



## Computer Science Work Group

**February 9, 2021, 3:30-5:00 p.m.**

### Members Present

Co-Chair Kathleen Kay, Co-Chair Jeff Weld, Wendy Batchelder, Dan Carver, David Collison, Nicole Crain, Samantha Dahlby, Jacquie Drey, Annette Dunn, Debi Durham, Linda Fandel, Dan Greteman, Dee Hamlett, Denise Hoag, Wren Hoffman, Doug Jacobson, Joe Murphy, Samuel Padilla, Melissa Pettigrew, Kyle Rector, Ryan Schaap, Ben Schafer, Lance Stonehocker, Joe Stutting, Beth Townsend, Timothy Urness

### Roll Call

Department of Education Computer Science Consultant Wren Hoffman facilitated the roll call of members.

### Welcome/Opening Remarks

Co-Chair Jeff Weld welcomed everyone to the third work group meeting and provided a review of the meetings to date and a preview of the agenda ahead. During meeting one, Sean Roberts with Code.org provided a national landscape analysis for computer science education. During meeting two, the current status of K-12 computer science in Iowa was provided as well as a presentation by Anthony Owen from Arkansas. During meeting two six buckets of work surfaced: computer science educator support, computer science education for the underserved, computer science education and work-based learning, computer science education promotion, computer science education policy, and computer science education youth programming.

Thank you to our subcommittee leads and also to everybody on this work group for signing on to serve on one or more of these subcommittees with an amazing sense of commitment. Every one of the six subcommittees have convened at least once.

### Subcommittee Preliminary Recommendations

Wren Hoffman facilitated the Subcommittee Preliminary Recommendations discussion. Each subcommittee had 10 minutes to present these preliminary recommendations along with time for questions.

**Computer Science Educator Support**, Ben Schafer, chair. Members include: Dan Carver, Samantha Dahlby, Dee Hamlett, Denise Hoag, Tim Urness

Preliminary ideas:

- In-service professional development;
- Micro-credentials; and
- Educator externships.

**Computer Science Education for the Underserved**, Kyle Rector, chair. Members include: Wendy Batchelder, David Collison, Samuel Padilla

Preliminary ideas:

- Bridge the funding gap;



- Mentors for students;
- More accessible curriculum to students with different abilities;
- Instructor training in being inclusive; and
- Support for English language learners.

**Computer Science Education Work-Based Learning**, Beth Townsend, chair. Members include: Nicole Crain, Linda Fandel, Dan Greteman, Joe Stutting, Melissa Pettigrew

Preliminary ideas:

- Increase and enhance business engagement and partnership with the schools through work-based learning modules or resource packets;
- Determine a consistent baseline of computer science foundational concepts, competencies and experiences, such as keyboarding, logical mindset, computational thinking, etc., for all K-12 students to have in all schools across Iowa; and
- Expand work-based learning with the goal of preparing students for success in computer science by giving them tools that will help.

**Computer Science Education Promotion**, Joe Murphy, chair. Members include: Doug Jacobson, Melissa Pettigrew, Robert Stough

Preliminary ideas:

- Focus on the middle school students' age group as this seems to be a breaking point between pursuing computer science and STEM in general as an interest area or not;
- Target parents, school counselors and work-based learning coordinators that this is a life skill;
- Create a quick access document such as a one pager of what the right information is so that parents who may not be proficient in computer science or technology have the opportunity to get their kids the right information and free information as early in their kid's educational careers they can;
- The Technology Association of Iowa (TAI) works on this promotion already;
- Partner with other business groups that already offer great opportunities for work-based learning engagements or other aspects that can promote introductory or simulation opportunities focusing on computer science; and
- Create a campaign that is perhaps student driven which rallies everyone around this computer science imperative regardless of disciplinary allegiance.

**Computer Science Education Policy**, Joe Stutting, chair. Members include: Annette Dunn, David Collison, Ryan Schaap, Ben Schafer

Preliminary ideas:

- Flex credit to promote more high school computer science course participation;
- Incentivizing the pursuit of computer science endorsements through reimbursement and supplementing salaries;
- Incentivize and recruit additional persons into the teaching field of computer science with school loan forgiveness or other strategies;
- Determine how to provide these kind of programs throughout Iowa in all schools;
- Explore regional partnerships around the state regarding existing computer science career pathways work at the high school level; and



- Explore whether larger school districts, community colleges or state colleges can provide remote learning opportunities to smaller rural districts or economically disadvantaged districts that cannot afford these teachers.

**Computer Science Education Youth Programming**, Doug Jacobson, chair. Members include: Jacquie Drey, Samuel Padilla, Lance Stonehocker

Preliminary ideas:

- Database/clearinghouse created to provide information on the various co-curricular activities available to support computer science education;
- Competition funding support;
- Summer programs;
- Statewide Tech Jam; and
- Crosscutting recommendations. Create a mentor database, increase participation in the National Center for Women in IT (NCWIT), arrange company visits, include the role of CTE Days at community colleges, collaborate with non-profits and national centers, specifically with regard to after school and summer programs.

### **Summary of Key Ideas and Final Remarks**

Co-Chair Kathy Kay thanked everyone for their participation and offered kudos to all the teams in formulating their great ideas in a concise way. There are a lot of synergies and recurring themes across the subcommittees which allows us to leverage each other's ideas with recommendations to solve two problems with one idea.

There are three recurring themes:

- Leveraging what is already in existence and available;
- Near-term initiatives that can be accomplished pretty quickly; and
- Longer-term initiatives that will take longer and may be more challenging to address in terms of changes in policies and requirements.

Subcommittees are encouraged to think about the following as they refine their ideas:

- Near term outcomes, as well as be mindful of those that will take longer to achieve;
- High impact consensus recommendations that may be low cost and utilize existent structures; and
- Funding mechanisms and partnerships with groups and private sectors to help make recommendations achievable.

All the subcommittees will continue to work in groups refining their ideas and recommendations ahead of the March meeting.

All members are invited to provide input across subcommittees and reach out with questions at any time.

Adjourned at 4:52PM

### **Next Meeting**

March 9, 2021, 3:30-5:00 p.m.