an appropriation law that specifies a purpose and a set time period.

Budget resolution: Concurrent resolution that creates the congressional budget by dividing spending into functional categories. Can include reconciliation instructions to designated Senate or House committees.

Calendar of business: "Senate Calendar" or the "Legislative Calendar": Published each day the Senate is in session and has information about the bills and resolutions eligible for floor action.

Caucus: An informal group of Senators, Representatives or both, that discuss shared concerns and possibly conduct legislative research and policy planning. There are regional, political, ideological, and ethnic caucuses.

CBO (Congressional Budget Office): Makes forecasts of revenues and estimates budget impact of proposed legislation.

Chair: The leader of a certain committee always in the majority party of the chamber.

Class: Article I, Section III of the Constitution divides senators into three classes, Class I, Class II, and Class III, each of whom are up for reelection 2 years apart.

Cloakroom: Adjacent to the House and Senate chambers, a cloakroom for each party serves as a place for the members of that party to discuss their ideas privately.

Closed session: "Secret Session": A House or Senate meeting that excludes the public and press usually for impeachment trials, national security, confidential information or sensitive communications from the present.

Cloture: The process by which a supermajority (two-thirds) of the Senate agrees to stop debate and move something forward. Goes against a filibuster.

Committee: Subgroup of the House or Senate with a specific topic area that considers legislation, conducts hearing and investigations and conducts other assignments in that policy area.

Committee amendment: Amendment recommended by a committee when reporting a bill or other measure.

Committee print: Publication committees use to state the rules of each standing committee, draft of bills or committee reports, and include memorial tributes.

Committee report: A publication created by a House, Senate, or conference committee to state the purpose of legislation the committee has considered.

Companion bill or measure: Bills that are similar or identical introduced in both the Senate and House.

Competitive Based: Funding typically based on a competitive process to acquire a grant type based funding.

Concurrent resolution: A resolution adopted by both the House and Senate that does not require the signature of the President and does not have the force of law. Concurrent resolutions are used to make or amend Congressional rules that apply to both chambers, express the sentiments, or set a non-binding annual congressional budget resolution.

Conferees: Appointees on conference committees who must uphold Chamber's position when negotiating with the conferees of other Chambers.

Conference committee: An ad hoc panel that reconciles differences in a measure passed in both chambers.

Congressional record: The substantially verbatim accounts of daily proceedings on the House and Senate floors. Printed each day either Chamber is in session.

Congressional resolution: A joint resolution by Congress that allows federal agencies and programs to continue operations without regular appropriations.

Congresswoman/Congressman: Typically used to address a Member of the House of Representatives.

Continuing Resolution(CR): A legislative mechanism to continue forward something passed previously, such as funding levels.

Controlled time: A unanimous consent agreement limiting debate time on a bill or other measure. The floor manager yields the specified time to any senator to speak in the debate.

CROmnibus: A combination of a long-term omnibus spending bill and a short-term continuing resolution.

CRS (Congressional Research Service): Researches policy implications or background on proposed legislation.

Deemer: Legislation which is deemed to serve as an annual budget resolution for purposes of establishing enforceable budget levels for a budget cycle.

Earmark: A legislative way to funnel funds to a specific project, company, or individual. (Earmarks have been considered unethical for some time now.)

Ed & Labor (Committee on Education and Labor): The committee in the House that handles most K-12 education legislation.

Enacted legislation: Legislation after it has passed both Chambers of Congress in identical form and has become law by signature of the president, a [pocket veto](#), or a [veto override](#).t, company, or individual. (Earmarks have been considered unethical for some time now.)

Enrolled bill: The final copy of a bill or joint resolution after it has passed both Chambers and been signed by the correct Congressional officials and submitted to the President for their signature.

Engrossed bill: The official copy of a bill or joint resolution passed and certified by one Chamber.

ESEA / ESSA (Elementary and Secondary Education Act of Every Student Succeeds Act): The main piece of Federal Education Legislation for K-12 schools.

Ex officio membership: Allows the chairman and ranking member of a committee to participate as members of any subcommittees of that committee, but generally they can not vote.

Executive business: The consideration of nominations and treaties, which is received from the President.

Executive calendar: A list of executive business available for consideration on the Senate floor. Can include treaties and nominations.

Executive communication: A message sent to the senate from the Executive branch, typically about a veto.

Executive session: Any time during the Senate's daily session when it considers executive business.

Filibuster: Procedure by which the Senate uses to prevent something from moving forward and does not require someone to stand on the floor and continue talking.

Fiscal Year: The leader of a certain committee always in the majority party of the chamber.

Floor: The physical space where the whole Senate conducts its business. It is also used informally such as someone "having the floor" or "yielding the floor" referring to the speaking area of the Senate.

Floor amendment: An amendment offered by a Congressperson during consideration of a bill or other measure on the floor rather than a committee amendment.

Floor manager: Senators or representatives designated to lead consideration of a bill or other measure on the floor. Usually the chair and ranking minority member of the reporting committee or their designee.

Formula Based: Funding based on a formula that uses a certain demographic or population.

Germane: Related to the subject and context of a bill. The House has a "germaneness rule" and all amendments must relate to the part(s) of the bill being amended. The Senate can allow nongermane amendments.

Hearing: A meeting of a committee or subcommittee to hear testimony, conduct an investigation, review a federal agency or program or consider nominations and treaties.

HELP (Health, Education, Labor, and Pensions): Matters relating to the issues of health, education, labor, and pensions. Encompasses most federal and labor laws.

Hold: An informal practice for a Senator to inform the leadership that they do not want a measure or nomination to reach the floor.

IDEA (Individuals with Disabilities Education Act): Special Education Law. The Federal Government is supposed to pay 40% of the average per student cost for every special education student.

ISTE (International Society for Technology in Education): Community of global educators who believe in the power of technology to transform teaching and solve problems in education.

Joint committee: A committee with members from both Chambers of Congress. They usually have narrow jurisdiction and no authority to report legislation. Chairmanship usually alternates between the Senate and House members from Congress to Congress.

Joint explanatory statement: A document to address differences in versions passed by the Senate and the House, usually created by a conference committee.

Joint meeting: An occasion, often ceremonial, when the Senate and House recess and meet together to hear an address by a visiting dignitary, such as a foreign leader.

Joint resolution: A legislative measure such as for constitutional amendments, continuing appropriations, establishing permanent joint committees, and corrections of errors in existing law. Becomes law when approved by both Chambers and signed by the president, besides proposed constitutional amendment, which requires a two-thirds affirmative vote in each Chamber and ratification by three-quarters of the states.

Joint session: A session both Chambers meet together for formal business or to hear an address from the President.

Journal of the Senate: The written record of the official proceedings of the Senate, including motions and votes but not debates. Each chamber, and legislative, executive, closed and impeachment proceedings all have their own journals.

“Lame duck” session: The time after November general elections during Congressional election years, as some of the lawmakers will not return to the next Congress.

Layover: Informal term for the requirement in various Senate rules that a measure or matter lie over one or two days before Senate action is in order. Layover periods may be waived by unanimous consent. Some fast-track statutes waive the layover requirement so that it is in order to proceed immediately to a measure.

LEA (Location Education Authority): Individual school districts.

Legislative day: The time between when the Senate convenes and adjourns. Usually one day, though, may extend over several days or even weeks or months.

Legislative session: Any time during the Senate's daily session in which it considers legislative business (bills, resolutions, and related actions).

LHHS: The House and Senate Labor, Health, Human Services and Education Appropriations Subcommittees (also referred to as “Labor-H” or “Labor-HHS”).

Lie on the table: A motion for permanent disposal of a bill, resolution, amendment, appeal or motion.

Line-item veto: A veto of only a section of an appropriations act, not the entire act. A president must sign or veto an act and cannot issue a line-item veto.

Majority leader: The floor leader for the majority party.

Markup: The process for congressional committees and subcommittees to debate, amend, and rewrite proposed legislation.

Measure: Proposed legislation on which the Senate or House takes action, such as a bill or resolution.

Member: Typically used as abbreviation of Member of Congress or Member of House of Representatives.

Minority leader: The floor leader for the minority party.

Morning business: Routine business for the first two hours of a legislative day or other times of unanimous consent such as receiving messages from the president and the House, executive branch reports, committee reports, and the introduction of bills and submission of resolutions.

Motion to instruct conferees: A non-binding proposal to instruct conferees appointed to a conference committee to take a certain position in the conference.

Motion to proceed to consider: A proposal, usually offered by the majority leader, to bring a measure, nomination, or treaty up for floor consideration, including debate and votes. Usually used when unanimous consent to do so cannot be obtained.

Motion to reconsider: A proposal that can be offered once after each vote by a member of the winning side to revisit any question previously decided by vote.

Motion to table: A proposal to set aside any pending question. Used to dispose of a question the Chamber does not want to consider further. Agreement to the motion is equivalent to defeating the question tabled.

Nomination: An appointment by the president to executive or judicial office which is subject to Senate confirmation.

NSBA: National School Board Association.

Omnibus: Term that describes packaging a large amount of items together into one large bill.

Original bill: A bill drafted by a committee instead of one drafted by a member and referred to committee.

Oversight: Review of the activities of a federal agency or program by a committee.

Parliamentarian: The Senate or House adviser on the interpretation of its rules and procedures. Duties also include referring bills to the appropriate committees.

Parliamentary inquiry: A question from the floor to the presiding officer requesting a clarification of the procedural situation on the floor.

Party conference: An organization of all party members in a Chamber. They elect party and committee leaders, assign members to committees, and then meet periodically to talk about political strategy and review party positions in pending legislation.

Pocket veto: A veto caused by the president not signing a bill within 10 days of receiving it and Congress adjourns during that time.

Poison Pills: An amendment proposed by someone who disagrees with the bill in an attempt to make it useless.

Point of order: A claim made by a Congressman from the floor that a rule of the Chamber is being violated.

Policy committees: Democratic and Republican groups with the purpose of providing research and services to the members of that party. They also help serve as a forum for discussion of party legislative strategy.

President of the Senate: The vice president oversees sessions of the Senate and may vote in the case of a tie. In the absence of the vice president, the president pro tempore or a designee performs these duties, with the exception of voting.

President pro tempore: A constitutionally recognized officer of the Senate who presides over the Chamber in the absence of the vice president. Elected by the Senate and, by custom, the senator of the majority party with the longest record of continuous service.

Presiding officer: A senator of the majority party who presides over the Senate in the absence of the president pro tempore. They maintain order and decorum, recognize members to speak, and interrupt the Senate's rules, practices, and precedents.

Private law: A bill applicable only to specific organizations or individuals that has passed both Chambers and is signed by the president.

Pro forma session: A few minute meeting of the Senate or House when business is typically not conducted.

Proxy voting: The practice of allowing a senator to cast a vote in committee on behalf of an absent senator.

PSA (Public School Academy): Typically a charter school

Ranking Member: Typically the most senior member of the minority party of the committee.

Public law: A bill or joint resolution with general applicability nationwide that has passed both Chambers and is signed by the president.

Question: All matters the Senate votes on, such as passage of a bill, adoption of an amendment, agreement to a motion, or an appeal.

Quorum: The number of senators that must be present for the Senate or House to do business. The Constitution requires a majority of senators (51) and representatives (218) for a quorum.

Ranking member: The highest-ranking (and usually longest-serving) minority member of a committee or subcommittee.

Recess: A temporary break of proceedings which can be a few hours to a long break such as a holiday period.

Reconciliation: A tool the Senate can use to make legislation easier to pass in the Senate. The reconciliation process allows for a simple majority of the Senate to pass certain policies, eliminating the need for three-fifths of the chamber—or 60 votes—to break the filibuster.

Referral: The process to assign a bill to committee for consideration. In the Senate, this is usually done by the committee with jurisdiction over that subject matter, but can be done by other committees with unanimous consent.

Rider: A nongermane amendment to a bill or an amendment to an appropriation bill that changes the permanent law governing a program funded by the bill.

Roll call vote: A vote in which each senator or representative votes "yea" or "nay" as his or her name is called by the clerk.

SEA (State Education Authority): A state's department of education.

Secretary of the Senate: Nominated by the majority party and elected by the senate to be the chief legislative, financial, and administrative officer of the Senate.

Select or special committee: A committee established usually for a limited time by resolution to conduct a particular study or investigation.

Senate Manual: A document containing the Senate's standing rules and orders and other laws and regulations that apply to the Senate, usually published once each new Congress.

Senator: Used to address a Member of the Senate.

Seniority: The status given to senators according to their length of service. Entitles a senator with greater seniority to preferential treatment in matters such as committee assignments. Seniority lists are established by the party conferences.

Sequestration: When the spending that is above the overall reduction needed to hit the spending target is withheld. This is the process by which the gridlock in DC in 2011 was "solved"; an overall spending target was established, but no individual programs were cut.

Sergeant at arms: The protocol officer and chief law enforcement officer of the Senate. Nominated by the majority party conference and elected by the Senate.

Session: The period of time that Congress assembles and conducts business. Each Congress generally has a first and second session roughly lasting a calendar year.

Simple resolution: A non-binding resolution passed by a single chamber of Congress concerning the operations or opinions of that chamber.

Slip law: The first official publication of a law, usually published a few days after a law has been enacted.

Star print: Corrected editions of congressional publications with stars in the lower left-hand corner that have precedent over the original documents.

Statutes at large: A publication of the laws and concurrent resolutions enacted during each Congress, arranged in chronological order. Also includes presidential proclamations.

Subcommittee: Part of a committee to divide the workload.

Supplemental appropriation: Money provided in an appropriations act outside the regular appropriations cycle for emergencies and disaster relief.

Title I: Refers to at risk population support in a given school based on free and reduced lunch rates.

Unanimous consent: A Senate procedure to set aside rules of procedure to speed up a legislative action.

United State Code: A compilation of general and permanent U.S. laws currently in force, organized by subject matter.

USED: United States Education Department.

Veto: When the president rejects a bill that has been passed by both Chambers and it gets sent back to the Chamber it originated in. Can be overridden by a two-thirds vote in both the Senate and the House.

Veto override: A veto by the president can be overridden by a two-thirds vote in both Chambers.

Vice President: Elected with the President. Part of the Executive branch. Also serves as President of the Senate.

Voice Vote: A vote where the presiding officer states a question, takes a "yea" or "nay" vote and announces the results based on their count. The names and numbers of senators voting on each side are not recorded.

Whip: Elected by the party to mobilize votes within the party and often serves as acting floor leader. There is one for each party in each Chamber.

Yeas and Nays: Vote options during a roll call vote

Yield: "Yields the floor" concludes a member speaking. "Yielding time" refers to the floor manager allowing members to speak for a certain amount of time. "Yielding for a question" refers to the senate with the floor allowing another member who does not have the floor to ask a question.

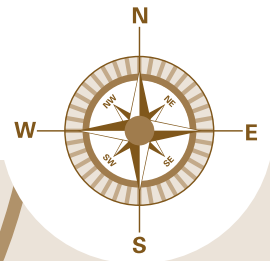


Appendix A – Maps and Places of Interest

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U.S. CAPITOL

Visitor Center



Legend

- | | | | |
|--|--------------------------|--|---------------|
| | Accessible Entrance | | Elevators |
| | Accessible Route | | Parking |
| | Visitor Services Shuttle | | Bus Pick-Up |
| | Circulator Bus Stop | | Bus Drop-Off |
| | | | Metro Station |



M System Map

wmata.com
Information: 202-637-7000 | TTY: 202-962-2033
Metro Transit Police: 202-962-2121 | Text: MYMTPD (696873)

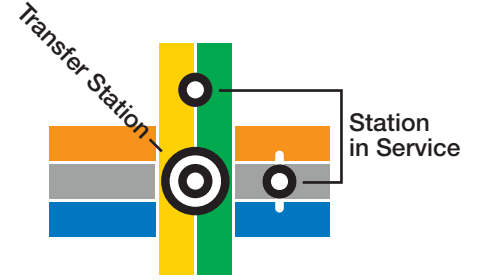
Legend

- RD** Red Line • Glenmont / Shady Grove
- OR** Orange Line • New Carrollton / Vienna
- BL** Blue Line • Franconia-Springfield / Downtown Largo
- GR** Green Line • Branch Ave / Greenbelt
- YL** Yellow Line • Huntington / Mt Vernon Sq
- SV** Silver Line • Ashburn / Downtown Largo

Station Features

- P** Parking
- H** Hospital
- A** Airport

Connecting Rail Systems



Metro is accessible.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY © 2023



No Smoking



No Eating or Drinking



No Animals (except service animals)



No Audio (without earphones)



No Littering or Spitting

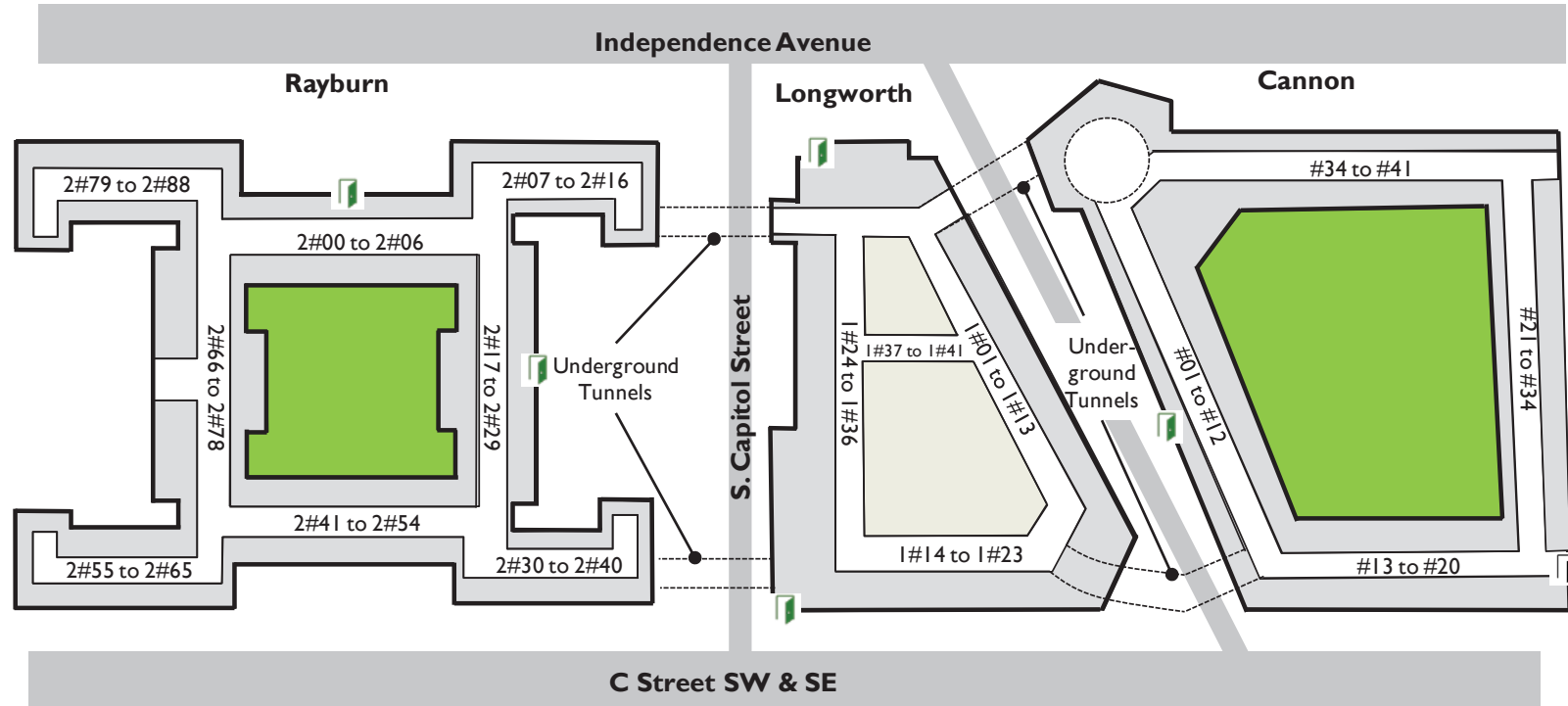


No Dangerous or Flammable Items

Inside the House Office Buildings

 Public, Handicapped Accessible Entrance  Public Non-Handicapped Accessible Entrance  Entrance Member/Staff-Only Until 10 AM

- Use the floor plans below to orient yourself once inside House office buildings; the floor plans are identical for different floors within the same building
- To identify offices, keep in mind that the first digit identifies the building (three digit numbers are in Cannon, four digit numbers starting with 1 are in Longworth, and four digit numbers starting with 2 are in Rayburn), the next number indicates building floor, and the last two numbers indicate specific office
- For example, Room 2255 is on the second floor of Rayburn

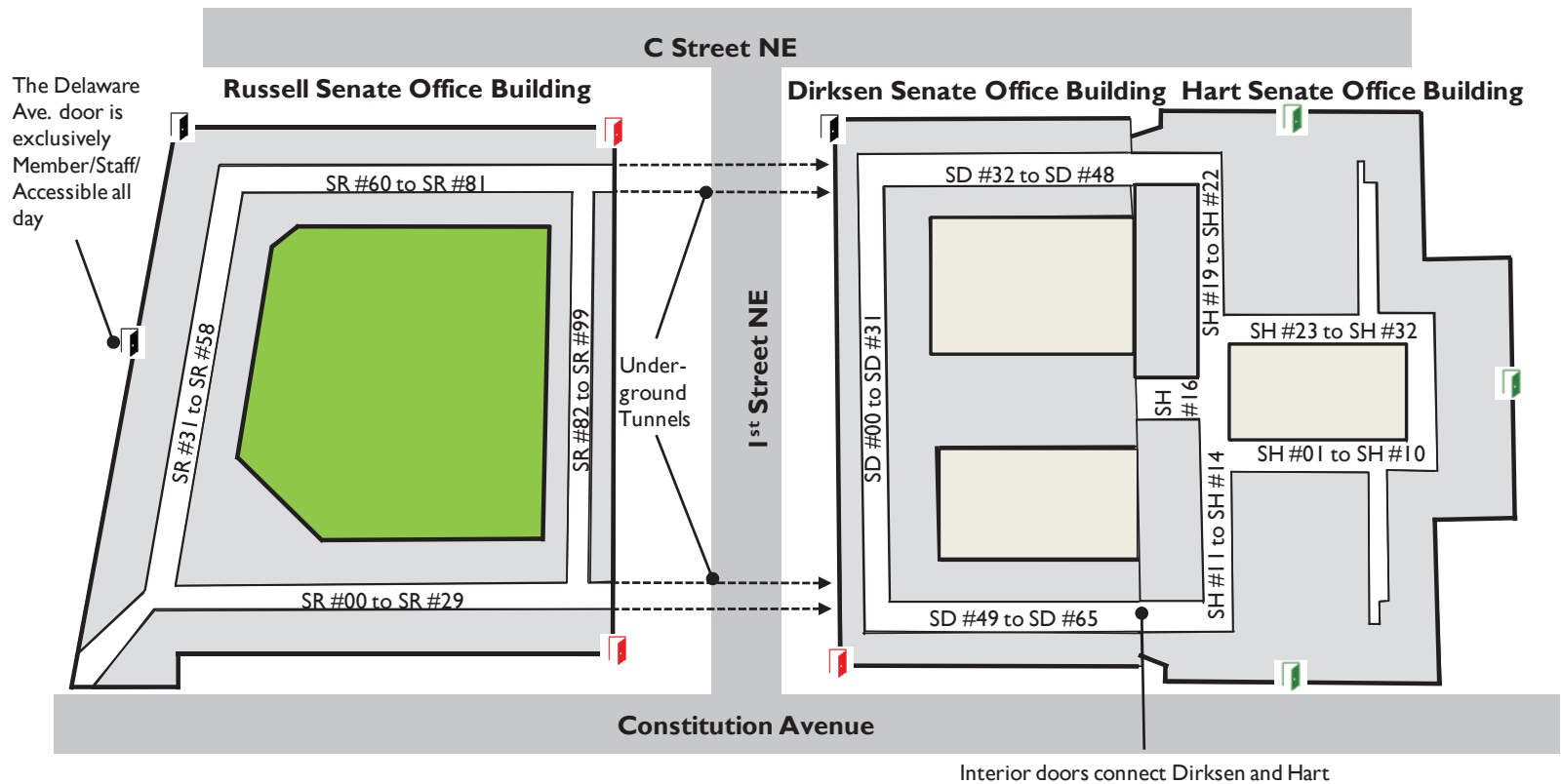


Source: National Journal Research

Inside the Senate Office Buildings

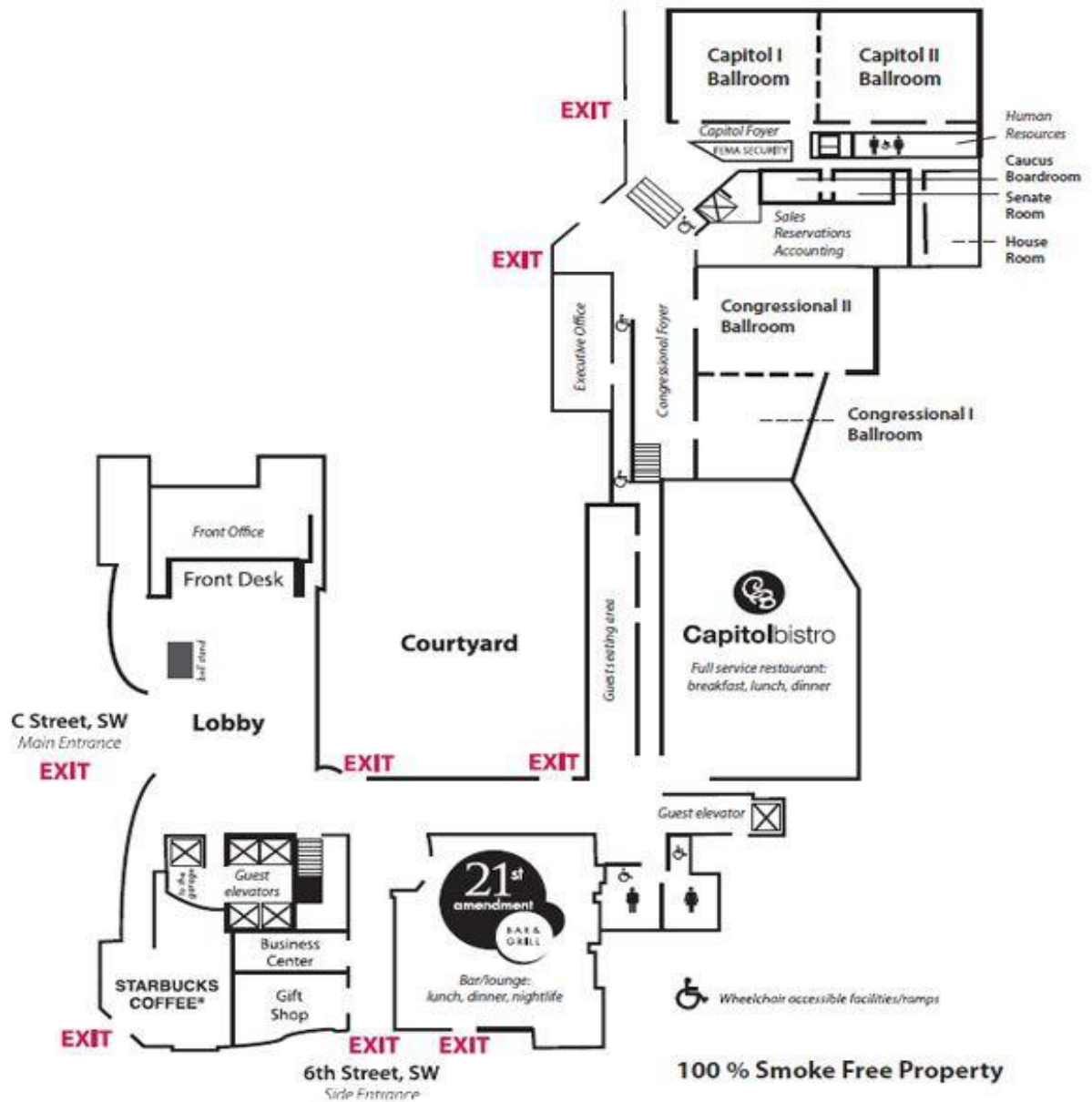
 Public, Handicapped Accessible Entrance  Public Non-Handicapped Accessible Entrance  Entrance Member/Staff-Only Until 10 AM

- Use the floor plans below to orient yourself once inside Senate office buildings; the floor plans are identical for different floors within the same building
- To identify offices, keep in mind that the first two letters before the office number identify the building (e.g., "SR" is Senate-Russell), the next number indicates building floor, and the last two numbers indicate specific office
- For example, SD 249 is on the second floor of Dirksen.



Source: National Journal Research

Holiday Inn Capitol Floor Plan





Restaurant List

Eateries Around Capitol Hill

- 2 Sisters Deli (400 C Street SW)
- Bullfeathers (410 First Street SE)
- Burrito Brothers (205 Pennsylvania Ave SE)
- Good Stuff Eatery (303 Pennsylvania Ave SE)
- Hawk 'n' Dove (329 Pennsylvania Ave SE)
- Hunan Dynasty (215 Pennsylvania Ave SE)
- McDonald's (400 C Street SW)
- My Own Pizza (400 C Street SW)
- Santa Rosa Taqueria (301 Pennsylvania Ave SE)
- Sweetgreen (221 Pennsylvania Ave SE)
- Sushi Capitol (325 Pennsylvania Ave SE)
- Talay Thai (406 First Street SE)
- The Dubliner (520 North Capitol Street NW)
- We, The Pizza (305 Pennsylvania Ave)
- Young Chow (312 Pennsylvania Ave)

Eateries at Holiday Inn Capitol (550 C Street SW)

- Starbucks
- 21st Amendment Bar & Grill
- Capitol Bistro

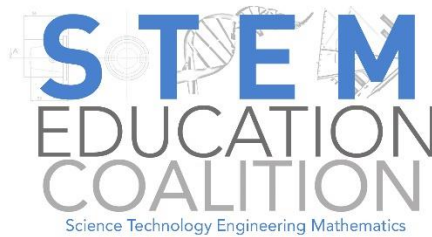
Eateries at Union Station (50 Massachusetts Ave NE)

- | | |
|--------------------------|-------------------------|
| • Auntie Anne's | • McDonald's |
| • Blue Bottle Coffee | • Neuhaus |
| • Cava | • Potbelly |
| • Charleys Philly Steaks | • Pret |
| • Chick-fil-A | • Raising Cane's |
| • Chipotle | • Sbarro |
| • Chop't | • Shake Shack |
| • Cinnabon | • Taco Bell |
| • Crepe Lena | • The Halal Guys |
| • Dunkin' | • Uno Pizzeria & Grill |
| • East Street Café | • Van Leeuwen Ice Cream |
| • Insomnia Cookies | • Wendy's |
| • Jamba Juice | • Wokaholic |
| • Jersey Mike's | |



Appendix B – Supporting Documents

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May 3, 2024

The Honorable Patty Murray
Chair
Senate Appropriations Committee

The Honorable Tom Cole
Chair
House Appropriations Committee

The Honorable Susan Collins
Ranking Member
Senate Appropriations Committee

The Honorable Rosa DeLauro
Ranking Member
House Appropriations Committee

Dear Appropriations Leaders:

On behalf of the undersigned organizations, thank you for your leadership in enacting final FY2024 appropriations bills. While we appreciate an agreement to keep the government funded for the fiscal year, we are disappointed in cuts to a range of funding streams critical to STEM education and workforce development in these fields at a time when our nation faces critical labor shortages, declining academic achievement, and significant technology and competitiveness threats.

The CHIPS and Science Act of 2022 authorized many programs that could allow for vital teacher training and collaboration with the scientific workforce, improved STEM education in afterschool programs, and a dedicated focus to diversify STEM fields. The legislation signaled a call to ramp-up the nation's investments in STEM education and workforce development programs, and to date, Congress has not fulfilled those obligations. As attention now turns to the FY2025 appropriations process, we ask that the Committee reject any further cuts and increase funding for long-standing STEM education and workforce priorities. In particular, we urge Congress to increase funding for the Student Support and Academic Enrichment (SSAE) grant program under Title IV-A in the Every Student Succeeds Act (ESSA). With this grant states and districts have the flexibility to provide well-rounded education programs, including Computer Science and STEM, to our most at-risk students. They will have access to new, high-quality STEM courses and resources, critical STEM opportunities both inside and outside the classroom for activities like STEM competitions, hands-on and field-based learning opportunities, increased access to Advanced Placement and International Baccalaureate programs, and more computer science courses.

We also request Congress to increase funding levels for ESSA Title II Supporting Effective Instruction Grants and ESSA Title IV/B, 21st Century Community Learning Centers. In a time of severe educator shortages, Title II grants will support teacher training and class-size reduction efforts that aid in teacher retention. Increasing funding for high-quality STEM programming in

afterschool and summer learning programs via Title IV-B offers complementary learning opportunities for students and additional support for teachers.

Increased funding for Career and Technical Education State Grants will also allow educators to provide more STEM-focused strategies in apprenticeships, work-based learning and dual-enrollment credits as state and local CTE providers explore pathways to high-needs fields, which allows for more allowable uses of funding for STEM education activities. This was another program with a net cut in the final FY2024 bill.

Additionally, we respectfully request that the National Science Foundation (NSF) receive at least \$11.9 billion in funding, including a robust appropriation for the National Science Foundation's STEM Education Directorate. This directorate plays a critical role in expanding the STEM education knowledge base for broadened participation, graduate and undergraduate innovation and fellowships, enabling a skilled technical workforce, informal and afterschool education, and student experiences in STEM careers. With the enactment of the CHIPS and Science Act of 2022, a robust appropriation for NSF is essential and we urge Congress to sustain the momentum of the CHIPS and Science Act and fund as many of these newly authorized STEM education programs as possible.

