* Moms can be Computing Leaders, Too!

Why We need Computing Community Learning Centers Designed and Lead by Mothers

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ABSTRACT

Women in underserved communities of computing such as women of color, women in poverty, elderly women, women with disabilities, and mothers who prioritize their families over their careers have little to no access to training or career development in a technical field due to lack of childcare, limited availability, lack of education, lack of employment history, transportation, and financial cost of training. Women from these groups often suffer from trauma or imposter syndrome lacking the confidence to believe they are capable of working with technology. Yet, in 2022, women are 91% of the households with children in public housing, which is more than 232 thousand households. Children from these households have very little possibility of social mobility from the bottom to the top quintile. There is a dearth of computer training opportunities for these women. A community computing learning center that is inclusive of and tailored to all mothers and their children would help to fill the void in the US technical workforce and break the cycle of poverty that exists in many low-income communities. Universities can play a critical role in the participatory design of these centers so that they can dually serve as an equity-enabling computer education research center for its faculty and students. Women led the computing revolution in the past and can lead the culturally responsive computing education movement of the future.

CCS CONCEPTS

• Applied Computing → Education• Professional topics → computing education, computing literacy, adult education, informal learning, computing education programs

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women, women of color, elderly women, poor women, women with disabilities, mother, computing education, equity-enabling research, culturally responsive education, informal learning, non-traditional pathways, community-based learning, participatory design, social mobility.

1 So why Moms?

After 10 years of trying to implement an introductory curriculum in a marginalized community that could serve as a bridge for both teachers and students to computer science in high schools, I am more convinced than ever that the only way to improve CS education in these communities is through grass roots efforts led by mothers and grandmothers, so that marginalized communities have the opportunity to thrive in a digital economy.

Mothers are a great and most underserved asset in computing, and to be more specific, they are the primary caregivers of the elderly, children, other family members, and the community who have sacrificed their career for the betterment of their children or other family members. Mother here is defined as a role and is not exclusive to any gender, race, age, disability, or socioeconomic status.

2 Why now?

There is an opportunity on the horizon that if not taken advantage of may lead to the greatest number of homeless families in the USA. Public housing is being transformed into mixed-income public/private housing in collaboration with government and industries. The lack of digital literacy in these communities may create barriers to housing. There is a shortage of computing teachers for many of these communities in their schools. Creating community computing learning centers that are led by local moms and volunteers trained by local community colleges and universities to teach computing informally to their peers and their families is essential to the security and economic development of the USA. This lightning talk will describe the creation process of such a center as well as the challenges, joys, concerns, and lessons learned from helping moms in low-income housing build an educational computing ecosystem tailored to their needs and those of their children.