Elementary Principals: Three Things You Never Want to Hear Your Teachers Say

QUESTION

I'm an elementary school principal. What are some of the pitfalls I should avoid when bringing CS to my school?

TOOL DESCRIPTION

This tool is for K-5 principals who are introducing computer science to their school for the first time. Using the voices of elementary teachers, it identifies some of the barriers that principals might come up against that could affect their CS program implementation. Quotes are taken from K-5 teachers who were teaching a new CS program in the 2014-2015 school year.

WHY DO YOU NEED TO KNOW THIS?

Unanticipated barriers are among the greatest challenges one can face when trying something new. Moreover, unless addressed, those barriers can prematurely end what might have otherwise been a successful initiative. This is the case for any effort that seeks to bring new practices to the classroom, including bringing computer science to elementary schools.

HOW DOES THIS TOOL HELP?

This tool includes the words of real elementary teachers who have come upon some stumbling blocks in their efforts to bring computer science to their students. It can help raise awareness of potential problems that principals and teachers new to computer science can work together to address.

TOOL CONTENT

Three things you don't want to hear, and how to avoid them

1. **"My principal doesn't care about this, so why should I?"**

2. **"We have computers; but we can't use them."**

3. **"We have Wi-Fi, but it's not enough."**

1. "My principal doesn't care about this, so why should I?"

Nothing will stop a new effort cold like the perception that the principal is not behind it. Many teachers, particularly those who have been in the classroom for some time, have seen programs come and go and if left on their own may decided to simply "wait it out."

Teachers may not embrace bringing computer science to their classrooms for a wide range of reasons from fear that they might be taking time away from subjects they feel are more important, to their own worries about trying something new. One savvy teacher described the resistant teacher well:

> *"There are teachers that are going to be like, 'Absolutely not. I am not doing that. I do not have time to do that. I do not have the knowledge to do that. I do not have this… I do not have that…' unless their principals enforce it."*

Another confirmed it this way:

> *"It is up to the principal how much he wants classroom teachers involved. They have already got more to do in their classroom than they have time for…"*

Other teachers may be less resistant, but are still pragmatic when it comes to acknowledging the effort it will take to make computer science happen. Time and time again, they have seen an initiative start out with a lot of visibility and excitement only to fade as day-to-day demands of the school day take priority. The pragmatic teacher might say:

> *"I feel like, I think we get tons of initiatives. I think administrators have tons of initiatives going across their desk, and I think in the moment, it's a high priority, but then I think as time goes on, you know, I'm in the same situation…like it was a big push and there was a lot of excitement, but now, it's like, when are we going to find time to do this in the schedule?"*

Some teachers who experience this repeatedly can, understandably, start to get skeptical:

> *"I always feel like there's a lot of talk about [the CS program] at the beginning of the year, and then it kind of just died out…"*

RECOMMENDATION

There is a single, simple action that a school principal can take to avoid this pitfall—commit. Send a clear, unambiguous message that the school is going to create opportunities for all students to engage in computer science. Then, demonstrate that commitment with action. Teachers will see that commitment and make comments such as:

"Our school has committed to utilizing this from K-8. We have committed. Our principal has committed. He has bought into it, so it's something that is going to be rolled out for everyone."

This isn't a decision to make without careful thought. Schools face many simultaneous priorities that make constant demands on teachers and leaders. If uncertain that computer science can be a priority at the moment, then consider postponing and entering a planning phase to introduce it in the future. Then, when the time comes to bring computer science to the school, this barrier can be avoided.

2.   "We have computers; but we can't use them."

A principal may have established a commitment and demonstrated that commitment by identifying appropriate instructional resources, and supporting teachers' attendance at professional development. Even after this effort, unexpected challenges can arise. Embarking on computer science education with computers requires more than attention to the teachers, it requires attention to the instructional resources themselves, particularly the hardware and software. (For information on introducing computer science without computers, see the "**Computer Science Without a Lot of Computers**" tool.)

Challenges can come from the computers themselves:

> *"We had 30 working computers. However, as the school year progresses, computers break down, or slow down …the hardware issues and the access is going to be a huge issue for me."*

Or, the computers are running, but they are just too old to run the software:

> *"We have a really great computer lab at our school, but the Macs that are there, you cannot even get the updates for them. So now we're looking to buy something new."*

RECOMMENDATION

Make a plan that includes upgrading computers when possible while also using "unplugged" activities that focus on computing concepts and skills but don't require a computer. Other approaches include using mobile devices that can access web-based computing activities.

3.   "We have Wi-Fi, but it's not enough."

Even as a school leader gives careful consideration to the hardware and software, she must also give attention to ensuring that once the technology resources are in place, there is sufficient bandwidth to accommodate them. One disappointed teacher explained:

> *"My school has everything. We just do not have the network that can handle it. Talk about frustration. My students know how to deal with being frustrated because it is frustrating when you are waiting for a program to load for 20 minutes. Our students are eager and willing, but the network just cannot handle what we have."*

Another teacher spoke about how she needs to give careful attention to when she schedules her computer science instruction:

RECOMMENDATION

Review the **bandwidth tool** to better understand the bandwidth requirements for the kinds of computer science education activities you plan to do. Then, ascertain whether the bandwidth is sufficient as well as the potential consequences of upgrading if need be. They key is getting the information you need and planning in advance.

"If there is one class using Wi-Fi, then I cannot really have my class use it because nothing ever loads."

And still another who described the irony of having an upgraded network that then made the devices she was accustomed to using obsolete:

> *"Because, our network got upgraded in the spring, we went from the old network to this new network that's much faster and much more reliable, however, the new network, because of whatever changes they made, kicked off all our Apple devices that have to use the guest network, Apple TV no longer works, there's so many problems with the new network… I had to completely abandon it…"*