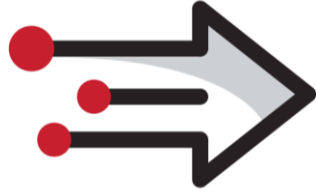


Extending the
CS Pipeline



Extending the CS Pipeline: Enhancing Rigor and Relevance in Middle School CS

School Recruitment Resource Packet

Suggested citation:

Center for Effective School Practices (2024). School Recruitment Resource Packet. Rutgers University.

<https://www.rutgerseir.com/post/school-recruitment-resource-packet>

Introduction to *Extending the CS Pipeline* Project

PRIMARY GOALS

- To build the capacity of middle school teams to effectively develop, implement, and strengthen high-quality and inclusive computer science education.

APPROACH

- Team of experienced CS faculty members and researchers from Rutgers work side-by-side with MS educators to improve their CS offerings.
- Personalized technical assistance plans are designed to address local school needs.

[EIR Extending the CS Pipeline Project Abstract](#)

Recruitment Goals

- Raise awareness about the project
- Encourage schools' participation in the project
- Highlight the benefits of participation
- Create an opening for productive conversations around the opportunities and challenges within middle school computer science
- Share information about available incentives for teachers' participation

1. Recruitment Materials

First, we created a recruitment packet of materials to generate the opportunity for conversation and generate a first impression among potential participants. The packet included the following:

- Introductory email
- Direct mail: Recruitment letter, program flyer, center brief.
- FAQs (added to direct mail in subsequent mailings)

**RUTGERS**
Center for Effective School Practices

Extending the CS Pipeline
A University Partnership with Middle Schools
to Enhance Computer Science Education

Introduction

Rutgers University is implementing a federally funded grant providing free technical assistance and curated resources to enhance middle schools' computer science course offerings.

We are currently seeking schools to join our 2024 cohorts!

Together, our work will involve ensuring that CS and related courses...

include carefully selected and rigorous content

are implemented using effective and engaging pedagogy



Program Supports

We provide schools with technical assistance and curated resources as **they make content- and pedagogy-focused enhancements** to computer science courses - all at absolutely **no cost** to the school.

Benefits to Your School

- in-school support to enhance CS courses
- growing the number and diversity of students in the CS pipeline
- stipends for participating educators
- state and national recognition for excellence

Technical Assistance to Support...

- engaging pedagogy and cooperative learning structures
- opportunities for scaffolding, differentiation, and extension
- inclusive learning that empowers student voice and choice
- connections to relevant, exciting career opportunities in computing
- assessments that capture all aspects of student growth

Program Details

Administrators and teachers from your middle school will work alongside faculty at Rutgers University for up to two years to enhance computer science and related courses. Your participation in the project entails:

- Technical assistance & working sessions at your school
- Periodic data collection (observations, surveys, interviews)
- Entering a data sharing agreement, and providing de-identified student-level administrative data

By partnering with the state's largest research university, your school will have access to

- the latest research driving evidence-based practices
- training in developing responsive and inclusive curriculum
- connections with a network of educators in this space
- opportunities for joint publications & presentations

Join today and don't miss the opportunity to be a part of a 2024 cohort!

Contact Us

To express your school's interest in participating or to obtain additional information, please contact Dr. Cindy Blitz.

This work is supported by the U.S. Department of Education [Award No. S411C200084].

**RUTGERS**
Center for Effective School Practices

Extending the CS Pipeline

Frequently Asked Questions

Rutgers EIR: Extending the Computer Science Pipeline

What is the *Extending the CS Pipeline* Project?

Extending the CS Pipeline is a USDOE-funded research award to build the capacity of middle schools to provide relevant, rigorous, and inclusive computer science education to all students by providing technical assistance and curated resources. Through this project, researchers and professors at Rutgers University partner with educators to provide support as they enhance instruction in computer science and computational thinking. By infusing intentionally selected and clearly articulated course content with engaging, inclusive, and student-centered pedagogical approaches, we invite all students to enter, succeed in, and remain on, the CS pipeline.

