Native American Code Writers Program

Evaluation Report

December 2019

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Program History and Description:

Arizona has the third highest population of Native Americans in the country at 383,486 (US Census Bureau, 2010), and is home to 21 federally recognized tribes. There are currently over 50,000 Native American students in Arizona, representing 5% of the total student population[1]. Native students in Arizona have the lowest high school graduation rates than any other demographic[2], and while Native students make up 5% of the student population, only 1% have ever taken an Advanced Placement (AP) exam[3]. Nearly one in ten Native students has been suspended[4], and chronic absenteeism is almost twice as high (24.1%) than their peers[5]. As a consequence, Native American participation in science, technology, engineering and mathematics (STEM fields) continues to be severely limited resulting in a fraction of Native Americans earning bachelor's degrees in STEM and Computer Science (NCES, 2018). While Native students are making gains in standardized test scores[6], there is still much to be done to provide equitable and impactful educational opportunities for Native American students now and in the future.

Arizona strives to produce students that are college and career ready. There are 9,355 open computing jobs currently in Arizona, yet last year AZ universities only graduated 814 students to fill these positions (16% were female)[7]. A new report (Sept. 2019) released by the Arizona Technology Council shows Arizona's tech sector is growing at a rate 40 percent faster than the U.S. overall, yet the current pipeline of potential students to fill these jobs is lacking. In an effort to build this pipeline and provide equitable accesses to opportunity for under-represented students, Arizona Governor Doug Ducey and the legislature initiated the Code Writers Pilot Program through **HB 2707** in 2016 and **SB 1505** in 2018. The goals of the program include:

1. Introduce computer code writing curriculum for students in grades nine through twelve.
2. Deliver a technology-focused education to Native American students that will prepare the students for the global economy.
3. Instruct Native American students in computer code writing and work with industry partners to develop internships and programs that will be made available to initiative graduates.
4. Instruct teachers and administrators in a technology focused curriculum.

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[1] U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program, 2018

[2] NCES, Table 1. Public high school 4-year adjusted cohort graduation rate (ACGR), by race/ethnicity and selected demographic characteristics for the United States, the 50 states, and United States, the 50 states, and the District of Columbia, school year 2016-2017

[3] NCES, Common Core of Data 2016-17; College Board AP State Reports 2018

[4] Civil Rights Data Collection 2013-14

[5] AZ School Report Cards, State Report

[6] NCES, NAEP Data Explorer, 2018

[7] Code.org

5. Develop assessment metrics to measure progress to be used to determine the initiative's effectiveness.
6. Install audio video distance learning equipment at key delivery points to maximize the number of program participants.
7. Determine the impacts from the initiative's curriculum and teacher instruction on students' standardized test scores and graduation rates.

Over the past three years, seven schools/districts serving Native American students have participated in the Native American Code Writers Pilot program and have successfully began the first of two, year-long courses (Code.org CS Discoveries- 9th grade and Advanced Placement CS Principles- 10th grade) and are beginning years three and four (software, hardware, networking) Career and Technical Education (CTE) courses in the fall 2020.

In 2016 only one Native American student took the Advanced Placement Computer Science Principles exam in the entire state of Arizona (College Board). This exam is the primary indicator of high school student matriculation and success into a university computer science program. ***This school year, 2019-2020, the Native American Code Writers Program has 108 Native American students enrolled in AP CS Principles from across the state, representing a transformative opportunity for these students and priming the technology pipeline for Arizona.***

Program Description:

The primary goal of the Native American Code Writers Program (NACWP) is to introduce computer code writing curriculum and deliver a technology-focused education to better engage Native American high school students. The Computer Science (CS) content is designed to help students think critically, problem-solve, and work with technology integration by using app development, gaming, website design, multimedia, cyber security and robotics.

The initiative is designed to address the education and workforce preparation of Native youth not only in Arizona, but across the nation. The NACWP provides for a highly integrative *series of four, year-long computer science high school courses, strategically integrated with business and industry mentoring, shadowing and internship experiences.* Participating students acquire the knowledge and skills required for information technology, industry certification and/or matriculation into higher education computer science and information technology degree programs.

Drawing on computer science curricula developed via Code.org, the National Science Foundation (NSF), and other industry partners, the NACWP forms a unique nexus of partnerships between Science Foundation Arizona (SFAz), the Arizona Department of Education- Office of Indian Education, six tribal nations, five public school districts, two public charter schools, local community colleges, universities, and the information technology and computer science business community.

The Arizona Department of Education (ADE)-Office of Indian Education and the Indian Education Advisory Council provide program oversight and support. Through a competitive Request for Proposal (RFP) process, SFAz was awarded funding for the facilitation of the program in 2017 through 2019.
SFAz currently provides the NACWP to the following Native American tribal communities:

1. The Salt River Pima-Maricopa Indian Community (SRPMIC) and Salt River High School (Charter)
2. The Fort McDowell Yavapai Nation (FMYN) and Fountain Hills High School in the Fountain Hills Unified School District (Public)
3. The Gila River Indian Community (GRIC) and Cesar Chavez High School in the Phoenix Union High School District (Public)
4. Navajo Nation and Chinle High School in the Chinle Unified School District (Public)
5. Navajo Nation and Flagstaff High School in Flagstaff Unified School District (Public)
6. Navajo and Hopi Nation and Shonto Preparatory Technology High School in Shonto Prep Schools (Charter)
7. White Mountain Apache Tribe and Alchesay High School in the Whiteriver Unified School District (Public)

Each NACWP partnering school is provided comprehensive, year-long teacher computer science professional development, funding for computer science equipment/labs, robotics and teacher/student travel. In addition, SFAz works extensively with schools and district leaders to obtain approvals and establish processes to implement the program activities and new CS course offerings. SFAz also provides the catalyst and program management for the articulation between business and industry partners and the schools/tribes. ***Current industry partners include; Code.org, GoDaddy, Amazon, Verizon, Salt River Project and Intel.*** In addition, SFAz provides for an articulated pathway K-12 from the feeder elementary and middle schools, into the sponsored high schools and the local community colleges and universities.
See Figure 1.

