Increasing Computing Participation through School Counselors

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ABSTRACT

While computer science programs are available in many US K-12 schools, students often do not enroll for various reasons such as lack of awareness or encouragement. School counselors, positioned to have an important impact on students' access to educational and career opportunities, often lack information on computer science content, curriculum, and careers. To address this problem, school counselors from underserved school districts are receiving professional learning (PL) on computer careers, the need for additional K-12 student enrollment in computer science courses, and strategies to discuss computer careers with all students in the school. Preliminary data showed that fewer than half the participants had information about CS curriculum and career options before the PL, but gained information about CS and changed their advising practices after a few sessions. The objective is to assess if the PL for the K-12 school counselor community measurably affects the interactions and equity awareness of K-12 school counselors.

CCS CONCEPTS

• **Applied computing** → **Education** → Collaborative learning.

KEYWORDS

K-12, computer science education, school counselors.

1 INTRODUCTION / PROBLEM

Even though computer science (CS) programs are available in many US K-12 schools, certain populations of students may not be actively encouraged to pursue computing majors or careers, revealing inequities based on gender, race, socioeconomic status, location, language, and disability [1-3].

2 BACKGROUND / RELATED WORK

Research indicates that school counselors are critical in guiding students to educational and career opportunities, especially those in underserved school districts [4, 5]. School counselors often provide support through encouraging education and career aspirations, providing recommendations for course selections, and exposing students to career opportunities.

3 OVERVIEW / METHODS / RESULTS

School counselors were recruited for this PL series through direct email to K-12 school district supervisors in CS-related areas. An initial kick-off session was held virtually in September 2021, with 24 attendees. Baseline data from a pre-event survey indicated that before attending the PL sessions, fewer than half of the participants reported that they have provided CS resources, advocated for more CS courses, and discussed CS with school staff or parents. Fewer than half had knowledge about CS curriculum and career options, underrepresented populations in computing, and CS resources for students. After three sessions, the mid-series survey administered in December indicated that a higher percentage of participants changed their advising to include these CS-related practices, and learned about these CS topics. At the end of the series in June 2022, a post-event survey will be administered to assess the impact of the sessions throughout the year on computing knowledge, perceptions, and advising practices.

4 CONTRIBUTIONS AND FUTURE WORK

The knowledge gained from this study will provide guidance on how to increase the recruitment of students into computing, especially those from underrepresented populations.

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