What types of support will my school receive from this project?

While participating in the project, schools can expect to receive hands-on, comprehensive technical assistance from academic researchers, computer science professors, and other computer science education experts. As we work to enhance (or develop) your computer science course(s), we are able to provide (or co-develop) curricular resources, pacing guides, lesson plans, instructional materials, and alignment with learning standards; our technical assistance will facilitate their modification and translation into practice in your school. For computer science teachers, we are able to (directly or indirectly) provide professional learning opportunities in computer science content, pedagogical content knowledge, and instructional practices.

My school already has a computer science course. Is this project a good fit?

Yes! In fact, our project was designed with schools already offering a computer science course in mind (although it is certainly not a requirement). Our work will always begin with efforts to understand your existing course's content, pedagogy, and climate, and other assets (this takes place through class observations, lesson plan and curriculum review, and discussions with teachers and administrators); from there, we can make informed decisions about enhancements. Improvement is ongoing and iterative!

Our CS course follows a standardized curriculum (PLTW, Code.org) Is this project a good fit?

Yes, absolutely! For schools using a standardized or pre-packaged curriculum, there are still many opportunities to enhance the course, such as reconsidering which units should be included, their sequence, instruction, and assessment. Even with curriculum content already set, there are still areas for extension, student choice, differentiation, cooperative learning, and scaffolding. We are prepared to work with teachers to think through how the pre-packaged curriculum comes to life in the classroom.

What does a school commit to by joining the project?

Participating schools will work directly with representatives from Rutgers University (along with other experts brought in as needed) throughout the project. Early on, meetings will take place more frequently (roughly monthly); once the new/revised course is being implemented, meetings will be held less frequently

2. Recruitment Process

Recruitment Materials

1a. Recruitment Materials: Initial Email

- Our approach followed generally accepted principles of research recruitment, such as personalized messages, highlighting incentives being offered to participants, and emphasizing the potential positive impacts of the project (Manohar et al., 2018)¹.
- Superintendents and principals (plus additional school and district staff such as curriculum directors and teachers) all received introductory email.
- Double click on the icon for full size document.



Click to view full document

Rutgers EIR: Extending the CS Pipeline
Jan. '24 Recruiting Round

Subject: Invitation to Collaborate – A Computer Science-Focused University Partnership

Dear [Principal's Name],

I am excited to extend an invitation for [Middle School Name] to collaborate in a USDOE-funded partnership with Rutgers University through the *Extending the CS Pipeline* project. In this project, we aim to support middle schools in offering the best possible computer science (CS) courses to their students. In doing so, we work to ensure that all middle school students can take a CS course that covers relevant and intentionally selected content delivered using engaging, inclusive, and inviting instructional methods.

Schools participating in this project will receive technical assistance and curated resources from experienced education researchers, computer science faculty, and a network of educators to make content and pedagogical enhancements to existing computer science course(s), or to develop a computer science course if one is not already offered. Our team will work with you to carefully select course content, implement effective pedagogical approaches, and create an articulated, exciting CS experience that resonates with a diverse student population.

Computer science is rapidly transforming our world and workforce, and as schools nationwide are incorporating computer science and computational thinking instruction across K-12, we are eager to partner with middle schools committed to excellence in education. We encourage you to consider this selective invitation and take advantage of this opportunity. We have attached a flier with more information about the project, and please be on the lookout more informational materials being mailed to your office. We currently have openings remaining for middle schools to join our summer and fall 2024 cohorts.

If you have any questions or interest, please do not hesitate to reach out via email or text to set up a time to speak further about this opportunity.

Warm regards,

Dr. Cindy Blitz, Ph.D.
Executive Director, Center for Effective School Practices
Research Professor, Graduate School of Education
Rutgers University, The State University of New Jersey

¹ Manohar, N., MacMillan, F., Z. Steiner, G., Arora, A. (2018). Recruitment of Research Participants. In: Liamputtong, P. (eds) *Handbook of Research Methods in Health Social Sciences*. Springer, Singapore. https://doi.org/10.1007/978-981-10-2779-6_75-1

1b. Recruitment Materials: Cover Letter

- Decision makers and key stakeholders received direct mail one week later.
- To make the direct mail packet stand out, materials were mailed in a red, Rutgers branded envelope. This also helped to show that the mailing was not marketing or from a vendor.
- Double click on the icon for full size document.



