Blackboard

## Contemporary Media File Best Practices

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**Product:** Blackboard Learn

**Release:** 9.1;SaaS

**Introduction:** Many times clients ask "what file types" does Learn support?

Because Blackboard Learn is an enterprise web-application that runs in the browser, it does not support files per-se. The *Browser* supports files. For information about the file formats supported by our *mobile applications* please see the help.blackboard.com article "Supported files in Mobile Apps"

As of the Q2 2017 release of Blackboard Learn, users aren't able to upload the following file types due to possible security risks:

- exe
- bat
- msi
- dll
- sh
- dmg

If you want to allow users to upload these file types, contact Blackboard Support through Behind the Blackboard.

**Functionality:** Clients may find that video or audio files they upload cannot be embedded into course content.

In order for playback to succeed, the playing application, such as the Browser, or an external player such as QuickTime must support *both* the container format and the *codec.* Results may also vary if a file extension does not match the container. For example, an m4a audio file which has the extension of "mp3"

For example the widely supported ISO-standard ".mp4" file *container* format can contain many types of media stream "codec." Some however have wider support than others. For example, for the Chrome browser: here are some valid and invalid combinations.

| | **container** | **codec** | **why** |
|---|---|---|---|
| **viable** | .mp4 | H.264 | Valid codec, valid container |
| **nonviable** | .mp4 | Motion JPEG | Valid container, invalid codec |
| **nonviable** | .avi | H.264 | Valid codec, invalid container |

Unsupported media files need to be converted to both a appropriate container, and an appropriate codec.

**The browser industry is in constant flux, but the following external websites provide lists.**

- https://developer.mozilla.org/en-US/docs/Web/HTML/Supported_media_formats
- https://caniuse.com/#search=video
- https://caniuse.com/#search=audio
- https://developers.google.com/web/fundamentals/media/video (note: the 'webm' format recommended here doesn't yet enjoy full support outside of Chrome.)

(Blackboard, Inc. does not endorse external websites)
**Technologies:**

Here is a short, non-exclusive list of unacceptable files. They are unacceptable only because no modern browser can play them. As of time of writing the help.blackboard.com article "File Types" lists as supported MANY of these files. That is extremely misleading. You can certainly upload them as attachments only, and users can certainly click such attachments to download and view them externally.  However, the browser is not going to be able to play them so if you embed them, it will fail.

- Microsoft Active Streaming Format, Windows Media format
    - asf, wma, wmv, .wmf
- Real Media
    - .ra, .ram
- Shockwave Director, Macromedia Authorwiare
    - .aam

- Heritage UNIX, and Apple Audio
    - .au, .snd
    - .aif, .aiff
- AAC
- Java Appliets
    - .jar
- Audio/video Interleave
    - .avi
- MPEG-2
    - .mpg, .mpe, .mpeg
- Documents cannot be embedded in course content, Microsoft Office and Openoffice can be viewed inline as *attempts* via NBV
- Tagged Image File Format
    - .tiff, .tif

Here is a short, non-exclusive list of files which work most of the time. It's advisable to test this in all major browsers such as Chrome, Firefox,

**Audio**

- MP3
- M4A file with AAC codec (there is limited support in Firefox)
- WAV files (Except in Internet Explorer.)

**Video**

- MP4 Video container with H.254 codec