Finally, we strongly urge Congress to continue community project funding, and urge the House Committee to expand the eligibility criteria to Education Innovation programs under the Labor, Health and Human Services, Education, and Related Agencies bill. These community projects have been a tremendous avenue for education providers to access resource for hands-on STEM education activities and workforce development programs in high-needs fields.

We appreciate the opportunity to share our views and we look forward to working with you and your staff closely during this appropriations process.

Sincerely,

STEM Education Coalition
AACTE (American Association of College for Teacher Education)
Afterschool Alliance
AISES- Advancing Indigenous People in STEM
American Chemical Society
American Mathematical Society
American Nuclear Society
American Society of Civil Engineers
Association of Science and Technology Centers (ASTC)
Battelle
COMAP
DiscoverE
Education Development Center
Education Development Center
FIRST

GirlStart
Hands on Science Partnership
National Consortium of Secondary STEM Schools (NCSSS)
National Council of Teachers of Mathematics
National Math and Science Initiative
National Math and Science Initiative
National Science Teaching Association
National Society of Black Engineers
OregonASK
Partnerships in Education and Resilience (PEAR)
Project Lead the Way
Society of Hispanic Professional Engineers
Society of Women Engineers
STEM Next Opportunity Fund
STEMx
Student Association for STEM Advocacy
The UTeach Institute
TIES Teaching Institute for Excellence in STEM

April 30, 2024

The Honorable Tammy Baldwin
Chairwoman, Appropriations Subcommittee on
Labor, HHS, Education &
Related Agencies
U.S. Senate
Washington, DC 20510

The Honorable Shelley Moore Capito
Ranking Member, Appropriations Subcommittee
on Labor, HHS, Education & Related Agencies
U.S. Senate
Washington, DC 20510

The Honorable Robert Aderholt
Chairman, Appropriations Subcommittee on Labor,
HHS, Education & Related Agencies
U.S. House of Representatives
Washington, DC 20515

The Honorable Rosa DeLauro
Ranking Member, Appropriations Subcommittee on
Labor, HHS, Education & Related Agencies
U.S. House of Representatives
Washington, DC 20515

Dear Chairwoman Baldwin, Chairman Aderholt, Ranking Member Capito, and Ranking Member DeLauro:

As you begin work on the Labor, Health and Human Services, and Education, and Related Agencies Appropriations bill for Fiscal Year (FY) 2025, the organizations signed below thank you for funding the Nita M. Lowey 21st Century Community Learning Centers (21st CCLC) - Title IV Part B of Every Student Succeeds Act - in FY 2024. While we understand the challenging fiscal environment at the federal level, and the limits to discretionary funding imposed by the Fiscal Responsibility Act of 2023, we also know about the significant increased costs and demand for programs at the local level. In an effort to respond to the needs of students and families, we ask that you and your colleagues increase 21st CCLC to \$2.09 billion as part of the FY 2025 appropriations process.

Afterschool and summer learning programs are a lifeline for millions of children and families. They are especially critical as parents and educators are increasingly concerned about children and teens' well-being, academic progress, mental wellness, social connections, and safety. The pandemic has shown how important robust afterschool and summer learning programs are to working families and students, and how crucial it is to invest in these programs to ensure their availability and efficacy. Every student who wants it deserves the opportunity to pursue passions and explore interests in a quality afterschool and summer program. Unfortunately, increased demand coupled with growing program costs means programs, especially those available to our most underserved youth, are struggling. And there is an access problem. For every 1 student served nationally, 4 are waiting. One in two programs nationwide has a waitlist. Recent data shows support for funding afterschool is at an all-time high; 8 in 10 voters want greater public investment in afterschool^[1], including majorities from all major political parties, age groups, community types, and racial and ethnic groups. With this in mind, we request that you support an increase of \$750 million for the 21st CCLC program in FY 2025. This would bring the total for the 21st CCLC program to \$2.09 billion.

In its 26th year, the 21st CCLC initiative supports all 50 states and the American territories. With funding from 21st CCLC, local school and community-based organizations, along with cities and towns, charter schools, faith-based providers, public housing authorities, and other entities provide students in kindergarten through 12th grade safe and supportive environments where they participate in academic enrichment opportunities, get excited about learning new things, and connect with caring mentors before school, afterschool, and during the summer months.

Federal 21st CCLC formula grants to states enable rural, urban, and suburban communities to leverage local resources by providing 3-5 years of funding to local partnerships among community-based organizations, faith-based partners, science centers and museums, private industry, and school partners (public, private, and charters). The funding provided by 21st CCLC is the foundation of afterschool and summer programming and enables communities to attract other partners and resources, including access to mentors, new learning opportunities, nutritious snacks and meals, as well as supports for mental wellbeing. Funds also are used for training, evaluation, and technical assistance to ensure quality programming is offered. While reflecting the needs of local communities, 21st CCLCs expand student access to activities and services designed to reinforce and complement the regular academic program, such as hands-on learning, physical activity, workforce development opportunities, gaining knowledge and skills in science, technology, engineering, and math (STEM) fields, drug and violence prevention programs, counseling programs, music and the arts, and more.

Quality afterschool and summer learning programming matters. The outcomes of 21st CCLC funded afterschool and summer learning programs are undeniable. Over decades of work, researchers have built an evidence base for quality and effectiveness by studying afterschool programs across the nation. An independent report[2] published in March 2019 and supported by the Wallace Foundation reviewed research from 2000 to 2017 and found programs improved a wide range of outcomes, including student attendance, achievement in mathematics and English, grade promotion and graduation rates, and student health and fitness. This research spans the country, all age groups, and a wide variety of indicators of well-rounded student success. Furthermore, the most recent Department of Education national annual performance report found that 69% of students increased homework completion and class participation, while 64% of students improved their classroom behavior—all important indicators of student engagement[3]. Central to quality afterschool and summer programs is adequate pay and training for staff. About 50 percent of program providers report that their costs per child have increased in the past year with staffing costs being the major contributing factor.

At a time when more families and students need afterschool and summer programs than ever, 21st CCLC providers must be able to build on 25 years of excellence in the field—not be faced with choosing between serving more youth or paying staff competitive wages. Increasing funding for this proven program will continue to reap benefits not only in the communities where the 10,500 21st Century Community Learning Centers currently thrive, but also where youth are waiting for access, including in many of the other almost 50,000 Title I schools[4] where the program could reach.

We thank you for your continued support of afterschool and summer learning programs, and for your efforts on behalf of children and working families. We ask that the Labor, Health and Human Services, Education, and Related Agencies Subcommittees ensure that the Nita M. Lowey 21st Century Community Learning Centers Program remains a vital resource to students and families.

[1] <http://afterschoolalliance.org/documents/Voters-Agree-Afterschool-Programs-Are-A-Priority-January-2023.pdf>

[2] <https://www.wallacefoundation.org/knowledge-center/pages/afterschool-programs-a-review-of-evidence-under-the-every-student-succeeds-act.aspx>

[3] <https://oese.ed.gov/files/2022/11/21st-CCLC-Overview-of-the-Annual-Performance-Data-2020-2021.pdf>

[4] https://nces.ed.gov/ccd/tables/202021_summary_3.asp

National Organizations

Afterschool Alliance
After-School All-Stars
Afterschool STEM Hub
AISES (American Indian Science and Engineering Society)
American Psychological Association Services
Association of School Business Officials International (ASBO)
Bertoletti Consulting
Boys & Girls Clubs of America
City Year Inc.
Coalition for Community Schools
Committee for Children
Council for a Strong America
Council of Administrators of Special Education
EDGE Consulting Partners
Every Hour Counts
Fight Crime: Invest in Kids
First Focus Campaign for Children
Food Research & Action Center (FRAC)
Forum for Youth Investment
Girlstart
Healthy Teen Network
Horizons National
Institute for Educational Leadership
Knowledge to Power Catalysts
MENTOR
National Alliance for Public Charter Schools
National Association of Elementary School Principals
National Association of School Psychologists
National Center for Families Learning
National Child Care Association
National Girls Collaborative Project
National Summer Learning Association
National Women's Law Center
National Youth Justice Network
Outward Bound USA
Partners for Rural Impact
Save the Children
Search Institute
STEM Next Opportunity Fund
STRATEGIES FOR YOUTH

Student Association for STEM Advocacy
The Gault Center
The Learning Agenda
TNTP
YMCA of the USA

State and Local Organizations

Alaska Afterschool Network	AK
Alaska Children's Trust	AK
Boys & Girls Clubs of the Kenai Peninsula	AK
Alabama Expanded Learning Alliance	AL
Alabama Alliance of Boys & Girls Clubs, Inc	AL
Boys & Girls Club of Southeast Alabama	AL
Boys & Girls Club of Southwest Alabama	AL
Arkansas Alliance of Boys & Girls Clubs	AR
Boys & Girls Club of Benton County	AR
Boys and Girls Club of South Logan County	AR
Boys and Girls Club of Jefferson County	AR
Boys & Girls Club of El Dorado	AR
Boys & Girls Club of Central Arkansas	AR
Boys and Girls Clubs of the Arkansas River Valley	AR
Boys & Girls Club of McGehee	AR
The Salvation Army Boys & Girls Club of Texarkana	AR
Small Wonders Foundation Inc	AR
Four States Urban Development Project	AR
EduCare Foundation	CA
California Alliance of Boys & Girls Clubs	CA
Edventure More (EDMO)	CA
California AfterSchool Network	CA
California Academy of Sciences	CA
A World Fit For Kids!	CA
Boys & Girls Clubs of Carson	CA
Boys & Girls Clubs of Metro Denver	CO
Riverside Education Centers	CO
Connecticut Network for Children and Youth	CT
EdAdvance	CT
DC STRINGS WORKSHOP	DC
Shaw Community Center	DC
BEST Kids	DC
Fair Chance	DC
DC Action	DC

Jubilee Housing	DC
SHAW COMMUNITY CENTER	DC
The T.R.I.G.G.E.R. Project	DC
The Fishing School	DC
Global Kids, Inc.	DC
Children's Art Studio	DC
Common Good City Farm	DC
One World Education	DC
Young Women's Project	DC
Boys & Girls Clubs of Delaware	DE
Georgia Alliance of YMCAs	GA
Georgia Statewide Afterschool Network	GA
Voices for Georgia's Children	GA
Boys & Girls Clubs of Lanier	GA
Everybody Wins! Iowa	IA
Illinois State Alliance of YMCAs	IL
Afterschool for Children and Teens Now	IL
Brighton Park Neighborhood Council	IL
Metropolitan Family Services	IL
Boys & Girls Clubs of Dundee Township	IL
YMCA of Metropolitan Chicago	IL
Union League Boys and Girls Clubs	IL
Boys & Girls Clubs of Chicago	IL
Indiana Alliance of YMCAs	IN
Indiana Alliance of Boys & Girls Clubs	IN
Boys & Girls Clubs in Indiana	IN
Boys & Girls Clubs of Elkhart County	IN
Kansas Alliance of Boys & Girls Clubs	KS
Boys & Girls Club of Lawrence	KS
Boys & Girls Club of Manhattan	KS
Kentucky Out-of-School Alliance	KY
Kentucky Alliance of Boys & Girls Clubs	KY
KY/WV YMCA State Alliance	KY
Boys & Girls Club of Glasgow-Barren County	KY
Oscar Cross Boys & Girls Club	KY
Boys & Girls Clubs of the Bowling Green Area	KY
Young Audiences of Louisiana	LA
Massachusetts Alliance of Boys & Girls Clubs	MA
SciTech2U Inc	MD
STUDENT GLOBAL AMBASSADOR PROGRAM	MD
Chesapeake Bay Outward Bound School	MD

ACRES a project of Maine Mathematics and Science Alliance	ME
Kieve Wavus Education, Inc.	ME
Main Street Skowhegan	ME
Michigan Afterschool Partnership	MI
YMCA of Saginaw	MI
TrueNorth Community Services	MI
Boys and Girls Clubs of Minnesota	MN
Missouri AfterSchool Network	MO
Missouri Alliance of Boys & Girls Clubs, Inc.	MO
Boys & Girls Club of the Ozarks	MO
Boys & Girls Clubs of Greater St. Louis	MO
Boys and Girls Club of West Central MO	MO
Boys & Girls Club of Southwest Missouri	MO
Boys & Girls Clubs of the Columbia Area	MO
Boys & Girls Club of Poplar Bluff	MO
Boys & Girls Clubs of Springfield	MO
Boys & Girls Club of Jefferson City	MO
ourBRIDGE	NC
Boys & Girls Club of Haliwa-Saponi Tribe in Indian Country	NC
Boys & Girls Clubs of Northwest New Jersey	NJ
Boys & Girls Clubs of Cumberland County	NJ
Boys & Girls Club of Garfield	NJ
Boys & Girls Clubs of Lower Bergen County	NJ
Boys & Girls Club of Newark	NJ
Boys & Girls Clubs of Gloucester County	NJ
Boys & Girls Club of Paterson and Passaic	NJ
FOCUS Hispanic Center for Community Development, Inc.	NJ
Northwest New Mexico Arts Council	NM
REFORMA de Nuevo Mexico	NM
Nevada Alliance of Boys & Girls Clubs	NV
Church Women United in New York State	NY
Rural Schools Association of New York	NY
ExpandedED Schools	NY
Jewish Institute of Queens	NY
YMCA of Greater New York	NY
Trail Blazers	NY
Ohio Afterschool Network	OH
Ohio Alliance of Boys & Girls Clubs	OH
The Community Building Institute Middletown	OH
McWatters Consulting	OH
Oregon Alliance of YMCAs	OR

Springfield Public Schools 19	OR
Nutritional Development Services	PA
YMCA of Greater Erie	PA
Philadelphia Outward Bound School	PA
MENTOR Independence Region	PA
Alliance for Refugee Youth Support and Education, Inc.	PA
South Carolina Alliance of YMCAs	SC
Greater Kingsport Family YMCA	TN
Big Thought	TX
Texas Alliance of Boys & Girls Clubs	TX
Boys & Girls Clubs of Victoria	TX
Boys & Girls Club of Brazoria County	TX
Dallas Afterschool	TX
Boys and Girls of Sherman	TX
Boys & Girls Clubs of Greater Houston	TX
Boys & Girls Club of Washington County	TX
Boys and Girls Club of Zapata County	TX
Boys & Girls Club of Greater Dallas	TX
Boys & Girls Clubs of the Coastal Bend	TX
Boys & Girls Club of Trinity	TX
Boys & Girls Club of Beeville	TX
Boys and Girls Clubs of Harlingen, Texas	TX
Boys & Girls Club of Walker County Texas Inc.	TX
Boys & Girls Clubs of El Paso	TX
Boys & Girls Clubs of the Permian Basin	TX
Boys & Girls Club of Alice	TX
BGC of Bandera and Uvalde	TX
Boys & Girls Clubs of South Central Texas	TX
Boys & Girls Clubs of Deep East Texas	TX
Boys & Girls Club of El Campo	TX
Boys & Girls Clubs of Greater Tarrant County	TX
Boys & Girls Club of Northeast Texas	TX
Sheppard AFB Madrigal Youth Center	TX
USAG Fort Bliss-Youth Plex-Replica YC	TX
Boys & Girls Clubs of Edinburg	TX
Boys & Girls Club of Pharr - San Juan	TX
Utah Afterschool Network	UT
Boys & Girls Clubs of Greater Salt Lake	UT
Youth Impact Inc	UT
YMCA of Northern Utah	UT
Virginia Partnership for Out-of-School Time (VPOST)	VA
Virginia Alliance of YMCAs	VA

Vermont Afterschool	VT
Schools Out Washington	WA
SOP Projects (Seeds of Peace)	WA
Washington State Boys & Girls Clubs Association	WA
Boys and Girls Clubs of Bellevue	WA
Boys & Girls Club of the Columbia Basin	WA
Boys & Girls Clubs of Thurston County	WA
Boys & Girls Clubs of Skagit County	WA
Boys & Girls Clubs of the Olympic Peninsula	WA
Boys & Girls Clubs of Southwest Washington	WA
Boys & Girls Clubs of Whatcom County	WA
Boys & Girls Clubs of South Puget Sound	WA
Upper Midwest Alliance of YMCAs	WI
Wisconsin Alliance of Boys & Girls Clubs	WI
School District of Arcadia - CLC Program	WI
Madison Out of School Time	WI
YMCA of the Fox Cities	WI
Boys & Girls Club of Fond du Lac	WI
Boys & Girls Club of Greater Chippewa Valley	WI
Boys & Girls Clubs of the Bay & Lakes Region	WI
Appleton Area School District	WI
YMCA of the Fox Cities	WI
Boys & Girls Club of the Tri-County Area	WI
Boys & Girls Clubs of the Fox Valley	WI
Boys & Girls Clubs of Barron County	WI
Think Kids	WV
Playmates Preschools & Child Development Centers, Inc.	WV
Wyoming Afterschool Alliance	WY

The Elementary and Secondary Education Act (ESEA), as Amended by the Every Student Succeeds Act (ESSA): A Primer

Updated February 12, 2024

Congressional Research Service

<https://crsreports.congress.gov>

R45977



R45977

February 12, 2024

Rebecca R. Skinner
Specialist in Education
Policy

The Elementary and Secondary Education Act (ESEA), as Amended by the Every Student Succeeds Act (ESSA): A Primer

The primary source of federal aid for elementary and secondary education is the Elementary and Secondary Education Act (ESEA)—particularly its Title I-A program, which authorizes federal aid for the education of disadvantaged students. The ESEA was initially enacted in 1965 (P.L. 89-10), and was most recently comprehensively amended and reauthorized by the Every Student Succeeds Act (ESSA; P.L. 114-95).

Under Title I-A, the ESEA as amended by the ESSA continues to require states and public school systems to focus on educational accountability as a condition for the receipt of grant funds. Public school systems and individual public schools are held accountable for monitoring and improving achievement outcomes for students and closing achievement gaps, sustaining a focus that was initiated by amendments to the ESEA made by the No Child Left Behind Act of 2001 (NCLB; P.L. 107-110), but modified under the ESSA. While states were given more latitude to develop their accountability systems under the ESSA provisions, as a condition of receiving Title I-A funds each state must continue to have content and academic achievement standards and aligned assessments in reading/language arts (RLA), mathematics, and science for specific grade levels. States must now have an accountability system that incorporates (1) long-term and interim performance goals for specified measures; (2) weighted indicators based, in part, on these goals; and (3) an annual system for meaningful differentiation that is used to identify schools that need additional support to improve student achievement.

Beyond Title I-A, other ESEA programs provide grants and contracts for a variety of educational purposes. ESEA programs and general provisions are included in eight titles, which collectively received appropriations of \$29.0 billion in FY2023. The ESEA's titles are as follows:

- Title I: Programs for disadvantaged students, student assessment, migratory students, and neglected and delinquent students.
- Title II: Programs for teachers, principals, and school leaders; literacy; and American history and civics education.
- Title III: Programs to support English language acquisition for English learners.
- Title IV: Programs to support a well-rounded education, safe and healthy students, and technology; after-school instruction and care; charter schools; magnet schools; family engagement in education; and various national activities.
- Title V: Programs to support rural education.
- Title VI: Programs for Indian education, Native Hawaiian education, and Alaska Native education.
- Title VII: Impact Aid programs.
- Title VIII: General provisions.

This report provides an overview of major provisions of the ESEA. It also includes a table showing annual appropriations for ESEA programs for FY2017 through FY2023, as well as a table showing the transition in authorized programs and related appropriations from FY2016, when NCLB provisions were still in effect, to FY2017, when ESSA provisions took effect. Finally, a table detailing authorizations of appropriations under current law is also included. The ESSA authorized appropriations for ESEA programs through FY2020.

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Introduction

The primary source of federal aid to elementary and secondary education is the Elementary and Secondary Education Act of 1965 (ESEA)—particularly its Title I-A program, which authorizes federal aid for the education of disadvantaged students. The ESEA was initially enacted in 1965 (P.L. 89-10) “to strengthen and improve educational quality and educational opportunities in the Nation’s elementary and secondary schools.” The ESEA has been comprehensively amended and reauthorized several times since its initial enactment.¹ It was most recently comprehensively amended and reauthorized by the Every Student Succeeds Act (ESSA; P.L. 114-95) in 2015, which was enacted “to ensure that every child achieves.” The ESSA authorized appropriations for ESEA programs through FY2020.² FY2023 appropriations for ESEA programs are \$29.0 billion.

Under Title I-A, the ESEA as amended by the ESSA continues to require states and public school systems to focus on educational accountability as a condition for the receipt of grant funds. Public school systems and individual public schools are held accountable for monitoring and improving achievement outcomes for students and closing achievement gaps, sustaining a focus that was initiated by amendments to the ESEA made by the No Child Left Behind Act of 2001 (NCLB; P.L. 107-110), but modified under the ESSA. While states were given more latitude to develop their educational accountability systems under the ESSA provisions, as a condition for receiving Title I-A funds each state must continue to have content and academic achievement standards and aligned assessments in reading/language arts (RLA), mathematics, and science for specific grade levels. States must now have an accountability system that incorporates (1) long-term and interim performance goals for specified measures; (2) weighted indicators based, in part, on these goals; and (3) an annual system for meaningful differentiation that is used to identify schools that need additional support to improve student achievement.

Beyond Title I-A, other authorized ESEA programs provide, for example, grants to support: the education of migratory students; recruitment and professional development of teachers; language instruction for English learners (ELs); well-rounded education, safe and healthy students, and technology initiatives; after-school instruction and care programs; expansion of charter schools and other forms of public school choice; education services for Native American, Native Hawaiian, and Alaska Native students; Impact Aid to compensate local educational agencies (LEAs) for taxes forgone due to certain federal activities; and innovative educational approaches or instruction to meet particular student needs.

In order to receive funds under Title I-A and several other formula grant programs authorized by the ESEA, each state educational agency (SEA) must submit a state plan to the U.S. Department of Education (ED). These plans can be submitted for individual formula grant programs or, if permitted by the Secretary of Education (hereinafter referred to as the Secretary), the SEA may

¹ For more information, see CRS Report R43761, *House and Senate Floor and Committee Action to Reauthorize the Elementary and Secondary Education Act: 1966 to Present*.

² Section 422 of the General Education Provisions Act (GEPA) provided for the automatic extension of the authorization of appropriations for ESEA programs administered by ED for one additional fiscal year, as Congress did not act in the regular session that ended prior to the beginning of the terminal fiscal year of such authorization (i.e., FY2020) to pass legislation that became law that either extended or repealed the authorization of appropriations for ESEA programs (20 U.S.C. §1126a). The amount authorized to be appropriated for the period of the automatic extension is required to be the same amount authorized to be appropriated for a program for the terminal fiscal year of the program. Thus, the authorization of appropriations for FY2021 for ESEA programs was identical to the authorization of appropriations for FY2020. For FY2022 and subsequent years, the authorization of appropriations for ESEA programs has expired; however, the programs may continue to receive appropriations through the appropriations process.

submit a consolidated state plan based on requirements established by the Secretary.³ Following the enactment of the ESSA, all SEAs submitted consolidated state plans.⁴ The Secretary has approved these plans for all 50 states, the District of Columbia, and Puerto Rico.

This report provides a brief overview of major provisions of the ESEA.⁵ It is organized by title and part of the act. Annual appropriations for ESEA programs are provided through the Departments of Labor, Health and Human Services, and Education, and Related Agencies (L-HHS-ED) Appropriations Act, and are shown in this report based on the most recent data available from the U.S. Department of Education, Budget Service for FY2017 through FY2023. **Table 2** provides ESEA appropriations for FY2016 and FY2017 to depict the transition from the ESEA as amended by the NCLB to the ESEA as amended by the ESSA. **Table 3** provides authorizations of appropriations included in the ESEA as amended by the ESSA. The **Appendix** provides a list of selected acronyms used in the report.

Title I: Improving the Academic Achievement of the Disadvantaged

The introductory text for ESEA Title I includes the purpose of Title I and authorizations of appropriations for FY2017 through FY2020 for each part of the title. The purpose of Title I is “to provide all children significant opportunity to receive a fair, equitable, and high-quality education, and to close educational achievement gaps.” The introductory text prior to Title I-A also requires states to reserve funds provided under Title I-A for school improvement activities and allows them to reserve Title I-A funds for direct student services. As such, while these reservations of funds appear before Title I-A in the ESEA, they are examined following the Title I-A discussion to provide greater context. The introductory text prior to Title I-A also provides authority for states to reserve funds for state administration for Title I-A, Title I-C, and Title I-D.

Administration (Section 1004)

Section 1004 permits states to reserve funds under Title I-A, Title I-C, and Title I-D for administration. Under this provision, a state may reserve 1% of the amount received under parts A, C, and D, or \$400,000 (whichever is greater) for state administration.⁶

³ ESEA, Section 8302 provides the Secretary with the authority to allow states to submit consolidated state plans. The Secretary exercised this authority with respect to the submission of ESEA state plans following the enactment of the ESSA.

⁴ On the consolidated state plan, SEAs were required to provide information related to how they would implement Title I-A, Title I-C, Title I-D, Title II-A, Title III-A, Title IV-A, Title IV-B, and Title V-B-2. In addition, they had to provide information on the Education for Homeless Children and Youth program authorized under the McKinney-Vento Homeless Assistance Act. For more information about the consolidated state plans, see <https://oese.ed.gov/offices/office-of-discretionary-grants-support-services/essa-consolidated-state-plans/>.

⁵ Other CRS reports provide much more detailed discussions and analyses of major ESEA provisions.

⁶ If the appropriations for Title I-A, Title I-C, and Title I-D are equal to or greater than \$14 million, then the reservation for state administration shall not exceed 1% of the amount the state would receive if \$14 million were allocated among the states for Title I-A, Title I-C, and Title I-D.

Part A: Grants to Local Educational Agencies⁷

Title I-A authorizes federal aid to LEAs for the education of disadvantaged children. Title I-A grants provide supplementary educational and related services to low-achieving and other students attending elementary and secondary schools with relatively high concentrations of students from low-income families, as well as eligible students who live in the areas served by these public schools but attend private schools.⁸ Title I-A is also a vehicle to which a number of requirements affecting broad aspects of public elementary and secondary education for all students have been attached as conditions for receiving these grants.

Calculation of Title I-A Grants

Title I-A grants are calculated by ED at the LEA level. The funds are then provided to SEAs, which are required to reserve funds for school improvement activities and may reserve funds for administration and direct student services. SEAs also adjust grant amounts for LEAs for which ED is unable to determine grant amounts, such as newly created LEAs or charter schools that are their own LEAs. In calculating Title I-A grant amounts, ED determines grant amounts under four different formulas—Basic, Concentration, Targeted, and Education Finance Incentive Grants (EFIG)—although funds allocated under all of these formulas are combined and used for the same purposes by recipient LEAs. While the allocation formulas have several distinctive elements, the primary factor used in all four is the estimated number of children aged 5-17 in families in poverty.⁹ Other factors included in one or more formulas include a state expenditure factor based on average per pupil expenditures for public elementary and secondary education, weighting schemes designed to increase aid to LEAs with the highest concentrations of poverty, and a factor to increase grants to states with high levels of expenditure equity among their LEAs. Each formula also has an LEA hold harmless provision and a state minimum grant provision.¹⁰

While there are several rules related to school selection, LEAs must generally rank their public schools by their percentages of students from low-income families, and serve them in rank order.¹¹ This must be done without regard to grade span for any eligible school attendance area¹² in which the concentration of children from low-income families exceeds 75%. An LEA also has the option of serving all high schools in rank order in which the concentration of children from low-income families is 50% or greater. Below these benchmarks, an LEA can choose to serve schools in rank order at specific grade levels (e.g., only serve elementary schools in order of their percentages of children from low-income families) or continue to serve schools at all grade levels in rank order. Once schools are selected, Title I-A funds are allocated among them on the basis of their number of students from low-income families. LEAs are not required to allocate the same

⁷ The actual title of this part is Improving Basic Programs Operated by Local Educational Agencies, but it is generally referred to as Grants to LEAs.

⁸ Although Title I-A funds are used to serve eligible private school students, funds remain under the control of public school authorities (i.e., they are not transferred to private schools).

⁹ These data are produced at the LEA level by the Small Area Income and Poverty Estimates (SAIPE) program administered by the U.S. Census Bureau. For more information on how the U.S. Census Bureau measures poverty, see <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>.

¹⁰ For more information about the Title I-A formulas, see CRS Report R47702, *ESEA Title I-A Formulas: A Primer*.

¹¹ LEAs are permitted to use data from the Small Area Income and Poverty Estimates, National School Lunch Program, Medicaid program, Temporary Assistance to Needy Families, or a combination of these data sources to determine school rankings.

¹² A *school attendance area* means the geographic area in which the children who are normally served by that school reside. An *eligible school attendance area* means a school attendance area in which the percentage of children from low-income families is at least as high as the percentage of low-income families served by the LEA as a whole.

amount of Title I-A funds per low-income child to each school. They may provide higher grants per low-income child at schools with high rates of these children than are allocated per low-income child to schools with lower rates of these children.

Types of Title I-A Programs

There are two basic types of Title I-A programs. Schoolwide programs¹³ are authorized if the percentage of low-income students served by a school is 40% or higher.¹⁴ In schoolwide programs, Title I-A funds may be used to improve the performance of all students in a school. For example, funds might be used to provide professional development services to all of a school's teachers, upgrade instructional technology, or implement new curricula. The other basic type of Title I-A school service model is the targeted assistance program (TAP).¹⁵ Under TAPs, Title I-A-funded services are generally limited to the lowest-achieving students in the school. For example, students may receive additional instruction in an after-school program, or funds may be used to hire a teacher's aide who provides additional assistance to low-achieving students in their regular classroom. In general, schools have substantial latitude in how they use Title I-A funds, provided the funds are used to improve student academic achievement.

Standards, Assessments, and Accountability Requirements (Section 1111)

As previously mentioned, each SEA must submit a state plan to ED to receive funds under Title I-A and several other state formula grant programs authorized under the ESEA. For Title I-A purposes, the plan requires the SEA to provide information or assurances related to its standards, assessments, and accountability system. Requirements related to each of these areas are discussed below.

Standards

In its state plan, each SEA receiving Title I-A funds is required to provide an assurance that it has adopted challenging academic content standards and aligned academic achievement standards (hereinafter collectively referred to as academic standards) in RLA, mathematics, and science (and any other subject selected by the state). The academic standards must include at least three levels of achievement (e.g., basic, proficient, and advanced). In addition, states are required to demonstrate that these academic standards are aligned with entrance requirements for credit-bearing coursework in the state's system of public higher education and relevant state career and technical education standards.

A state is permitted to adopt alternate academic achievement standards for students with the most significant cognitive disabilities provided, among other requirements, that the standards are aligned with the state's challenging academic content standards. The state is also required to demonstrate that it has adopted English language proficiency standards that are derived from the domains of speaking, listening, reading, and writing; address the different proficiency levels of English learners; and align the English language proficiency standards with the challenging state academic standards.

The ESEA explicitly maintains that a state is not required to submit any of the aforementioned standards to the Secretary of Education (the Secretary) for review or approval. Also, the Secretary

¹³ Schoolwide programs are authorized in Section 1114.

¹⁴ A Title I-A school in which less than 40% of the children are from low-income families may request a waiver from the SEA to operate a schoolwide program.

¹⁵ Targeted assistance programs are authorized in Section 1115.

does not have the authority “to mandate, direct, control, coerce, or exercise any direction or supervision over any of the challenging State academic standards adopted or implemented by a State.”¹⁶

Assessments

Each state plan must demonstrate that the SEA, in consultation with LEAs, has implemented assessments in RLA, mathematics, and science. The mathematics and RLA assessments must be administered in each of grades 3-8 and once during high school. The science assessment must be administered once in grades 3-5, grades 6-9, and grades 10-12. Thus, each state must administer 17 assessments each school year, but no individual student will take more than 3 of these assessments in a given school year. The assessments must be aligned with the state academic standards.

A state may implement alternate assessments aligned with state academic standards and alternate academic achievement standards for students with the most significant cognitive disabilities. However, for each subject tested no more than 1% of all students tested may take the alternate assessment. Each state plan must also demonstrate that the LEAs in the state will administer an annual assessment of English proficiency for all English learners that is aligned with the state’s English language proficiency standards.

In addition to state assessments, each state receiving Title I-A funds must also agree to participate in the National Assessment of Educational Progress (NAEP) assessments of 4th and 8th grade students in reading and math every two years.¹⁷

Accountability System

In its state plan, each SEA is required to describe its academic accountability system. The system must include state established long-term goals (and measures of interim progress) for all students and separately for each focal subgroup of students¹⁸ for academic achievement as measured by proficiency on the state RLA and mathematics assessments¹⁹ and high school graduation rates. In addition, the goals for subgroups of students who are behind on any of these measures must take into account the improvement needed to close statewide achievement gaps. Also, the system must include long-term goals (and measures of interim progress) for increases in the percentage of English learners making progress in achieving English proficiency, as defined by the state.

The state must then use a set of indicators that are based, in part, on the long-term goals it established to measure annually the performance of all students and each subgroup of students to evaluate public schools. These indicators must include the following:

1. public school student performance on the RLA and mathematics assessments as measured by student proficiency, and for high schools this may also include a measure of student growth on such assessments;

¹⁶ Section 1111(b)(1)(G)(ii).

¹⁷ There are also 12th grade NAEP assessments for reading and mathematics. However, a state does not have to participate in these assessment as a condition of receiving Title I-A funds.