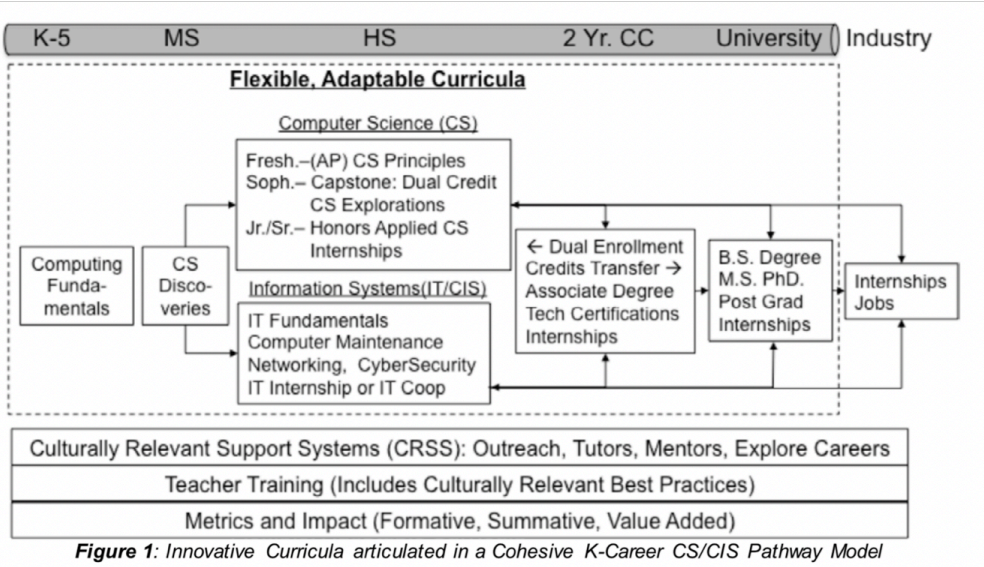


***Figure 1**: Innovative Curricula articulated in a Cohesive K-Career CS/CIS Pathway Model*

The NACWP has been evaluated using the STEM Equity Program Evaluation Rubric[8], a tool for evaluating the factors that influence access and success for underrepresented students in STEM education. Additional information available upon request.

The NACWP implementation plan was presented at the National Science Foundation (NSF) sponsored, American Indian Science and Engineering Society (AISES) "CS Convening for Native American students" in March and again in October 2019. During this convening a strong interest in successful CS education models was expressed. The program information and data herein have been shared with the NSF and the AISES organization for dissemination across the US. The program is scalable, replicable and sustainable and has the potential to change the trajectory of Native American education through an articulated Kindergarten to higher education pathway and into the computer science/ technology work force.

This evaluation report, conducted by Dr. Mary Aleta-White of Arizona Evaluation & Research Associates, provides an overview of NACWP implementation, student results, and other program outcomes between fall 2018 and spring 2019. NACWP management has been led by Linda Coyle, SFAz Director of Education and STEM consultant.

Evaluation and Data Results

Methods:

The purpose of this study was to gather and report on evaluative feedback from students and teachers participating in the Native American Code Writers program (NACWP). The program has been designed to provide school-based opportunities that prepare Native American students for computer science (CS) higher education majors and careers while also preparing teachers to effectively lead CS courses and activities. The research questions guiding this study are:

1. **Based on the grant-funded activities, to what extent are students engaged and interested in CS?**
2. **To what extent are teachers prepared for and delivering effective CS instruction?**

To address these questions, the evaluator used a combination of teacher and student surveys and interviews to gather multiple perspectives on the program's impact. This update report contains data collected during the fall 2018, spring 2019, and again fall 2019. The evaluation was somewhat delayed because the program wasn't funded between August, 2018 – January, 2019.

The evaluator provided online pre/post surveys for the students. In addition, interviews were conducted with a sample of students from each site and with each high school teacher at the end of the spring 2019 semester. The student survey assessment was

[8] *National Alliance for Partnerships in Equity Education Foundation- 2019*

based on the Computer Attitude Questionnaire (CAQ) from the University of North Texas' Institute for the Integration of Technology into Teaching and Learning (Knezek, G. and Christensen, R., 1995). The CAQ is a validated instrument that measures various student attitudes about computers and computer science. Although the program targeted Native American students, all participating students' data are reported and analyzed in this report.

Instruments:

The surveys described on page five are examples of validated instruments used in other programs to gauge student interest in CS. They will serve as the backbone for this project's survey. Survey research information is included with each survey. The planned data analyses include descriptive statistics of student interest, a demographic summary, and a qualitative description of their education and career plans.

Data Reporting:

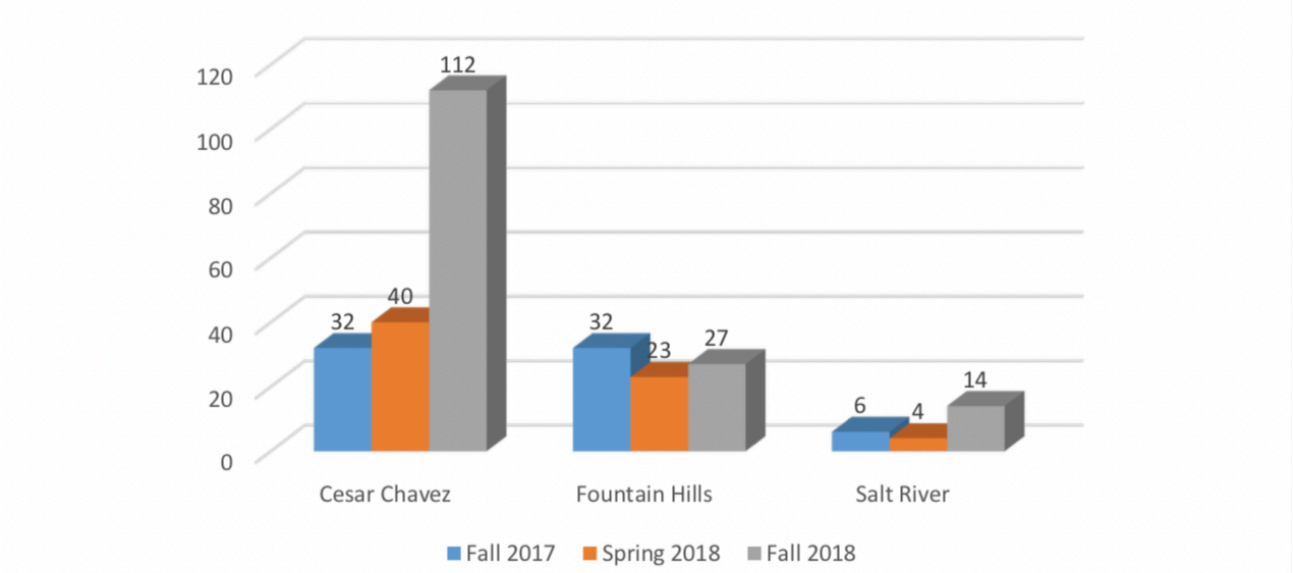
Due to delays in funding between the original signed legislation in April of 2016 and the funding being disseminated by the ADE in January 2017, the NACWP director worked with the partnering districts to create the courses, schedule and register students in their first full year computer science course in fall 2017. In preparation for this start, all program teachers had to attend extensive professional development in Computer Science during the summer 2017. This training was provided by Code.org, Science Foundation Arizona and Grand Canyon University. Additional industry support came from Verizon, Amazon and Go Daddy. Many of the targeted Native American students had no prior knowledge of what computer science was, therefore the students were offered summer exploratory programs to introduce them to the topic of computer science and coding. These summer programs were held at each of the original three NACWP sites. **NOTE:** Prior monthly, quarterly and full year reports were submitted to the ADE for 2017, 2018 and 2019. The following data covers primarily the 2019-20 school year. For prior results, please contact the ADE Office of Indian Education, or Science Foundation Arizona.

Data Results:

Question 1: Based on the grant-funded activities, to what extent are students engaged and interested in Computer Science?

The Native American Code Writers program began with the summer exploratory coding experience at three central Arizona sites that serve Native students. The first full year course in CS Discoveries (Code.org) began in Fall 2017. Within the first two years of the program the numbers of participating students at the three original NACWP partnering schools (Salt River High School, Cesar Chavez High School, and Fountain Hills High School) increased significantly. See Figure 2.

Figure 2.



(Note: Fountain Hills HS actually has 38 students enrolled in CSD and 27 students enrolled in AP CS Principles. Only students in APCSP participated in data collection for Fall 2018. Total student count for FHHS=65 students.)

In the past year, 2019, the Program director, Linda Coyle, encouraged and signed on four additional schools to participate in the NACWP beginning with teacher training in summer, 2019. Three of the new programs are located on Arizona reservations. The fourth school provides CS opportunities for Native students who travel to the school site during the week from reservations across northern Arizona.

Current partners for the 2019-20 school year include the following tribal nations, school districts and number of students enrolled in the NACWP:

1. The Fort McDowell Yavapai Nation (FMYN) and Fountain Hills High School in the Fountain Hills Unified School District (2017) with 16 students enrolled in AP Computer Science Principles, and 42 students enrolled in Computer Science Discoveries.
2. The Gila River Indian Community (GRIC) and Cesar Chavez High School in the Phoenix Union High School District (2017) with 25 students enrolled in AP Computer Science Principles and 49 students enrolled in CS Discoveries/Intro to CS.
3. Navajo Nation and Chinle High School in the Chinle Unified School District (2019) with 46 students in CS Discoveries and 81 students in AP Computer Science Principles.
4. Navajo and Hopi Nation and Flagstaff High School in Flagstaff Unified School District (2019) with 27 students enrolled in Computer Science Discoveries.
5. Navajo Nation and Shonto Preparatory Academy in Shonto Prep Schools (2019) with 22 students in AP Computer Science Principles.
6. White Mountain Apache Tribe and Alchesay High School in the Whiteriver Unified School District (2019) with 21 students in CS Discoveries.

***Total program participants:* 322 students during the 2019-2020 school year:**

CS Discoveries-Intro to CS	185 students total	82 are Native American
AP CS Principles	142 students total	108 are Native American

The following data was collected in winter (December) 2019 and focuses primarily on the four new schools/districts that joined the program. **NOTE:** Results reflect collected survey data. Not all students participated in the surveys at each site due to final exam testing and students project deadlines.

Chart 1: Enrollment, by **grade levels**, at participating schools.

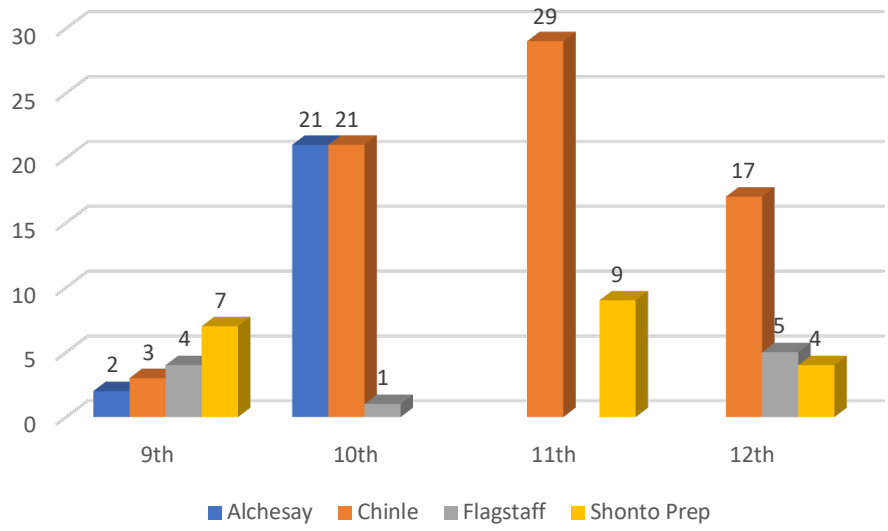


Chart 2: Student enrollment, by race and ethnicity.

