Computer Science Teacher Certification

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CS Teacher Certification is a Hot Mess

• Many states have:
  • no requirements so anyone can teach computer science
  • requirements with absolutely no connection to computer science content or teaching
  • requirements that are impossible to meet (requiring teachers to have taught courses that do not exist)
Obstacles to CS Certification

- State level administrators don’t know what their own requirements are
- Policy-makers confuse “having computers” with teaching computer science
- Teacher preparation programs not preparing CS teachers because they are designed to prepare teachers for professional certification
- State standards often do not include CS
- National curriculum movements ignore CS
Required Knowledge and Skills

- CSTA has developed a comprehensive model for CS certification for:
  - Pre-service teachers
  - Teachers with CS teaching experience
  - Teachers with no CS teaching experience
  - People coming from industry
The CS AP Principles Course

• AP audits are serious business meant to ensure that courses (and teachers) meet AP requirements
• Successful implementation requires a large community of AP CS-ready teachers (10K)
• Huge push for PD for CS teachers and those from other fields who want to teach CS (universities & industry need to step up)
• Teachers must take it upon themselves to lobby for and take advantage of every relevant PD event they can and push for AP CS courses in their schools
• Recruit, recruit, recruit
Making CS a Priority

• ACM Education Policy Committee working on making K-12 CS education a federal priority (changed legislation, CSED Week, CS Education Act)
• NSF funding development of AP CS Principles course and more research and PD (10K)
• CSTA Leadership Cohort has members at state level advocating for CS education (still need two people from Indiana!)
• Universities and colleges must be proactive advocates for K-12 CS education and provide relevant PD for teachers
• We have to educate state-level policy makers about critical need for CS education and for teacher certification that is rigorous and fair
• Help students (parents and guidance counselors) understand the opportunities that CS provides for students in all disciplines (thinking outside the nerdbox)
THANK YOU!

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