

Blog

Pathfinders Summer Institute: An Intense Week of Learning for Hundreds of K-12 Public School Teachers

@InfyFoundation | September 04, 2018

During the week of July 15-20, 2018, Infosys Foundation USA hosted **Pathfinders Summer Institute 2018**, a national convening of K-12 public school teachers. Free Computer Science and Maker Education professional development (CS/MakerEd PD) was provided to hundreds of teachers, capturing the spirit of the **Foundation's mission** to bridge the digital divide in America and inspire students and teachers to become creators of technology, with a particular focus on underrepresented communities.



Teachers (in blue) and instructors (in orange) from Pathfinders Summer Institute in front of the auditorium on the IU Bloomington campus.

About 550 public school teachers from 45 states and two US territories (Puerto Rico & Northern Mariana Islands) traveled to the Indiana University Bloomington campus where each teacher was enrolled in one of 19 free curricula. This gathering, a peer community on a national scale, celebrated both teachers and life-long learning. Paige Prescott, a ProjectGUTS PD facilitator from New Mexico, explained, "Teachers can feel silo'ed. Those just getting started in computer science can be helped along by a larger community of teachers." This event, as reported by **Inside Indiana Business**, helped to narrow the digital divide whereby teachers could connect with other like-minded teachers and gain access to new resources to help students navigate the digital world.

Strong partnerships were key to fueling this intense week, including 20 PD providers, DonorsChoose.org, Indiana University, the National Science Foundation, and dozens of supporters (see end of article for a complete list). [Stephanie Zircher](#) of Nextech worked closely with the Foundation to bring Pathfinders to Indiana; this resulted in 110 Indiana public school teachers attending Pathfinders for free, including [Maria Sellers](#), to learn Code.org's curriculum.

Inaugural Pathfinders Cohort

A broad mix of public school teachers, especially those from underrepresented groups:

- 333 educators (60%) from Title 1 Schools
- 40% of teachers from high poverty schools where between 60-100% of the students receive free lunch
- 17 Special Education teachers
- 10 educators from schools where 100% of students are Native American
- 6 English as a Second Language (ESL) and/or bilingual teachers

Amongst the courses offered at Pathfinders a handful of Maker Ed PD courses were included. Elementary school teacher Annette Crothers, from Hampton, VA, attended the Maker Educator Collective Bootcamp PD. Annette shared on her [DonorsChoose project page](#): "During the week, I learned about "making", which is giving students the opportunity to make objects that solve a problem, demonstrate their learning, extend the content, display their creativity, etc. I also learned about incorporating computer science skills into my curriculum. For example, I learned about coding through using the website makecode.org and micro:bits, which are tiny programmable computers."

All teachers accepted into Pathfinders attended at no cost; this was made possible through a series of grants, partnerships, and crowdfunding. Tuition, travel, accommodations, and meals were free for all participants. Some teachers sourced 50% of the Pathfinders fee from their school district, with 50% remainder covered by the Foundation. Those that went through the DonorsChoose funding route benefited from a combination of citizen donors and matching funds from the Foundation. A few select courses were offered at no cost to teachers through a combination of matching donations from Infosys Foundation USA and National Science Foundation.

Videos & Tweets from Pathfinders 2018

- Pathfinders Cohort
- Art in Motion
- Beauty & Joy of Computing
- KCI CS Crash Course
- Maker Educator Collective
- UTeach

[Alisha Lee](#)'s local community in Oklahoma donated generously to her Pathfinders project. A teacher from rural North Carolina [Caren Long](#), utilized the DonorsChoose platform to attend Pathfinders, receive valuable Maker Ed curriculum to bring back to her elementary school, and connect with a new community of like-minded teachers from around the US. Many more Pathfinders success stories can be read [here](#) on DonorsChoose.

Teachers attending Pathfinders stayed in student dorms, ate in cafeterias, and went to class each day on the Bloomington campus. During the evenings, teachers were encouraged to attend CS & Maker workshops, meet PD providers and Edtech companies, and explore the [School of Informatics and Computing and Engineering](#).