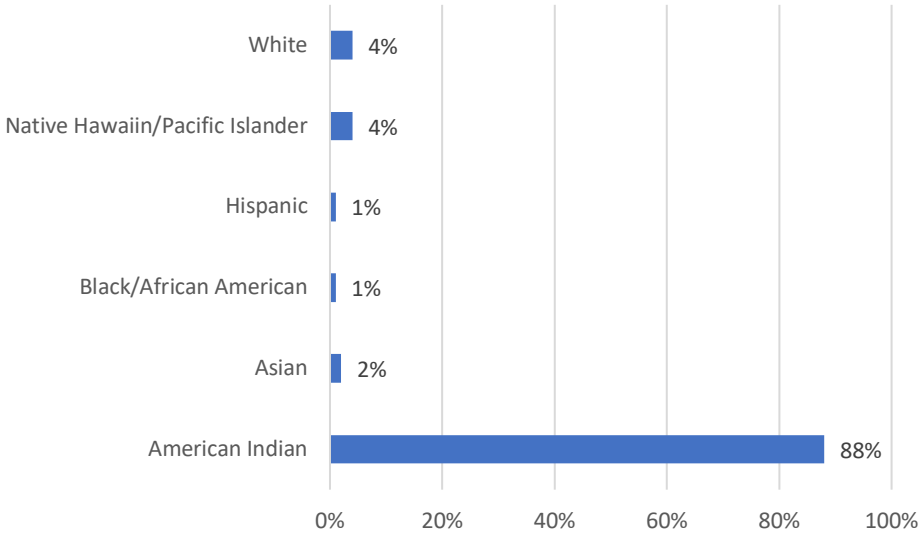


Chart 3: Tribal affiliation.

- 65% Navajo
- 9% White Mountain Apache
- 25% Mixed, "American Indian", missing, or White.

Chart 4: Students primary residency.

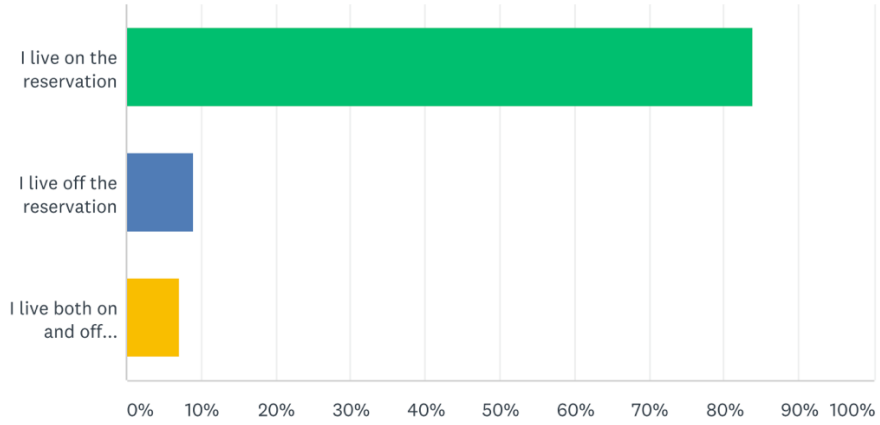


Chart 5: Student enrollment by gender. **NOTE:** The NACWP far exceeds the national average of 18% percent of female students (US News and World Report) enrolled in a computer science/coding program. Targeted strategies were used to engage female students all grade levels 9-12, in each of the courses.

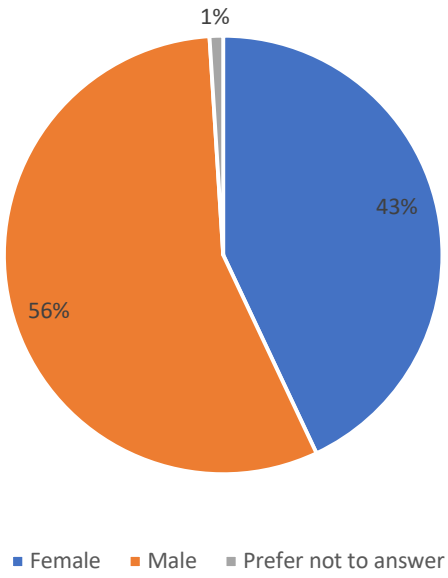


Chart 6: Percent of students enrolled in the computer science courses that "like school":