¹⁸ For accountability purposes, the ESEA requires separate accountability determinations to be made for four subgroups—economically disadvantaged students, students from major racial/ethnic groups, children with disabilities, and English learners—provided the number of students in each subgroup meets the state’s minimum group size for inclusion in accountability determinations (Section 1111(c)(2) and Section 1111(c)(4)(A)).

¹⁹ Student proficiency on science assessments is not included in a state’s accountability system for Title I-A purposes.

2. for public elementary and secondary schools that are not high schools, a measure of student growth or another indicator that allows for “meaningful differentiation” in school performance;
3. for public high schools, graduation rates;
4. for all public schools in the state, progress in achieving English language proficiency;²⁰ and
5. for all public schools in the state, at least one indicator of school quality or student success (e.g., a measure of student engagement, postsecondary readiness, or school climate).

Based on these indicators, the SEA must establish a system for annually “meaningfully differentiating” all public schools that gives substantial weight to each indicator but in the aggregate provides greater weight to the first four than to the school quality and student success indicators.²¹ The system must also identify any school in which any subgroup of students is “consistently underperforming,” as determined by the state.²²

Based on the state’s system for annual meaningful differentiation, each SEA must establish a state-determined methodology to identify for comprehensive support and improvement (CSI): (1) at least the lowest-performing 5% of all schools receiving Title I-A funds, (2) all public high schools failing to graduate 67% or more of their students, (3) schools required to implement additional targeted support (see below) that have not improved in a state-determined number of years, and (4) additional statewide categories of schools, at the state’s discretion. The LEAs in which schools are identified for CSI are required to work with stakeholders to develop a school improvement plan that, among other requirements, must include evidence-based interventions,²³ be based on a school-level needs assessment, and identify resource inequities. An LEA may also offer students enrolled in a school identified for CSI the option to transfer to another public school in the LEA. If a school does not improve within a state-determined number of years (no more than four years), the school must be subject to more rigorous state-determined actions.

States are required to identify for targeted support and improvement (TSI) any school in which one or more subgroups of students are consistently underperforming as determined by the state. Each of these schools is required to develop and implement a plan to improve student outcomes that includes evidence-based interventions. If a school fails to improve within a number of years determined by the LEA, additional actions must be taken. For a school in which one or more subgroups are performing at a level that if reflective of an entire school’s performance would result in its identification for CSI, the school must be identified for additional targeted support and improvement (ATSI) activities, which must include an identification of resource inequities. If a school identified as meeting the criteria for ATSI does not improve within a state-determined number of years, the state is required to identify the school for CSI.

²⁰ Only the English learners subgroup needs to be measured annually on this indicator (Section 1111(c)(4)(B)(iv)).

²¹ Section 1111(c)(4)(C)(i) and (ii).

²² Section 1111(c)(4)(C)(iii).

²³ Section 8101(21) includes a definition for “evidence-based.” With respect to an activity, strategy, or intervention, the definition establishes three tiers of evidence that demonstrate a statistically significant effect on improving student outcomes or other relevant outcomes: (1) strong, (2) moderate, and (3) promising. The definition also includes an activity, strategy, or intervention that demonstrates a rationale based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes.

In its state plan, the SEA must also provide an explanation of how the state will factor into its accountability system the requirement that 95% of all students and each subgroup of students participate in the required assessments.

Teacher Requirements

Any teacher or paraprofessional working in a program supported with Title I-A funds must meet applicable state certification and licensure requirements. In addition, states participating in Title I-A must describe in their state plans how low-income and minority children enrolled in Title I-A schools are not served at disproportionate rates by “ineffective, out-of-field, or inexperienced teachers.” The state must also describe the measures that will be used to assess and evaluate the state’s success in this area.

School Improvement (Section 1003)

To serve schools that are identified for comprehensive support and improvement or targeted support and improvement under Title I-A,²⁴ SEAs are required to reserve the greater of (1) 7% of the total amount the state receives under Title I-A or (2) the sum of the amount that the state reserved for school improvement in FY2016 and received under the School Improvement Grant (SIG) program for FY2016.²⁵ Beginning in FY2018, an SEA is only permitted to reserve the full amount of funds for school improvement if no LEA receives a smaller Title I-A grant than it did during the prior fiscal year due to the implementation of this provision.²⁶ Of the funds reserved for school improvement, states are required under ESSA provisions to provide at least 95% to LEAs through formula or competitive grants to serve schools that are implementing comprehensive support and improvement activities or targeted support and improvement activities.²⁷

Direct Student Services (Section 1003A)

In addition to the required reservation of Title I-A funds for school improvement, SEAs have the option of reserving up to 3% of the Title I-A funds they receive for direct student services. This optional reservation of funds was not included in the law prior to the ESSA. Of the funds reserved, states must distribute 99% to geographically diverse LEAs using a competitive grant process that prioritizes grants to LEAs that serve the highest percentages of schools identified for comprehensive support and improvement or that are implementing targeted support and improvement plans.²⁸ Funds for direct student services may be reserved without regard to how the reservation of funds may affect LEA grant amounts. Funds may be used by LEAs for a variety of

²⁴ See the subsequent discussion of Title I-A for more information about comprehensive support and improvement and targeted support and improvement.

²⁵ The SIG program was not reauthorized by the ESSA.

²⁶ For FY2017, SEAs were able to reserve the full amount for school improvement regardless of whether it resulted in reduced LEA grant amounts. This could have resulted in lower FY2017 Title I-A grant amounts to LEAs, making it easier for states to reserve the full amount for school improvement in subsequent years without violating the requirement that no LEA receive less than it did in a prior year as a result of the reservation of funds for school improvement. As of February 2024, CRS is not aware of any publicly available analysis that details whether states’ FY2017 reservation of funds for school improvement resulted in lower grants to LEAs.

²⁷ For more information about comprehensive and targeted support and improvement activities, see the subsequent discussion about Title I-A or CRS In Focus IF10556, *Elementary and Secondary Education Act: Overview of Title I-A Academic Accountability Provisions*.

²⁸ Ibid.

purposes, including to pay the costs associated with the enrollment and participation of students in academic courses not otherwise available at the students' school; credit recovery and academic acceleration courses that lead to a regular high school diploma; activities that lead to the successful completion of postsecondary level instruction and examinations that are accepted for credit at institutions of higher education (IHEs), including reimbursing low-income students for the costs of these examinations;²⁹ and public school choice if an LEA does not reserve funds for this purpose under Section 1111.

Part B: Grants for State Assessment and Enhanced Assessment Instruments

Title I-B authorizes the State Assessment Grant program to support the development of the state standards and assessments required under Title I-A; the administration of those assessments; and related activities, such as improving assessments for English learners. Two funding mechanisms are authorized: (1) formula grants to states for the development and administration of the state standards and assessments required under Title I-A, and (2) competitive grants to states to carry out related activities beyond the minimum assessment requirements. The allocation of funds depends on a statutorily established "trigger amount" of \$369.1 million.³⁰ For annual appropriations at or below the trigger amount, the entire appropriation is used to award formula grants to states. Under the formula grant program, the Secretary then provides each state with a minimum grant of \$3 million. Any remaining funds are subsequently allocated to states in proportion to their number of students ages 5 to 17. For an annual appropriation above the trigger amount, the difference between the appropriation and trigger amount is used to award competitive grants to states.

Assessment System Audit (Section 1202)

The ESEA as amended by the ESSA permits the Secretary to reserve up to 20% of the funds appropriated for the State Assessment Grant program to make grants to states to conduct assessment system audits.³¹ From the funds reserved for this purpose, the Secretary is required to make an annual grant to the state of not less than \$1.5 million to conduct a statewide assessment system audit and provide subgrants to LEAs to conduct assessment audits at the LEA level.³²

Innovative Assessment and Accountability Demonstration Authority (Section 1204)

The ESEA as amended by the ESSA includes a demonstration authority for the development and use of an "innovative assessment system." A state, or a consortium of states, may apply for the demonstration authority to develop an innovative assessment system that "may include competency-based assessments, instructionally embedded assessments, interim assessments, cumulative year-end assessments, or performance based assessments that combine into an annual summative determination for each student" and "assessments that validate when students are ready to demonstrate mastery or proficiency and allow for differentiated student support based on

²⁹ These could include, for example, Advance Placement (AP) or International Baccalaureate (IB) examinations.

³⁰ Section 1111(b)(2)(I) and Section 1203(a) and (b).

³¹ This reservation of funds is determined after the Secretary reserves 0.5% of the total appropriation for the Bureau of Indian Education and 0.5% of the total appropriation for the Outlying Areas.

³² If a state chooses not to apply for a grant, the Secretary reallocates grant funds to other states in accordance with the formula in Section 1203(a)(4)(B).

individual learning needs.”³³ During the first three years in which the Secretary grants demonstration authority, not more than seven SEAs may have their applications for the authority approved.³⁴ Separate funding is not provided under the demonstration authority; however, states may use a portion of the formula and competitive grant funding provided through the State Assessment Grant program discussed above to carry out this demonstration authority.

Part C: Education of Migratory Children

Title I-C authorizes grants to SEAs for the education of migratory children and youth. A migratory child or youth is one who made a qualifying move³⁵ in the preceding 36 months as a migratory agricultural worker or migratory fisher or moved with or to join a parent or spouse who is a migratory agricultural worker or migratory fisher. Among other purposes, the program assists states in supporting high-quality, comprehensive educational programs and services during the school year, summer, and intersession periods that address the unique needs of migratory children. Funds are allocated by formula on the basis of each state’s number of migratory children and youth aged 3-21 and Title I-A state expenditure factor (discussed above). ED may also make grants for the coordination of services and transfer of educational records for migratory students.

Part D: Prevention and Intervention Programs for Children and Youth Who Are Neglected, Delinquent, or At Risk

Title I-D authorizes a pair of programs intended to improve education for students who are neglected, delinquent, or at risk of dropping out of school. Subpart 1 authorizes grants for the education of children and youth in state institutions for the neglected or delinquent, including community day programs and adult correctional institutions. Funds are allocated to SEAs on the basis of the number of such children and youth and the Title I-A state expenditure factor. A portion of each SEA’s grant is to be used to provide transition services to children and youth transferring to regular public schools.

Under Subpart 2, Title I-A funds are provided to each SEA based on the number of children and youth residing in local correctional facilities or attending community day programs for delinquent children and youth. These Title I-A funds are used to make grants to LEAs with high numbers or percentages of children and youth in locally operated correctional facilities for children and youth. These children and youth are then served in accordance with Title I-D provisions. Funds are used, for example, to provide transition programs, dropout prevention programs, special programs to meet the unique academic needs of participating children and youth, and mentoring and peer mediation.

Part E: Flexibility for Equitable Per-Pupil Funding

ESEA Title I-E provides the Secretary with the authority to enter into demonstration agreements that provide flexibility to LEAs to deliver equitable per-pupil funding. The weighted per-pupil funding system must allocate substantially more funding to students from low-income families, English learners, and students with other characteristics associated with educational disadvantage selected by the LEA than is allocated to other students. Prior to the 2019-2020 school year, up to

³³ Section 1204(a).

³⁴ This includes any SEAs participating in consortia. Up to four SEAs are permitted to work together in a consortium.

³⁵ A qualifying move generally means a move due to economic necessity from one residence to another and from one school district to another (Section 1309(5)).

50 LEAs were permitted to apply for the flexibility to consolidate eligible federal funds³⁶ and state and local funds to create a single school funding system based on weighted per-pupil allocations (using weights or allocations to provide funding to schools). Beginning with the 2019-2020 school year, the number of LEAs permitted to participate under Title I-E is not capped provided a “substantial majority” of the LEAs participating in previous years have met program requirements.

Part F: General Provisions

Title I-F provides for the development of federal regulations for Title I programs and state administration of these programs. Part F also prohibits federal control of the “specific instructional content, academic achievement standards and assessments, curriculum or program of instruction”³⁷ of states, LEAs, or schools, and clarifies that nothing in Title I is to be “construed to mandate equalized spending per pupil for a State, local educational agency, or school.”³⁸

Title II: Preparing, Training, and Recruiting High-Quality Teachers, Principals, and Other School Leaders

Title II includes programs centered on teachers, school leaders (e.g., principals), literacy, and American history and civics education. Programs focused on teachers and school leaders support activities and initiatives such as professional development, staff recruitment and retention, performance-based compensation systems, and the establishment of a statewide science, technology, engineering, and mathematics (STEM) master teacher corps. Other Title II programs focus on literacy education, providing grants to support literacy efforts from birth through grade 12 and supporting school library programs, early literacy services, and the provision of high-quality books to children and adolescents. Title II also includes American history and civic education programs that provide academies for teachers and students to learn more about these topics and authorizes national activities related to American history and civics education. Title II’s introductory text includes the purpose of the title, several definitions, and authorizations of appropriations for FY2017 through FY2020 for the programs authorized in Title II.³⁹

Part A: Supporting Effective Instruction

Part A authorizes a program of state grants that may be used for a variety of purposes related to preparation, training, recruitment, retention, and professional development of elementary and secondary education teachers and school leaders. The formula grants are allocated to SEAs based on student population and poverty counts, as well as a base guarantee determined by the amount each state received in FY2001 under antecedent programs. The base guarantee was phased out through FY2022. SEAs may reserve a share of funds for administration and statewide services,

³⁶ Eligible federal funds include those under Title I-A, Title I-C, Title I-D-2, Title II-A, Title II-B, Title III, Title IV-A, and Title V-B.

³⁷ Section 1604.

³⁸ Section 1605.

³⁹ Section 2003.

such as teacher or principal support programs; preparation academies;⁴⁰ licensing or certification reform; improving equitable access to effective teachers; reforming or improving teacher and principal preparation programs; training teachers in the use of student data; and technical assistance to LEAs.

SEAs are required to suballocate at least 95% of grants to LEAs. Grants to LEAs are made based on student population and poverty counts. However, states are authorized to reserve up to 3% of the amount otherwise reserved for subgrants for LEAs for state-level activities focused on school leaders.⁴¹ Funds received by LEAs may be used for a variety of purposes including recruiting, hiring, and retaining effective teachers; teacher and school leader evaluation and support systems; professional development activities for teachers and principals; and class-size reduction.

Part B: National Activities

Subpart 1 authorizes the Teacher and School Leader Incentive Fund. This program provides competitive grants to LEAs, SEAs or other state agencies, the Bureau of Indian Education, or a partnership of one of these entities with one or more nonprofit or for-profit entities to develop, implement, improve, or expand performance-based teacher and principal compensation systems or human capital management systems for teachers, principals, and other school leaders in high-needs schools.

Subpart 2 authorizes Literacy Education for All, Results for the Nation to improve student academic achievement in reading and writing from early education through grade 12. Under Subpart 2, competitive Comprehensive Literacy State Development Grants (Section 2222) are provided to SEAs. SEAs subsequently provide competitive subgrants to one or more eligible LEAs for the development and implementation of a comprehensive literacy instruction plan, professional development, and other activities. SEAs may also award competitive subgrants for early literacy services to one or more eligible early childhood education programs. In addition, SEAs may use funds to develop or enhance comprehensive literacy instruction plans. SEAs must ensure that at least 15% of funds are used to serve children from birth through age 5, 40% to serve children in kindergarten to grade 5, and 40% to serve children in grades 6 through 12. Funds reserved under Section 2222 for evaluation purposes must be used to conduct a national evaluation of the grant and subgrant programs authorized under Subpart 2 (Section 2225). Under the Innovative Approaches to Literacy program (Section 2226), the Secretary may award grants, contracts, or cooperative agreements to eligible entities to promote literacy programs that support the development of literacy skills in low-income communities through school library programs, early literacy services, and programs to provide high-quality books regularly to children from low-income communities.

Subpart 3 authorizes American History and Civics Education programs. Section 2232 authorizes the Presidential and Congressional Academies for American History and Civics. Presidential Academies offer professional development opportunities for teachers of American history and civics. Congressional Academies provide a seminar or institute for outstanding students of American history and civics. Section 2233 authorizes national activities that provide competitive

⁴⁰ SEAs are permitted to use a limited amount of their funds to establish or expand teacher, principal, or other school leader preparation academies that meet certain requirements, such as ensuring that enrolled students receive a “significant part of their training through clinical preparation that partners the prospective candidate with an effective teacher, principal, or other school leader, as determined by the state”; ensuring that the academy will award a certificate of completion (or degree) to a teacher only after the teacher has demonstrated that he or she is an effective teacher, as determined by the state; and limiting admission to the academy to prospective candidates who demonstrate “strong potential to improve student achievement” (Section 2002(4)).

⁴¹ Section 2101(c)(3).

grants to promote new and existing evidence-based strategies to encourage innovative American history, civics and government, and geography instruction and learning strategies, and professional development for teachers and school leaders.

Subpart 4 authorizes several programs related to educators, school leaders, technical assistance, and evaluation. Section 2242 authorizes the Supporting Effective Educator Development (SEED) program, which provides competitive grants to support nontraditional teacher certification or preparation routes, evidence-based professional development, professional development to support dual or concurrent enrollment, and professional enhancement activities that may lead to an advanced credential. Section 2243 authorizes the School Leader Recruitment and Support program, which provides competitive grants to improve the recruitment, placement, support, and retention of principals and other school leaders in high-need schools. Section 2244 authorizes a comprehensive center focused on students at risk of not attaining full literacy skills due to a disability. Funds may also be used to provide technical assistance or evaluate state and LEA activities under Title II-B. Section 2245 authorizes the STEM⁴² Master Teacher Corps program, which provides competitive grants to support the development of a statewide STEM master teacher corps or to support the implementation, replication, or expansion of effective STEM professional development programs.

Part C: General Provisions

Part C includes a supplement, not supplant provision that applies to funds provided under Title II. It also states that nothing in Title II authorizes the Secretary or any federal employee to mandate, direct, or control specific aspects of a state's, LEA's, or school's educational program, including, for example, instructional content, curricula, academic standards, academic assessments, staff evaluation systems, specific definitions of staff effectiveness, professional standards, licensing, or certification. Title II also states that none of the provisions in the title shall be construed to affect collective bargaining or other such agreements between school or district employees and their employers.

Title III: Language Instruction for English Learners and Immigrant Students

Title III authorizes programs that are focused on improving the academic attainment of ELs, including immigrant students. Under the Title III-A state grants program, funds are used at the state level to support activities such as consultation to develop statewide standardized entrance and exit procedures. Funds are used by LEAs for activities such as effective language instructional programs, professional development, and supplemental activities. Title III also authorizes two national programs, a professional development project and a clearinghouse related to the education of ELs. The introductory text to Title III authorizes appropriations for FY2017 through FY2020.

⁴² STEM stands for science, technology, engineering, and mathematics.

Part A: English Language Acquisition, Language Enhancement, and Academic Achievement Act

The English Language Acquisition program was designed to help ensure that ELs,⁴³ including immigrant students, attain English proficiency, develop high levels of academic attainment in English, and meet the same challenging state academic standards that all students are expected to meet. The program was also designed to assist educators, SEAs, and LEAs in developing and implementing effective language instruction educational programs to assist in teaching ELs and developing and enhancing their capacity to provide effective instructional programs to prepare ELs to enter all-English settings. Title III-A also promotes parental, family, and community participation in language instruction educational programs for the parents, families, and communities of ELs.

Formula grant allocations are made to SEAs based on the proportion of EL students and immigrant students in each state relative to all states. These amounts are weighted by 80% and 20%, respectively. SEAs may reserve not more than 5% of the funds received for working with LEAs to establish standardized statewide entrance and exit procedures, providing effective teacher and principal preparation and professional development activities, and planning evaluation, administration, and interagency coordination. SEAs are required to make subgrants to eligible entities⁴⁴ based on the relative number of EL students in schools served by those entities. SEAs are also required to reserve not more than 15% of the state allocation to make grants to eligible entities that have experienced a significant increase in the percentage or number of immigrant students enrolled in schools in the geographic area served by the entity.⁴⁵

Eligible entities receiving subgrants are required to use funds for three activities.⁴⁶ First, funds must be used to increase the English language proficiency of ELs by providing effective language instructional programs that demonstrate the program is successfully increasing English language proficiency and student academic achievement. Second, funds must be used to provide effective professional development to school staff or community-based personnel. Third, funds must be used to provide and implement other “effective activities or strategies that enhance or supplement language instruction educational programs for ELs,”⁴⁷ including parent, family, and community engagement activities. Eligible entities receiving grants from the funds reserved specifically for immigrant students are required to use these funds to support activities that “provide enhanced instructional opportunities”⁴⁸ for immigrant students.

While Title III-A focuses on the education of ELs, Title I-A also contains provisions that specifically apply to this student population, as noted previously. For example, Title I-A requires that states establish English language proficiency standards⁴⁹ that are derived from the domains of speaking, listening, reading, and writing and are aligned with challenging state academic

⁴³ A definition of *English learner* is included in Section 8101(20).

⁴⁴ Eligible entities include one or more LEAs, or one or more LEAs partnering with a specified entity (e.g., IHE).

⁴⁵ The percentage of funds reserved is determined by the ESEA but may not exceed 15% of the SEA’s grant amount.

⁴⁶ There are several allowable uses of funds as well, such as providing community participation programs and acquiring or developing educational technology to improve the instruction of ELs.

⁴⁷ Section 3115(c)(3).

⁴⁸ Section 3115(e)(1).

⁴⁹ Section 1111(b)(1)(F).

standards. Under Title I-A, LEAs are required to assess English language proficiency annually using assessments aligned with the state English language proficiency standards.⁵⁰

National Programs (Sections 3131 and 3202)

A portion of Title III-A funds are reserved to support two specific national programs: (1) the National Professional Development Project (Section 3131), and (2) the National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (Section 3202). Under the National Professional Development Project, grants are awarded on a competitive basis for a period of up to five years to IHEs or public or private entities with relevant experience and capacity working in consortia with SEAs or LEAs to provide for professional development activities that will improve classroom instruction for ELs and help personnel working with these students to meet professional standards. The National Clearinghouse is responsible for collecting, analyzing, synthesizing, and disseminating information about language instruction educational programs for ELs and related programs.

Part B: General Provisions

Part B includes definitions relevant to Title III, statutory provisions authorizing the National Clearinghouse (discussed above), and the development of regulations for Title III.

Title IV: 21st Century Schools

Title IV authorizes a range of programs and activities including a block grant program, a program to support learning opportunities during non-school hours, programs to support charter schools and magnet schools, a family engagement program, an innovation and research program, programs to provide community support for student success, national activities for school safety, and programs focused on arts education, video programming for preschool and elementary school children, and gifted and talented education.

Part A: Student Support and Academic Enrichment (SSAE) Grants

Title IV-A authorizes SSAE grants to improve students' academic achievement by increasing the capacity of states, LEAs, schools, and local communities to (1) provide all students with access to a well-rounded education,⁵¹ (2) improve school conditions for student learning, and (3) improve the use of technology in order to increase the academic achievement and digital learning of all students. Formula grants are made to states based on their Title I-A funding from the prior year.⁵² States then make formula subgrants to LEAs. LEAs must use SSAE funds for three broad categories of activities: (1) supporting well-rounded educational opportunities, (2) supporting safe and healthy students, and (3) supporting the effective use of technology. If an LEA receives a grant of \$30,000 or more, it must provide assurances that it will use at least 20% for activities to support a well-rounded education, at least 20% for activities to support safe and healthy students, and at least some of its funds to support the effective use of technology. If an LEA receives a

⁵⁰ Section 1111(b)(2)(G).

⁵¹ *Well-rounded education* is defined in Section 8101(52). It means courses, activities, and programming in a variety of subjects with the "purpose of providing all students access to an enriched curriculum and educational experience."

⁵² No hold harmless provisions are applied in making this determination. For more information about the Title I-A formulas, see CRS Report R44461, *Allocation of Funds Under Title I-A of the Elementary and Secondary Education Act*.

grant of less than \$30,000, it is only required to provide an assurance regarding the use of funds for at least one of the three categories.

Part B: 21st Century Community Learning Centers

Title IV-B supports activities provided during non-school hours that offer learning opportunities for school-aged children. Formula grants are made to SEAs based on their Title I-A funding from the prior year.⁵³ States subsequently award grants to local entities (e.g., LEAs, community-based organizations) on a competitive basis for a period of three to five years. In awarding subgrants, SEAs are required to give priority to applicants proposing to target services to students who attend schools implementing CSI or TSI activities or other schools identified by the LEA in need of intervention support to improve student academic achievement and other outcomes; enroll students who may be at risk for academic failure, dropping out, or involvement with criminal or delinquent activities, or who lack “strong positive role models”; or target the families of such students. Local entities may use funds for activities that improve student academic achievement and support student success, such as academic enrichment learning programs, mentoring, tutoring, well-rounded education activities, programs to support a healthy and active lifestyle, technology education, expanded library service hours, parenting skills programs, drug and violence prevention programs, counseling programs, STEM programs, and programs that build career competencies and career readiness.

Part C: Enhancing Opportunity Through Quality Charter Schools

The Charter Schools Program (CSP) supports the startup of new charter schools and the replication and expansion of high-quality charter schools (Section 4303). It also assists charter schools in accessing credit to acquire and renovate facilities and includes a competitive grant program that provides per-pupil facilities aid (Section 4304). The CSP also provides funding for national activities to support the startup, replication, and expansion of charter schools; the dissemination of best practices; program evaluation; and stronger charter authorizing practices (Section 4305). Of the funds appropriated for Title I-C, 65% is provided for the startup, replication, and expansion of charter schools; 22.5% for national activities; and 12.5% for facilities financing.⁵⁴

Part D: Magnet Schools Assistance Program

Title IV-D provides grants to LEAs to plan and operate magnet schools—public schools of choice designed to encourage voluntary enrollment by students of different racial backgrounds. LEAs that are operating under a court-ordered desegregation plan or have voluntarily adopted a federally approved desegregation plan are eligible to receive grants to establish and operate magnet schools. In awarding grants, the Secretary is required to give priority to LEAs that demonstrate the greatest need for assistance, based on the expense or difficulty of effectively carrying out approved desegregation plans and the magnet school program; propose to implement a new or revise an existing magnet school program based on evidence-based methods and practices or replicate an existing magnet school with a demonstrated track record of success; plan to admit students by methods other than academic examinations, such as a lottery; and propose to increase racial integration by taking into account socioeconomic diversity in the design and implementation of the magnet school program.

⁵³ Ibid.

⁵⁴ The distribution of funds among the various charter school programs is detailed in Section 4302(b).

Part E: Family Engagement in Education Programs

Title IV-E provides competitive grants to statewide organizations to establish family engagement centers. These centers promote parent education and family engagement in education programs and provide comprehensive training and technical assistance to SEAs, LEAs, and schools identified by SEAs and LEAs; organizations that support family-school partnerships; and other organizations that carry out such programs.

Part F: National Activities

Title IV-F authorizes a range of programs. Each is discussed briefly below.

Subpart F-1 authorizes the Education Innovation and Research (EIR) program,⁵⁵ which provides competitive grants to eligible entities to create, develop, implement, replicate, or take-to-scale entrepreneurial, evidence-based, field-initiated innovations to improve achievement and attainment for high-need students. Three types of grants (early phase, mid-phase, and expansion grants) are awarded primarily based on the past demonstrated success of the grantee in meeting these goals.

Subpart F-2 authorizes the Promise Neighborhoods program (Section 4624) and the Full-Service Community Schools (FSCS) program (Section 4625).⁵⁶ Both programs are designed to provide pipeline services, which deliver a “continuum of coordinated supports, services, and opportunities,” to children in distressed communities. More specifically, the Promise Neighborhoods program provides a comprehensive, effective continuum of coordinated services in neighborhoods with high concentrations of low-income individuals, multiple signs of distress (e.g., high rates of poverty, academic failure, and juvenile delinquency), and schools implementing comprehensive or targeted support and improvement activities under Title I-A. The FSCS program provides grants to public elementary and secondary schools to participate in a community-based effort to coordinate and integrate educational, developmental, family, health, and other comprehensive services through community-based organizations and public and private partnerships. Access to such services is provided in schools to students, families, and the community.

Subpart F-3 authorizes National Activities for School Safety. A portion of funds appropriated for these activities must be used for the Project School Emergency Response to Violence (Project SERV). Project SERV provides grants to LEAs, IHEs, and the Bureau of Indian Education (BIE) for BIE schools where the learning environment has been disrupted due to a violent or traumatic crisis.⁵⁷ Funds for National Activities for School Safety that are not used for Project SERV may be used for other activities to improve student well-being during or after the school day.

Subpart F-4 authorizes three programs focused on academic enrichment. Section 4642 authorizes competitive grants for arts education under the Assistance for Arts Education Program. Section

⁵⁵ This program is similar to the Investing in Innovation (i3) program authorized by the American Recovery and Reinvestment Act (ARRA; P.L. 111-5).

⁵⁶ These programs were authorized by the ESEA prior to the enactment of the ESSA using authority previously available in Title V-D-1 to create programs of national significance. Congress used the Title V-D-1 authority to create the programs through the appropriations process. Neither program had statutory language included in the ESEA prior to the enactment of the ESSA. The authority previously included in Title V-D-1 that was used to create the programs was not retained by the ESSA.

⁵⁷ Based on recent grants made under Project SERV, eligible entities that have been affected by natural disaster may also be able to receive a grant. For more information, see U.S. Department of Education, *Project School Emergency Response to Violence (SERV): Eligibility*, <https://www2.ed.gov/programs/dvppserv/eligibility.html>.

4643 authorizes grants to support educational and instructional video programming, accompanying support materials, and digital content to promote school readiness for preschool and elementary school children and their families through the Ready to Learn Programming program. Section 4644 authorizes the Javits Gifted and Talented Students Education Program, which provides grants to enhance the ability of elementary and secondary schools to identify gifted and talented students, including low-income and at-risk students, and meet their special educational needs. The section also supports the National Research Center for the Education of Gifted and Talented Children and Youth.

Title V: Flexibility and Accountability

Title V includes both funding transferability authority and programs to support rural education. Funding transferability authority allows states and LEAs to transfer federal funds from certain ESEA programs to other ESEA programs to enable them to address their particular needs. The Rural Education Assistance Program (REAP) provides additional resources to rural LEAs that might lack the resources to compete effectively for federal grants or might receive formula grant allocations that are too small to meet their intended purposes. The two rural education programs included in Title V provide LEAs with substantial flexibility in how they use their grant funds.

Part A: Funding Transferability for State and Local Educational Agencies

Funding transferability for states and LEAs is included under Title V-A to provide states and LEAs with the “flexibility to target Federal funds to the programs and activities that most effectively address”⁵⁸ their “unique needs.”⁵⁹ In general, states are able to transfer funds from three formula grants programs that focus on teachers and school leaders, provide block grants, and provide after-school programming to formula grant programs focused on special populations (i.e., disadvantaged students, migratory students, neglected and delinquent students, and ELs). More specifically, states are permitted to transfer up to 100% of the funds allotted to them for state-level activities under Title II-A, Title IV-A, or Title IV-B to Title I-A, Title I-C, Title I-D, Title III-A, and Title V-B.⁶⁰ Similarly, LEAs are also permitted to transfer funds from formula grant programs that focus on teachers and school leaders or provide block grants to formula grant programs focused on special populations. More specifically, LEAs are permitted to transfer 100% of the funds received under Title II-A or Title IV-A to Title I-A, Title I-C, Title I-D, Title III-A, and Title V-B.⁶¹ SEAs and LEAs are prohibited from transferring funds received under any other ESEA program.⁶²

⁵⁸ Section 5102.

⁵⁹ Ibid.

⁶⁰ Statutory provisions include language allowing funds to be transferred to “Part B,” but the provision does not specify the applicable title. In applicable guidance, ED has indicated that this is a reference to Title V-B. For more information, see U.S. Department of Education, *Non-regulatory Guidance: Fiscal Changes and Equitable Services Requirements Under the Elementary and Secondary Education Act of 1965 (ESEA), as Amended by the Every Student Succeeds Act (ESSA)*, November 21, 2016, pp. 39-41, <https://www2.ed.gov/policy/elsec/leg/essa/essaguidance160477.pdf> (hereinafter referred to as ED, Fiscal Changes Guidance).

⁶¹ Statutory provisions include language allowing funds to be transferred to “Part B,” but the provision does not specify the applicable title. In applicable guidance, ED has indicated that this is a reference to Title V-B. For more information, see ED, Fiscal Changes Guidance.

⁶² For more information, see ED, Fiscal Changes Guidance.

Part B: Rural Education Initiative

Title V-B authorizes the Rural Education Achievement Program (REAP), which is designed to assist rural LEAs that may lack the resources to compete effectively for competitive grants and that may receive grants under other ESEA programs that are too small to be effective in meeting their specified purposes.

Subpart 1 authorizes the Small, Rural School Achievement (SRSA) program, which (1) provides eligible rural LEAs with the flexibility to use funds received under Title II-A and Title IV-A to carry out local activities authorized under certain ESEA programs,⁶³ and (2) authorizes a formula grant program for rural LEAs under which funds received may be used under several other ESEA programs.⁶⁴ Eligibility for both the flexibility authority and the grant program is based on criteria such as average daily attendance or population density and locale codes.⁶⁵

Subpart 2 authorizes the Rural and Low-Income School (RLIS) program, which provides formula grants to states. SEAs then make subgrants to eligible LEAs by formula or competition as determined by the SEA. LEA eligibility criteria include a school-age child poverty rate of 20% or more and meeting certain locale requirements. Similar to the SRSA grants, RLIS grants may be used under several other ESEA programs⁶⁶ or for parent involvement activities. LEAs cannot receive both an SRSA grant and a RLIS grant. An LEA that is eligible for grants under both the SRSA and RLIS programs must select the grant program under which it will receive funds.