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Center for Effective School Practices
Graduate School of Education
Rutgers, The State University of New Jersey

January XX, 2024

Dear Educator:

My name is Cindy Blitz; I am a research professor at the Rutgers University Graduate School of Education and the executive director of the Center for Effective School Practices. I am writing to follow up on an email I sent you recently inviting you to join *Extending the CS Pipeline*, a research grant project aimed at building the capacity of middle schools to provide equitable access to high-quality computer science courses by providing technical assistance and curated resources. As I mentioned in my message, please find additional information enclosed with this letter about the project.

As you are likely aware, recent research has shown that computer science and computational thinking are important skills for students to learn at a young age, and that students who are exposed to these concepts in middle school are more likely to pursue these subjects in high school and beyond. Regardless of what areas students pursue in the future, computational thinking skills will be necessary in our modern, connected society. As the provision of effective and rigorous computer science education becomes a national focus, we hope you will consider this opportunity to become an innovative and pioneering school in this space.

The *Extending the CS Pipeline* project provides participating middle schools with technical assistance and curated resources from experienced researchers and practitioners from Rutgers University with expertise in this space. Through sustained, hands-on technical assistance with administrators and computer science teachers, we will work to enhance existing computer science courses (or develop a new course) with engaging pedagogical practices and informed, articulated course content. The project will continue to provide supports throughout early implementations of the revised (or new) course(s), and work alongside practitioners to provide instructional support, revise instructional materials, and collect data that will inform continuous improvement to computer science education within and beyond your school.

Participation in the *Extending the CS Pipeline* project spans up to two years, allowing us ample time to enhance/develop a CS course, implement the revised/new curriculum, and gather valuable data to assess its impact. As a fully-funded initiative, there are no costs associated with participating in the project; technical assistance provided by Rutgers University, along with stipends for participating computer science teachers, will be covered entirely by the USDOE grant.

We are currently recruiting schools to join us during the 2024-2025 academic year. We are excited about the potential to work with your middle school! We also look forward to the opportunities associated with this research project to share the work we do together, potentially create joint papers presentations, and for you and your school to receive recognition for your efforts. I'd love the chance to talk through some of this with you and think about ways that we might be able to support you and your school. Please take some time to review the materials we've shared and let me know if you are available to chat; I look forward to connecting on this or future endeavors!

Sincerely,

Dr. Cynthia Blitz, Ph.D.
Executive Director, Center for Effective School Practices
Research Professor, Graduate School of Education
Rutgers University, New Brunswick, NJ

1c. Recruitment Materials: Program Flyer

- Earlier versions of the program flyer contained a great deal of information about the project.
- We moved information from the program flyer into the FAQs document to avoid overloading the program flyer.
- By giving the program flyer more white space, key details are better able to stand out.
- Double click on the icon for full size document.



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**RUTGERS**

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Center for Effective
School Practices

1d. Recruitment Materials: FAQs

- The question-and-answer format of the FAQs document was an additional way for schools to gauge the fit of the project with their needs.
- Double click on the icon for full size document.



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1e. Recruitment Materials: CESP Brief

- We added this brief about the Center for Effective School Practices (CESP) to emphasize the legitimacy of the project.
- The brief tells reader who we are and provides information about our past work in similar areas.
- The brief is also a way of showing schools that we are not vendors who are trying to sell them something.
- Double click on the icon for full size document.