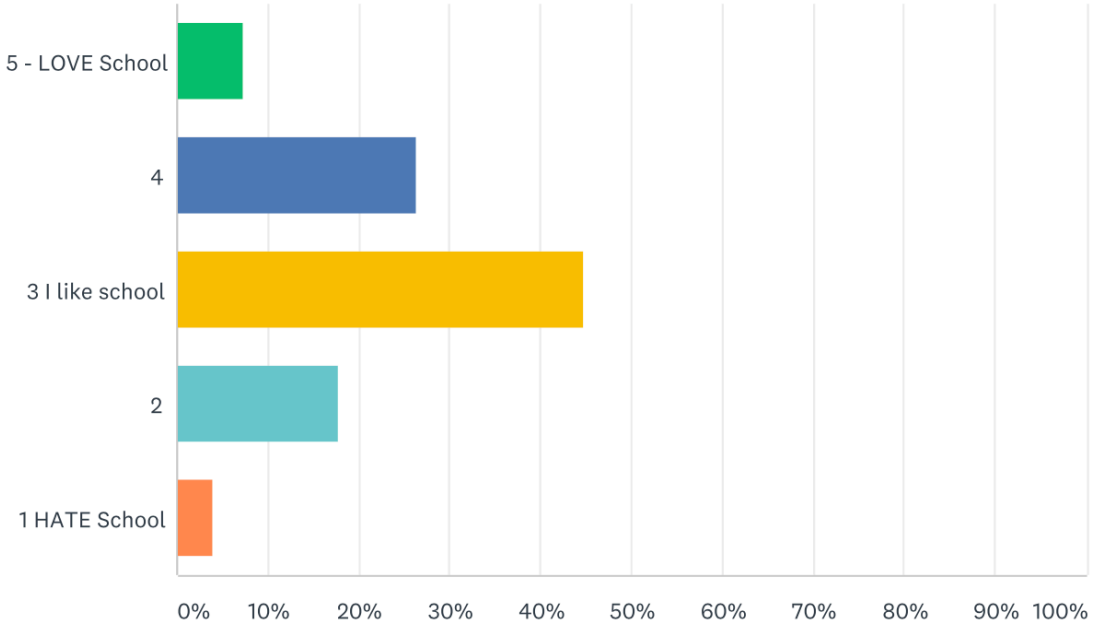


Chart 7: Reported post high school education plans of students taking CS courses. **NOTE:** 58% of students report wanting to graduate high school and engage in post-secondary educational opportunities.

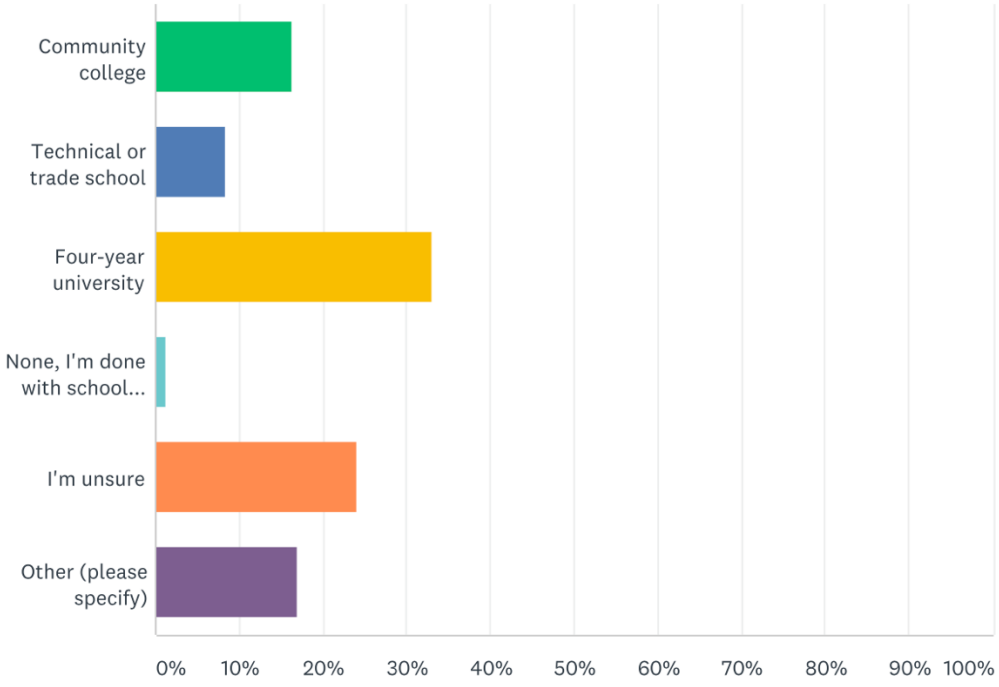


Chart 8: Motivational factors for students registering for CS courses/curriculum

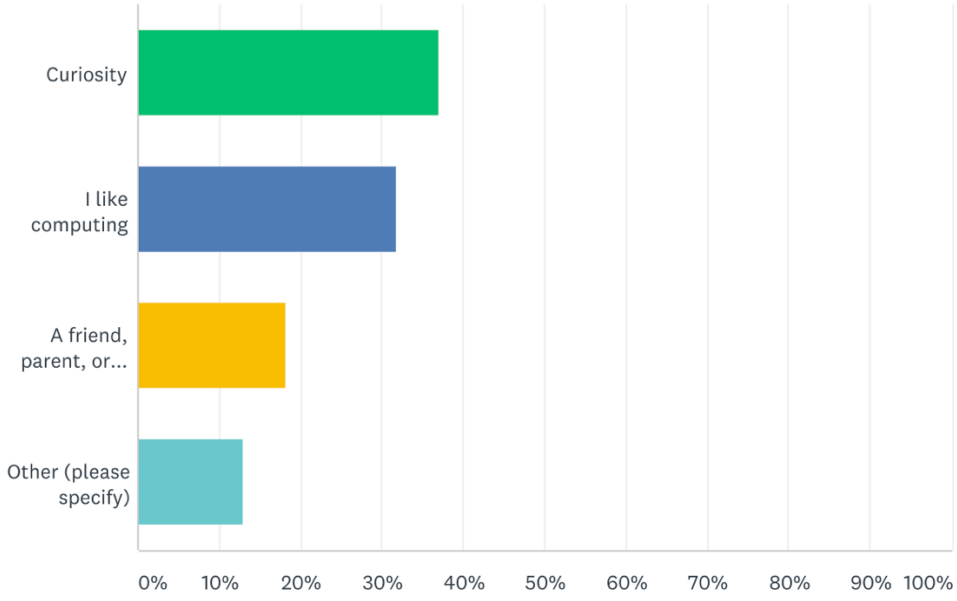


Chart 9: Student interest in taking the AP Computer Science Principles Exam in the spring of 2020. NOTE: 84% of students are interested in taking the AP exam for the first time.