Part C: General Provisions

Part C contains several prohibitions against federal control of educational curricula, academic standards and assessments, or programs of instruction as a condition of receipt of funds under Title V. It also states that nothing in Title V shall be construed to mandate equalized spending per pupil for a state, LEA, or school.

Title VI: Indian, Native Hawaiian, and Alaska Native Education

Title VI provides funds specifically for the education of Indian, Native Hawaiian, and Alaska Native children.⁶⁷ With respect to Indian education, the ESEA authorizes formula grants to LEAs, Indian tribes and organizations, BIE schools, and other entities to support elementary and secondary school programs that meet the unique cultural, language, and educational needs of Indian children. Funds are also provided for competitive grants to examine the effectiveness of services for Indian children and to provide support and training for Indian individuals to work in various capacities in the education system. Title VI also authorizes competitive grants to organizations with experience in operating Native Hawaiian programs to provide services to improve Native Hawaiian education. A Native Hawaiian Education Council is also authorized under Title VI. In addition, Title VI authorizes competitive grants for activities and services

⁶³ These programs include Title I-A, Title II-A, Title III, Title IV-A, and Title IV-B.

⁶⁴ These programs include Title I-A, Title II-A, Title III, Title IV-A, and Title IV-B.

⁶⁵ Locale codes are used to define an area's urbanicity. The locale codes used for the purposes of the Title V-B programs were established by the National Center for Education Statistics at ED. For more information about the locale codes, see <https://nces.ed.gov/surveys/ruraled/definitions.asp>.

⁶⁶ These programs include Title I-A, Title II-A, Title III, and Title IV-A.

⁶⁷ These programs were previously authorized under Title VII of the ESEA.

intended to improve education for Alaska Natives, such as the development of curricular materials and professional development.

Part A: Indian Education

Subpart 1 authorizes formula grants to eligible LEAs, Indian tribes and organizations, BIE schools, and other entities to support the development of elementary and secondary school programs for Indian students that are designed to meet the unique cultural, language, and educational needs of such students and ensure that all students meet their state's challenging academic standards. Grant allocations are determined based on the number of eligible Indian children served by the eligible entity and state average per pupil expenditures.

Subpart 2, Special Programs and Projects to Improve Educational Opportunities for Indian Children, authorizes two competitive grant programs: (1) Improvement of Educational Opportunities for Indian Children and Youth (Section 6121) and (2) Professional Development for Teachers and Education Professionals (Section 6122). The former supports projects to develop, examine, and demonstrate the effectiveness of services and programs to improve educational opportunities and achievement of Indian children and youth. The latter focuses on efforts such as providing support and training to qualified Indian individuals to become effective teachers, school leaders, and administrators.

Subpart 3, National Activities, authorizes funds for a variety of purposes including research, evaluation, and data collection and analysis. It also authorizes Grants to Tribes for Education Administrative Planning, Development, and Coordination (Section 6132), as well as for Native American and Alaska Native Language Immersion Schools and Programs (Section 6133).

Subpart 4 establishes the National Advisory Council on Indian Education (NACIE; Section 6141) and authorizes a preference for Indian entities under programs authorized by Subparts 2 and 3.

Part B: Native Hawaiian Education

Part B authorizes competitive grants to Native Hawaiian educational or community-based organizations, charter schools, or other public or private nonprofit organizations with experience in operating Native Hawaiian programs, or consortia of these entities, to provide a wide variety of services intended to improve education for Native Hawaiians. In the awarding of grants, priority is to be given to activities that are intended to improve reading skills for Native Hawaiian students in grades K-3, meet the needs of at-risk children and youth, increase participation by Native Hawaiians in fields or disciplines in which they are underemployed, or increase the use of the Hawaiian language in instruction. Specifically authorized activities include early childhood education and care, services for Native Hawaiian students with disabilities, and professional development for educators. Title VI-B also establishes a Native Hawaiian Education Council, which provides coordination activities, technical assistance, and community consultations related to the educational needs of Native Hawaiians.

Part C: Alaska Native Education

Part C authorizes competitive grants for a variety of activities and services intended to improve education for Alaska Natives. Eligible grantees include Alaska Native organizations with relevant experience, Alaska Native organizations that lack relevant experience and partner with an SEA, LEA, or Alaska Native organization operating relevant programs; or an entity located in Alaska that is predominantly governed by Alaska Natives and meets other specified criteria. Authorized uses of funds include, for example, the development of curriculum materials that address the

special needs of Alaska Native students, training and professional development, early childhood and parenting activities, and career preparation activities.

Title VII: Impact Aid

Title VII compensates LEAs for the “substantial and continuing financial burden” resulting from federal activities.⁶⁸ These activities include federal ownership of certain lands, as well as the enrollments in LEAs of children of parents who work and/or live on federal land (e.g., children of parents in the military and children living on Indian lands). The federal government provides compensation via Impact Aid for lost tax revenue because these activities deprive LEAs of the ability to collect property or other taxes from these individuals (e.g., members of the Armed Forces living on military bases) even though the LEAs are obligated to provide free public education to their children.

Title VII authorizes several types of Impact Aid payments. These include payments under Section 7002, Section 7003, Section 7007, and Section 7008, which are discussed briefly below.⁶⁹

Payments Relating to Federal Acquisition of Real Property (Section 7002). Section 7002 compensates LEAs for the federal ownership of certain property. To qualify for compensation, the federal government must have acquired the property, in general, after 1938 and the assessed value of the land at the time it was acquired must have represented at least 10% of the assessed value of all real property within an LEA’s area of service.

Payments for Eligible Federally Connected Children (Basic Support Payments, Section 7003). Section 7003 compensates LEAs for enrolling “federally connected” children. These are children who reside with a parent who is a member of the uniformed services living on or off federal property, reside with a parent who is an accredited foreign military officer living on or off federal property, reside on Indian lands, reside in low-rent public housing, or reside with a parent who is a civilian working and/or living on federal land.

Two payments are made under Section 7003. Section 7003(b) authorizes “basic support payments” for federally connected children. Basic support payments are allocated directly to LEAs by ED based on a formula that uses weights assigned to different categories of federally connected children and cost factors to determine maximum payment amounts. Section 7003(d) authorizes additional payments to LEAs based on the number of certain children with disabilities who are eligible to receive services under the Individuals with Disabilities Education Act (IDEA).⁷⁰ Payments are limited to IDEA-eligible children whose parents are members of the uniformed services (residing on or off federal property) and those residing on Indian lands.

Construction (Section 7007). Section 7007 provides funds for construction and facilities upgrading to certain LEAs with high percentages of children living on Indian lands or children of military parents. These funds are used to make formula and competitive grants.

Facilities Maintenance (Section 7008). Section 7008 provides funds for emergency repairs and comprehensive capital improvements at schools that ED currently owns but LEAs use to serve federally connected military dependent children.

⁶⁸ Impact Aid was previously authorized under ESEA, Title VIII.

⁶⁹ Other significant Impact Aid provisions include Section 7004, which details policies regarding children residing on Indian lands, and Section 7009, which prohibits states from considering Impact Aid payments in determining state aid to LEAs unless the state has an approved program to equalize expenditures among LEAs.

⁷⁰ For more information about IDEA, see CRS Report R41833, *The Individuals with Disabilities Education Act (IDEA), Part B: Key Statutory and Regulatory Provisions*.

Title VIII: General Provisions

Part A: Definitions

Part A (Section 8101) provides definitions of a variety of terms used frequently throughout the ESEA, such as *local educational agency*, *state educational agency*, *evidence-based*, *four-year adjusted cohort graduation rate*, *professional development*, *state*, and *well-rounded education*.

Part B: Flexibility in the Use of Administrative and Other Funds

Part B authorizes SEAs and LEAs to consolidate and jointly use funds available for administration under multiple ESEA programs. In order to qualify for this flexibility, SEAs must demonstrate that a majority of their resources are provided from nonfederal sources. LEAs need SEA approval to consolidate their funds. Part B also authorizes the consolidation of funds set aside for the Department of the Interior under various ESEA programs and the McKinney-Vento Homeless Education program.⁷¹

Part C: Coordination of Programs, Consolidated State and Local Plans and Applications

Part C authorizes SEAs and LEAs to prepare single, consolidated plans and reports for all “covered” ESEA programs. In general, the covered programs⁷² are the ESEA formula grant programs administered via SEAs.

Part D: Waivers

Under this provision, the Secretary is authorized to waive most statutory and regulatory requirements associated with any program authorized by the ESEA,⁷³ if specifically requested by an SEA or Indian tribe. LEAs may submit waiver requests through their SEA. The SEA may then submit the request to the Secretary if it approves the waiver. Schools must submit their waiver requests to their LEAs, which in turn submit those requests to the SEA.

Part E: Approval and Disapproval of State Plans and Local Applications

Part E includes provisions related to secretarial approval of state ESEA plans and SEA approval of LEA plans. In both cases, the Secretary and the SEA, respectively, have 120 days from the day the plan was submitted to make a written determination that the submitted plan does not comply with relevant requirements. If such a determination is made, among other actions, the state or LEA must be notified immediately of the determination, provided with a detailed description of the specific plan provisions that failed to meet the requirements, offered an opportunity to revise and resubmit the plan within 45 days of the determination being made, provided technical

⁷¹ For more information about the McKinney-Vento Homeless Education program, see CRS Report RL30442, *Homelessness: Targeted Federal Programs*.

⁷² These include Title I-A, Title I-C, Title I-D, Title II-A, Title III-A, Title IV-A, Title IV-B, and Title V-B-2.

⁷³ The Secretary is prohibited from waiving certain statutory or regulatory requirements. For example, the Secretary may not waive requirements related to the allocation or distribution of ESEA funds or requirements related to parental participation and involvement.

assistance upon request (from the Secretary or SEA, respectively), and provided with a hearing within 30 days of the plan's resubmission.

Part F: Uniform Provisions

Subpart 1 contains provisions for the participation of private school students and staff in those ESEA programs where such participation is authorized.⁷⁴ Under the relevant ESEA programs, services provided to private school students or staff are to be equitable in relation to the number of such students or staff eligible for each program; secular, neutral, and non-ideological, with no funds to be used for religious worship or instruction; and developed through consultation between public and private school officials. Provision is made for bypassing SEAs and LEAs that cannot or have not provided equitable services to private school students or staff, and serving private school students and staff in these areas through neutral, third-party organizations. Provision is also made for the submission of complaints regarding implementation of these requirements. Subpart 1 also prohibits federal control of private or homeschools, or the application of any ESEA requirement to any private school that does not receive funds or services under any ESEA program. It also states that no ESEA provisions apply to homeschools.⁷⁵

Subpart 2 contains a wide range of provisions, including the following:

- a general definition of “maintenance of effort,” as applied in several ESEA programs (Section 8521);
- a requirement that ED publish guidance on prayer in public schools, and a requirement that LEAs receiving ESEA funds certify to their SEAs that they do not limit the exercise of “constitutionally protected prayer”⁷⁶ in public schools (Section 8524);
- a requirement that recipient SEAs, LEAs, and public schools have a “designated open forum”⁷⁷ to provide equal access to the Boy Scouts (Section 8525);
- a prohibition on the use of ESEA funds to “promote or encourage sexual activity (Section 8526)”;
- a prohibition on federal control of educational curricula, content or achievement standards, building standards, or allocation of resources (Section 8526A and Section 8527);
- a requirement that LEAs receiving funds under any ESEA program provide to the armed services access to directory information on secondary school students, unless students or their parents request that such information not be released⁷⁸ (Section 8528);

⁷⁴ The Section 8501 private school student and staff participation requirements apply to Title I-C, Title II-D, Title III-A, Title IV-A, Title IV-B, and Section 4631 with respect to Project SERV. Title I-A has separate, detailed private school student and staff participation provisions. The Supporting High-Ability Learners and Learning program (Section 4644) also has separate private school student and teacher participation provisions.

⁷⁵ This provision applies to all homeschools, regardless of whether a homeschool is considered a private school under state law.

⁷⁶ Section 8524(a).

⁷⁷ Section 8525(b)(1).

⁷⁸ This provision does not apply to certain religiously affiliated private schools (Section 8527(c)).

- a prohibition on federally sponsored testing of students or teachers, with some exceptions (Section 8529);⁷⁹
- an “Unsafe School Choice Option” under which students in states receiving ESEA funds who attend a “persistently dangerous” public school,⁸⁰ or who are victims of violent crime at school, are to be offered the opportunity to transfer to a “safe” public school (Section 8532);
- a requirement related to the transfer of school disciplinary records (Section 8537);
- a requirement related to consultation between LEAs and Indian tribes and tribal organizations (Section 8538);
- a requirement that ED provide outreach and technical assistance to rural LEAs (Section 8539); and
- a prohibition related to the aiding and abetting of sex abuse (Section 8546).

Subpart 3 includes teacher liability protection that applies to states that receive ESEA funds. This subpart provides limitations on liability for teachers in school for harm caused by an act or omission of the teacher on behalf of the school if certain conditions (e.g., the teacher was acting within the scope of his or her employment) are met.

Subpart 4 contains gun-free requirements. Each state receiving funds under the ESEA must have a state law that requires LEAs to expel for at least one year any student who is determined to have brought a firearm to a school or possessed a firearm at a school under the jurisdiction of an LEA in the state. The chief administering officer of the LEA may modify this requirement on a case-by-case basis. In addition, no LEA may receive funds unless it has a policy requiring that any student who brings a firearm or weapon to a school served by the LEA is referred to the criminal justice or juvenile delinquency system.

Subpart 5 prohibits smoking within indoor facilities providing kindergarten, elementary, or secondary education or library services to children, if the services are funded directly or indirectly by the federal government, or the facility is constructed, operated, or maintained using federal funds.

Part G: Evaluations

Part G authorizes ED to reserve 0.5% of the funds appropriated for ESEA programs, other than programs authorized by Title I, for program evaluations⁸¹ if funds for this purpose are not separately authorized by a given program.

Appropriations and Authorizations of Appropriations for Programs Authorized by the ESEA

Table 1 provides appropriations for ESEA programs for FY2017 through FY2023. The appropriations included in **Table 1** are based on the most recent data available from ED’s Budget

⁷⁹ For example, NAEP is an exception to this prohibition (Section 8529(b)).

⁸⁰ Each state defines what constitutes a “persistently dangerous school” for its public schools.

⁸¹ Section 1002 includes a separate authorization of appropriations for evaluations of Title I.

Service Office. The amounts shown reflect any reprogramming or transfers of funds done by ED as of the time this table was prepared to provide the actual level of funding allocated to each program/activity. This list of “programs/activities” does not take into account the number of programs, projects, or activities that may be funded under a single line-item appropriation, so the actual number of ESEA programs, projects, or activities being supported through appropriations is not shown. It should be noted that ED considers all of the funds provided in an appropriations act for a given fiscal year, including advance appropriations provided for the following fiscal year, to be appropriations for the given fiscal year. For example, ED considers all of the funds provided in the FY2023 appropriations act, including advance appropriations provided in FY2024, to be FY2023 appropriations. These funds are being used primarily during the 2023-2024 school year. **Table 1** follows this convention with regard to the fiscal year of the funds.

Table 2 provides ESEA appropriations for FY2016 and FY2017 to depict the transition from the ESEA as amended by the NCLB to the ESEA as amended by the ESSA. Programs authorized under the ESEA as amended by either the NCLB or the ESSA are included. Programs and activities are referred to by their names in the ESEA as amended by the ESSA if a program was in both the ESEA as amended by the ESSA and by the NCLB. If the program had a different name in the ESEA as amended by the NCLB, the name is included in parentheses. Programs are listed in the order in which they appear in the ESEA as amended by the ESSA if they also appeared in the ESEA as amended by the NCLB. For programs that appear in only the ESEA as amended by either the ESSA or the NCLB, programs are listed in the order they appear or appeared in law. For some programs that were funded in FY2016 but not in FY2017, it is possible that another program authorized in FY2017 provided funding for similar purposes. For example, the Elementary and Secondary School Counseling program was funded in FY2016 but not in FY2017. School counseling activities are an allowable use of funds under the SSAE program created under the ESSA. The same methodology as discussed above was used in determining appropriations amounts for each program.

Table 3 provides the authorized level of appropriations for each program included in the ESEA that has a specified authorization of appropriations. The ESEA includes authorizations of appropriations for FY2017 through FY2021.⁸²

⁸² The General Education Provisions Act (GEPA) automatically extended the authorizations of appropriations for programs administered by ED for an additional fiscal year as Congress did not act to extend or repeal the authorizations of appropriations by the regular session that ended prior to the start of FY2020 (20 U.S.C. §1126a). The amount authorized to be appropriated for the period of the automatic extension is required to be the same amount authorized to be appropriated for a program for the terminal fiscal year of the program. Thus, the authorization of appropriations for FY2021 for ESEA programs was identical to the authorization of appropriations for FY2020. For FY2022 and subsequent years, the authorization of appropriations for ESEA programs has expired; however, the programs may continue to receive appropriations through the appropriations process.

Table I. ESEA Appropriations, FY2017-FY2023

(Dollars in thousands)

Program/Activity	ESEA Citation	FY2017 Appropriations	FY2018 Appropriations	FY2019 Appropriations	FY2020 Appropriations	FY2021 Appropriations	FY2022 Appropriations	FY2023 Appropriations
Grants to Local Educational Agencies (LEAs)	Title I-A	\$15,459,802	\$15,759,802	\$15,859,802	\$16,309,802	\$16,536,802	\$17,536,802	\$18,386,802
Grants for State Assessments and Enhanced Assessment Instruments (State Assessment Grants)	Title I-B	\$369,100	\$378,000	\$378,000	\$378,000	\$378,000	\$390,000	\$390,000
Education of Migratory Children (Migrant Education)	Title I-C	\$374,751	\$374,751	\$374,751	\$374,751	\$375,626	\$375,626	\$375,626
Prevention and Intervention Programs for Children and Youth Who Are Neglected, Delinquent, or At-Risk (Neglected and Delinquent)	Title I-D	\$47,614	\$47,614	\$47,614	\$47,614	\$48,239	\$48,239	\$49,239
Supporting Effective Instruction	Title II-A	\$2,055,830	\$2,055,830	\$2,055,830	\$2,131,830	\$2,143,080	\$2,170,080	\$2,190,080

Program/Activity	ESEA Citation	FY2017 Appropriations	FY2018 Appropriations	FY2019 Appropriations	FY2020 Appropriations	FY2021 Appropriations	FY2022 Appropriations	FY2023 Appropriations
Teacher and School Leader Incentive Fund	Title II-B-1	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$173,000	\$173,000
Comprehensive State Literacy Development Grants	Title II-B-2 (Section 2222)	\$190,000	\$190,000	\$190,000	\$192,000	\$192,000	\$192,000	\$194,000
Innovative Approaches to Literacy	Title II-B-2 (Section 2226)	\$27,000	\$27,000	\$27,000	\$27,000	\$28,000	\$29,000	\$30,000
American History and Civics Education ^a	Title II-B-3 (Sections 2232 and 2233)	\$3,515	\$3,515	\$4,815	\$4,815	\$5,250	\$7,750	\$23,000
Supporting Effective Educator Development (SEED)	Title II-B-4 (Section 2242)	\$65,000	\$75,000	\$75,000	\$80,000	\$80,000	\$85,000	\$90,000
School Leader Recruitment and Support	Title II-B-4 (Section 2243)	\$14,500	\$0	\$0	\$0	\$0	\$0	\$0
STEM Master Teacher Corps	Title II-B-4 (Section 2245)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
English Language Acquisition	Title III-A	\$737,400	\$737,400	\$737,400	\$787,400	\$797,400	\$831,400	\$890,000
Student Support and Academic Enrichment Grants	Title IV-A	\$400,000	\$1,100,000	\$1,170,000	\$1,210,000	\$1,220,000	\$1,280,000	\$1,380,000

Program/Activity	ESEA Citation	FY2017 Appropriations	FY2018 Appropriations	FY2019 Appropriations	FY2020 Appropriations	FY2021 Appropriations	FY2022 Appropriations	FY2023 Appropriations
21 st Century Community Learning Centers	Title IV-B	\$1,191,673	\$1,211,673	\$1,221,673	\$1,249,673	\$1,259,673	\$1,289,673	\$1,329,673
Charter Schools Program	Title IV-C	\$342,172	\$400,000	\$427,859 ^b	\$440,000	\$440,000	\$440,000	\$440,000
Magnet Schools Assistance Program	Title IV-D	\$97,647	\$105,000	\$113,700 ^b	\$107,000	\$109,000	\$124,000	\$139,000
Family Engagement in Education	Title IV-E	\$0	\$10,000	\$15,440 ^b	\$10,000	\$12,500	\$15,000	\$20,000
Education Innovation and Research	Title IV-F-1	\$100,000	\$120,000	\$130,000	\$190,000	\$194,000	\$234,000	\$284,000
Promise Neighborhoods	Title IV-F-2 (Section 4624)	\$73,254	\$78,254	\$78,254	\$80,000	\$81,000	\$85,000	\$91,000
Full-Service Community Schools	Title IV-F-2 (Section 4625)	\$10,000	\$17,500	\$17,500	\$25,000	\$30,000	\$75,000	\$150,000
National Activities for School Safety	Title IV-F-3	\$68,000	\$90,000	\$95,000	\$105,000	\$106,000	\$201,000	\$216,000
Assistance for Arts Education Program	Title IV-F-4 (Section 4642)	\$27,000	\$29,000	\$29,000	\$30,000	\$30,500	\$36,500	\$36,500
Ready to Learn Programming	Title IV-F-4 (Section 4643)	\$25,741	\$27,741	\$27,741	\$29,000	\$29,500	\$30,500	\$31,000

Program/Activity	ESEA Citation	FY2017 Appropriations	FY2018 Appropriations	FY2019 Appropriations	FY2020 Appropriations	FY2021 Appropriations	FY2022 Appropriations	FY2023 Appropriations
Javits Gifted and Talented Education	Title IV-F-4 (Section 4644)	\$12,000	\$12,000	\$12,000	\$13,000	\$13,500	\$14,500	\$16,500
Small, Rural School Achievement Program	Title V-B-1	\$87,920	\$90,420	\$90,420	\$92,920	\$93,920	\$97,500	\$107,500
Rural and Low-Income School Program	Title V-B-2	\$87,920	\$90,420	\$90,420	\$92,920	\$93,920	\$97,500	\$107,500
Indian Education, Formula Grants to LEAs	Title VI-A-1	\$100,381	\$105,381	\$105,381	\$105,381	\$105,381	\$109,881	\$110,381
Special Programs and Projects to Improve Educational Opportunities for Indian Children	Title VI-A-2	\$57,993	\$67,993	\$67,993	\$67,993	\$67,993	\$70,000	\$72,000
Indian Education, National Activities	Title VI-A-3	\$6,565	\$6,865	\$6,865	\$7,365	\$7,865	\$9,365	\$12,365
Native Hawaiian Education	Title VI-B	\$33,397	\$36,397	\$36,397	\$36,897	\$37,397	\$38,897	\$45,897
Alaska Native Education	Title VI-C	\$32,453	\$35,453	\$35,453	\$35,953	\$36,453	\$37,953	\$44,953

Program/Activity	ESEA Citation	FY2017 Appropriations	FY2018 Appropriations	FY2019 Appropriations	FY2020 Appropriations	FY2021 Appropriations	FY2022 Appropriations	FY2023 Appropriations
Impact Aid, Payments Relating to Federal Acquisition of Real Property	Title VII (Section 7002)	\$68,813	\$73,313	\$74,313	\$75,313	\$76,313	\$77,313	\$78,313
Impact Aid, Payments for Eligible Federally Connected Children (Basic Support Payments)	Title VII (Section 7003(b))	\$1,189,233	\$1,270,242	\$1,301,242	\$1,340,242	\$1,354,242	\$1,409,242	\$1,468,242
Impact Aid, Payments for Eligible Federally Connected Children (Payments for Children with Disabilities)	Title VII (Section 7003(d))	\$48,316	\$48,316	\$48,316	\$48,316	\$48,316	\$48,316	\$48,316
Impact Aid, Construction	Title VII (Section 7007)	\$17,406	\$17,406	\$17,406	\$17,406	\$17,406	\$17,406	\$18,406
Impact Aid, Facilities Maintenance	Title VII (Section 7008)	\$4,835	\$4,835	\$4,835	\$4,835	\$4,835	\$4,835	\$4,835
TOTAL	—	\$23,627,231	\$24,897,121	\$25,167,421	\$25,947,426	\$26,254,111	\$27,682,278	\$29,044,128

Source: Table prepared by CRS based on appropriations tables from the U.S. Department of Education, Budget Service, various years.

- a. With respect to American History and Civics Education, under Section 2232 funds are used to support Presidential and Congressional Academies for American History and Civics. Under Section 2233, funds are used to support National Activities. Based on ED, Budget Service, Justification of Appropriations Estimates to Congress, various years, appropriations have been provided as follows: FY2017 and FY2018: \$1,815,000 (Section 2232) and \$1,700,000 (Section 2233); FY2019 and

FY2020: \$1,815,000 (Section 2232) and \$3,000,000 (Section 2233); FY2021: \$1,986,000 (Section 2232), \$3,211,000 (Section 2233), and \$53,000 (peer review of new applications for grants under Sections 2232 and 2233); FY2022: \$828,000 (Section 2232), \$6,920,000 (Section 2233), and \$1,000 (peer review of new applications for grants under Section 2233); and FY2023: \$2,975,000 (Section 2232), \$19,950,000 (Section 2233), and \$75,000 (peer review of new applications for grants under Sections 2232 and 2233). Details may not add to totals due to rounding.

- b. ED reprogrammed \$12,141,000 from the Charter Schools Program and provided it to other programs in the Innovation and Improvement account, including \$6,700,000 to the Magnet Schools Assistance Program and \$5,440,000 to Statewide Family Engagement Centers. Prior to the reprogramming, appropriations for the Charter Schools Program were \$440,000,000, appropriations for the Magnet Schools Assistance Program were \$107,000,000, and appropriations for the Statewide Family Engagement Centers were \$10,000,000.

**Table 2. ESEA Program Authorizations Based on Amendments Included in the No Child Left Behind Act (NCLB) and the Every Student Succeeds Act (ESSA):
FY2016 and FY2017**

(Dollars in thousands)

Program/Activity	ESEA Citation		FY2016 Appropriations	FY2017 Appropriations
	NCLB Amendments	ESSA Amendments		
School Improvement Grants	Title I, Section 1003(g)	—	\$450,000	na
Grants to Local Educational Agencies (LEAs)	Title I-A	Title I-A	\$14,909,802	\$15,459,802
Grants for State Assessments and Enhanced Assessment Instruments (State Assessment Grants)	Title VI-A-1 (Sections 6111 and 6112))	Title I-B	\$378,000	\$369,100
Reading First	Title I-B-1	—	\$0	na
Early Reading First	Title I-B-2	—	\$0	na
Even Start	Title I-B-3	—	\$0	na
Improving Literacy through School Libraries	Title I-B-4	—	\$0	na
Education of Migratory Children (Migrant Education)	Title I-C	Title I-C	\$374,751	\$374,751
Prevention and Intervention Programs for Children and Youth Who Are Neglected, Delinquent, or At-Risk (Neglected and Delinquent)	Title I-D	Title I-D	\$47,614	\$47,614
Close Up Fellowships	Title I-E (Section 1504)	—	\$0	na
Comprehensive School Reform	Title I-F	—	\$0	na
Advanced Placement	Title I-G	—	\$28,483	na
School Dropout Prevention ^a	Title I-H	—	\$0	na
Supporting Effective Instruction (formerly the Teacher and Principal Training and Recruiting Fund ^b)	Title II-A	Title II-A	\$2,349,830	\$2,055,830
Advanced Credentialing	Title II-A-5 (Section 2151(c))	—	\$0	na

Program/Activity	ESEA Citation		FY2016 Appropriations	FY2017 Appropriations
	NCLB Amendments	ESSA Amendments		
Special Education Teacher Training	Title II-A-5 (Section 2151(d))	—	\$0	na
Early Childhood Educator Professional Development	Title II-A-5 (Section 2151(e))	—	\$0	na
Teacher and School Leader Incentive Grants (formerly the Teacher Incentive Fund)	Title V-D-1	Title II-B-1	\$230,000	\$200,000
Comprehensive Literacy Development Grants (formerly Striving Readers)	Title I-E (Section 1502)	Title II-B-2 (Section 2222)	\$190,000	\$190,000
Innovative Approaches to Literacy	Title V-D-1	Title II-B-2 (Section 2226)	\$27,000	\$27,000
American History and Civics Education ^c	Title V-D-1	Title II-B-3 (Sections 2232 and 2233)	\$1,815	\$3,515
Supporting Effective Educator Development (SEED)	— ^d	Title II-B-4 (Section 2242)	na	\$65,000
School Leader Recruitment and Support (formerly School Leadership program)	Title II-A-5 (Section 2151(b))	Title II-B-4 (Section 2243)	\$16,368	\$14,500
STEM Master Teacher Corps	—	Title II-B-4 (Section 2245)	na	\$0
Math and Science Partnerships	Title II-B	—	\$152,717	na
Transition to Teaching	Title II-C-1-B	—	\$0	na
National Writing Project	Title II-C-2	—	\$0	na
We the People (Civic Education)	Title II-C-3 (Section 2344)	—	\$0	na
Cooperative Education Exchange (Civic Education)	Title II-C-3 (Section 2345)	—	\$0	na
Teaching of Traditional American History	Title II-C-4	—	\$0	na
Educational Technology	Title II-D	—	\$0	na
English Language Acquisition	Title III-A ^e	Title III-A	\$737,400	\$737,400

Program/Activity	ESEA Citation		FY2016 Appropriations	FY2017 Appropriations
	NCLB Amendments	ESSA Amendments		
Student Support and Academic Enrichment Grants ^f	—	Title IV-A	na	\$400,000
Safe and Drug Free, State Grants	Title IV-A-1	—	\$0	na
Hate Crime Prevention	Title IV-A-2 (Section 4123)	—	\$0	na
National Coordinator Program	Title IV-A-2 (Section 4125)	—	\$0	na
Community Service Grant Program	Title IV-A-2 (Section 4126)	—	\$0	na
School Security and Technology Resource Center	Title IV-A-2 (Section 4127)	—	\$0	na
National Center for School and Youth Safety	Title IV-A-2 (Section 4128)	—	\$0	na
Alcohol Abuse Reduction	Title IV-A-2 (Section 4129)	—	\$0	na
Mentoring Programs	Title IV-A-2 (Section 4130)	—	\$0	na
21 st Century Community Learning Centers	Title IV-B	Title IV-B	\$1,166,673	\$1,191,673
Charter Schools Program	Title V-B-1 and 2	Title IV-C	\$333,172	\$342,172
Magnet Schools Assistance Program	Title V-C	Title IV-D	\$96,647	\$97,647
Family Engagement in Education	—	Title IV-E	na	\$0
Education Innovation and Research	— ^g	Title IV-F-1	na	\$100,000
Promise Neighborhoods	Title V-D-1 ^h	Title IV-F-2 (Section 4624)	\$73,254	\$73,254
Full Service Community Schools	Title V-D-1 ⁱ	Title IV-F-2 (Section 4625)	\$10,000	\$10,000
National Activities for School Safety	Title IV-A-2 (Section 4631)	Title IV-F-3	\$75,000	\$68,000
Assistance for Arts Education Program	Title V-D-15	Title IV-F-4 (Section 4642)	\$27,000	\$27,000
Ready to Learn Programming (formerly Ready-to-Learn Television)	Title II-D-3	Title IV-F-4 (Section 4643)	\$25,741	\$25,741

Program/Activity	ESEA Citation		FY2016 Appropriations	FY2017 Appropriations
	NCLB Amendments	ESSA Amendments		
Javits Gifted and Talented Education	Title V-D-6	Title IV-F-4 (Section 4644)	\$12,000	\$12,000
Innovative Programs	Title V-A	—	\$0	na
Small, Rural School Achievement Program	Title VI-B-1	Title V-B-1	\$87,920	\$87,920
Rural and Low-Income School Program	Title VI-B-2	Title V-B-2	\$87,920	\$87,920
Voluntary Public School Choice	Title V-B-3	—	\$0	na
Fund for the Improvement of Education, National Programs ⁱ	Title V-D-1	—	na ^k	na
Preschool Development Grants	Title V-D-1 ^l	— ^m	\$250,000	na
Non-cognitive Skills Initiative	Title V-D-1	—	\$3,000	na
Elementary and Secondary School Counseling	Title V-D-2	—	\$49,561	na
Character Education	Title V-D-3	—	\$0	na
Smaller Learning Communities	Title V-D-4	—	\$0	na
Reading is Fundamental	Title V-D-5	—	\$0	na
Star Schools Program	Title V-D-7	—	\$0	na
Ready to Teach	Title V-D-8	—	\$0	na
Foreign Language Assistance	Title V-D-9	—	\$0	na
Carol M. White Physical Education Program	Title V-D-10	—	\$47,000	na
Community Technology Centers	Title V-D-11	—	\$0	na
Exchanges with Historic Whaling and Trading Partners	Title V-D-12	—	\$0	na
Excellence in Economic Education	Title V-D-13	—	\$0	na
Grants to Improve the Mental Health of Children, Mental Health Integration in Schools	Title V-D-14 (Section 5541)	—	\$0	na

	ESEA Citation			
Program/Activity	NCLB Amendments	ESSA Amendments	FY2016 Appropriations	FY2017 Appropriations
Grants to Improve the Mental Health of Children, Foundations for Learning	Title V-D-14 (Section 5542)	—	\$0	na
Parental Assistance and Local Family Information Centers	Title V-D-16	—	\$0	na
Combating Domestic Violence	Title V-D-17	—	\$0	na
Healthy, High-Performance Schools	Title V-D-18	—	\$0	na
Grants for Capital Expenses of Providing Equitable Services for Private School Students	Title V-D-19	—	\$0	na
Additional Assistance for Certain Local Educational Agencies Impacted by Federal Property Acquisition	Title V-D-20	—	\$0	na
Women's Educational Equity Act	Title V-D-21	—	\$0	na
Indian Education, Formula Grants to LEAs	Title VII-A-1	Title VI-A-1	\$100,381	\$100,381
Special Programs and Projects to Improve Educational Opportunities for Indian Children	Title VII-A-2	Title VI-A-2	\$37,993	\$57,993
Indian Education, National Activities	Title VII-A-3	Title VI-A-3	\$5,565	\$6,565
Native Hawaiian Student Education	Title VII-B	Title VI-B	\$33,397	\$33,397
Alaska Native Student Education	Title VII-C	Title VI-C	\$32,453	\$32,453
Impact Aid, Payments Relating to Federal Acquisition of Real Property	Title VIII (Section 8002)	Title VII (Section 7002)	\$66,813	\$68,813
Impact Aid, Payments for Eligible Federally Connected Children (Basic Support Payments)	Title VIII (Section 8003(b))	Title VII (Section 7003(b))	\$1,168,233	\$1,189,233

Program/Activity	ESEA Citation		FY2016 Appropriations	FY2017 Appropriations
	NCLB Amendments	ESSA Amendments		
Impact Aid, Payments for Eligible Federally Connected Children (Payments for Children with Disabilities)	Title VIII (Section 8003(d))	Title VII (Section 7003(d))	\$48,316	\$48,316
Impact Aid, Construction	Title VIII (Section 8007)	Title VII (Section 7007)	\$17,406	\$17,406
Impact Aid, Facilities Maintenance	Title VIII (Section 8008)	Title VII (Section 7008)	\$4,835	\$4,835
Title I Evaluation (formerly referred to as the National Assessment of Title I)	Title I-E	Title VIII-G	\$0	\$0
TOTAL	—	—	\$23,754,060	\$23,627,231

Source: Table prepared by CRS based on CRS analysis of relevant statutory language and appropriations tables from the U.S. Department of Education, Budget Service, various years.

