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Computer Science: Faculty Publications and Other Works

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Chicago Alliance For Equity in Computer Science

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TEACHERS WHO ARE NOT TEACHING: WHO ARE THEY AND WHAT WOULD MOTIVATE THEIR RETURN TO TEACHING?

REL Midwest analyzed Michigan's teacher certification data, employment data, and data from a survey of teachers who are not teaching to inform education leaders about the viability of recruiting from the pool of certified teachers who are not teaching (that is those who never taught or those who taught but left their position) to alleviate teacher shortages. The study provides information on the characteristics of teachers who are not teaching, the reasons they are not teaching, and the types of incentives that might persuade them to work as a teacher in a public school. The study found that certified teachers who are not teaching in public schools indicated that low salaries were a main reason for not teaching, and that increasing salaries might motivate them to teach in a Michigan public school. Nonteaching teachers also may consider becoming a public school teacher if earning or renewing teaching certificates was easier and less costly, if they could more easily find full-time and part-time positions, and if they were assured of school leadership support and smaller class sizes.

PROJECT IN PRACTICE

In Michigan, public school students' access to effective teachers is hindered by teacher shortages in rural and urban regions of the state and in certain subjects. Yet Michigan's Department of Education (MDE) estimates that approximately 105,000 teacher certificate holders who currently reside in Michigan do not teach. MDE wanted to know if it is possible to recruit some of these nonteaching certificate holders to fill vacant teaching positions in the state, and if so, the types of incentives that might encourage their return to the teaching profession. This study provided MDE with information about the characteristics of nonteaching certificate holders, their reasons for leaving or never entering the teaching profession, and the incentives that could encourage them to enter or reenter the profession.

CHICAGO ALLIANCE FOR EQUITY IN COMPUTER SCIENCE

FOUNDED 2012

JOINED NNERPP 2019

MISSION

CAFÉCS is committed to ensuring that every high school student in Chicago Public Schools receives a compelling and relevant experience in computer science by providing schools with sufficient support and holding them accountable such that the quality of the computer science experience is equitable across the entire district.

PARTNERS

- Chicago Public Schools (CPS)
- The Learning Partnership
- DePaul University
- Loyola University
- <u>University of Illinois</u> at Chicago

ALL RESEARCH PROJECTS

CAFECS.ORG/ **PUBSOMITABSTRACTS**

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RESEARCH QUESTION

How did the profile of Exploring Computer Science (ECS) teachers change after CPS enacted a computer science graduation requirement?

WHY THIS STUDY

In 2016, CPS enacted a high school computer science graduation requirement as a means to broaden participation in computer science. ECS is the primary course that supports enactment of this policy. With limited numbers of certified computer science teachers, CPS relied on teachers from a variety of disciplines to teach ECS. The ECS professional development program is designed to prepare teachers from all backgrounds to support student success in ECS. This study examines how the profile of ECS teachers changed and the impact of that change on teachers' experiences with ECS professional development.

MAIN FINDINGS

Teachers who volunteered to teach ECS in the years prior to the graduation requirement were more likely to have a computer science background than teachers teaching ECS after the enactment of the graduation requirement (53% compared to 24% of the teachers, respectively). Despite the shift in teacher background, teachers who attended the ECS professional development after the enactment of the graduation requirement had equivalent levels of satisfaction with the workshop experience and confidence to teach ECS at the end of the PD program as did the volunteer teachers who experienced the professional development prior to the enactment of the graduation requirement.

PROJECT IN PRACTICE ······

To support the graduation requirement, there are more than 200 teachers teaching ECS each year. CPS would not be able to meet the needs of all students if it had to rely on teachers endorsed in computer science. This research validates the need to support teachers who are not endorsed in computer science. It also provides initial evidence on the effectiveness of the ECS professional development. Further research is needed on whether the equivalence of the workshop experience translates into an equivalence in student experience in the ECS course.

THE CHANGING PROFILE OF ECS TEACHERS

continued **•**