One educator, Jessica Henricks from Girl Scouts of Northern California, wrote a [blog](#) about her experiences finding herself in the middle of a powerful learning community at Pathfinders: "Throughout the week, I attended sessions and shared meals with a diverse group of passionate educators. We shared our wins and trying moments with the challenging coursework, and talked about how we might incorporate what we were learning at our respective organizations. The space was full of optimism for the powerful, positive impact our [#InfyPathfinders](#) coursework could have on our learners."

It is estimated that this first Pathfinders cohort will share their new knowledge with anywhere between 11,000 to 17,000 students in the 2018-2019 school year alone. That's assuming each participant teaches 20 to 30 students per school year, keeping this number on the lower end.

"This Pathfinders Institute has been one of the best professional development courses I have ever attended" said elementary school librarian, [Joanne Reed](#) from Houston, TX. "This event has made a huge impact on the learning opportunities I will be able to offer in our elementary school library. Scratch coding involves a lot sequencing, problem-solving, and collaboration, in addition to other skills. These skills are required in reading and math classes. These are also skills that employers find desirable. Thanks to the Pathfinders Institute, I know how to teach creative Scratch computer coding skills which will prepare my students for a future that is sure to include computer technology careers. I believe that

my students will be excited to come to school and visit to the library to learn and create with Scratch. The library will be a happy place for my students. It will be a place for books, information, research, informational literacy, and now Scratch coding."

Josh Paley, a computer science teacher at Gunn High School in Palo Alto, CA offered this observation on the importance of CS and Maker Ed professional development opportunities for teachers: "If we're going to make CS education ubiquitous, we need to go and make more things like Pathfinders".

Out of the 412 completed surveys, 99% of teachers indicated they would like to return to a future Pathfinders Summer Institute. As part of completing Pathfinders, each teacher received an electronic credential certifying participation in a week-long professional development course, many of whom have posted now on their LinkedIn profiles.



The Foundation was thrilled to have so many teachers attend this summer's Pathfinders, and do our small part to further a growing community of computer science and Maker Ed teachers across all grades, and across all states.

We extend our gratitude and thanks to the individuals and partners listed below to make Pathfinders a reality:

Steering Committee: Maureen Biggers, Adam Maltese, Anne Leftwich, Kylie Peppler all with IU Bloomington; Gail Chapman, Exploring Computer Science; Tom O'Connell, Code Interactive; Stephanie Zircher, Nextech; Kirk Smiley, DonorsChoose.org

Professional Development Providers: Art in Motion, BJC, Bootstrap, ECS, Everyday Computing, Introduction to Logic, KCI CS Crash Course, Junior Botball, Maker Educator Collective, MIT App Inventor, Mobile CSP, Nextech offering Code.org's CS Discoveries and Code.org's CS Principles, Paper Mechtronics, Project GUTS, Scratchjr + KIBO Robotics, Scratch Creative Computing offered by Code/Interactive, Tapestry Workshop, and UTeach CSP

Partners: IU Bloomington, DonorsChoose, Computer Science Teachers Association, the

...the Birmingham, Birmingham, Computer Science Teachers Association, the International Society for Technology in Education, National Science Foundation, Nextech, the State of Indiana

Guest Speakers: Laurie McRobbie, Maureen Biggers, Anne Leftwich, and Raquel Hill, all from Indiana University; Jake Baskin, Computer Science Teachers Association; Kyle Cornforth, MakerEd; Josh Elder, CSForAll; Eric Holcomb, State of Indiana; Jan Cuny, National Science Foundation; Charles Best, DonorsChoose.org; Mike Langellier, TechPoint; Vaidy Subramanian, Cummins; Timothy Coleman, Eli Lilly; Lindsay Lee Siovaila, Salesforce.com/Girl Develop It; Robert Ladd, Charter Communications



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