Notes:

na: not applicable.

—: program not authorized.

- a. This program was also known as the High School Graduation Initiative.
- b. This program was commonly referred to as the Improving Teacher Quality program.
- c. Funds under the ESEA as amended by both the NCLB and the ESSA are used to support Presidential and Congressional Academies for American History and Civics. Under the ESEA as amended by the ESSA, funds are also used for National Activities.
- d. Prior to the enactment of the ESSA, funds were provided for SEED as a set aside under Title II-A.
- e. The ESEA as amended by the NCLB also included programs under Title III-B, Improving Language Instruction Educational Programs. Title III-B programs were only authorized if funding for Title III-A fell below \$650 million. As this never occurred, the Title III-B programs are not reflected in the table. The Title III-B programs were not retained by the ESSA.
- f. The SSAE grant program authorizes block grants that can be used to support activities that could formerly be supported through more targeted grant programs that were authorized under the ESEA as amended by the NCLB.
- g. While the ESEA as amended by the NCLB did not include a program similar to the Education Innovation and Research (EIR) program, the EIR program is similar to the Investing in Innovation (i3) program that was originally authorized by the American Recovery and Reinvestment Act (ARRA; P.L. 111-5) under the State Fiscal Stabilization Fund (Title XIV). The i3 program received \$120 million in FY2016.
- h. The Promise Neighborhoods program was enacted through the Department of Education Appropriations Act, 2010 (Division D, Title III of P.L. 111-117), based on authority available under Title V-D-1 of the ESEA. The specific provision of funds for this purpose is detailed in the conference report accompanying P.L. 111-117 (H.Rept. 111-366).
- i. The Full Service Community Schools program was initially created as a demonstration program through the Department of Education Appropriations Act, 2008 (Division G, Title III of P.L. 110-161), based on authority available under ESEA, Title V-D-1.
- j. The Fund for the Improvement of Education, National Programs authority supported “nationally significant programs to improve the quality of elementary and secondary education at the State and local levels and help all children meet challenging State academic content and student academic achievement standards” (ESEA, Section 5411(a) prior to the enactment of the ESSA). Examples of programs funded under the Title V-D-1 authority, in addition to those listed in the table, include the Data Quality Initiative and the Gulf

- Coast Recovery Grant Initiative. The Title V-D-I authority was not retained when the ESEA was reauthorized by the ESSA.
- k. See specific programs listed in the table for appropriations provided under the Title V-D-I authority in FY2016.
 - l. For FY2014, Preschool Development Grants were authorized using authority available under the American Recovery and Rehabilitation Act (ARRA, P.L. 112-5, Section 14006). In FY2015 and FY2016, the program was authorized using authority available under ESEA, Title V-D-I.
 - m. A new Preschool Development Grants program was included in the ESSA but was not included in the ESEA. It should be noted that the ESSA included changes to programs that are not part of the ESEA.

Table 3. ESEA Program Authorizations

Program/Activity	Title	Section Authorizing Appropriations	FY2017	FY2018	FY2019	FY2020	FY2021^a
Grants to Local Educational Agencies (LEAs)	Title I-A	Section 1002	\$15,012,317,605	\$15,457,459,042	\$15,897,371,442	\$16,182,344,591	\$16,182,344,591
Grants for State Assessments and Enhanced Assessment Instruments (State Assessment)	Title I-B	Section 1002	\$378,000,000	\$378,000,000	\$378,000,000	\$378,000,000	\$378,000,000
Education of Migratory Children (Migrant Education)	Title I-C	Section 1002	\$374,751,000	\$374,751,000	\$374,751,000	\$374,751,000	\$374,751,000
Prevention and Intervention Programs for Children and Youth Who Are Neglected, Delinquent, or At-Risk (Neglected and Delinquent)	Title I-D	Section 1002	\$47,614,000	\$47,614,000	\$47,614,000	\$47,614,000	\$47,614,000
Supporting Effective Instruction	Title II-A	Section 2003	\$2,295,830,000	\$2,295,830,000	\$2,295,830,000	\$2,295,830,000	\$2,295,830,000
Teacher and School Leader Incentive Program	Title II-B-1	Section 2003 and Section 2201	49.1% (\$230,220,362) of a single authorization for national activities under Title II-B. ^b	49.1% (\$230,220,362) of a single authorization for national activities under Title II-B. ^b	49.1% (\$230,361,488) of a single authorization for national activities under Title II-B. ^b	47.0% (\$229,908,960) of a single authorization for national activities under Title II-B. ^b	47.0% (\$229,908,960) of a single authorization for national activities under Title II-B. ^b

Program/Activity	Title	Section Authorizing Appropriations	FY2017	FY2018	FY2019	FY2020	FY2021^a
Literacy Education For All (includes Comprehensive Literacy State Development Grants and Innovative Approaches to Literacy)	Title II-B-2	Section 2003 and Section 2201	34.1% (\$159,888,276) of a single authorization for national activities under Title II-B. ^b	34.1% (\$159,888,276) of a single authorization for national activities under Title II-B. ^b	34.1% (\$159,986,288) of a single authorization for national activities under Title II-B. ^b	36.8% (\$180,013,824) of a single authorization for national activities under Title II-B. ^b	36.8% (\$180,013,824) of a single authorization for national activities under Title II-B. ^b
American History and Civics Education, Presidential and Congressional Academies	Title II-B-3, Section 2232	Section 2003 and Section 2201	26.0% ^c of 1.4% (\$1,706,725) of a single authorization for national activities under Title II-B. ^{b, c}	26.0% ^c of 1.4% (\$1,706,725) of a single authorization for national activities under Title II-B. ^{b, c}	26.0% ^c of 1.4% (\$1,707,772) of a single authorization for national activities under Title II-B. ^{b, c}	26.0% ^c of 1.4% (\$1,780,572) of a single authorization for national activities under Title II-B. ^{b, c}	26.0% ^c of 1.4% (\$1,780,572) of a single authorization for national activities under Title II-B. ^{b, c}
American History and Civics Education, National Activities	Title II-B-3, Section 2233	Section 2003 and Section 2201	74.0% ^d of 1.4% (\$4,857,603) of a single authorization for national activities under Title II-B. ^{b, d}	74.0% ^d of 1.4% (\$4,857,603) of a single authorization for national activities under Title II-B. ^{b, d}	74.0% ^d of 1.4% (\$4,860,580) of a single authorization for national activities under Title II-B. ^{b, d}	74.0% ^d of 1.4% (\$5,067,780) of a single authorization for national activities under Title II-B. ^{b, d}	74.0% ^d of 1.4% (\$5,067,780) of a single authorization for national activities under Title II-B. ^{b, d}

Program/Activity	Title	Section Authorizing Appropriations	FY2017	FY2018	FY2019	FY2020	FY2021^a
Programs of National Significance (includes Supporting Effective Educator Development Grant Program, School Leadership Recruitment and Support Grant Program, Technical Assistance and National Evaluation, and STEM Master Teacher Corps Grant Program)	Title II-B-4	Section 2003 and Section 2201	15.4% (\$72,207,609) of a single authorization for national activities under Title II-B. ^b	15.4% (\$72,207,609) of a single authorization for national activities under Title II-B. ^b	15.4% (\$72,251,872) of a single authorization for national activities under Title II-B. ^b	14.8% (\$72,396,864) of a single authorization for national activities under Title II-B. ^b	14.8% (\$72,396,864) of a single authorization for national activities under Title II-B. ^b
English Language Acquisition	Title III	Section 3001	\$756,332,450	\$769,568,267	\$784,959,633	\$884,959,633	\$884,959,633
Student Support and Academic Enrichment Grants	Title IV-A	Section 4112	\$1,650,000,000	\$1,600,000,000	\$1,600,000,000	\$1,600,000,000	\$1,600,000,000
21 st Century Community Learning Centers	Title IV-B	Section 4206	\$1,000,000,000	\$1,100,000,000	\$1,100,000,000	\$1,100,000,000	\$1,100,000,000
Charter Schools Program (includes Grants to Support High-Quality Charter Schools, Facilities Financing, and National Activities)	Title IV-C	Section 4311	\$270,000,000	\$270,000,000	\$300,000,000	\$300,000,000	\$300,000,000
Magnet Schools Assistance Program	Title IV-D	Section 4409	\$94,000,000	\$96,820,000	\$102,387,150	\$108,530,379	\$108,530,379

Program/Activity	Title	Section Authorizing Appropriations	FY2017	FY2018	FY2019	FY2020	FY2021^a
Family Engagement in Education Programs	Title IV-E	Section 4506	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
Education Innovation and Research	Title IV-F-1	Section 4601	36.0% (\$70,466,760) of a single authorization for national activities under Title IV-F. ^e	36.0% (\$70,466,760) of a single authorization for national activities under Title IV-F. ^e	42.0% (\$90,611,220) of a single authorization for national activities under Title IV-F. ^e	42.0% (\$90,611,220) of a single authorization for national activities under Title IV-F. ^e	42.0% (\$90,611,220) of a single authorization for national activities under Title IV-F. ^e
Community Support for School Success (includes Promise Neighborhoods and Full-Service Community Schools)	Title IV-F-2	Section 4601	36.0% (\$70,466,760) of a single authorization for national activities under Title IV-F. ^e	36.0% (\$70,466,760) of a single authorization for national activities under Title IV-F. ^e	32.0% (\$69,037,120) of a single authorization for national activities under Title IV-F. ^e	32.0% (\$69,037,120) of a single authorization for national activities under Title IV-F. ^e	32.0% (\$69,037,120) of a single authorization for national activities under Title IV-F. ^e
National Activities for School Safety, including the Project School Emergency Response to Violence program (Project SERV) ^f	Title IV-F-3	Section 4601	\$5,000,000 reservation from a single authorization for national activities under Title IV-F. ^e	\$5,000,000 reservation from a single authorization for national activities under Title IV-F. ^e	\$5,000,000 reservation from a single authorization for national activities under Title IV-F. ^e	\$5,000,000 reservation from a single authorization for national activities under Title IV-F. ^e	\$5,000,000 reservation from a single authorization for national activities under Title IV-F. ^e
Academic Enrichment (includes Assistance for Arts Education, Ready to Learn Programming, and Supporting High-Ability Learners and Learning)	Title IV-F-4	Section 4601	28.0% (\$54,807,480) of a single authorization for national activities under Title IV-F. ^e	28.0% (\$54,807,480) of a single authorization for national activities under Title IV-F. ^e	26.0% (\$56,092,660) of a single authorization for national activities under Title IV-F. ^e	26.0% (\$56,092,660) of a single authorization for national activities under Title IV-F. ^e	26.0% (\$56,092,660) of a single authorization for national activities under Title IV-F. ^e

Program/Activity	Title	Section Authorizing Appropriations	FY2017	FY2018	FY2019	FY2020	FY2021^a
Rural Education Achievement Programs (REAP; includes Small, Rural Achievement Program and Rural and Low-Income School Program)	Title V-B	Section 5234	\$169,840,000	\$169,840,000	\$169,840,000	\$169,840,000	\$169,840,000
Indian Education, Formula Grants to LEAs	Title VI-A-1	Section 6152	\$100,381,000	\$102,388,620	\$104,436,392	\$106,525,120	\$106,525,120
Special Programs and Projects to Improve Educational Opportunities for Indian Children	Title VI-A-2	Section 6152	\$17,993,000	\$17,993,000	\$17,993,000	\$17,993,000	\$17,993,000
Indian Education, National Activities	Title VI-A-3	Section 6152	\$5,565,000	\$5,565,000	\$5,565,000	\$5,565,000	\$5,565,000
Native Hawaiian Education	Title VI-B	Section 6205	\$32,397,000	\$32,397,000	\$32,397,000	\$32,397,000	\$32,397,000
Alaska Native Education	Title VI-C	Section 6304	\$31,453,000	\$31,453,000	\$31,453,000	\$31,453,000	\$31,453,000
Impact Aid, Payments Relating to Federal Acquisition of Real Property	Title VII, Section 7002	Section 7014	\$66,813,000	\$66,813,000	\$66,813,000	\$71,997,917	\$71,997,917
Impact Aid, Payments for Eligible Federally Connected Children (Basic Support Payments)	Title VII, Section 7003(b)	Section 7014	\$1,151,233,000	\$1,151,233,000	\$1,151,233,000	\$1,240,572,618	\$1,240,572,618

Program/Activity	Title	Section Authorizing Appropriations	FY2017	FY2018	FY2019	FY2020	FY2021^a
Impact Aid, Payments for Eligible Federally Connected Children (Payments for Children with Disabilities)	Title VII, Section 7003(d)	Section 7014	\$48,316,000	\$48,316,000	\$48,316,000	\$52,065,487	\$52,065,487
Impact Aid, Construction	Title VII, Section 7007	Section 7014	\$17,406,000	\$17,406,000	\$17,406,000	\$18,756,765	\$18,756,765
Impact Aid, Facilities Maintenance	Title VII, Section 7008	Section 7014	\$4,835,000	\$4,835,000	\$4,835,000	\$5,210,213	\$5,210,213
Evaluation of Title I Programs	Title VIII-G	Section 1002	\$710,000	\$710,000	\$710,000	\$710,000	\$710,000
TOTAL Authorization of Appropriations	—	—	\$24,205,408,630	\$24,718,613,504	\$25,231,819,617	\$25,745,024,723	\$25,745,024,723

Source: Table prepared by CRS based on CRS analysis of the Elementary and Secondary Education Act.

- The General Education Provisions Act (GEPA) automatically extended the authorizations of appropriations for programs administered by ED for an additional fiscal year as Congress did not act to extend or repeal the authorizations of appropriations by the regular session that ended prior to the start of FY2020 (20 U.S.C. §1126a). The amount authorized to be appropriated for the period of the automatic extension is required to be the same amount authorized to be appropriated for a program for the terminal fiscal year of the program. Thus, the authorization of appropriations for FY2021 for ESEA programs was identical to the authorization of appropriations for FY2020. For FY2022 and subsequent years, the authorization of appropriations for ESEA programs has expired; however, the programs may continue to receive appropriations through the appropriations process.
- The total authorization of appropriations for Title II-B is \$468,880,575 for each of FY2017 and FY2018, and \$489,168,000 for each of FY2019 and FY2020.
- The ESEA as amended by the ESSA requires that not less than 26% of the available funds be used for the Presidential and Congressional Academies for American History and Civics program. For the purposes of this report, it was assumed that 26% would be used for this program.
- The ESEA as amended by the ESSA requires that not more than 74% of the available funds be used for national activities related to American history, civics and government, and geography instruction. For the purposes of this report, it was assumed that 74% would be used for this purpose.
- The total authorization of appropriations for Title IV-F is \$200,741,000 for each of FY2017 and FY2018, and \$220,741,000 for each of FY2019 and FY2020. The amount of funding available for the programs authorized under Title IV-F-1, Title IV-F-2, and Title IV-F-4 is based on the total amount of funding available for Title IV-F after reserving \$5 million for Title IV-F-3.
- The Secretary must use a portion of the funds reserved under national activities for Project SERV. Funds may also be used to carry out other activities “to improve students’ safety and well-being.” (Section 4631(a)(1)(B).)
- Per the requirements of Section 5234, appropriations for REAP are divided evenly between the Small, Rural School Achievement Program and the Rural and Low-Income School Program.

Appendix. Glossary of Acronyms

Acronym	Definition
ATSI	Additional targeted support and improvement
BIE	Bureau of Indian Education
CSI	Comprehensive support and improvement
ED	U.S. Department of Education
EFIG	Education Finance Incentive Grants
EIR	Education Innovation and Research program
EL	English learner
ESEA	Elementary and Secondary Education Act
ESSA	Every Student Succeeds Act
i3	Investing in Innovation program
IDEA	Individuals with Disabilities Education Act
IHE	Institution of higher education
LEA	Local educational agency
LEP	Limited English proficient
L-HHS-ED	Departments of Labor, Health and Human Services, and Education, and Related Agencies
NAEP	National Assessment of Educational Progress
NCLB	No Child Left Behind Act
Project SERV	Project School Emergency Response to Violence
REAP	Rural Education Achievement Program
RLA	Reading/language arts
RLIS	Rural and Low-Income School Program
SEA	State educational agency
SEED	Supporting Effective Educator Development
SES	Supplemental educational services
SIG	School Improvement Grants
SRSA	Small, Rural School Achievement Program
TAP	Targeted assistance program
TSI	Targeted support and improvement

Author Information

Rebecca R. Skinner
Specialist in Education Policy

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Afterschool Alliance

ESSA Playbook

Introduction & Timeline

The implementation of the Every Student Succeeds Act (ESSA) provides tremendous opportunity for the state afterschool networks and other statewide afterschool organizations to elevate the importance of afterschool and summer learning programs with key audiences and secure additional out-of-school time resources.

This playbook is designed to help networks and their allies understand which parts of the new law have the most potential to support afterschool and summer learning programs. It provides guidance and tools to help networks engage with state and local audiences, including information about who to engage, which messages to use, and how to participate in critical discussions.

Networks may share the messages and materials in this playbook during presentations, at meetings, and via newsletters, websites, blogs, Facebook, Twitter, listservs and other platforms. The materials can be shared verbatim or tailored to meet specific needs within a state.

Every state will be operating on its own distinct timeline, so networks should check with state education agencies to determine exact points of engagement. However, a general time frame is as follows:

Summer/Fall 2016	States creating advisory committees and seeking required stakeholder engagement on drafting of Title I plans
Fall/Winter 2016	Draft state ESSA plans posted on state department of educations' websites for public feedback
April 3, 2017	First possible deadline for state ESSA Title I plan, due to the U.S. Department of Education
September 18, 2017	Second possible deadline for state ESSA Title I plan, due to the U.S. Department of Education
Fall/Winter 2017	ESSA goes into effect and funds are made available to states

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Chapter 1: Background and Opportunities for Action

What is the Every Student Succeeds Act?

The Every Student Succeeds Act (ESSA) is the new K-12 federal education law, which reauthorizes the Elementary and Secondary Education Act and replaces No Child Left Behind. It was signed into law in 2015 and will be phased in over the next few years. The law was designed to increase opportunities for local input and flexible decision making based on what communities and states need. A key goal of the new law is to ensure all students have access to a quality education—inside and outside the classroom.

Why does ESSA matter to afterschool and summer programming?

Many areas in the law provide opportunities to boost student achievement by building and strengthening before, afterschool and summer learning opportunities. The following describes each relevant title of the law and opportunities for state networks to engage in the implementation process.

Title I

Every state will need to submit a new Title I plan to the U.S. Department of Education. This plan will determine the accountability measures and the types of supports schools will use to track and improve student outcomes—at the state level and at the local district level. Each state also must show the U.S. Secretary of Education that public comments were taken into account before the plan is approved. States are required by law to make a draft plan available for public comment for at least 30 days. There are multiple opportunities for afterschool networks to weigh in on their state's plan to position afterschool and summer programming as a support that will help states achieve their goals AND make the case for more resources for out-of-school time programming.

Title I: Opportunities for Action

Provide input on the state plan

- **Ask your state education agency** if your network or a provider can be formally included in the development of the state plan. Some states are forming advisory councils and are including afterschool representation as part of the council.
- **Participate in any listening tours** your state education agency is having and share stories, facts and any materials you have to show how afterschool and summer programs are critical to academic success.
- **Make sure the state agency knows** that afterschool is an allowable use of Title I funding.
- **Sign up for any email lists** that provide updates about how the state is moving forward with its plan. Understand and track your state's timeline.
- **Meet with superintendents** and other education officials to provide input on your state's plan. Submit model language for your state's plan.

Chapter 1: Background and Opportunities for Action

Review and comment on state plan

- **Understand the timeline** for release of the state plan in your state.
- **Monitor the release** of your state plan and submit comments.
- **Learn more about fifth indicators.** Get informed about discussions of accountability indicators for school quality and student success. *Learn more about fifth indicators.*
- **Share those comments** with providers and other partners and encourage them to submit similar comments.

Ensure allocation of Title I funding includes afterschool

- **Work with principals** to ensure they are aware that funding can be used to support afterschool programming.
- **Encourage parents** to advocate for quality, affordable afterschool opportunities.

Title II: Teacher Preparation and Development

Title II aims to increase the effectiveness of educators throughout their teaching career so they can help all students improve their academic achievement, especially low-income and minority students. The U.S. Department of Education released *guidance* in September 2016 encouraging states and districts to use Title II funds to make sure all children have access to an effective teacher and to ensure teachers in high-need schools have the extra support they need. Uses of Title II include many areas relevant to the afterschool field, including:

- Providing high quality trainings in STEM and Career & Technical Education.
- Supporting the integration of technology into curricula and instruction.
- Recruiting qualified individuals from other fields, including mid-career professionals.
- Assisting local educational agencies and schools in effectively recruiting and retaining teachers, principals, or other school leaders who are effective in improving student academic achievement.

To receive grants under Title II, both the state and local agencies are required to undertake **meaningful consultation** in developing an application, which includes involvement of “teachers, principals, other school leaders, as well as other organizations with relevant and demonstrated expertise in teacher training and preparation.” Afterschool providers can be among those consulted.

Title II: Opportunities for Action

Work with local and state education agencies to ensure they know afterschool settings can be considered environments where teachers gain real-world training experience and earn hours of practice and observation.

Ask your state education leaders to ensure the final state plans enable school staff and afterschool staff to attend all joint trainings and professional development opportunities, particularly in the fields of positive youth development and science, technology, engineering and math (STEM).

Chapter 1: Background and Opportunities for Action

Title IV, Part A: Student Support and Academic Enrichment Grants

Districts receiving these funds will have great discretion in how to allocate them—with the intent of providing states and districts with more flexibility in assisting students and families. Regardless, districts that do receive funds are expected to coordinate them in partnerships with non-profits. Funds can be used to pay for increasing collaborations between schools and STEM afterschool programs and for funding resource counselors to establish community partnerships, as well as programs to support mentoring and healthy lifestyles for students. Because these funds will flow to schools and students where these types of needs have been identified, state level afterschool advocates can help local afterschool providers and parents participate in the needs assessment process in local communities.

Title IV, Part A: Opportunities for Action

Work with local education agencies to prioritize afterschool

- **Inform local needs assessments.** If your local education agency must conduct a needs assessment (because they are set to receive more than \$30,000), work to ensure that access to safe, supportive programs from 3 to 6 p.m. is part of the assessment for a well-rounded education.
- **Create fact sheets** about how afterschool supports a well-rounded education and safe and healthy schools so that key stakeholders can make the most informed decisions.
- **Work with local afterschool providers** that are part of your network to ensure they have the tools they need to engage in the needs assessment process.

Title IV, Part B: 21st Century Community Learning Centers

Each state is required to submit a plan for implementing 21st CCLC as part of either a consolidated state plan or as a stand-alone Title IV plan. As with Title I, states are required to show that public comments were taken into account. Statewide afterschool networks can engage with state agencies to provide input on the plan.

Based on the plan submitted, state education agencies will need to write a new request for proposals (RFP) for 21st CCLC. States are required to engage in meaningful consultation with stakeholders in the development of the new 21st CCLC RFP. The state education agencies will be revisiting and updating eligibility criteria, competitive priorities and indicators as part of the re-write. In addition to weighing in on those changes, afterschool networks can remind SEAs about the role networks and intermediaries can play in providing professional development, capacity building, technical assistance and training to grantees and potential grantees through the increased percentage in funding for 21st CCLC state activities under ESSA.

Chapter 1: Background and Opportunities for Action

Title IV, Part B: Opportunities for Action

Weigh in on state application

- **Use the process** to develop and/or maintain a relationship with your state's 21st CCLC director.
- **Make the case** that afterschool advocates should be included among those consulted about the new RFP.
- **Offer input** on the updated RFP regarding eligibility criteria, competitive priorities, quality, professional development and outcomes measurement.
- **Provide ideas** on the how your state 21st CCLC office can utilize the statewide afterschool network and similar intermediaries to provide professional development, capacity building and technical assistance and training to grantees and potential grantees through the increased percentage in funding for 21st CCLC state activities under ESSA.

Offer technical assistance

- **Work** with the 21st CCLC directors to roll out the updated RFP.
- **Work with state your education agency** to serve as a technical assistance provider to sites receiving 21st CCLC funding.
- **Look for opportunities** to help the state improve the quality of its programs through professional development.

For more detailed instructions and discussion questions, please visit [Chapter 2](#).

Chapter 2: Spotlight on 21st CCLC RFP

As the Every Student Succeeds Act (ESSA) is implemented at the state level, afterschool advocates have the opportunity to provide feedback to their state education agency (SEA) on Title IV, Part B: 21st Century Community Learning Centers. The first step will be helping to shape the 21st CCLC section of the state ESSA application that will be submitted to the U.S. Department of Education. Even while those applications are under development, SEAs will be revising their RFP process for 21st CCLC funding.

This tool is specifically designed to help afterschool advocates shape the 21st CCLC RFP.

Goal	Action Steps
Be a partner: Ensure the afterschool community is meaningfully consulted in the development of the new 21st CCLC RFP.	<ul style="list-style-type: none"> ■ Contact your state 21st CCLC director to ask how the new RFP is being designed ■ Ask to join the design process, bringing your expertise of programs on the ground
Be an interpreter: Ensure the new 21st CCLC RFP incorporates revisions based on new language in ESSA, such as changes to allowable activities and performance measures, and retains key provisions, such as eligible entities.	<ul style="list-style-type: none"> ■ Help to navigate the complicated language (e.g., the inclusion of “external organizations”) ■ Highlight the new language on expanded learning programs ■ Clarify that community-based organizations are allowable lead applicants
Add your technical expertise: Help your SEA understand that external organizations are technical assistance providers (like networks or intermediaries) that may help provide a grantee with professional development or technical assistance to help them reach quality standards.	<ul style="list-style-type: none"> ■ Make the case that your SEA increase its reserve for training and technical assistance and position your network to provide these services, as appropriate ■ Look for opportunities to help the state improve quality through professional development and technical assistance
Provide insights on grant RFPs: Use your knowledge of the field and what the youth and the state need to design strong RFPs that lead to effective programs.	<ul style="list-style-type: none"> ■ Offer feedback or suggestions on eligibility criteria, competitive priorities, quality, performance measures, etc.
Inform and educate: Help legislators, partners, businesses, parents, and other stakeholders learn about the process.	<ul style="list-style-type: none"> ■ Consider looping in friendly state legislators to let them know how the process is moving forward and how they can help

Chapter 2: Spotlight on 21st CCLC RFP

Become/Remain a Partner with Your State Education Agency

Develop/continue to build a relationship with your state's 21st CCLC director. Find time to meet with your 21st CCLC director to find out how he or she is addressing 21st CCLC in the state ESSA application and what the process will be for revising the state RFP. Offer to be a resource to your SEA in the process.

Make the case that afterschool advocates should be included among those consulted about the new RFP. In preparing new RFPs, ESSA requires SEAs to conduct meaningful consultation with: parents, teachers, principals and other school leaders, specialized instructional support personnel, students, community-based organizations, local government representatives, and other stakeholders who have relevant and demonstrated expertise in programs and activities.

Help Your State Education Agency Understand and Interpret the New Law

Clarify for your state education agency the meaning of "external organizations."

- The new law mentions "external organizations" and "partners"—these are two distinct ideas.
- External organizations are technical assistance providers (like networks or intermediaries) that for example, may provide a grantee with professional development or technical assistance to help them reach quality standards.
- Partners are the organizations written into local grants that will have a role in providing services to students.
- This distinction is important because states under the law should create a list of pre-approved external organizations but not partners.

Ensure the meaning of "expanded learning programs" in Title IV, Part B of ESSA is understood. This section of the law requires that states that choose to allow grantees to extend their school day for all students with 21st CCLC funding must: 1) add a minimum of 300 additional hours of programming each year; 2) ensure programming be 'afterschool-like' in nature and not an extension or addition of traditional classroom activities; and 3) require partners for any local education agency seeking this type of grant. Regular afterschool, before school, and summer programs are not subject to these special conditions.

Clarify that schools and community-based organizations continue to be eligible lead applicants for 21st CCLC grants. Either schools or community-based organizations are legally able to apply as long as they propose to serve populations of students in which 40% or more are eligible for Free and Reduced Meal Status (FARMS) or target their services to schools identified by the state as being in need of support.

Chapter 2: Spotlight on 21st CCLC RFP

Be a Technical Expert

Remind your state that the set aside for quality has increased from 3% to 5%. Research¹ shows that the quality of afterschool programs is key to significant positive outcomes. Many statewide afterschool networks, as well as other state and local intermediaries, are well-positioned with the tools and training that can help programs

develop, monitor, and increase quality. Encourage your SEA to increase the resources devoted to quality improvement activities and share the tools and resources your network has (i.e., for capacity building, parent engagement, and professional development) to make the case for using the additional investments in technical assistance.

Provide Insights into Building a Strong Grant Program

Weigh-in on competitive priorities that your SEA may be considering. Based on needs assessments, gaps analysis, and other research that your network has conducted in your state, consider making recommendations about competitive priorities, such as middle school and/or STEM programs.

Help your SEA determine new performance measures to consider as part of 21st CCLC. Under ESSA, states have the opportunity to expand beyond the currently required GPRA indicators to include performance measures that better reflect the strengths of the afterschool field, such as school engagement, school day attendance, employability skills, or other areas based on 21st CCLC state data.

¹ www.afterschoolalliance.org/research.cfm

Chapter 2: Spotlight on 21st CCLC RFP

The 21st Century Community Learning Centers (21st CCLC) program has been preserved and updated in the new federal Every Student Succeeds Act (ESSA). State education agencies (SEAs) are currently reviewing the changes to the law as they prepare new Requests for Proposals (RFPs). The following discussion questions are intended to help the afterschool field and providers offer their input to state agencies as RFPs are developed.

Discussion Questions to Help Shape RFP

- Under ESSA, states have the opportunity to expand beyond the currently required indicators used to evaluate 21st CCLCs to include performance measures that better reflect the strengths of the afterschool field, such as school engagement, school day attendance, employability skills, or other areas based on 21st CCLC state data. What performance measures do you think the state should look at to determine success of 21st CCLC?
- If an external organization were to provide you with technical assistance and training before, during, or after receiving a 21st CCLC grant, what sort of topics would you most like to see offered? Are there current technical assistance offerings provided by the SEA that you would change to better meet your needs?
- ESSA now allows an SEA to automatically renew 21st CCLC grants based on an entity's performance during the proceeding sub grant period, if it so chooses. Should the SEA automatically renew 21st CCLC grants based on performance in the previous grant cycle? Why or why not? What specifically do you think the criteria for renewal should be?
- What aspects of your state's RFP process may be impacting equity across the state and how should your state address that? For example, how can the SEA ensure distribution of sub grantees is equitable across rural and urban communities? Should the SEA reconsider the length of grants and/or reconsider different step-down formula for funding in years 2-5?
- ESSA now requires the program activities to align with the challenging state academic standards to improve student academic achievement and overall student success. What types of supporting information should/should not be requested by the SEA in an RFP to illustrate that activities align with state academic standards to improve student academic achievement and improve overall student success?
- ESSA presents an opportunity for the SEA to consider new priorities within the RFP process. Are there state priorities related to high-poverty, low-performing schools that we should consider? Priorities that could help promote college and career readiness? Priorities that could strengthen services for families and promote stronger family engagement? Other suggestions?
- In addition to 21st CCLC under Title IV, Part B, ESSA allows Title I and Title IV, Part A funds to be used to support afterschool programs, but that decision will be based on local school and community needs assessments and local school and district officials. How can your program build or strengthen relationships with school and community leaders to make a case for these funds supporting quality afterschool programs for children?

Chapter 3: Engaging ESSA Audiences

Who should I talk with?

