

Mobile Devices 101

Intel® Teach Elements: Moving into Mobile Learning



The following mobile devices are listed in order of size and capability, from larger more fully featured to smaller with more limited functions.

Laptops

The largest of the possible mobile devices students may have at their disposal, laptops provide a full range of functions and can access a large range of web tools and applications. Laptops enable your students to use a single tool for most (if not all) classroom activities. They are also, however, the more expensive and least portable of the various devices. Additionally, the larger size may make handling these devices more challenging for younger students.



Ultrabooks™

Ultrabooks™ are thinner, lighter laptops, sometimes with decreased hardware related features, such as internal CD and DVD drives. The longer battery life and decreased weight make these devices more portable than laptops. Like laptops, Ultrabooks™ such as the Lenovo® Ideapad have a full range of features and capabilities and are suited to enable the full range of mobile student activities. As newer laptops have become thinner and lighter, distinctions between Ultrabooks™ and laptops may disappear. Currently the cost of an Ultrabook™ is similar to the range in laptop costs.



Convertibles and Detachables

The mobile device market is currently seeing the emergence of a broader selection of convertible devices that function as full laptops but “convert” to a tablet or have a detachable tablet. While convertible devices have been available for several years, newer convertibles, such as the Lenovo Yoga®, replace interface and interaction previously limited to a stylus with improved touchscreen technology, making them more accessible to students of a range of ages. Convertibles are priced similarly to laptops and Ultrabooks™.



Netbooks

Netbooks are often smaller and less expensive than laptops or Ultrabooks™. They are designed primarily for browsing the Internet and word processing. An example is Google Chromebook®. While some netbooks act as diminished laptops, others act more like tablets. In the case of the Chromebook, the netbook runs only a browser and Internet apps. That said, the devices can still access the full-range of web tools. Small size and portability makes these ideal for student use. Assignments and activities that require a broad set of software beyond browser-based programs, however, will require students to use an additional device.



Tablets

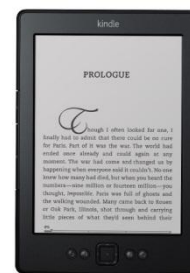
Tablets are touch devices that connect easily to the Internet and function through a browser and apps. Examples include high end tablets such as the Apple iPad®, Microsoft Surface®, and the lower end Google Nexus®. The touch interface makes these devices



more suitable for younger children than the above mentioned laptops. Apps designed to run on mobile devices are widely available for all tablet operating systems. The popularity of apps has led to a large selection of educational apps that extend the function and capabilities of mobile devices.

eReaders

eReaders are designed for downloading, storing, and reading digital text of all types, from full textbooks to novels, and periodicals without the cost (new and replacement) and storage infrastructure of physical texts. They are capable of storing eBooks for students to read and mark-up with notes and high-lighting. Examples include Barnes and Noble Nook* and Amazon Kindle*. Some eReaders are also capable of acting as a tablet with full Internet access and use of some apps. Many also have enhanced features that allow students to search definitions for new vocabulary, “mark up” texts with notes and references, and use accessibility tools to mitigate hearing and vision impairments.



Smart Phones

The smart phone is a mobile phone that can download and use apps. The apps extend the device's functionality beyond the phone, camera, and basic browser. Smart phones also allow students to text one another or the teacher, take and share photos, and record themselves or others on video or audio. Smart phones in a mobile classroom are highly portable and flexible for students to access, use, and create media as part of assignments and activities, but they are best used as a complement to devices with greater functionality. For Bring Your Own Device (BYOD) environments, mobile phones (many “smart”) are becoming omnipresent parts of students' lives; students across a broad range of demographics are more likely to have access to a smart phone than any other item on this list outside Feature Phones.



MP3 Players

MP3 players allow students to store and listen to audio files, such as music, podcasts, and recorded lectures. They may also be used to provide access to written material for vision-impaired students. Some devices also allow students to record themselves or others. A high-end device, such as the iPod Touch*, may also allow the use of apps. Like a phone, an MP3 player is strictly a complementary device to something with a larger set of features and functions in a mobile classroom.



The Intel® Corporation web site maintains two resources for sorting through decisions about devices:

- [Product Finder](#) is useful for understanding the distinctions between larger mobile devices like tablets and convertibles.
- [Intel® Education Technology Advisor](#) provides information on technology solutions geared to the school IT department and decisions makers