



Indicator: Hardware, web browser and software requirements are specified to students and parents before the use of online instruction outside of school. (B5)

Explanation: Blended learning enables personalized learning at scale, offering students both traditional classroom and online learning experiences, some of which may occur outside the brick and mortar classroom. Since online learning often takes place at home, parents and students must be aware of technology requirements prior to blended learning implementation, as part of an initial communications plan to build program support among stakeholders. Schools may want to assess their students' level of technology available at home prior to blended learning implementation, and establish ongoing "communication loops" to keep students and parents informed.

Questions: How can schools and districts ensure that students can engage in online learning outside of school?

Learner-centered, or personalized learning refers to "tailoring learning for each student's strengths, needs and interests—including enabling student voice and choice in what, how, when and where they learn—to provide flexibility and supports to ensure mastery of the highest standards possible" (Patrick, Kennedy, & Powell, 2013, p. 4). The student is actively involved with the teacher in co-constructing their individualized learning pathway, and the location, time and pace of learning may vary from student to student (Redding, 2016). Blended learning models grant students some degree of control over their learning pathway, and provide a mix of traditional classroom instruction and online delivery of instruction and content (Staker & Horn, 2012). While K-12 blended learning research is limited (Sparks, 2015), some evidence suggests that students with access to well-implemented blended learning models outperform those experiencing only one type of instruction (Means, Toyama, Murphy, Bakia, & Jones, 2010; Bakia, Shear, Toyama, & Lasseter, 2012; Means, Toyama, Murphy & Baki, 2013; Pane, Griffin, McCaffrey, & Karam, 2014; Pane, Steiner, Baird, & Hamilton, 2015). Students may spend part of the school day engaged with teachers and other students using both digital and non-digital content, and get tutoring or complete an online course at home or in an after-school program. If students are expected to engage in online learning outside of school, students and parents must be made aware of the required technology prior to a school incorporating this instruction in order to avoid potential accessibility pitfalls (Darrow, Friend, & Powell, 2013).

How Can Schools and Districts Ensure that Students Can Engage in Online Learning Outside of School?

Districts and schools considering blended learning models that emphasize online learning at home must consider the types of technology and Internet access students have available in the home environment. Low-income students and students of color are much less likely to have sufficient hardware, software, and broadband Internet access at home than affluent students (Darling-Hammond, Zielezinski, & Goldman, 2014). Districts and schools should track the availability of Internet access at home, and should ensure that "parents and guardians have access to view, search and use digital content with students" (District Reform Support Network, n.d.). Schools can also assess their readiness for incorporating blended learning by examining the types of hardware and software that students have available at home through a "change readiness" survey (Bailey, Ellis, Schneider, & Vander Ark, 2013; Thompson, 2015). To ensure

equity and equip families with the tools necessary to facilitate blended learning, schools should target 1:1 access to multimedia devices for all students in the classroom, and include the ability for students to take devices home if many do not have their own devices (Friday Institute for Educational Innovation, 2013; Thigpen, 2014).

Building parent engagement and support is crucial for successful blended learning programs. Communication planning builds this support and is critical for successful blended learning implementation; schools should consider doubling or tripling their communications with parents (Blouin, 2015; Keane, 2015). Parents should be engaged at the earliest stage of implementation through presentations at events such as “Back to School Night,” PTA meetings, and parent-teacher conferences (Keane, 2015). Parent focus groups can also provide two-way communication and help teachers or administrators understand parent concerns as well as better communicate the purposes of blended learning programs (Heitner, 2014). Timely information about required technology should be incorporated within these communication efforts to build parent and student support and buy-in for blended learning initiatives. Darrow (2014) recommends that schools and districts establish “ongoing communication loops;” for example, a website with frequently asked questions, ongoing blog about technology issues, or a Twitter feed. Schools may also want to offer ongoing training to students and parents in the use of technology tools, to include how-to videos, face-to-face training, screenshots with instructions, etc.

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