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Center for Effective School Practices

Excellence and Integrity in Applied Research

Under the executive leadership of Dr. Cynthia Blitz, the Center for Effective School Practices (CESP) is a practice-focused unit at Rutgers University's Graduate School of Education. Founded over 20 years ago, CESP works towards building and improving the capacity of a broad range of education stakeholders to implement high-quality *evidence-based* curricula, programs, and instructional practices designed to improve learning for *all* students and mitigate systemic inequities and bias in education. The work of the center has evolved in recent years from providing professional development and technical assistance to education professionals toward the development, implementation, and evaluation of structural or 'upstream' interventions to promote transformational change in educational systems and policies at the local, regional, and national levels.

CESP is a nationally recognized leader in the creation and facilitations of effective collaborative structures to address problems of practice and promote a continuous cycle of improvement and innovation. Examples of such collaborative structures include research-practice partnerships (RPPs), professional learning communities (PLCs), and regional educational alliances (REs). These partnerships bring together diverse stakeholders to exchange knowledge, evaluate interventions, and tailor innovative solutions that can be sustained to improve learning and achievement for all students.

A recent focus of CESP's work is on creating and sustaining scalable mechanisms for improving equity in



and access to robust computer science education across the K-12 continuum by co-developing, implementing, and assessing collaborative and capacity-focused educational interventions in the primary grades. Throughout research and evaluation projects, the Center works to distill the most salient, scalable, and replicable aspects of our work that have led to success, and disseminate such aspects to researchers and practitioners internationally.

CESP is strongly committed to connecting a broad range of education stakeholders with the best available research evidence to inform sound education policy and practice decisions needed to support the delivery of quality education to all students while closing persistent achievement gaps. The Center leverages decades of experience and research expertise to support a broad range of education stakeholders, including education practitioners, policymakers, and researchers.



Dr. Cynthia L. Blitz Executive Director & Research Professor

Cynthia Blitz (Ph.D., University of Pennsylvania) is the Executive Director of the Center for Effective School Practices (CESP) and a Research Professor at the Rutgers University Graduate School of Education (RU-GSE), where she works to facilitate the translation of scientific knowledge into educational practice in multiple domains of K-12 education. She has over 20 years of experience as a social scientist and program evaluator in the health and education fields, and has authored numerous publications on the topic of closing educational gaps and health disparities among disadvantaged and vulnerable populations.

Recruitment Process

2a. Recruitment Process: Recruitment criteria

- Middle school in New Jersey enrolling at least 600 students in grades 6-8
- 40% or more of the student population eligible for free or reduced-price lunch, and/or 40% or more of the student population are members of underrepresented minorities (Black and Latinx).
- Agreement by a diverse set of instructional stakeholders at the school and district to participate in Rutgers-led technical assistance activities.
- Agreement to participate in project evaluation activities:
 - Teacher and administrator online surveys and interviews
 - Provision of multiple years of administrative data (student-level course enrollments, demographics, and course grades)
 - Provision of detailed course descriptions and syllabi

2b. Recruitment Process: Target key decisionmakers and send out emails and packets

- We cast a wide net within each district to promote awareness of the project across multiple stakeholders:
 - District Superintendents
 - Middle School Principals
 - Supervisors of Curriculum and Instruction
 - STEM Supervisors
 - CSE Teachers
 - Lead Teachers
 - Department Chairs
- Initial contact was via email.
- A hard copy of the recruitment packet was sent a week later (postal mail).
- Phone calls to stakeholders were placed by the Principal Investigator two weeks after the mailing of the packet.

2c. Recruitment Process: Follow-up calls and meetings (Zoom and in-person)

- Listening to the schools that responded to the initial emails or recruitment packet mailers was critical to our recruitment process.
- These discussions were important opportunities for our team to learn about middle schools' CSE programs, their available resources, and the challenges they faced.
- Conversations helped schools and the project team assess the fit of the project with the school's needs as well as with the grant's requirements.

2d. Recruitment Process: After the meetings

- Meetings were followed up with:
 - A summary of the meeting
 - Any additional information that may have been requested by the school
- As part of the iterative recruitment process, we adjusted the information in our recruitment materials and our recruitment strategies in response to what we learned from educators:
 - Simplified the program flyer
 - Created an FAQs document
 - Expanded the list of recipients of the recruitment packet