State Education Agencies and State Superintendents

State education agencies are responsible for writing and submitting the new Title I plan to the U.S. Department of Education. The agencies will be soliciting feedback throughout the writing process and posting the draft plan online in the winter.

[Find contacts at your state education agency](#)

[Find your chief state school officer](#)

- Understand their timeline
- Get on their email lists
- Attend their meetings
- Review their plans
- React/submit comments on their plans

Local Education Agency (LEA) Superintendents

LEA superintendents will be responsible for orchestrating the local plans needed under the law. They will also determine how Title IV, Part A Student Support and Academic Enrichment Grant dollars can be spent, including the creation of a needs assessment where applicable.

[Learn more about local superintendents](#)

- Aim to get afterschool mentioned in your local plan
- Aim to get afterschool listed in outgoing guidance from LEA to schools
- Ask LEA advocates to reach out to their superintendent to encourage he/she prioritize afterschool

Principals

Principals control the use of Title I dollars and make decisions on how the funding can be spent. Some principals are already champions of afterschool and summer programming because they understand the connection back to academic success, but others need to become informed so they can become champions as well. Principals will also be key to the needs assessment process for Title IV, Part A funds.

- Develop relationships with principals in your state
- Ensure they understand afterschool is an allowable use of Title I funds
- Encourage parents to contact their principals and share stories
- Invite principals to visit afterschool sites

State 21st Century Community Learning Center (21st CCLC) Coordinators

Coordinators or directors will be developing the new proposal process and funding application for 21st CCLC programs.

[Find your 21st Century Community Learning Center coordinator](#)

- Develop a relationship with your director/coordinator
- Share success stories
- Contribute to the proposal rewrite process

Chapter 3: Engaging ESSA Audiences

Who should I talk with? (cont.)

State and Local Boards of Education

This may be a good venue to do a presentation to ensure that the connections between afterschool, student support, and opportunities in ESSA are explicitly drawn out.

Find out how many seats there are on your state board of education

Learn more about your state board of education

Learn more about your local school boards

Providers

Afterschool and summer providers throughout your state can be champions for ensuring afterschool is a priority throughout state plans. They can talk with principals and superintendents and share stories and data about how their afterschool programs help students increase academic achievement, reduce absenteeism and help working families. Providers can also comment on the draft plans issued by the state and encourage parents to weigh in as well.

Individual Parents and Parent Groups

Parents are able to share their stories, contact their policymakers and talk with their principals about why they support afterschool and summer programming and how important it is to working families.

Students

Students, especially middle and high school students, can share valuable input about the types of supports they need to help ensure academic success. They should be included in the process of determining student supports. Informing them of their options and listening to their needs will be important.

Chapter 3: Engaging ESSA Audiences

How should I prepare?

Research shows that out-of-school time programs contribute to many of the goals outlined in ESSA, including helping schools graduate academically prepared students on time and ready for college and career; reducing absenteeism; closing achievement gaps; and building strong partnerships between schools and communities. Quality afterschool and summer learning programs also provide critical support to working

families, benefit the economy, and help build strong, safe communities.

Leaders and others who influence implementation of ESSA need to understand the benefits of out-of-school programs and how they contribute to priorities defined within individual state education plans, as well as top priorities set by districts and schools.

Consider the following in preparation for meetings, presentations, events and other opportunities to engage with important stakeholders:

- **Know your audience.** Think about their perspective—what do they need to hear? What is in it for them? Be as specific as possible when asking them to do something.
- **Be clear about your message.** What are the two or three points you want the person to learn or remember? Test your message with a teenager or a neighbor. Do they get it? Are they “sold”? If not, try again.
- **Tell brief stories.** People are moved by stories and the emotion behind them more than they are by data. Prepare in advance a short, simple story that paints a picture of how afterschool or summer programming has helped a child, teacher or family. It should convey your optimism and connect to an issue that is important to your audience.
- **Anticipate tough questions and practice the answers.** You should almost never be caught off guard or surprised. Sometimes the hardest question is “how can I help.” Know what you want your audience to do. Be prepared to make a plan and agree on next steps.
- **The ask.** An “ask” is a specific request that you make of someone during a meeting. A good ask is within the power of the person you’re talking with, and gives him or her a specific task that will help your network. Your ask should be timely and connected to an issue that is important to the person you’re talking with.

Chapter 3: Engaging ESSA Audiences

What should I share?

The ESSA toolkit (essa.afterschoolalliance.org) includes a series of factsheets and graphics that connect out-of-school programs to a range of topics that are prioritized within ESSA: chronic absenteeism, academic achievement, STEM learning, graduation rates, student discipline and behavior, student health and wellness, social emotional learning, summer learning loss and closing achievement gaps.

These materials were developed to help networks and partners prepare for formal meetings, speaking opportunities, casual conversations, and media interviews. The

intent of the messages is to provide top-line language that describes our collective efforts to increase support and funding for quality afterschool and summer learning programs.

Some of the factsheets and graphics include data from the America After 3PM series that can be tailored with state-specific data.

Networks are encouraged to share these assets at meetings, during presentations, and with providers, parents and partners. The materials can be printed, included in presentations and shared via email and across a variety of online platforms.

If you have any questions about the messages or need additional information about the factsheet series, please contact Jillian Luchner, JLuchner@afterschoolalliance.org.

Chapter 4: Influencing Your State’s ESSA Plan

This resource is intended to help the afterschool field participate in meetings focused on ESSA implementation and offer direct input to the statewide education plans required by ESSA.

The following is provided for each relevant title of the law:

Talking points about the role of afterschool in ESSA implementation to help networks and advocates prepare for and participate in listening sessions and other meetings. You also may need to create some talking points of your own!

Afterschool asks detailing what we would like to see in draft and final plans. We also encourage you to consider specific “asks” for your state and to focus on key points provided below that help support those asks.

Sample language for draft ESSA plans that can be shared with key decision-makers and stakeholders involved in writing the statewide plans that will be submitted to the U.S. Department of Education. You may also [download a one-page Word document](#) with the sample language for all relevant titles.

Factsheets and other resources available on the ESSA toolkit (<http://essa.afterschoolalliance.org>) may help supplement your talking points and asks. If you have questions, need additional support, or want to share points that resonated effectively at one of your meetings, please contact Jillian Luchner, JLuchner@afterschoolalliance.org.

Title I

Talking points: The role of afterschool in ESSA implementation

- Afterschool and summer programs are an allowable use of Title I funding.
- Title I explicitly lists afterschool as an intervention for schools identified for targeted support, because many students need additional time, alternative settings, and safe, supportive spaces to interact with adults.
- Quality afterschool provides evidence-based supports for academic indicators and “fifth indicators,” that are related to school quality and/or student success, including attendance, behavior, coursework, health and wellness, and STEM.
- Afterschool programs define quality through multiple student indicators, including parent and student survey tools, behavior, homework, and attendance. This allows afterschool networks to provide states with expertise about how to incorporate such indicators for a more holistic picture of student success and well-being.
- Afterschool provides supports for well-rounded students, increasing student engagement in school and developing health and wellness, hands-on learning, social and emotional skills, leadership, and employability skills, among others.
- Students’ connections to passions and career interests are often sparked in out-of-school time, which can lead to greater perseverance during the school day and throughout the education pipeline from kindergarten through career. Three in four Nobel winning scientists say their passion was first sparked in out-of-school settings.¹
- Quality summer learning programs can help close the achievement gap and have been shown to reduce—and even eliminate—the “summer slide.”

¹ <http://www.click2sciencepd.org/about/why-out-school-stem-important>

Chapter 4: Influencing Your State's ESSA Plan

- High-income parents (those in the top 20% of the income distribution) spend up to seven times as much on enrichment for their children compared with families in the lowest income distribution, which makes access to afterschool programs an important equalizer in resource equity and opportunity.
- Afterschool leverages community funding and parent and community engagement. For example, on average, a 21st CCLC program brings in \$67,000 per partner and averages nine partner organizations per grantee.
- Only one in three 21st CCLC grants get funded nationally, which means many more schools and communities need these programs.

Asks: What we'd like to see in draft and final plans

- List afterschool and summer programs as an allowable use of Title I funds in the state plan.
- List afterschool as an evidence-based intervention for supporting student success.
- For the school quality and student success indicators (fifth indicators), adopt a dashboard of multiple indicators including, at a minimum: attendance, school engagement, safety, and opportunities for participation in afterschool and summer programs. *[Note: some states currently employ school climate surveys that address multiple indicators at once, however not all of these include access to afterschool and summer programs, which may need to be added as a separate indicator.]*
- Include access to and involvement in afterschool programs with enrichment and academic components as a mandatory component in any state and local needs assessments.
- Include access to and involvement in afterschool programs in any report cards issued by schools and/or districts.
- Include access to and involvement in afterschool in all conversations about resource equity.
- Work with state afterschool networks to provide technical assistance to districts and schools that provide (or are hoping to provide) quality afterschool and summer programs.

Sample language for draft ESSA plans: Title I

- The state recognizes that afterschool and summer learning programs are an effective use of Title I funds. The state, therefore, encourages district level administrators, school boards, and principals, to include afterschool and summer learning programs as an allowable expenditure for student support and school intervention and to inform parents, students, teachers and other stakeholders of the availability of afterschool offerings.
- State and district level needs assessment tools must include questions about student access to and participation in afterschool and summer academic and enrichment programs.
- School report cards and/or performance reviews must include at least one measure of access to afterschool and summer learning programs available to students who attend the school. Examples of such a measure might include the percentage of students in the school who report having access to and the percentage of students utilizing affordable afterschool and summer opportunities.

Chapter 4: Influencing Your State's ESSA Plan

- District level ESSA plans on the issue of resource equity should include measures of access to quality afterschool and summer learning programs for all children.
- The state will work with the [insert name of statewide afterschool network] to provide quality evaluation tools and professional development to afterschool and summer learning programs funded under this title.

Title II: Teacher Preparation and Development

Talking points: The role of afterschool in ESSA implementation

- Afterschool settings provide opportunities for training teachers by giving them experience in diverse settings with diverse groups of students.
- School day teachers and afterschool staff in some places are already participating in joint training in the areas of positive youth development, race and equity issues, and hands-on STEM.

Asks: What we'd like to see in draft and final plans

- Provide opportunities for school staff and afterschool staff to attend joint training and professional development.
- Provide teachers with real-world training and experience in diverse settings, including afterschool and summer programs, as part of the process for earning their hours of practice and observation.

Sample language for draft ESSA plans: Title II

- The state encourages collaborations among educational instruction providers, for example local universities, schools of education, and training institutions like science centers and museums, to create collaborations for training teachers in hands-on and experiential learning.
- The state encourages districts to coordinate teacher in-service training and professional development with local school and community-based afterschool provider staff so that students are receiving consistent, coordinated evidence-based supports, positive youth development training, and resources that extend from the school day through to other programming.

Chapter 4: Influencing Your State's ESSA Plan

Title IV, Part A: Student Support Grants

Talking points: The role of afterschool in ESSA implementation

- Well-rounded supportive education includes the wrap-round services offered by afterschool and summer programs that help to support students' academic, social, and personal development, as well as a safe and supportive environment.
- Afterschool and summer programming supports students during their transitions between grades and levels of schooling and has an evidence base of improved graduation rates for students who regularly attend quality programs.
- Afterschool program participation is associated with fewer behavioral infractions during the school day and fewer suspensions.
- Afterschool programs show the greatest effects on student improvement in high-risk populations (e.g., low-income, minority students).
- Afterschool and summer programs provide opportunities for families to be part of their students' academic and enrichment experiences outside of the school day.
- When schools partner with community-based organizations, they are able to tap into additional resources, including staff and youth development expertise. This exponentially increases the supports available to students.

Asks: What we'd like to see in draft and final plans

- Explicitly state that the Department of Education recognizes afterschool and summer programs as evidence-based supports that help provide a well-rounded supportive education for students—and that districts can choose afterschool and summer programs as such supports.
- Encourage local districts to build on STEM learning during the regular school day by using Title IV, Part A funds to provide afterschool STEM programs that offer hands-on engagement and help students develop their interests, confidence, and experience in career building pathways.

Sample language for draft ESSA plans: Title IV, Part A

- The state recognizes afterschool and summer programs as evidence-based supports that help provide a well-rounded supportive education for student success.
- State and district level needs assessment tools must include questions about student access to and participation in afterschool and summer academic and enrichment programs, particularly in the STEM fields (science, technology, engineering and math).
- The state encourages collaborations among school, afterschool program, and informal program personnel to improve the integration of programming and instruction in the STEM fields (science, technology, engineering and math).

Chapter 4: Influencing Your State's ESSA Plan

Title IV, Part B: 21st Century Community Learning Centers

Talking points: The role of afterschool in ESSA implementation

- 21st CCLC providers need access to knowledgeable and trusted resources who understand the needs of afterschool and summer providers and have a history of helping to advance afterschool.
- Staff quality is a key determinant of program quality. 21st CCLC providers need quality professional development opportunities and access to vetted resources who can help them achieve results for kids and families.

Asks: What we'd like to see in draft and final plans

- Ensure that afterschool networks, programs, parents, and students are meaningfully consulted in the development of RFPs and are included in state-level advisory groups for 21st CCLC.
- Use the increased available quality set aside at the 5% level with the understanding that the SEA will work with experienced technical assistance providers (intermediaries, such as networks) to build program quality and provide staff professional development opportunities that can contribute to student outcomes.
- Define "external organizations" and "partners" as two distinct ideas. "External organizations" are technical assistance providers (like networks or intermediaries). For example they may help provide a grantee with professional development or support reaching quality standards. "Partners" are the organizations in local grant applications that will provide a role in the provision of services to students. This distinction is important because states under the law should create a list of pre-approved "external organizations" but not "partners."
- Ensure "expanded learning programs" for states allowing extended school days follow the law and 1) add a minimum of 300 additional hours of programming each year; 2) ensure programming be 'afterschool-like' in nature and not an extension or addition of traditional classroom activities; and 3) require partners for any LEA seeking this type of grant. Regular afterschool, before school, and summer programs are not subject to these special conditions.
- Clarify that both schools and community-based organizations are eligible to apply for 21st CCLC grants.

Sample language for draft ESSA plans: Title IV, Part B

- The State Education Agency will convene a 21st Century Community Advisory group for meaningful engagement by inviting all the partners explicitly stated in the law, as well as parents, teachers and students who will be instrumental in re-designing the Requests for Proposals, including contributing to the priorities, performance measures and methods of measurement.
- The state designates up to 5 percent of its allocation under ESSA Sec. 4202 (c) (3) to ensure quality and professional development efforts, including through contracts with the [\[insert name of statewide afterschool network\]](#) to provide the quality measurement tools, monitoring, and professional development support for new and returning grantees.

Chapter 4: Influencing Your State's ESSA Plan

- The state clarifies that the “external organizations” expected to undergo state pre-screening in the law are those providing generalized technical assistance and professional development, not those partners applying jointly with school districts or as community based organizations. External organizations with experience delivering professional development, skills training, research-based curriculum support, or quality assessment tools in the school-age care community will be sought out to apply for pre-screening. In contrast, grantee community partners working with schools and local education agencies to provide services for students and/or families are not expected to undergo this process.
- The state stipulates that the “expanded learning programs” referenced in this section of the law are those which extend the school day for all students at a particular school. Grantees desiring to apply under this provision must: 1) add a minimum of 300 additional hours of programming each year; 2) ensure programming be ‘afterschool-like’ in nature and not an extension or addition of traditional classroom activities; 3) require partners for any local education agency seeking this type of grant. Regular afterschool, before school and summer learning programs, which are distinguished from expanded learning programs by not being applied to the whole school population, are not subject to the above conditions.
- The state clarifies that while schools and community based organizations may choose to apply independently each as their own lead grantee, those that apply jointly together as collaborative partners will be awarded competitive priority. The state recognizes that many regional high schools have large concentrations of high need students without meeting the Title I threshold because they serve a mix of students from a broad and diverse area. The state welcomes applications proposing to serve students attending these non-Title I schools under the condition of high need.

Additional Resources

The Afterschool Alliance:

- Ongoing Policy Blogs with more on ESSA on [Afterschool Snack](#)
- Hosted webinar: [ESSA: What does it mean for Afterschool and Summer Learning](#)
- Produced a [Frequently Asked Question sheet on ESSA](#)
- Prepared a [Side by Side chart](#) comparing 21st CCLC under NCLB and ESSA
- [Submitted comments to ED](#) on the implementation of Title IV part B (21st CCLC)
- Submitted to ED comments on [Title I](#)
- Produced a [summary of opportunities for afterschool in ESSA](#)
- Additional Webinars: [Sign up here](#) to learn more.

Learn more about [your state's plans for implementation](#) on the Collaborative for Student Success Website and find [your state ESSA webpage](#) through the National PTA

U.S. Department of Education:

U.S. Department of Education provides background information about what ESSA is, how it is different from No Child Left Behind, and updates on how it will be implemented nationally.

Coalition for Community Schools ESSA Resources:

Provides resources and tips on how stakeholders can engage with states about ESSA, as well as other partner resources to learn more about ESSA.

Get ESSA Right:

Provides information from the National Education Association about ESSA implementation at the federal and state level. Also includes resources specifically for communities, a state map with contact information for each state's Education Association, and general ESSA updates.

Ed Reform Now:

Breaks down information and provides news updates on what is happening with ESSA state-by-state.

Council of Chief State School Officers Guide:

Provides a Guide on Stakeholder Outreach document, breakdowns of various ESSA components, and some individual state plans and comments.

Questions PTA Advocates should ask about ESSA Implementation:

Provides ideas for important guiding questions when speaking with ESSA leaders in your state, as well as a link on the last page to find your state's ESSA website.

National Association for Family, School and Community Engagement:

A quick summary of what ESSA asks parents and families to do to engage in ESSA implementation.

EVERY STUDENT SUCCEEDS ACT (ESSA)

ESSA Implementation Resources for Educators



ESSA Essentials for Educators

The enactment of the Every Student Succeeds Act (ESSA)—a new federal education law—last year provides educators with a unique opportunity to exercise their voice in education policy. Federal regulations that provide the details for implementation, as well as new state and district policies required under the law, are currently being developed. These new rules and policies will have a profound influence on educators’ professional responsibilities and obligations. Educators must be informed about the changes required by the new law and help decision makers ensure that the way the law is implemented will have the most positive effect on the lives of students and the success of schools.

What are the provisions in ESSA that educators should be aware of and advocate for?

1. Assessments—There are a range of changes to assessment requirements in ESSA, including the options for states to use a single summative assessment; allow districts to use an optional high school assessment; use computer adaptive assessments; and allow 8th grade advanced math students to take a higher level assessment that aligns with their advanced coursework.

ASCD Recommendation: States should take advantage of the opportunity to audit the student testing environment, including both state- and district-required tests, for which ESSA provides funding. Results on state standardized tests should continue to be disaggregated and reported publicly. To the maximum extent possible, districts and schools should be given the flexibility to choose and administer the assessments they deem in alignment with and supportive of their educational goals for students.

ASCD Resources: [ESSA webinar: “The Every Student Succeeds Act: What You Need to Know”](#); [ESSA webinar: “ESSA Assessment Changes from A to Z”](#); [ESSA FAQs: Title I, Accountability](#)

2. Accountability—State test scores remain the primary component of state accountability systems despite the elimination of NCLB’s adequate yearly progress requirements. However, other measures that must now be included in state accountability determinations include another academic indicator (besides test scores), the proficiency of English language learners, high school graduation rates, and at least one nonacademic indicator, such as school climate, access to advanced coursework, and chronic absenteeism. This requirement provides a unique opportunity to expand the definition of student success and move toward a whole child accountability system.

E-mail us at gr@ascd.org or visit www.ascd.org/gr for information about ASCD’s Government Relations resources and work.

Join the educator advocacy discussion on Twitter using [#ASCDgr](#) and follow [@ASCD](#) for education policy news and information.



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ASCD Recommendation: States and districts should go beyond the bare minimum of federal requirements and consider more than one nonacademic indicator. Indeed, state accountability systems should include a variety of measures of student success and school quality based on the community's vision. These measures should be designed to ensure schools are delivering a well-rounded educational experience for all students, addressing their comprehensive needs, and providing a safe and healthy school environment.

Resources: [Using Multiple Measures to Redefine Success](#); [Making Accountability Meaningful](#); [Multimetric Accountability Systems: A Next-Generation Vision of Student Success](#); [ESSA FAQs: Title I, Accountability](#); [ESSA webinar: "Measuring Student Success Through Multimetric Accountability"](#)

3. School Improvement—The accountability measures previously listed will be the criteria for identifying schools for either “comprehensive” or “targeted” improvement interventions. A school will be identified for *comprehensive support and improvement* (CSI) if it is among the lowest-performing 5 percent of schools in the state (based on all accountability indicators taken together) or has a graduation rate less than 67 percent (for high schools). CSI schools will be subject to district improvement interventions determined primarily by district leaders, with input from educators, parents, and others. A school will be identified for *targeted support* (TS) if it has a consistently underperforming subgroup. Interventions will be implemented at the school level but monitored by the district. ESSA requires stakeholder involvement in the creation and implementation of evidence-based strategies for school improvement.

ASCD Recommendation: Districts should take advantage of the flexibility allowed in ESSA to select or create school improvement strategies that reflect a whole child approach, incorporating whole child indicators systemically through reform efforts. Any school improvement efforts must include educator training and supports aligned with the whole child approach to help teachers and school leaders address the comprehensive needs of students and improve their academic outcomes.

Resources: [ASCD School Improvement Tool](#); [Whole Child indicators](#)

4. Professional Development—ESSA expands the allowable use of professional development (PD) funds to more school personnel. In fact, many of the provisions in the PD section, Title II, specifically mention paraprofessionals and other school leaders, and some also extend PD opportunities to any school personnel directly involved with Title I students. And there is an additional 3 percent state set aside for PD for school leaders. The law also updates the definition of PD to include job-embedded, ongoing activities and programs that can help to drive instructional improvements throughout the school year. Principals and school leaders (including any school employee or officer responsible for the daily instructional leadership and managerial operations in the school) can also take advantage of newly authorized residencies to help prepare them for the job.

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ASCD Recommendation: Given the multiple opportunities and funding sources that are available for educator PD, state plans should incorporate personalized, job-embedded PD wherever possible. Districts should ensure that no funds allocated at the federal level for educator PD are diverted to other purposes. States should take advantage of the option to create consortia that focus on reciprocity of teacher licensure to help facilitate the free movement of educators to fill open positions.

Resources: [ESSA FAQs: Title II and Support for Educators](#); [ESSA webinar: “Professional Development for Educators”](#)

5. Educator Evaluations—ESSA does not require states to evaluate educators. However, if any Title II funds are used to update or improve evaluation systems, ESSA does require that such evaluations be based only in part on student achievement and include multiple measures of evaluation.

ASCD Recommendation: If a district decides to use some of its Title II allocation to revise its evaluation system, educators should provide input on the types of indicators that are most useful in those evaluations in order to help personalize PD opportunities and lead to the most effective improvements. Educator evaluation systems should embody the principle of lifelong learning and recognize and reward educators who fill a variety of roles. Educators should be evaluated on a variety of measures, the results of which must help drive continuous support and improvement.

Resources: [ESSA FAQs: Title II and Support for Educators](#); [ESSA webinar: “Professional Development for Educators”](#); [Using Multiple Measures to Redefine Success](#); [Making Accountability Meaningful](#); [Multimetric Accountability Systems: A Next-Generation Vision of Student Success](#)

6. Well-Rounded Education—Many programs that supported a well-rounded education, such as the Elementary and Secondary Counseling program and the Carol M. White Physical Education Program, were eliminated in ESSA. In their place is a new block grant intended to provide funds for every district to support well-rounded education, provide safe and healthy school environments, and enhance technology in education. The law includes a brand-new definition of a “well-rounded” education that includes everything from physical education to foreign languages to computer science. And, since that definition is mentioned in numerous places in the statute, the allowable uses of funds for those areas are greatly expanded, including Title I’s schoolwide programs and Title II’s professional development.

ASCD Recommendation: Districts use of the ASCD School Improvement Tool as the needs assessment required by ESSA to justify expenditures in the new block grant will help to ensure that all whole child indicators are measured and addressed. Well-rounded education programs can be funded through Title I schoolwide programs and should be considered in school improvement strategies. All opportunities for

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systemically incorporating the whole child approach should be considered, including preparation for educators to address the comprehensive needs of students.

Resources: [ASCD School Improvement Tool](#); [ESSA FAQs: Title IV and School Health](#); [ESSA webinar: “Meeting Students’ Needs Under Title IV”](#); [Funding for Social-Emotional Learning in ESSA](#); [Whole Child indicators](#); [U.S. Department of Education Guidance on Title IV](#)

7. English Language Learners (ELLs)—English language learner proficiency is now a mandatory component of school accountability. In addition, there are several new requirements around ELLs, including the option to either not test first-year ELLs or not have their tests results included in accountability systems for the first year they are identified as ELLs.

ASCD Recommendation: New accountability provisions for ELLs should also reflect the importance of ensuring that schools are meeting the comprehensive needs of these students. The use of multiple measures of accountability will help provide information about how well schools are meeting the needs of ELLs. In addition, English language educators and paraprofessionals should be explicitly consulted about and included in PD opportunities that prepare them to meet the specific needs of ELLs.

Resources: [ESSA webinar: “The Every Student Succeeds Act: What You Need to Know”](#); [ESSA webinar: “ESSA Assessment Changes From A to Z”](#); [ESSA webinar: “Measuring Student Success Through Multimetric Accountability”](#)

8. Funding Levels—Education has not been a federal funding priority, and Title I has received no meaningful appropriation increase in the past eight years. What’s worse, funding for the professional development of teachers has actually decreased by \$500 million during the last decade. Overall, per-pupil state expenditures are less now than they were before the great recession occurred in 2008. The federal Title I and Title II allocations have not seen meaningful increases in about 10 years (since 2006, the Title I allocation has increased by only about \$2 billion and the Title II allocation has decreased by about \$500 million), and states provided less funding per student in the 2014–15 school year than before the recession.

ASCD Recommendation: The increase in the national student population, the historically high number of students living in poverty, and the enactment of ESSA demand greater investments in education to meet the comprehensive needs of students and the goal to graduate all students college, career, and citizenship ready. Titles I and II deserve 10 percent funding increases immediately, and educators can contact their lawmakers to ask for robust funding for the new Title IV block by accessing the ASCD [action portal](#).

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Resources: [Funding for Social-Emotional Learning in ESSA](#); [ESSA webinar: “Professional Development for Educators”](#); [ESSA webinar: “Meeting Students’ Needs Under Title IV”](#)

9. Public Engagement and Stakeholder Input—ESSA requires states to engage multiple stakeholder populations as they implement the new requirements in the statute. From assessments and accountability to school improvement and funding, states are to engage with educators, parents, tribal organizations, the civil rights community, school boards, and many others as they undertake this new work. The U.S. Department of Education published [guidance](#) earlier this year to outline the requirements in the statute and provide states with advice on how to meet these requirements.

ASCD Recommendation: Identify the opportunities for input in your state and district and work with your colleagues and educator networks to ensure educators are included in your state’s decision-making processes. States should abide by Secretary King’s reminder that “meaningful and ongoing stakeholder engagement helps ensure that stakeholders are able to provide feedback and inform continuous enhancement of State and local strategies to improve student outcomes and meet State-established performance goals.”

Resources: [ESSA State Implementation Map](#); [CCSSO Stakeholder Engagement Guide](#); [U.S. Department of Education’s Dear Colleague Letter on Stakeholder Engagement](#)

ESSA Implementation at the State Level

1. What decisions do states have to make? ESSA shifts authority for a myriad of decisions to the state level. See ASCD’s [NCLB/ESSA comparison chart](#) to learn about the changes and new state- and district-level decisions. Here is a brief list of some of the major decisions and actions states must make.

- a. Create new accountability systems with additional indicators of student success and school quality.
- b. Determine the weighting for accountability indicators.
- c. Decide whether to use one or more nationally recognized high school assessments for districts in place of the statewide assessment.
- d. Participate in an innovative test pilot alternative.
- e. Decide whether to use a single summative assessment or multiple interim assessments.
- f. Decide whether to limit the amount of time students spend taking tests.
- g. Determine how to assess and account for ELL proficiency.

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- h. Define “consistently underperforming subgroups” for identification of a school in need of targeted support.
 - i. Decide whether to create a consortia with neighboring states to address teacher reciprocity.
 - j. Work with districts to support evidence-based school improvement strategies.
2. What is my state doing? See ASCD’s [ESSA State Implementation Map](#) to find out and see how you can get involved.

What Should Educators Do?

1. *Get Informed*—You’ve taken the first step by accessing this resource! Additional information and details are available on [ASCD’s ESSA webpage](#), including webinars, FAQs, and links to U.S. Department of Education resources.
2. *Share Information with Colleagues*—Be sure to let your peers and others know what you learn. The more voices that are heard by decision makers, the better. Ask your district leaders about the opportunities to participate in discussions and decision making around ESSA implementation, and tell them you want to get involved.
3. *Prioritize Your Positions, Goals, and Asks*—Which areas are most important to you? Which issues will have the greatest influence on your profession and in your daily work? What changes would you like to see from the current education system in your state regarding standards; educator evaluations; testing; and data collection, disaggregation, and reporting?
4. *Organize and Collaborate*—Develop leadership teams in your school to provide input to decision makers on issues such as which multimetric indicators you believe would be valuable in your state’s new accountability system. Conduct polls within your school to identify professional development activities and programs your colleagues want and need. Present these ideas to your school and district leadership.
5. *Develop a Plan*
 - a. Know the timeline for state decisions.
 - b. Identify the meetings you can attend.
 - c. Share information with colleagues.
 - d. Become a trusted resource for state decision makers.
 - e. Hold the decision-making authority or team accountable for their decisions.
 - f. Keep apprised of the activities and decisions in your state.

ASCD will continue to develop resources to inform you through the entire ESSA implementation process. You may access our ESSA resources—a webinar series, FAQs, ASCD statements and letters, links to U.S. Department of Education resources, and much more—at www.ascd.org/essa. Do not hesitate to send questions to gr@ascd.org.

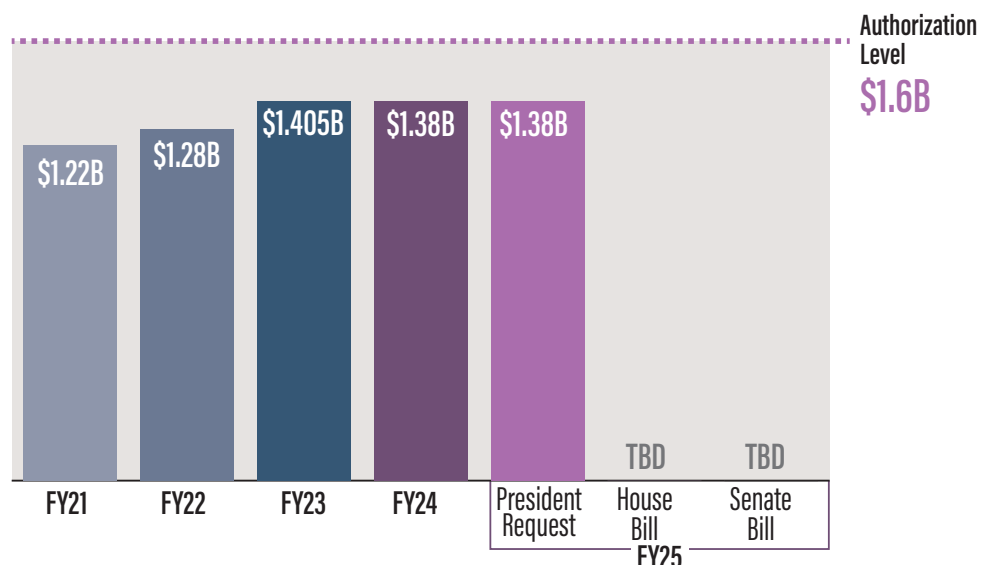
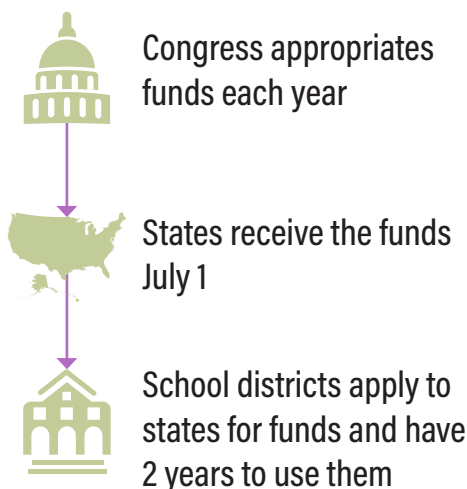


Student Support & Academic Enrichments Grants

Authorized at \$1.6 billion, Title IV-A is a formula grant program that supports the district use of funds in three broad areas:

- 1 **Providing students with a well-rounded education**
- 2 **Supporting safe and healthy students**
- 3 **Supporting the effective use of technology**

The amount districts receive each year is dependent on what Congress allocates.





Student Support & Academic Enrichments Grants

OVERVIEW & FUNDING HISTORY

The bipartisan Every Student Succeeds Act (ESSA) includes a flexible block grant program under Title IV, Part A (Title IV-A), which is authorized at \$1.6 billion. Title IV-A, Part A authorizes activities in three broad areas:

- 1 Providing students with a well-rounded education.**
 College and career counseling, STEM, including computer science, music and arts, civics, IB/AP
- 2 Supporting safe and healthy students.**
 Comprehensive school mental and behavioral health, drug and violence prevention, training on trauma-informed practices, health and physical education
- 3 Supporting the effective use of technology.**
 Professional development, blended learning, purchase of devices

DISTRIBUTION OF FUNDS

ESSA stipulates that each state will receive an allocation based on the Title I funding formula. Using the same Title I formula, the states will then allocate funds to school districts.

