Title:
Teachers Talk: When Are BYOD Strategies Worth the Trouble?

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Background:
How the Study Came About and What I Wanted to Know

Like many cash-strapped American school districts who want to give their students ready access to the growing wealth of free online learning resources, my (first author) small, Texas district began an experiment with students providing their own Internet-connection devices, the so-called Bring-Your-Own-Device (BYOD) strategy. Because their choice of BYOD and need for information about how it was working coincided with my need to complete a dissertation for my Ed. D. program, I decided to select this topic as the focus of my study. I wanted to know what teachers feel are the benefits and downsides of this novel strategy and what can a district do to make it more likely that the positives outweigh the negatives.

Study Methods:
Theory into Practice

Rogers (2003) Diffusion of Innovation theory was used to structure questions for a teacher interview and survey. Findings from interviews were used to get insights into what should be asked in the survey. Rogers' said that people are more likely to adopt an innovation like BYOD when they see how its benefits – what he called "relative advantages" – are an improvement over what they currently do. Those who adopt an innovation also see clearly that the new way is not too difficult (i.e., it has low complexity) and fits in with their perceptions of their role (i.e., what Rogers referred to as compatibility). Thus, to determine teachers' perceptions of BYOD's relative advantages, I asked questions about what benefits they perceived it provided over their former way of getting students connected with online resources . When I wanted to know their perceptions of BYOD complexity and compatibility, I asked what difficulties this new format presented and whether or not they perceived that it fit in with what teachers should be doing in the classroom.

Findings:
What Teachers Said

Teachers were very forthcoming in both the interview and survey portions of the study. A fairly high survey return (59%) indicated their interest in and concern about the topic. They reported that student motivation, engagement, and technology literacy were the greatest benefits of the BYOD approach and that lack of uniform access to the devices was the greatest challenge. Teachers tended to agree that they needed additional time for preparation and collaboration on how to implement the approach before they could determine best practices. They also said they would like the district to provide stricter guidelines and more assistance with managing and monitoring students. Responses seemed to indicate that teachers believed the strategy could be beneficial if teachers received the support they needed to make it work.

Findings:
How the District Can Use Teachers' Observations

Teachers varied considerably in their perceptions of BYOD benefits and obstacles, most likely because their resources and levels of support differed so much from school to school. But a common thread across all sites was the need for additional training and collaboration both before and during BYOD implementation. Though many teachers seemed excited about the possibilities of accessing technologies' benefits in this way, some clearly remained uncertain of their abilities to make this approach worth the trouble.

One way the district could improve teachers' confidence that they can implement and profit from BYOD-based strategies is to ask those who have already been using them successfully in classrooms to become opinion leaders and role models for others. These teachers could lead professional development, both in person and via video and online media, to increase what Rogers referred to as "observability," or opportunities to see that other teachers like themselves are using BYOD in their teaching. These experiences also help decrease teachers' perceptions of the complexity involved and promote the view that using innovative methods is a characteristic of good teaching and, thus, is compatible with how they should be using their classroom time. To increase what Rogers called "trialability," teachers could collaborate in small groups on professional development days, designing and exchanging ideas on what was working for them in order to have specific strategies to try out in their classrooms. These sessions could also be opportunities to gain agreement on ways the district could support their work.

One other clear finding of this study was that lack of universal access to devices can severely hinder the entire enterprise. If some students do not have their own Internet-ready devices, the district's efforts to provide this access become a key prerequisite to success. Our district is considering providing devices to students to assure a one-to-one environment for more uniform access to technology.

This was only one small-scale study, but it yields insights that may help other districts seeking to use a BYOD format to increase students' technology access. My district, like ones around the country who are trying out this strategy, will not only be doing everything it can to make it work as well as possible, it will also continue to gather data, analyze the outcomes, and seek to answer the question increasingly on the minds of every school administrator: what is the most viable, cost-effective way to make sure every student has access to technology?

References

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.

Thibodeaux, T.T. (2014). *Teacher perceptions of strategies for successful implementation of bring-your-own-device and one-to-one computing strategies in a small school district* (Doctoral dissertation). Nova Southeastern University, Florida.