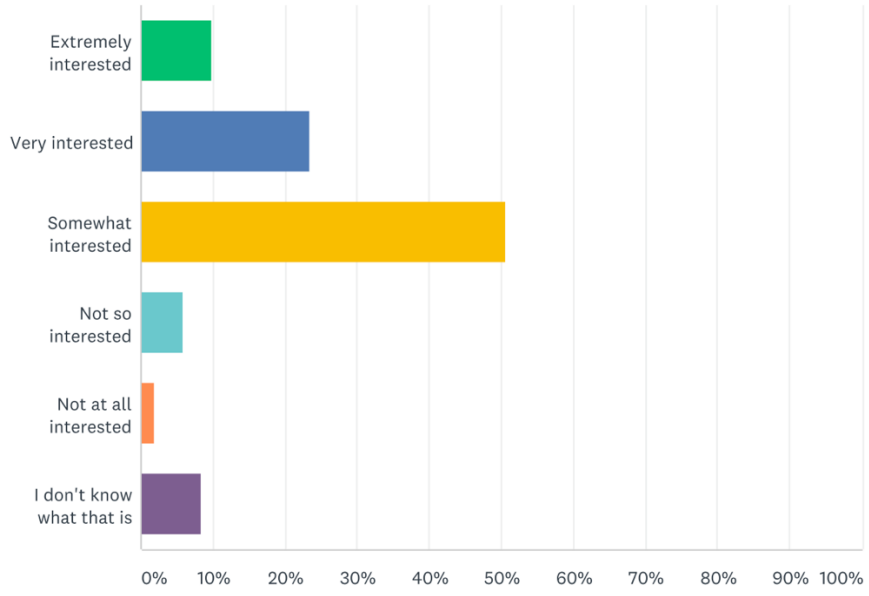


Chart 10: Probable college major and Career Interests.

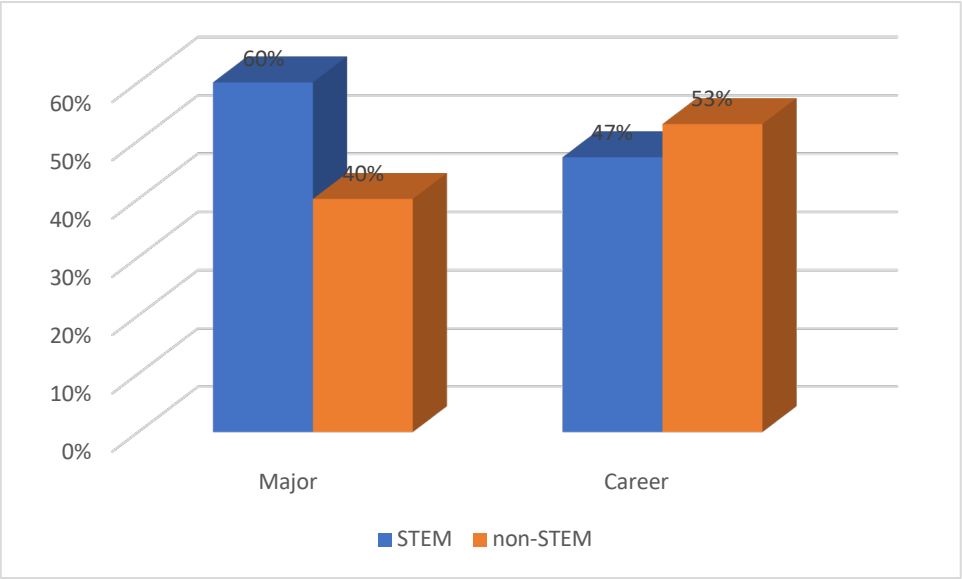
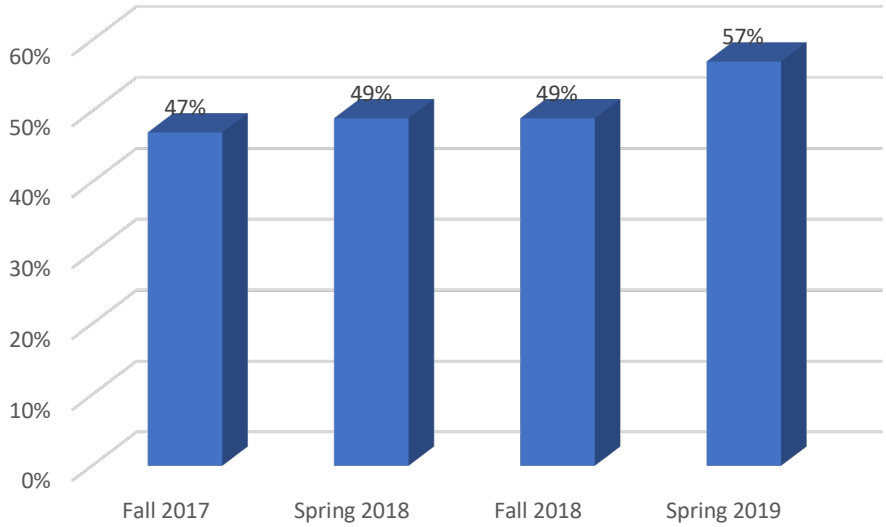


Chart 11: Percentage of surveyed students reporting interest in a STEM college major.



Students were asked to describe the kind of future career they had in mind for themselves. In the fall, 2019, 48% of the surveyed students indicated an interest in a STEM degree. This is comparable to earlier versions of the survey as shown in the chart below. Of the students selecting a STEM major, the majority (44%) listed a computer science-based career. Table 1, below, lists a sample of student career goals.