Districts receiving \$30,000 or more must conduct a needs assessment and follow the 20/20/60 rule:

20%	Safe and healthy students
20%	Well-rounded education
60%	Across any of the 3 buckets, including supporting effective ed-tech (15% limit on devices)

If a district receives an allocation below \$30,000, the law does not require a needs assessment or setting aside percentages for well-rounded and safe and healthy student programs. However, it must still direct the funds it receives toward activities in at least one of the three categories. The 15 percent technology purchase cap would continue to apply.

FUNDING

CURRENT FUNDING LEVEL

\$1.38B

AUTHORIZATION

\$1.6B

Robust and steady funding for Title IV-A helps ensure districts are able to provide a full array of services and learning opportunities that support the whole child, and improve academic success for all students.

PROGRAM FUNDING NEED

As a formula-based program focused on the flexible, locally-determined use of funds, the grant is well suited for ensuring that a large number of geographically and socioeconomically diverse districts have resources they can direct in a manner that best addresses their particular needs. Title IV-A has continuously maintained bipartisan support in part because of the flexibility it affords states and districts to implement programming based on specific needs of their school communities.

In our 2023 survey of over 600 districts across the nation, the data continuously shows that district leaders appreciate the program's flexibility above all else. When asked about how districts invested in the many allowable uses across the three broad areas, districts selected a wide-range of activities including, but not limited to:

- Funding STEM and computer science,
- Music and the arts,
- Social studies,
- Literacy,
- Environmental education,
- International Baccalaureate and Advanced Placement courses (IB and AP),
- Physical education,
- Health and wellness,
- Professional development for use of educational technology,
- Violence prevention,
- Behavioral and mental health supports,
- And much more.

Survey data also reveals that without these funds, the expansion of existing programs and creation of new programs would not be possible, making the amount of funding second to flexibility in terms of importance for districts. This federal investment is absolutely critical to supporting comprehensive student needs, ensuring a safe and healthy school environment, and increasing access to a well-rounded education necessary for students to thrive in a modern society and workforce.

"Title IV-A helps fill the gaps on crucial programs like schoolwide literacy, educational technology, and safety that are often touted as important but too rarely funded. The importance on inclusiveness, addressing the needs of all of our diverse student groups, and access to a well rounded education has been paramount."

— Chuck Puga, Principal, Smoky Hill High School, Aurora, CO



**For further information,
or if any questions arise,
please contact any
member of the
Title IV-A Coalition
Board of Directors**

ALLY TALCOTT

Executive Director,
Title IV-A Coalition

AMANDA KARHUSE

National Association for Music
Education (NAfME)

AILEEN MA

Collaborative for Academic and Social
and Emotional Learning (CASEL)

ALYSSA MORRISON

Committee for Children (CFC)

KENNETH POLISHCHUK

American Psychological Association
(APA)

JON BERNSTEIN

American Federation of School
Administrators (AFSA)

LINDSAY KUBATZKY

National Center for Learning
Disabilities (NCLD)

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Student Support & Academic Enrichments Grants

WELL-ROUNDED PROVISIONS

The bipartisan Every Student Succeeds Act (ESSA) includes a flexible block grant program under Title IV, Part A (Title IV-A), which is authorized at \$1.6 billion. Title IV-A authorizes activities in three broad areas:

1 Providing students with a well-rounded education.

College and career counseling, STEM, including computer science, music and arts, civics, IB/AP

2 Supporting safe and healthy students.

Comprehensive school mental and behavioral health, drug and violence prevention, training on trauma-informed practices, health and physical education

3 Supporting the effective use of technology.

Professional development, blended learning, purchase of devices

SUPPORTING WELL-ROUNDED EDUCATION

Title IV-A should receive the maximum funding so that all students have access to the variety of educational opportunities — including arts and music, foreign language, social studies and civics, and science and technology — that build the foundation for success in college and career. These disciplines teach valuable skills and have a positive impact on student achievement, but they often end up on the chopping block when districts face tough budget decisions. Full funding of Title IV-A is needed to ensure that all students, including those who attend high-need schools, have opportunities to build the full range of competencies that are required to graduate ready for success in life.

Access to a well-rounded education is vital for student development. Exposure to a variety of educational experiences like STEM activities and career exploration, both in school and during afterschool and summer programming, helps young people develop lifelong relationships with learning and set goals for a bright future. Classes in the creative arts can enhance student learning in other areas, including in language development and math. When teachers integrate social-emotional learning into the classroom, they help students develop resilience and skills to achieve their goals. In high school, Advanced Placement and International Baccalaureate classes allow students to experience college-level coursework and earn credits before graduation.

If a district receives more than \$30,000, Title IV-A requires that at least 20% of funds are used to implement initiatives to a well-rounded education including but not limited to:

- Arts and music
- STEM
- AP/IB
- Computer science
- Civics
- Physical education
- Social and emotional learning
- College and career counseling
- CTE
- Afterschool programs

FUNDING

CURRENT FUNDING LEVEL

\$1.38B

AUTHORIZATION

\$1.6B

Robust and steady funding for Title IV-A helps ensure districts are able to provide a full array of services and learning opportunities that support the whole child, and improve academic success for all students.

HOW ARE DISTRICTS USING THE FUNDING?



Expand STEM courses and provide hands-on learning opportunities in STEM, including computer science.



Provide social and emotional learning programs.



Integrate other academic subjects into STEM subject programs or create or enhance STEAM specialty schools.



Provide or expand after school and summer learning programs.



Increase availability of music education in a variety of offerings and access/purchase instruments of supplies to enhance music education offerings.

What would your district not be able to offer without Title IV-A funding?

"We would likely have to cancel Project Lead the Way engineering courses in our high school, preventing a pathway for graduation for students, if not for Title IV funding. Our credentialed teacher is retiring in the next 2 years, and we are able to use Title IV money to get another teacher credentialed to teach the courses so we won't have an interruption in our course offerings."

—Fairfield Community Schools, IN

"Without Title IV, we would not be able to provide a well-rounded education. Title IV is essential to PBIS, our Music and Theater Program and intramural and competitive athletics. Additionally, Title IV supports MTSS and restorative practices in our schools."

—Cicero School District 99, IL

"Our Social Emotional Screening tools may not have been available without this support. Additionally, our focus on improving school climate through racial equity awareness may not have happened."

—Asheville City Schools, NC

"We were able to provide our middle school with much needed SEL coaching and support by means of ESSER funds. When the time and funds expire we will likely need to discontinue this research-based intervention that has been significantly helping our middle school staff and students if we do not continue to receive other grant funding sources that can be utilized for this purpose."

—Necedah Area School District, WI



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Student Support & Academic Enrichments Grants

SAFE & HEALTHY PROVISIONS

The bipartisan Every Student Succeeds Act (ESSA) includes a flexible block grant program under Title IV, Part A (Title IV-A), which is authorized at \$1.6 billion. Title IV-A, Part A authorizes activities in three broad areas:

1 Providing students with a well-rounded education

College and career counseling, STEM, including computer science, music and arts, civics, IB/AP

2 Supporting safe and healthy students

Comprehensive school mental and behavioral health, drug and violence prevention, training on trauma-informed practices, health and physical education

3 Supporting the effective use of technology

Professional development, blended learning, purchase of devices

SUPPORTING SAFE AND HEALTHY STUDENTS

A strong system of comprehensive supports is equally as important as effective teaching in helping students achieve their academic potential. In order to achieve to their fullest potential, students must be physically, mentally, and socially healthy and feel safe. Ensuring that students have access to safe and supportive learning environments, as well as behavioral, social-emotional, and mental health services promotes student resilience, improves academic performance, and allows children and youth to successfully deal with challenges they may face.

Title IV-A should receive maximum funding so that districts can implement these evidence based approaches to improve school climate, school safety, student mental health, and the overall learning environment. Students who do not feel safe and supported do not learn to their fullest potential and it is imperative that the federal government support these necessary investments to help students thrive.

If a district receives more than \$30,000, Title IV-A requires that at least 20% of funds are used implement initiatives to support safe and healthy students including but not limited to:

- School mental and behavioral health service delivery systems
- Trauma informed policies and practices
- Bullying and harassment prevention
- Social-emotional learning
- Violence prevention programming
- Substance abuse prevention
- Improving school safety and school climate
- Designating a site resource coordinator to connect with community partners
- Mental health first aid training, and
- Professional development activities

FUNDING

CURRENT FUNDING LEVEL

\$1.38B

AUTHORIZATION

\$1.6B

Robust and steady funding for Title IV-A helps ensure districts are able to provide a full array of services and learning opportunities that support the whole child, and improve academic success for all students.

HOW ARE DISTRICTS USING THE FUNDING?



Implement strategies to improve school climate and culture



Implement positive discipline strategies (e.g PBIS, restorative justice)



Increase access to comprehensive school mental and behavioral health services



Implement school safety trainings for educators and students



Provide professional development in mental health first aid to school staff



Provide professional development in evidence-based crisis response/prevention techniques

What, if any, initiatives supported by ESSERS are you concerned may be scaled back, or discontinued, without ongoing and robust funding for Title IV-A?

"SO MANY. ESSER has supported our ability to hire more Community Field Coordinators and mental health staff. Our population of students can't do academics without an equitable focus on social emotional support. The continuation of this focus for funding is critically important."

— Boston, MA

"ESSERS funds were used in our division to support student learning loss and mental health. These funds allowed our division to hire additional staff to serve as transition teachers to support those students most impacted by the pandemic (2), paraprofessionals to provide remediation (2), and an additional behavior specialist to support student's social emotional needs. Our division is currently in jeopardy of losing these services due to lack of funding from the locality."

— Rappahannock County, VA

"We are still recovering from the time spent unable to meet with students in person. In addition we have been able to support students social and emotional needs. Across our district we are seeing these needs more significantly than ever before. Without strong funding we will not be able to respond to our students and families with the support they need to succeed academically."

— Desert Heights Charter Schools, AZ

"Physical Education at the elementary level would possibly be scaled back to 1 or 2 grades rather than all K-5 grades"

—Akron Fairgrove School District, MI

"Our SEL programs would be severely lacking our PLTW Biomedical Science and Engineering would be depleted as well"

— East Gibson School Corporation, IN



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Student Support & Academic Enrichments Grants

EDUCATION TECHNOLOGY PROVISIONS

The bipartisan Every Student Succeeds Act (ESSA) includes a flexible block grant program under Title IV, Part A (Title IV-A), which is authorized at \$1.6 billion. Title IV-A, Part A authorizes activities in three broad areas:

1 Providing students with a well-rounded education.

College and career counseling, STEM, including computer science, music and arts, civics, IB/AP

2 Supporting safe and healthy students.

Comprehensive school mental and behavioral health, drug and violence prevention, training on trauma-informed practices, health and physical education

3 Supporting the effective use of technology.

Professional development, blended learning, purchase of devices

SUPPORTING TECHNOLOGY NEEDS

In order to meet the increasing demands to effectively use educational technology in classrooms and the need for professional development, Title IV-A should receive maximum funding so that districts can adequately support the growth and expansion of digital learning in classrooms. Such an investment is necessary to create a competitive workforce, technology-proficient educators, well-equipped classrooms, sufficiently supported administrative structures, and a curriculum optimized to take advantage of the benefits technology offers to students. It is crucial that the federal government continues to invest in these key components of digital teaching and learning as schools cannot afford to make these significant investments alone.

The use of technology has opened a wide array of exciting learning avenues in classrooms—from streaming educational videos to 3D printing to hands-on-robotics. Teachers no longer stand statically in front of a chalkboard and lecture. Instead they cultivate digital resources and foster creativity by utilizing a plethora of learning devices that engage students in all aspects of learning. Rather than learning solely from their desks, students use technology to collaborate to solve real-world problems, collectively analyze and use data to create advanced science models, and sharpen their 21st Century workforce skills. Maximum funding of Title IV-A would ensure the federal government prioritizes support for the shift to modern classrooms and that all students, regardless of where they live, have the opportunity to engage in digital learning.

While the program does not require a specific portion of funds to be used on technology, at least some money must be spent on the effective use of technology activities, including but not limited to:

- Instructional support for technology
- Blended learning strategies
- Personalized learning
- Securing open and free resources
- Specialized professional development opportunities
- Hiring IT and edtech coaches
- Making technology more accessible to students with disabilities

The program also restricts school districts to using no more than 15% of their allocations for devices, software, equipment and infrastructure.

FUNDING

CURRENT FUNDING LEVEL

\$1.38B

AUTHORIZATION

\$1.6B

Robust and steady funding for Title IV-A helps ensure districts are able to provide a full array of services and learning opportunities that support the whole child, and improve academic success for all students.

HOW ARE DISTRICTS USING THE FUNDING?



Purchase digital tools and services.



Building technological infrastructure (may include assistive technology).



Provide professional development on best practices in instructional technology and virtual instruction.



Provide technology and coursework access to remote/rural/underserved areas.



Provide additional instructional support on the effective use of technology for educators.



Develop/implement personalized learning initiatives.

What would your district not be able to offer without Title IV-A funding?

"Our district was able to employ additional personnel to help bridge the learning loss and this has been successful. This effort needs to continue, but we are unsure how we will find the funds with the ESSER funding. The ESSER funding also funds our summer reading and numeracy camps and without the ESSER funds these will most certainly have to be scaled back or even discontinued without additional funding."

— AL

"With the changing technology, our Instructional Technology Coaches are able to train our staff and/or lead them to evidence-based resources to best use in their classrooms."

— Bensenville ESD, IL

"73% of our rural school population is considered low-income. The families we serve have limited access and resources. Title IV-A funding helps us to provide opportunities for STEM and computer sciences that they would not otherwise receive in the home or local community."

— Dallas ESD, IL

"The use of Title IV-A funds are necessary to carryout the specialized activities and programs, such as after-school programming, enrichment opportunities for students in STEAM/STEM activities, school safety awareness and education, and educational technology that our librarians have come to use for training and purchase of materials for our staff and students."

—Harlandale ISD, TX



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BUDGET OF THE U.S. GOVERNMENT

FISCAL YEAR 2025

OFFICE OF MANAGEMENT AND BUDGET



THE WHITE HOUSE
WASHINGTON

THE BUDGET DOCUMENTS

Budget of the United States Government, Fiscal Year 2025 contains the Budget Message of the President, information on the President's priorities, and summary tables.

Analytical Perspectives, Budget of the United States Government, Fiscal Year 2025 contains analyses that are designed to highlight specified subject areas or provide other significant presentations of budget data that place the Budget in perspective. This volume includes economic and accounting analyses, information on Federal receipts and collections, analyses of Federal spending, information on Federal borrowing and debt, baseline or current services estimates, and other technical presentations.

Supplemental tables and other materials that are part of the *Analytical Perspectives* volume are available at <https://whitehouse.gov/omb/analytical-perspectives/>.

Appendix, Budget of the United States Government, Fiscal Year 2025 contains detailed information on the various appropriations and funds that constitute the Budget and is designed primarily for the use of the Appropriations Committees. The *Appendix* contains more detailed financial information on individual programs and appropriation accounts than any of the other Budget documents. It

includes for each agency: the proposed text of appropriations language; budget schedules for each account; legislative proposals; narrative explanations of each budget account; and proposed general provisions applicable to the appropriations of entire agencies or groups of agencies. Information is also provided on certain activities whose transactions are not part of the budget totals.

BUDGET INFORMATION AVAILABLE ONLINE

The President's Budget and supporting materials are available online at <https://whitehouse.gov/omb/budget/>. This link includes electronic versions of all the Budget volumes, supplemental materials that are part of the *Analytical Perspectives* volume, spreadsheets of many of the budget tables, and a public use budget database. This link also includes Historical Tables that provide data on budget receipts, outlays, surpluses or deficits, Federal debt, and Federal employment over an extended time period, generally from 1940 or earlier to 2029. Also available are links to documents and materials from budgets of prior years.

For more information on access to electronic versions of the Budget documents, call (202) 512-1530 in the D.C. area or toll-free (888) 293-6498. To purchase the printed documents, call (202) 512-1800.

GENERAL NOTES

1. All years referenced for budget data are fiscal years unless otherwise noted. All years referenced for economic data are calendar years unless otherwise noted.
2. At the time the Budget was prepared, none of the full-year appropriations bills for 2024 have been enacted, therefore, the programs and activities normally provided for in the full-year appropriations bills were operating under a continuing resolution (Public Law 118-15, division A, as amended). References to 2024 spending in the text and tables reflect the levels provided by the continuing resolution.
3. Detail in this document may not add to the totals due to rounding.

U.S. GOVERNMENT PUBLISHING OFFICE, WASHINGTON 2024

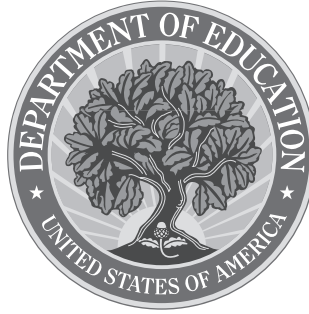
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Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

ISBN 978-0-16-096004-8

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DEPARTMENT OF EDUCATION

The Department of Education (ED) is responsible for assisting States, school districts, and institutions of higher education in providing a high-quality education to all students and addressing the inequitable barriers underserved students face in education. The President's 2025 Budget for ED makes critical investments to: spur the Nation's future prosperity; accelerate academic growth; bolster mental health supports for students at all levels; advance the needs of students with disabilities; increase affordability and quality in higher education; and improve connections between the K-12 system, higher education, and the workforce.

The Budget requests \$82 billion in discretionary funding for ED in 2025, a \$3.1 billion or 3.9-percent increase from the 2023 level.

The President's 2025 Budget:

Preschool to 12th Grade Education

- **Supports Academic Achievement for All Students, Particularly Students in Schools with High Rates of Poverty.** The disruptive effect of the COVID-19 pandemic on student learning has added new urgency to the work of schools. The Budget includes \$8 billion in mandatory funding to provide Academic Acceleration and Achievement Grants to close opportunity and achievement gaps and speed the pace of learning recovery. Carrying forward efforts funded by the American Rescue Plan, these grants to school districts would support evidence-based strategies to increase school attendance, provide high-quality tutoring, and expand learning time, including both in the summer and in extended day or afterschool programs. To help ensure that every student receives the high-quality education they deserve, the Budget also provides \$18.6 billion for Title I, a \$200 million increase above the 2023 enacted level. This funding amount is \$2.1 billion higher than when the President took office, reflecting the President's strong commitment to expanding support for every American student. Title I, which reaches 90 percent of school districts across the Nation, delivers critical funding to schools in low-income communities so they can provide their students with the learning opportunities needed to recover academically from the COVID-19 pandemic and be successful after graduation.
- **Expands Access to High-Quality Preschool.** The Budget includes a major new mandatory funding proposal for a Federal-State partnership to provide free, high-quality preschool to four-year olds, offered in the setting of a parent's choice—from public schools to child care providers to Head Start. The proposal gives States the flexibility to expand preschool to three-year-old children once they make high-quality preschool fully available to four-year-old children. Over the next 10 years, this proposal would dramatically expand access to effective early childhood education, ensuring students enter kindergarten ready to learn. This

proposal would be administered by the Department of Health and Human Services in collaboration with ED. The Budget also includes \$25 million for incentive demonstration grants to create or expand free, high-quality preschool in school or community-based settings for children eligible to attend Title I schools. The incentive demonstration grants, which would require close collaboration among school districts, Head Start, and other community-based providers, would serve as models that could be adopted across the Nation. This program would expand its reach by encouraging districts to leverage Title I funds, along with other Federal, State, and local funds.

- **Bolsters Mental Health Supports for All Students.** The mental health of students, teachers, and school staff is essential for their overall well-being and continued academic recovery, and continues to be a high priority of the Administration, which has delivered an additional \$2.1 billion to mental health programs since 2021. Research shows that students who receive social, emotional, mental, and behavioral supports have better outcomes, including performing better academically. The Budget provides a combined total of \$216 million for mental health programs, including \$200 million from the Bipartisan Safer Communities Act, a 900-percent increase in program funding since 2021. These funds would help increase the number of school-based counselors, psychologists, social workers, and other mental health professionals in K-12 schools.
- **Addresses Critical Educator Shortages.** While the education sector has faced shortages in critical staffing areas for decades, these shortages have grown worse since the COVID-19 pandemic, highlighting the importance of retaining educators and building strong pipelines into the profession. Since 2021, the Administration has supported schools in addressing educator shortages, including by supporting the expansion of evidence-based pathways such as residencies and grow your own programs, which may be provided through teacher registered apprenticeships. The Budget includes \$90 million for Supporting Effective Education Development, \$95 million for the Teacher Quality Partnership program, and \$30 million for the Hawkins Centers of Excellence program, to expand the number of prospective teachers who have access to comprehensive, high-quality pathways and improve the diversity of the teacher pipeline. The Budget also includes critical investments in recruitment and retention of teachers and school leaders, and provides \$173 million for the Teacher and School Leader Incentive Fund.
- **Increases Support for Children with Disabilities.** To support high-quality special education services for over seven million Pre-K through 12 students with disabilities, the Budget provides \$14.4 billion for Individuals with Disabilities Education Act (IDEA) State Grants, a \$200 million increase over the 2023 enacted level. Since 2021, the Administration has secured a \$1.3 billion, or 10-percent, increase in annual funding for the program as well as an additional \$2.6 billion in American Rescue Plan funds to help students with disabilities recover from the COVID-19 pandemic. The Budget also invests \$545 million in IDEA Grants for Infants and Families, to provide early intervention services to infants and toddlers with disabilities. To address nationwide special educator shortages, the Budget also invests \$125 million, which is \$10 million above the 2023 enacted level, in grants to prepare special education and early intervention personnel—addressing another critical educator shortage area.
- **Expands Full-Service Community Schools.** Community schools continue to be a high priority for the Administration as they play a critical role in providing comprehensive wrap-around services to students and their families, including afterschool programs, adult education opportunities, and health and nutrition services, and have been demonstrated to improve academic and other outcomes for students. The Budget provides \$200 million for this program,

an increase of \$50 million above the 2023 enacted level, and a 500-percent, or \$120 million, increase in program funding since the beginning of the Administration.

- **Supports Multilingual Learners.** The number of students learning English as a second language continues to grow in the Nation's schools, and multilingualism is a crucial skill that all students should develop to be competitive in a global economy. The Budget provides \$940 million for the English Language Acquisition program, an increase of \$50 million above the 2023 enacted level, to help students learning English attain English proficiency and achieve academic success. The Budget provides \$72 million in dedicated funding to help schools hire more bilingual teachers and allow States and districts to provide professional development on multilingual education for existing teachers and staff.

Education Beyond High School

- **Improves College Affordability and Provides Free Community College.** To help low- and middle-income students overcome financial barriers to postsecondary education, the Budget proposes to increase the discretionary maximum Pell Grant by \$100 and thereby expand the reach of the program to over 7.2 million students. The Budget builds on successful bipartisan efforts to increase the maximum Pell Grant award by \$900 over the past two years—the largest increase in more than 10 years. The Budget provides a path to double the maximum award by 2029 for students attending public and non-profit institutions. The Budget excludes for-profit institutions from the mandatory increases due to evidence these institutions are least likely to provide good outcomes for students. The Budget also expands free community college across the Nation through a Federal-State partnership. In addition, the Budget provides two years of subsidized tuition for students from families earning less than \$125,000 enrolled in a four-year Historically Black College and University (HBCU), Tribally Controlled College and University (TCCU), or Minority-Serving Institution (MSI).
- **Invests in Services for Student Borrowers.** The Budget provides \$2.7 billion for the Office of Federal Student Aid (FSA), a \$625 million increase above the 2023 enacted level. This additional funding is needed to provide better support to the 46 million student loan borrowers and make additional and necessary improvements to the new servicing system. This increase would allow FSA to continue to modernize its digital infrastructure and ensure the successful administration of its financial aid programs, including the Free Application for Federal Student Aid, through a simplified and streamlined process for students and borrowers.
- **Reduces College Costs for Students.** High college prices deter many young people from attending the colleges that would be best for them. The Budget includes a \$12 billion mandatory Reducing the Costs of College Fund that would fund three strategies to lower college costs for students. First, the fund would provide competitive awards for public institutions that affordably deliver a quality education, allowing those schools to use those funds either to serve more students or to share best practices so that other schools can become more affordable. Second, the Classroom to Career fund would also provide over \$7 billion for States to provide access to at least 12 credits of transferable career-connected dual enrollment credits to students while in high school—credits that can enable students to obtain postsecondary degrees more affordably. Third, the fund would support evidence-based strategies, such as the City University of New York's Accelerated Study in Associate Programs model, which increase college graduation rates, reduce cost burdens for students, and lower costs per graduate.
- **Eliminates the Origination Fee on Student Loans.** The Budget builds on the President's historic actions to reduce student debt and the cost of college by eliminating the origination

fees charged to borrowers on every new Federal student loan. These unnecessary fees burden anyone who needs to borrow to help get an education and cost American families billions of dollars.

- **Reimagines the Transition from High School to Higher Education.** Reimagining traditional educational pathways to higher education is critical to improving outcomes for all students. The Budget doubles the funding provided in 2023 for national activities in career and technical education, including a focus on the Career-Connected High Schools initiative, which seeks to increase the integration and alignment of the last two years of high school and the first two years of higher education by expanding access to dual enrollment programs, work-based learning, college and career advising, and the opportunity to earn industry-recognized credentials while in high school.
- **Supports Students through Graduation.** The Budget supports strategies to improve the enrollment, retention, transfer, and completion rates of students by investing in the Federal TRIO Programs and Gaining Early Awareness and Readiness for Undergraduate Programs, and by more than doubling funding for the Postsecondary Student Success Grants Program. The Budget also promotes student success through investments to support students' basic needs, including funding to help students access non-student aid public benefits and to provide affordable child care for low-income student parents.
- **Expands Institutional Capacity at HBCUs, TCCUs, MSIs—including Hispanic Serving Institutions (HSIs)—and Community Colleges.** The Budget increases institutional capacity at HBCUs, TCCUs, MSIs—including HSIs—and under-resourced institutions, including community colleges, by providing an increase of \$93 million above the 2023 enacted level. The Budget funding level is \$329 million higher than the 2021 enacted level, underscoring the President's commitment to increasing funding to historically under-served institutions. The Budget also doubles funding by providing \$100 million for four-year HBCUs, TCCUs, and MSIs to expand research and development infrastructure at these institutions, a program the President has championed since his first year in office to address historic disparities in Federal research and development funding to HBCUs, TCCUs, and MSIs.

Other Key Priorities

- **Strengthens Civil Rights Enforcement.** The Budget provides \$162 million to ED's Office for Civil Rights (OCR), a \$22 million increase above the 2023 enacted level. This funding would ensure that OCR has the personnel it needs to carry out its mission to protect equal access to education through the vigorous enforcement of civil rights laws.
- **Advances Opportunities and Manages Risks of Artificial Intelligence (AI).** AI has the potential to provide transformational academic programming and career opportunities for the Nation's students, but it also poses significant risks to the privacy, opportunity, and well-being of students and educators. To support implementation of Executive Order 14410, "Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence," the Budget includes additional resources to enhance the capacity of Department staff, schools, and postsecondary institutions to achieve the promise of AI while managing inherent risks.

TO: AASA Members
FROM: Noelle Ellerson Ng, Tara Thomas
DATE: March 13, 2024
RE: President Biden's FY2025 Budget Proposal

OVERVIEW: On March 11, 2024 President Biden released his budget proposal for federal fiscal year 2025 (FY25). FY25 runs October 1, 2024 through September 30, 2025 and FY25 funding will be in schools for the 2025-26 school year. This document provides an overview of what the budget proposal includes. The budget is widely received as 'dead on arrival', with the House and Senate expected to advance their own budget proposals and priorities. The numbers below are a proposal and likely differ significantly from what will be in the final funding package. These numbers are a reference point. As Congress moves through its appropriations work, pay attention to which proposal and draft you are referencing, to ensure you are looking at the latest numbers.

Final FY25 allocations are months away and before Congress even rolls up its sleeves to work on annual appropriations, they will need to first finish their FY24 work, which is more than six months late. Congress passed the bipartisan Fiscal Responsibility Act in 2023, a bill that both raised the debt ceiling and established funding caps for FY24 and FY25. The act caps non-defense discretionary funding for FY24 at roughly \$704 billion, followed by a 1% increase in discretionary spending in FY25. These caps will be enforced through sequestration. As a point of comparison, appropriations have grown by 17% since FY21 (when prior caps ended) and by 37% since FY17.

- **Important Note:** While FY25 is anticipated to have a 1% increase in discretionary spending, once you account for allowed adjustments, FY25 allocations will be at a cap lower than that of FY24.

As a reminder, while FY25 starts on October 1, it is very unlikely (and in fact, very much the norm) that Congress will not complete its work on time, especially in an election year. When Congress is unable to finish on time, they will likely exercise a continuing resolution (CR), a legislative proposal that allows government to stay open, freezing federal funding levels and buying Congress more time to complete its appropriations work.

AASA maintains that a budget, whether that of our organization or the schools that AASA members lead, reflects our mission and priorities: we fund what we support, and we support what we fund. To that end, President Biden's proposed FY25 budget continues his trend of introducing federal budget proposals that not only support but prioritize support for strengthening our nation's public schools and the students they serve. We applaud his consistent support and funding for programs that are fundamental to educating students.

ANALYSIS: The President's budget includes \$82 billion for the US Education Department (USED). This represents an increase of \$3.1 billion (4%) over the USED FY23 budget, and a \$2.8 billion increase above anticipated FY24 spending (though that is yet to be finalized). This year's proposed increase is smaller than that of \$10.8 billion in FY24 and \$15.3 billion in FY23, stemming from the constraints in the Fiscal Responsibility Act.

Generally speaking, the budget freezes funding for federal education programs at the FY2023 level.

Almost all of the \$3.1 billion increase is in Pell grants (\$2.1 billion) and USED Staffing. The other two major increases are for Title I and IDEA Part B/Grants to States, which both receive a proposed increase of \$200 million (1.1% for Title I, 1.5% for IDEA).

The following programs are slated for cuts: charter schools (\$40 million cut, down to \$400 million); education innovation and research (a \$15 million cut, down to \$269 million); comprehensive centers (\$5 million cut, down to \$50 million); and international education/foreign language (\$4 million cut, down to \$82 million).

The proposal includes \$8 billion for scaling evidence-based practices for accelerating student learning (think: addressing chronic absenteeism, tutoring, and extended learning).

At the higher education level, the budget includes a \$750 increase in the Pell Grant award level (to \$8,145), \$12 billion for a new program focused on reducing the cost of college (with the lion's share of those dollars intended to expand dual enrollment programs), and a \$143 million increase in institutional aid, through Titles III and IV of the Higher education Act.

While USED is proposed to receive a significant increase, there are many programs that do not receive a funding increase at all, including Title II, 21st Century Community learning Centers, Rural Education Achievement Program (REAP) and Impact Aid. It also includes zero funding for school facilities/infrastructure.

Given the unfinished state of FY24 appropriations, we must keep in mind that this FY25 request may look better or worse once we see what Congress provides for FY24, and we can update funding comparisons to FY24 from FY23.

Helpful Links

- *President's FY25 [Budget Request Justifications](#)*
- *USED FY25 [Budget Summary & Background Information](#)*
- *USED FY25 [Budget Key Highlights](#)*
- *USED FY25 [Sec. Cardona Statement](#)*
- *USED FY25 [Funding by State](#)*

Thank you to Committee for Education Funding, the Children's Budget Coalition, Education Week/Politics K12 and Politico for great budget day coverage, analysis, and reporting.

Appendix A: FY25 Funding Summary (in billions)

Program Name	2023 Final Level	2025 Budget Request	Change +/- 2023	% Change vs 2023
ESSA Title I	18.387	18.587	0.2	1.10%
Comprehensive Literacy Development Grants	0.194	0.194	0	0.00%
Innovative Approaches to Literacy	0.03	0.03	0	0.00%
Migrant Education	0.376	0.376	0	0.00%
Neglected/Delinquent	0.049	0.049	0	0.00%
Impact Aid	1.618	1.618	0	0.00%
ESSA Title II	2.19	2.19	0	0.00%
21st Century Learning Community Learning Centers	1.33	1.33	0	0.00%
State Assessment	0.39	0.39	0	0.00%
Education for Homeless Children	0.129	0.129	0	0.00%
Native Hawaiian Education	0.046	0.046	0	0.00%
Alaska Native Education	0.045	0.045	0	0.00%
Rural Education	0.215	0.215	0	0.00%
Comprehensive Centers	0.055	0.05	-0.005	-9.10%
ESSA Title IV	1.38	1.38	0	0.00%
School Safety National Activities	0.216	0.216	0	0.00%
School-Based Mental Health Services Grants	0.0559	0.02	-0.036	-64.50%
Promise Neighborhoods	0.091	0.091	0	0.00%
Full Service Community Schools	0.15	0.2	0.05	33.30%
Education Innovation and Research	0.284	0.269	-0.015	-5.30%
Teacher and School Leader Incentive Grants	0.173	0.173	0	0.00%
Supporting Effective Educator Development	0.09	0.09	0	0.00%
Charter School Grants	0.44	0.4	-0.04	-9.10%
Magnet Schools Assistance	0.139	0.139	0	0.00%
English Language Acquisition	0.89	0.94	0.05	5.60%
Special Education Grants to States	14.194	14.394	0.2	1.40%
Perkins Career & Technical Education (State grants)	1.43	1.43	0	0.00%
Perkins Career & Technical Education (Natl Prog)	0.032	0.032	0	0.00%
Outside of USED				
Head Start (incl Early Head Start) (HHS)	11.997	12.541	0.544	4.50%
Child Care Development Block Grant (HHS)	8.021	8.521	0.5	6.20%
Cyber Security (Homeland Security/CISA)	2.955			



PRESS RELEASE

President Biden's FY2025 Budget prioritizes students, educators, and public schools

Budget released on third anniversary of the President Biden's American Rescue Plan

By: Eric Jotkoff

Published: March 11, 2024

SHARE



National Education Association President Becky Pringle released the following statement reacting to President Joe Biden's 2025 budget proposal. The budget was released three years to the day after President Biden signed into law the largest federal investment in public education in history through the American Rescue Plan:

“All students, no matter their race, place or background, deserve leaders who will give them quality public schools where they can grow into their full brilliance. President Joe Biden's budget shows that he values the voice of parents and educators and that his vision

for this country is one where all students – Black and white, native and newcomer, Latino and AAPI - are always a top priority.