Table 1: Students' list (sample) of probable careers, December 2019

Semester	STEM	Non-STEM
Fall, 2019	Aerospace engineer (3)	Architecture
	Computer system administrator	Basketball
	Game designer (7)	Construction
	Mathematician	Art (singer, artist, etc.)
	Software Engineer	Lawyer
	Underwater welding	Nurse (7)

Table 2: CAQ, percentage of students who "strongly agree" or "agree"

.	Fall 2017**	Fall 2018**	Fall 2019
I enjoy doing things on a computer.	85%	83%	84%
I am tired of using a computer.	23%	12%	10%
I will be able to get a good job if I learn how to use a computer.	73%	73%	75%
I concentrate on a computer when I use one.	70%	80%	76%
I enjoy computer games very much.	82%	80%	78%
I would work harder if I could use computers more often.	51%	54%	55%
I know that computers give me opportunities to learn many new things	90%	87%	91%
I can learn many things when I use a computer.	83%	86%	87%
I enjoy lessons on the computer.	62%	59%	66%
I believe that the more often teachers use computers, the more I will enjoy school.	54%	44%	52%
I believe that it is very important for me to learn how to use a computer.	80%	78%	81%
I feel comfortable working with a computer.	81%	80%	78%
I get a sinking feeling when I think of trying to use a computer.	17%	9%	18%
I think that it takes a long time to finish when I use a computer.	23%	22%	23%
Computers do not scare me at all.	93%	80%	77%
Working with a computer makes me nervous.	11%	7%	13%
Using a computer is very frustrating.	20%	16%	24%
I will do as little work with computers as possible.	14%	16%	19%
Computers are difficult to use.	11%	8%	11%
I can learn more from books than from a computer.	23%	13%	19%

**Rows may not round to 100% due to non-responses.*
*** Prior survey administrations provided as a measure*

Additionally, the post-survey asked if students wanted to learn more about computers and technology. In fall 2019 a total of 77% of students were interested in learning more, and an additional 16% said they were not sure. When asked to what extent, as a result of taking this course, students rated their knowledge and skills in computers and technology, 66% rated their skills and knowledge as "good" or "excellent". The other 34% rated their skills as "average" or "just ok". On average, 70% of students reported that they were "satisfied" or "very satisfied" with their Fall 2019 CS course.

Question 2: To what extent are participating teachers prepared for and delivering effective CS instruction?

As reported in prior reports, the initial pilot program focused on three schools/districts, with four more schools being added in fall of 2019. In the initial year, two of the program three teachers (66%) had a STEM undergraduate major and two also had a Master's degree. During spring, 2019, all site teachers participated in a brief interview about their fall 2018 and spring 2019 courses. Teachers taught the Code.org CS Discoveries course and the Principles (AP Computer Science) course as year-long courses. The CS course was combined with robotics at Cesar Chavez and at Salt River. The Cesar Chavez instructor also included game design and app design within the Discoveries course.

Each program instructor attended a weeklong teacher professional development program in summer, follow up by four day-long (Saturday) quarterly curriculum workshops throughout the school year. The Code.org teacher professional development program was hosted and managed by Science Foundation Arizona and Grand Canyon University. The NACWP grant director attended all the trainings with the teachers and facilitated the travel, accommodations and food for each teacher. Monthly site visits were also conducted by the program director during the grant funded time periods where teachers were provided individual support and resources for their programs.

Between the start of the original NACW pilot program in 2017, the Salt River High School CS teacher changed three times. In summer 2018, a new teacher attended the weeklong CS professional development, but only two of the four quarterly workshops. In the spring 2019 semester, the teachers at Salt River changed yet again. One teacher reported:

- *We went from having seven periods last semester to only having six. The students had to give up an elective. A lot of them didn't have a choice of what elective they had to give up. We lost students just because of schedule changes, and less opportunity for more electives basically.*

Because of the schedule change, only three of the fall students were able to reenroll in the spring, the others were new. The spring semester teacher at Salt River said that it did not negatively impact his class as he has led the robotics team before, however he had no prior Code.org course training or experience. Due to high teacher turn over, Salt River High School elected to drop out of the NACWP in fall 2019.

Teachers were asked to select a highlight from the semester, and they all pointed to their student successes:

- *Some of my robotic students; this is their first year. Towards the end, kids were allowed to make their own computer games. It astonished me at how much they can do. I am just always amazed. When they come up and they're presenting their work, and I'm over there looking [over] their shoulders, asking them. "How do you play your game?" Then they show you this. I'm the teacher, and, I'm like, "This is really good!" [Laughter]*
- *I really enjoyed the AP Principles course 10 times more than the Discoveries.*
- *I think learning with them [the students] was interesting. We'd all get that the light went on at the same time, even with me. We would all figure it out together. That was a great experience. They could see my learning process because I wasn't completely getting it either initially. I think that in those moments was—those were my highlights-- when I wasn't quite sure, but we're just going to go with it, and let's see what happens kind of thing. Yeah, so it was that discovery learning that was great.*
- *The Principles class was really, really good. Especially for not having taught it previously.*

Teachers were also asked to describe any challenges or low points from the fall and spring semesters. For one teacher, the courses were a challenge because of how the administrators allowed students to be registered for the course:

- *The Discovery class was just unfortunately used as a dumping ground. It was overloaded. I didn't even have enough computers. I had to bring in Chrome Books, and it was just about discipline the whole time. Yeah, they know of my displeasure. I had meetings with the principal and the superintendent about it. They promised me they would change that for next year, and they did. My numbers are manageable and the kids are doing great.*

The Salt River teacher from the fall semester was a new math instructor placed in the Discoveries course. She attended the code.org workshop and enjoyed the experience. Although hesitant because of her lack of background knowledge in computer science, the teacher reported that she was nervous about the course.

- *I was still very iffy because of my lack of background in computer science, and so coming into that starting the year, I wasn't completely comfortable by any means with that class. It was a new way of learning for the students.*

Another teacher also reported feeling unprepared for the class:

- *I think with the "AP Computer Science Principles", that was nerve-wracking for me cuz I really wanted the kids to do well. And I know it's our first year of actually having that program offered. Without a degree in CS it was a tough uphill climb where I was learning right along with the kids.*

Another challenge the teachers noted is what they called the "digital divide". Some of the Native American students enrolled in the courses did not have internet access at home:

- *My other kids, they would come in during advisory, and I'd say, "Well, do you have time to get finished up?" They say, "No, I'm just gonna finish up at home. I can do it..." And that wasn't their problem. But I could definitely see that we definitely have the "digital divide", that we have the have-nots and the haves. You would think it wouldn't be that way in this day and age, but it is. They have a cell phone, but you can't do this work on their cell phone. He was actually on the reservation. He didn't have internet access. He had to go borrow stuff from his cousin going to ASU. I'm*

like, "Alright. Well, how do we get this to work, so it's equitable for all?"

- *Up on the (Navajo) reservation, every time the wind blows the internet goes out. We have internet access at school, but for many of the students they have no access at home. Some of them have to travel for miles per day to get to school, not having the ability to work on their projects or do their homework after school was a challenge.*

In the summer 2018, two teachers from Chinle High School and one teacher from Shonto Preparatory Technical High School participated in the Code.org summer week-long computer science training. These teachers began to offer the CS Discoveries course and the CS Principles course in the fall of 2018. Neither of these two schools offered the Principles course as an AP course during the 18-19 school-year. While the students enjoyed the course, both the students and teachers felt apprehensive and unprepared for the rigors of the AP exam in spring 2019. Corrective strategies are now in place to assist both the teachers and students with the exam. The teachers in the Chinle Unified School District also worked extensively with business partner, Intel. This school/business partnership provided them with mentors, equipment and work place connections.

In the summer of 2019, the teacher from Shonto Preparatory Academy joined teachers from Alchesay High School, Whiteriver USD, and Flagstaff High School, Flagstaff USD in the week-long professional development training of the Code.org CS Discoveries course. In addition, each of the NACWP instructors across all school sites attended and participated in the *Computer Science Teachers Association (CSTA)* annual four-day professional development conference and ADE's Computer Science Summit.

NACWP Outreach Activities to Business, Industry and Higher Education:

Along with the continuous teacher professional development activities, the NACWP director assisted in the facilitation of business and community- based outreach experiences for the students. Each school was provided opportunities to directly connect with NACWP partners, including; Amazon, Verizon, Go Daddy, Intel and Salt River Project. These businesses provided mentoring, site visits, industry shadowing, and special career exploration events. Each school, teacher and student was given a free membership to the American Indian Science and Engineering Society (AISES) comprised of Native American professionals. They also participated in AISES local events and national conferences. Additional experiences included attending yearly ADE Office of Indian Education "Stakeholders Summit" and the "Native American Youth, Educators, and Employers (NAYEE) Conference".

The schools also participated in outreach activities above and below their grade levels, including:

- Organizing a yearly "Hour of Code" and robotics event with their K-8 feeder schools
- Participating and presenting at K-8 Career Day events
- Participating in STEM outreach events at local community colleges (Dine college, Scottsdale Community College)
- Participating in university led CS/STEM events at Grand Canyon University and Arizona State University

- Participating in Virtual STEM outreach activities via distance learning modalities (STEM Pro Live virtual online events and teleconferencing).

Summary/Conclusions

In conclusion, the NACWP was initiated and funded by the Arizona Legislature in April 2016. Science Foundation Arizona (SFAz) was awarded a one-year grant to begin a pilot NACWP Project in January 2017. However, due to funding delays from the state the program did not officially begin until April and continued through December, 2017. Details of this eighth month pilot can be found in the previous NACWP external evaluators report-Dec. 2017. In August of the following year (2018), the grant was renewed for an additional pilot year through SB 1505 although, again, funding was delayed and not available until January, 2019. Even with the lapse in funding and support the sites continued to create and offer yearlong CS course offerings and programming between fall 2018 through spring 2019. In addition, four more sites were added to the program in the fall 2019 for a total of seven Native American schools/districts impacting 328 students in year one and two, and an additional 322 students in year three, for a total of 650 students overall.

By self-report, the majority of students are engaged and challenged by the CS courses provided. The most successful courses appear to be those that combine coding with hands-on activities (e.g., robotics or game design) and that feature group work. The CAQ measure shows an increase in students enjoying computers and technology, and the percentages in the avoidant category remained consistent (~20%).

The teachers consistently rate their training and curriculum resources as excellent. The course itself, whether enrollment or their own confidence levels in teaching it, varied somewhat, but all teachers are committed to continuing the course in the future. Their highlights or success stories all describe strong student engagement and student work products.

The initial pilot program in 2016 did not make its targeted number of participating American Indian students (100) in the first year. However, with the inclusion of four new schools all located on or near Native American reservations that joined the program in fall 2019, **the resulting target of Native students remains steady at 190 with 108 Native students currently enrolled in AP Computer Science Principles.** While the goal of the program was to introduce Native American students to computer science, the number of students taking the AP CS Principles course increased with the ultimate outcome of these students taking in the College Board AP CS Exam in Spring 2020. Moreover, with connections to business, industry and higher education the schools will sustain their initial grant funded programs by moving the third and fourth level courses into Career and Technical Education tracks of Software and App Development and Networking, Hardware and Cybersecurity, therefore sustaining the program for years to come. For additional information on the NACWP, see: http://www.sfaz.org/native-american-code-writers-program/ or contact Science Foundation Arizona @ http://www.sfaz.org/.