“President Biden’s budget continues historic investments in public education, including funding for IDEA, Title I, community schools, early childhood education, community colleges, and HBCUs and MSIs. He understands the issues facing students and families, which is why he is working to expand school-based mental health services by increasing the number of school counselors, nurses, and mental health professionals.

“President Biden’s budget would make progress on tax fairness, calling on the wealthiest Americans and large corporations to pay their fair share.

“President Biden knows that too many school communities and families have been impacted by gun violence, which is why his budget includes investments in making our schools and communities safer.

"And President Biden is working to make higher education more affordable and accessible by expanding Pell Grants, while also lifting the burden of crushing student debt. Since taking office, the Biden-Harris administration has canceled the student debt of nearly 4 million Americans, including almost 800,000 educators and public servants.

“On the third anniversary of the American Rescue plan, we are reminded of President Biden’s leadership in providing students the one-on-one help they need, enabling school districts to boost

educator pay to address educator shortages, permitting schools to improve ventilation in classrooms by upgrading HVAC systems, and so much more. Now, through this budget, he again gives us a window into his values and continues to demonstrate that he is the most pro-public education president in modern history. The 3 million members of the National Education Association urge Congress to join President Biden in prioritizing students and families by building on the President’s fiscal year 2025 budget.”

-###-

The National Education Association is the nation’s largest professional employee organization, representing more than 3 million elementary and secondary teachers, higher education faculty, education support professionals, school administrators, retired educators, students preparing to become teachers, healthcare workers, and public employees.

**MEDIA
CONTACT**

Eric Jotkoff
ejotkoff@nea.org
202-822-7355
[@NEAMedia](#)



GREAT PUBLIC SCHOOLS FOR EVERY STUDENT

The National Education Association (NEA), the nation's largest professional employee organization, is committed to advancing the cause of public education. NEA's 3 million members work at every level of education—from pre-school to university graduate programs. NEA has affiliate organizations in every state and in more than 14,000 communities across the United States.

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National Science Foundation

CELEBRATING **1** YEAR

of the **CHIPS and Science Act**



"For over 70 years, the U.S. National Science Foundation has advanced the frontiers of the full spectrum of science and engineering research and innovation. On August 9, 2022, President Biden signed into law the "[CHIPS and Science Act](#)," landmark bipartisan legislation establishing a bold vision for accelerating U.S. leadership in innovation. NSF is playing a key role in realizing that vision.

Bolstered by the historic investment Congress and the administration provided in the Fiscal Year 2023 appropriations legislation, NSF is working at speed and scale to accelerate technology, safeguard U.S. investments through enhanced research security, strengthen the discovery ecosystem, and invest in the U.S. STEM research and development and workforce enterprise to unleash opportunities for everyone and innovation everywhere."

- NSF Director Sethuraman Panchanathan

ACCELERATING TECHNOLOGY AND INNOVATION

NSF has unleashed critical investments to support use-inspired research and innovation in key technology areas and in support of solutions to grand national, societal and geostrategic challenges. The "CHIPS and Science Act" codified NSF's cross-cutting Directorate for Technology, Innovation and Partnerships (TIP)—NSF's first new directorate in more than 30 years. In its first year, TIP has already accelerated the translation of agency-wide discoveries from lab to society, thereby driving industry, amplifying job growth, and creating opportunities for everyone, everywhere.

TIP Directorate achievements since the CHIPS and Science Act



*These data are pulled from Pitchbook from 8/9/2022-7/20/2023 and track all small businesses funded through the NSF SBIR/STTR program.

From 8/9/2022-7/20/2023

Visit <https://new.nsf.gov/chips> for updates on NSF's "CHIPS and Science Act"-related news and funding opportunities.



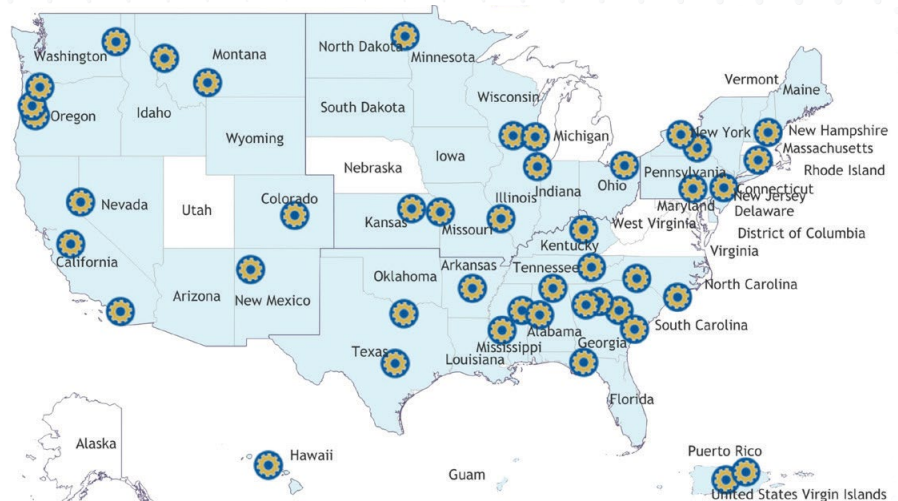
NSF Engines Development Awards



**More than
\$43 Million
invested**



**44 Awards
across 46
U.S. states
and territories**



States and territories covered by at least one award

NSF Engines Development Awards

NSF and the U.S. Economic Development Administration [signed a memorandum of understanding](#) to formalize ongoing cross-agency coordination on regional innovation programs.

The NSF [Regional Innovation Engines \(NSF Engines\)](#) program seeks to catalyze and foster innovation ecosystems across the U.S. NSF published nearly 700 concept outlines from every U.S. state and territory in response to the first NSF Engines funding opportunity. In May 2023, one year after launching, the program made its first-ever [Development Awards](#) to 44 teams spanning 46 U.S. states and territories.

NSF also launched the [Enabling Partnerships to Increase Innovation Capacity \(EPIIC\)](#) program to build capacity among minority-serving institutions, two-year institutions, undergraduate institutions, and other emerging research institutions in regional innovation ecosystems, with the hope that they will go on to participate in an NSF Engine or similar activity.

In June 2023, the [Assessing and Predicting Technology Outcomes \(APTO\)](#) program was launched with the goal of assessing how previous R&D spending in the public and private sectors have yielded different outcomes, and making predictions of how future spending can be steered to yield different outcomes.

The [Accelerating Research Translation \(ART\)](#) program, launched in February 2023, is an NSF-wide endeavor that seeks to grow institutional capacity for translating discoveries, thereby increasing the scale and pace of turning academic research into tangible solutions that benefit the public.

In October 2022, TIP launched, in collaboration with the Directorate for STEM Education, [Experiential Learning for Emerging and Novel Technologies \(ExLENT\)](#) to support experiential learning opportunities that provide cohorts of diverse learners with the skills needed to succeed in key technology fields such as artificial intelligence, advanced manufacturing, biotechnology and quantum computing.

September 2022 saw the launch of NSF's [Entrepreneurial Fellowships](#), in partnership with Activate.org. These Fellowships are designed to support STEM entrepreneurs from diverse backgrounds in turning breakthroughs in the lab into products and services that benefit society.

ENHANCING RESEARCH SECURITY

Securing the nation's research enterprise is part of the mission of NSF and is essential to the national defense. Led by the [Office of the Chief of Research Security Strategy and Policy](#), NSF has dedicated considerable effort and resources to working with the research community and its other partners to: equip researchers with the information and tools necessary to ensure that their work is protected; clarify security issues and mitigate risks; and foster transparency, disclosure and other practices that reflect the values of research integrity.



"Research security is a critical matter. It is important that the research community, government agencies and our international partners have frequent dialogue to share perspectives and help shape our research security policies and programs. Collaboration is critical to a vibrant science and engineering community, which includes domestic and international collaboration."

NSF Director Sethuraman Panchanathan

As part of the U.S. Research Security and Integrity Information Sharing Analysis Organization (RSI-ISA) development process, NSF issued a [Dear Colleague Letter](#) in May 2023 to solicit from the research community feedback, ideas, and recommendations to ensure the products, services, and tools provided by the RSI-ISA align with the needs and expectations of the research community.

In August 2023, NSF issued a [solicitation](#) inviting proposals that articulate a vision and actionable plan for the RSI-ISA that would build the capacity of the research community to make risk-informed decisions and create a trusted partnership between USG research-awarding agencies and the research communities they serve.

In anticipation of the launch of the new [Research on Research Security](#) program, NSF issued a [Dear Colleague Letter](#) calling for proposals for a workshop to inform the program's development. The program will specifically fund projects that assess the methods for identifying research security risks, and the strategies for preventing and mitigating them.

NSF also published [guidelines](#) describing NSF's internal guidance for research security data-related practices, aligned with [National Security Presidential Memorandum 33](#) and its accompanying [implementation guidance](#).

STRENGTHENING THE DISCOVERY ECOSYSTEM AND INVESTING IN A DIVERSE STEM WORKFORCE

NSF's decades of leadership has enabled the agency to quickly strengthen and scale its investments in support of the U.S. research and innovation enterprise. NSF is proud to have supported generations of technicians, engineers, educators, researchers and innovators, the people who make up our nation's diverse STEM workforce. To remain at the vanguard of innovation and competitiveness and to solve the grand challenges of our time, the strength of that demographically and geographically diverse STEM talent must be fully engaged.

The "CHIPS and Science Act" codified and renamed NSF's Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science Initiative as NSF's Eddie Bernice Johnson INCLUDES Initiative, a comprehensive, national initiative to enhance U.S. leadership in STEM discovery and innovation, focused on NSF's commitment to ensuring accessibility and inclusivity in STEM fields.

NSF waived, for a period of five years, the cost-sharing requirements of its [Robert Noyce Teacher Scholarship \(Noyce\)](#) program and its [Major Research Instrumentation \(MRI\)](#) program.

The [Scholarships in Science, Technology, Engineering, and Mathematics \(S-STEM\)](#) program supports institutions of higher education to fund scholarships for academically talented low-income students and to study and implement a program of activities that support their recruitment, retention and graduation in STEM. Leveraging new flexibilities provided under the "CHIPS and Science Act," NSF increased the scholarship caps for undergraduate and graduate students to \$15,000 and \$20,000, respectively.



NSF's [National Center for Science and Engineering Statistics](#) established [America's DataHub](#), a multisector consortium that will serve to meet the needs of the National Secure Data Service demonstration project described in the "CHIPS and Science Act."

NSF's [Growing Research Access for Nationally Transformative Equity and Diversity \(GRANTED\)](#) program is focusing on addressing systemic barriers within the research enterprise by improving research development and administration capacity at emerging research institutions in both EPSCoR and non-EPSCoR jurisdictions.

NSF is also partnering with industry to invest in and develop the microelectronics innovations and workforce of the future. NSF's [Future of Semiconductors \(FuSe\)](#) initiative aims to cultivate a broad coalition of researchers and educators from the science and engineering communities utilizing a holistic, co-design approach to enable rapid progress in new semiconductor technologies. FuSe is a nearly \$50 million investment in [partnership with Ericsson, IBM, Intel and Samsung](#).

Additional examples include: a combined \$30 million partnership with Micron Technology to develop bold solutions to address workforce challenges related to semiconductor technologies; a combined \$100 million investment in partnership with Intel to support research in semiconductor design and manufacturing as well as innovative approaches to enhancing the education and development of the national technical workforce; and a [five-year agreement between the Semiconductor Research Corporation and NSF's Research Experiences for Undergraduates \(REU\) program](#) to jointly expand undergraduate research opportunities related to semiconductor work through hands-on research opportunities for undergraduates.

NSF and the Semiconductor Research Corporation (SRC) [invested in six sites](#) for undergraduate research experiences in semiconductors. These grants will provide undergraduate students with hands-on research opportunities in STEM priority areas related to semiconductors. These are the first awards under a five-year agreement, [announced in January 2022](#), between NSF and SRC to jointly support awards through the NSF Research Experiences for Undergraduates program.

Did you know that **258 Nobel Prize** winners received support from NSF at some point in their career?



**Dr. Sethuraman Panchanathan
Director
National Science Foundation**

**Before the
Senate Committee on Commerce, Science and Transportation**

**on
"CHIPS and Science Implementation and Oversight"**

October 4, 2023

Introduction

Chair Cantwell, Ranking Member Cruz, and Members of the Committee, it is a privilege to appear before you today to discuss the National Science Foundation's implementation of the CHIPS and Science Act of 2022, and how the agency is building upon decades of successful investments in science, engineering, and technology to ensure that the United States remains the global leader in innovation into the future.

Established by the National Science Foundation Act of 1950 (P.L. 81-507), the National Science Foundation (NSF) is an independent federal agency charged with the mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF is unique in carrying out its mission by supporting research across all fields of science, technology, engineering, and mathematics (STEM), and at all levels and settings of STEM education. NSF investments contribute significantly to the economic and national security interests of the Nation, and the development of a future-focused science and engineering workforce that draws on the talents of all Americans.

For more than seven decades, NSF has been a critical component in powering the United States economy, transforming American lives, and securing the national defense. Many of the technological advances from which the Nation is benefiting from today, such as Artificial Intelligence (AI), Quantum Information Science, and Biotechnology, are rooted in sustained NSF investments. However, we currently face intense global competition in the race to develop the next breakthroughs in these key technology areas and to grow the workforce needed to unlock these innovations. Our success in enabling scientific breakthroughs and accelerating these and other

technological developments is central to our economic and national security and our continued global leadership.

With the passage of the CHIPS and Science Act of 2022, Congress put in place a roadmap for meeting this challenge while also spurring innovation in all communities throughout the country. The law codifies NSF's new Directorate for Technology, Innovation, and Partnerships (TIP), and positions the agency to capitalize on the uniquely American research and innovation ecosystem that includes academia, private industry, the government, civil society, and other partners to shape future research directions and quickly translate research outputs into impacts that benefit the Nation. The law also reaffirms our commitment to exploratory-based, discovery-driven research that is foundational to advancing progress. NSF is unique in how the agency invests in research across every STEM discipline, and the CHIPS and Science Act challenges us to invest even more intentionally across all geographic boundaries and socioeconomic groups. Through such investments, NSF plays a major role in inspiring and training the next-generation STEM workforce – through K-12 informal STEM education, technical training, support for master's and Ph.D. students, and adult and continuing education, including experiential learning, enabling reskilling and upskilling of the current workforce. NSF's role in workforce training has become increasingly important with the significant investments in semiconductor manufacturing, which will require strong partnerships between the federal government, academia, and private industry to train the needed workforce. The CHIPS and Science Act provided \$200 million for the CHIPS for America Workforce and Education Fund, and NSF is using the \$50 million provided over Fiscal Years 2023 and 2024 to leverage additional resources, including more than \$145 million in partnerships with the private sector, to address the needs of the semiconductor industry.

Over the past year, with the increased funding the agency received in the FY 2023 Omnibus Appropriations Act, NSF has been able to make significant progress in implementing the CHIPS and Science Act. The agency has moved quickly to expand the TIP Directorate by launching new opportunities for innovation while engaging industry, academia, philanthropies, and others to ensure the broadest possible impact of these critical investments. The agency has also moved swiftly to implement research security measures to safeguard taxpayer investments and has conducted outreach, education, and training throughout the research enterprise while strengthening agency oversight measures. In addition, NSF continues to prioritize engaging talent and inspiring the STEM leaders of the future throughout the Nation – from all geographic and demographic backgrounds – to ensure we are training the domestic workforce needed for our future competitiveness.

Ensuring U.S. Leadership in Innovation

With the support of the Administration and Congress, NSF launched its first new directorate in more than thirty years. The new Directorate for Technology, Innovation, and Partnerships (TIP), which was codified in the CHIPS and Science Act, sits at the crossroads of exploratory, curiosity-driven research, use-inspired, solutions-oriented research, and translational research across all disciplines of science and engineering. The TIP Directorate, in close collaboration with all of NSF's directorates and offices, is focused on advancing the key technology areas and addressing the national, societal, and geostrategic challenges identified in Section 10387 of the CHIPS and Science Act. TIP is fostering new innovation ecosystems throughout the Nation, transforming

regions into national and global anchors in key technologies; accelerating the translation of research results from the lab to the market and society; and cultivating new education pathways for a diverse and skilled future technical workforce comprising researchers, practitioners, technicians, entrepreneurs, and educators. Further, TIP opens new possibilities for research, innovation, and education by catalyzing strategic partnerships linking academia; industry, startups and small businesses; federal, state, local, and tribal governments; nonprofits and philanthropic organizations; civil society; and communities of practice to cultivate 21st-century innovation ecosystems that give rise to future, high-wage, good-quality jobs and enhance the Nation's long-term competitiveness. Over the past year we have seen immense interest from a wide range of institutions, industries, and state and local governments in the new opportunities NSF has unveiled through TIP. For example, nearly 700 teams from every state and U.S. territory responded to the NSF Regional Innovation Engines call for concept papers.

Since the enactment of the CHIPS and Science Act just over a year ago, NSF has moved expeditiously to realize the law's vision for TIP. In that time, NSF has made more than 760 new awards and partnered with 10 different federal agencies and more than 10 industry groups or nonprofits through the TIP Directorate. These efforts span a wide range of activities, ranging from regional innovation to supporting the next generation of entrepreneurs.

As authorized by the CHIPS and Science Act, the NSF Regional Innovation Engines (NSF Engines) program is a major new undertaking that will catalyze new businesses and economic growth in diverse regions of America that have not fully participated in the technology boom of the past several decades. Understanding that not all communities and proposed collaborations will be immediately ready to launch full-scale NSF Engines, the program comprises two tracks: Type-1 NSF Engines Developmental Awards and Type-2 NSF Engines. The Type-1 awards invest up to \$1 million to help organizations create connections and develop their local innovation ecosystems over a two-year period to prepare strong proposals for becoming future NSF Engines. The Type-2 NSF Engines could receive up to \$160 million over 10 years. When successful, an NSF Engine will lead to its region becoming a nationally and potentially globally renowned, self-sustaining, technology and innovation-driven hub of economic activity for the topic in which it specializes. Each NSF Engine's status and overall progress will be assessed annually, with metrics and milestones that will determine whether NSF will continue to support the NSF Engine year over year. Through these two tracks, NSF is seeding the future for communities to grow their regional economies by fostering partnerships that will unleash ideas, talent, pathways, and resources to create vibrant innovation ecosystems across the United States.

When the NSF Engines program released its first funding opportunity, NSF received nearly 700 concept papers from every state and U.S. territory. In May of this year, NSF announced the first-ever Type-1 NSF Engines Developmental Awards consisting of 44 unique teams spanning 46 states and U.S. territories. Then, in August, NSF announced 16 finalists for the first full-scale Type-2 NSF Engines. NSF anticipates announcing the NSF Engines awards this winter, with each awardee initially receiving approximately \$15 million for the first two years. Through these two tracks, NSF will have invested nearly \$200 million in regional innovation throughout the country by the end of this calendar year.

While NSF is excited by the broad geographic distribution and extensive engagement across academia, industry, and other sectors, we also know that more must be done to fully engage the talent that exists throughout the Nation. That is why NSF launched the Enabling Partnerships to Increase Innovation Capacity (EPIIC) program. EPIIC will build capacity among minority-serving institutions, two-year institutions, undergraduate institutions, and other emerging research institutions in regional innovation ecosystems, with the hope that they will go on to participate in an NSF Engine or similar regional innovation activity. NSF recently announced its first-ever EPIIC investment of \$19.6 million to 49 institutions (via 47 awards) at U.S. institutions of higher education (IHEs), including teams from historically Black colleges and universities (HBCUs), Tribal colleges and universities (TCUs), and minority-serving institutions, including Hispanic-serving institutions (HSIs), and community colleges. Importantly, in this inaugural cohort of NSF Engine Development Awards, NSF Engines finalists, and EPIIC awards, NSF is touching 48 states plus multiple U.S. territories.

NSF and the Department of Commerce are collaborating closely together on regional innovation efforts. NSF and the Economic Development Administration (EDA) share a mutual commitment to regional innovation and economic development in communities across the nation. The CHIPS and Science Act authorizes both agencies to implement programs to enable regional technology development and economic and job growth through the NSF Engines and the EDA Regional Technology and Innovation Hubs programs. In July, NSF and EDA signed a memorandum of understanding to officially enable cross-agency coordination on these critical programs to ensure they contribute to regional economic growth and U.S. competitiveness in key technology areas.

In addition to incubating regional innovation, NSF has also prioritized investing in the workforce the Nation needs to be successful today and into the future. NSF invests in the entire spectrum of STEM education and training, from K-12 students and teachers; to technical and vocational training; to undergraduate, graduate, and postgraduate researchers across all fields of science, engineering, and technology. For example, NSF's Experiential Learning in Emerging and Novel Technologies (ExLENT) program will support inclusive experiential learning opportunities designed to provide cohorts of diverse learners with the crucial skills and support services needed to succeed in the key technology focus areas and prepare them to enter the workforce ready to solve the Nation's most pressing societal, national, and geostrategic challenges. NSF just recently announced the first-ever ExLENT awards to 27 teams at U.S. institutions of higher education and nonprofits, including teams led by historically Black colleges and universities and minority-serving institutions, representing a total investment of \$18.8 million.

Equally important to the Nation's competitiveness is NSF's commitment to funding exploratory-based research that creates new knowledge and seeds the industries of tomorrow. For example, many of the AI advancements making news today – both the innovative products and the talent that is developing them – are made possible by NSF's long history of investments dating back decades. From reinforcement learning, which supports more effective chatbots, inventory managers, and self-adjusting thermostats, to the deep learning techniques that have led to generative AI, NSF's investments built the foundation for the AI tools and applications of today. This technical foundation has also been critical for our defense and intelligence communities, translating into capabilities that underpin national security. Over the past three years, NSF has established 25 National AI Research Institutes, or AI Institutes, in partnership with other federal

agencies and industry. This \$500 million investment touches almost every state, supporting cutting-edge research that is applying AI to key economic sectors like agriculture, weather, and public health.

Another example of NSF's commitment to investing in foundational breakthroughs is the recent announcement of a \$162 million investment in nine new Materials Research Science and Engineering Centers (MRSECs) that will each receive \$18 million over six years. The centers aim to transform fundamental scientific breakthroughs into tangible benefits for multiple sectors of the U.S. economy and innovations that can be produced on tomorrow's factory floors – from being tough enough to withstand the heat of a fusion reactor to processing information at the quantum level. Since the 1970s, NSF's MRSECs have yielded countless breakthroughs, from shape-morphing materials to plastics that conduct electricity. NSF now supports 20 MRSECs and these most recent investments expand the centers' portfolios to pursue a broad range of research projects to unlock new capabilities in several areas: semiconductors, artificial intelligence, biotechnology, sustainable energy sources and storage, advanced manufacturing, quantum computing and sensing, and other areas critical for U.S. leadership in materials research.

Early last month, NSF announced four new Science and Technology Centers (STCs) that will enable advances in fields ranging from cell biology and complex materials to new applications of sound waves and environmental change. Since it was established in 1987, the STC program has supported exceptionally innovative, complex research and education projects that have opened new areas of science and engineering and developed breakthrough technologies. STCs conduct world-class research through partnerships among institutions of higher education, national laboratories, industrial organizations and other public or private entities, and via international collaborations. They provide a means to undertake groundbreaking investigations across disciplines and highly innovative approaches within disciplines. They also play a fundamental role in engaging, recruiting, retaining, and mentoring the next generation of scientists and engineers from groups underrepresented in STEM.

The CHIPS and Science Act reiterated the importance of NSF's mission to invest in exploratory, curiosity-driven research. NSF will continue to make significant investments in center-scale research such as the MRSECs and STCs, as well as in the individuals all across the Nation to ensure we are exploring the frontiers of science and engineering and leading the world in innovation.

Safeguarding Taxpayer Investments

The future of U.S. competitiveness requires that we safeguard these critical investments and take steps to address research security while also cultivating vibrant international partnerships that are critical to success. NSF plays a leading role in federal efforts to address research security and is expanding capabilities and competencies to protect the U.S. science and engineering enterprise. In January 2022, the National Science and Technology Council's Research Security Subcommittee, which is co-chaired by NSF, issued implementation guidance for National Security Presidential Memorandum 33 (NSPM-33) on National Security Strategy for United States Government-Supported Research and Development. In addition, the CHIPS and Science Act contains several research security provisions that NSF is in the process of implementing. NSF has engaged in robust

discussions with the U.S. research community and with like-minded international colleagues through groups like the G7 and bilaterally to develop common frameworks for understanding and addressing research security.

NSF has prohibited our staff from participating in any foreign talent recruitment programs and updated and clarified our guidelines and requirements for institutions and individuals requesting funding from NSF so that senior/key persons identified on proposals cannot participate in malign foreign talent recruitment programs. NSF has also established new analytic capabilities to proactively identify conflicts of commitment, vulnerabilities of pre-publication research, and risks to the merit review system. NSF will scale up the use of these analytics to analyze all NSF awards and contribute to NSF's Small Business Innovation Research (SBIR) due diligence process in FY 2024.

As required by the CHIPS and Science Act, NSF is in the process of establishing a Research Security and Integrity Information Sharing and Analysis Organization (RSI-ISA), called SECURE, to provide needed information and tools to the research community. Full proposals for SECURE are due at the end of October. NSF is confident that we will be able to establish an innovative entity that will build the capacity of the research community to make risk-informed decisions and create a trusted partnership between research-awarding agencies and the research communities, which strengthens the security of our national research enterprise.

NSF is also leading efforts through a partnership with the federal government interagency community to develop research security training modules for the research community. These modules will be available in the coming months, and NSF plans to fund the delivery of these modules and their evaluation to help researchers understand and avoid research security risks. In addition, NSF has also put in place research security training for all of our staff, which is required to be completed on an annual basis.

NSF is developing the system for reporting by institutions of higher education of foreign financial transactions with countries of concern above \$50,000 as mandated in CHIPS and Science and will be coordinating closely with our Office of Inspector General on these reports. NSF will do appropriate due diligence to assess these reports.

NSF takes very seriously the need to safeguard the investments the agency makes on behalf of the American taxpayer while also contributing to a vibrant global research community based on shared values with like-minded partners. We will continue to partner with other agencies, the intelligence and law enforcement communities, and the research community to take all necessary steps to do so.

CHIPS for America Workforce and Education Fund

The CHIPS and Science Act included \$200 million for the CHIPS for America Workforce and Education Fund. NSF is investing those resources in an effort to train upwards of 100,000 new semiconductor researchers, practitioners, technicians, and educators over the next five years, fulfilling a key need of the semiconductor industry and further building a skilled U.S.

semiconductor workforce. The CHIPS and Science Act provided \$25 million in each of FY 2023 and 2024, and \$50 million in each of FY 2025, 2026, and 2027.

NSF has focused the FY 2023 funding to leverage existing investments to address the immediate needs of the semiconductor industry. For example, \$10 million was provided to the TIP Directorate to fund scalable partnerships with the private sector, including Intel, Micron, Ericsson, IBM, and Samsung to enhance research traineeships and skilled semiconductor manufacturing workforce programs. This NSF investment will be matched by the companies. For example, in the case of Intel, the investment is part of an already-announced 10-year NSF-Intel partnership to invest \$100 million to address semiconductor design and manufacturing research and workforce development throughout the country.

NSF also invested more than \$6 million of the FY 2023 funds in the new Future of Semiconductors (FuSe) program. The objective of this investment is to cultivate a broad coalition of researchers from across science and engineering communities to utilize a holistic, co-design approach to fundamental research and education and training, to enable rapid progress in new semiconductor technologies. Last month, NSF announced 24 research and education projects with a total investment of \$45.6 million through a public-private partnership spanning NSF and four of the companies named above: Ericsson, IBM, Intel, and Samsung. These awards support novel, transdisciplinary research that will enable breakthroughs in semiconductors and microelectronics and address the national need for a reliable, secure supply of innovative semiconductor technologies, systems, and professionals.

In FY 2024, NSF will focus on supporting a national-level clearinghouse that brings together academia, industry, and government to grow capacity and reduce barriers to grow a diverse workforce capable of ensuring U.S. competitiveness across all facets of microelectronics. Such a microelectronics workforce development clearinghouse will offer a proving ground for reliable, practicable, evidence-based, industry-aware curricula leading to new educational programs spanning secondary schools, two-year community and technical colleges, and minority-serving institutions across all 50 states, the District of Columbia, and U.S. territories. In doing so, NSF will enhance industry and career awareness among a diverse array of potential entrants to the industry, develop professional and technical skills, and provide work-based, experiential learning opportunities (e.g., internships, apprenticeships) that inspire prospective students to enroll in industry-related programs at community colleges and four-year universities. This approach has been recommended by coalitions of academia and industry as they have imagined how best to address the needs of the future semiconductor workforce.

Put simply, this clearinghouse will foster high-quality and affordable training pathways aligned with the Administration's workforce approach, benefiting workers as much as they benefit employers, by setting workers on pathways to success in higher-quality careers in the long run.

As the Federal Government's leader in STEM education, with a strong track record in fostering public and private partnerships, NSF is uniquely positioned to design, implement, scale, and sustain this clearinghouse. Moreover, success in the semiconductor and microelectronics sector will provide an evidence base for extending other key technology areas authorized in the CHIPS and Science Act. NSF is committed to investing the \$200 million provided for the CHIPS for

America Workforce and Education Fund and leveraging public-private partnerships to have the most impactful outcomes for the Nation.

Innovation Anywhere, Opportunities Everywhere

NSF is fully committed to the development of a future-focused science and engineering workforce that draws on the talents of all Americans, in every region of the country. The CHIPS and Science Act authorizes NSF to support broadening participation at the individual, institutional, and jurisdictional levels. At the individual level, CHIPS and Science authorizes programs that empower individuals through scholarships, fellows, traineeships, and project activities that enrich STEM education at all levels. At the institutional level, awards to minority-serving institutions, including community and technical colleges, will lead to greater opportunities for all students and faculty. Finally, at the jurisdictional level, NSF is working toward more geographical diversity across the entire NSF portfolio, especially to rural and urban institutions that serve diverse students.

An important component of these efforts is NSF's Established Program to Stimulate Competitive Research (EPSCoR). EPSCoR enhances the research competitiveness of targeted jurisdictions by strengthening science, technology, engineering, and mathematics (STEM) capacity and capability through a diverse portfolio of investments from talent development to local infrastructure. The CHIPS and Science Act requires NSF to increase the percentage of the agency's investments in EPSCoR jurisdictions over a seven-year period, reaching 20% in FY 2029. For FY 2023, the EPSCoR target was 15.5%. We are pleased to report that NSF has met and slightly exceeded that target in FY 2023. In addition, as required by the CHIPS and Science Act, NSF is prioritizing activities that enable sustainable growth in the research competitiveness of EPSCoR jurisdictions. For example, in May, NSF released two new programs to further support EPSCoR jurisdictions in building sustainable research capacity. The EPSCoR Research Incubators for STEM Excellence (E-RISE) program supports incubation of research teams and products in scientific topical areas linked to a jurisdiction's scientific priorities. The EPSCoR Collaborations for Optimizing Research Ecosystems (E-CORE) program provides funding to support targeted research infrastructure cores that underlie the jurisdiction's research ecosystem, including development, enhancement, and/or sustainability of research facilities, higher education pathways, workforce development, economic development, and use-inspired research.

NSF recognizes that building sustained research capacity in all states and territories is critical to our long-term competitiveness. NSF's Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED) program will improve the Nation's research support and service capacity at emerging and underserved research institutions. Last week, NSF announced an investment of \$9.2 million in funding for a collaborative project between Emory University and the National Organization of Research Development Professionals (NORDP), a professional nonprofit association dedicated to advancing the research capacity and impact of colleges and universities. Together they will expand support to 16 minority-serving institutions by providing extensive consulting time from experienced NORDP consultants over the next two years and access to an array of tools and services to improve research development. This investment will provide direct research development services to participating institutions, including grant writing assistance, team building, strategic research planning, outreach activities, and student training. The

program is specifically designed to provide a significant investment to intentionally small cohorts of institutions to ensure a lasting impact.

Conclusion

At a time of intense international competition, NSF's ability to generate more breakthroughs and foster more innovations that strengthen our economy and national security is critical to keeping the United States a global leader in science, engineering, and technology. As NSF continues to implement the CHIPS and Science Act, we are doing so with a focus on expanding opportunities for all types of institutions, in every geographic region, in every key technology area, and for everyone who wants to engage in STEM –while through leveraging partnerships with industry and philanthropies.

Thank you for the opportunity to testify before you today. With the continued support of this Committee and Congress, and through successful implementation of the CHIPS and Science Act, NSF stands ready to strengthen our national and economic security and create innovation anywhere and opportunities everywhere.