

# Blackboard

## Font Substitution and Page Layout changes in Blackboard Annotate for Word Processing Files

**Date Published:** Jun 09,2021 **Category:** Planned\_First\_Fix\_Release:Learn\_9\_1\_3900\_0\_Release,SaaS\_v3800\_21\_0; Product:Course\_Tools\_Learn,Extensions\_Learn; Version:Learn\_9\_1\_3900\_0,Learn\_9\_1\_Q4\_2019,Learn\_9\_1\_Q4\_2018,Learn\_9\_1\_Q2\_2019,SaaS **Article No.:** 000060627

**Product:** Blackboard Learn

**Release:** 9.1;SaaS

**Service Pack(s):** Learn 9.1, 3900.0.0, Learn 9.1 Q4 2019 (3800.0.0), Learn 9.1 Q4 2018 (3500.0.0), Learn 9.1 Q2 2019 (3700.0.0), SaaS

**Description:** Common fonts such as Times New Roman are substituted with other, visually and metrically incompatible ones in BB Annotate. This can cause page layout changes because the fonts are 'wider' than those selected by the user. Additionally: the display libraries used to convert office files to PDF do not necessarily handle kerning and hinting identically to Microsoft applications.

**Steps to Replicate:** Use a word-processing application such as Microsoft Word to create a file with several paragraphs of text in common typefaces such as Times New Roman, Arial or other normal typefaces.

1. Save this document in three formats: DOCX without embedded fonts (default), PDF and DOCX with embedded fonts
  1. The steps to embed fonts in a DOCX file may vary by software application. To embed fonts into a DOCX file in Microsoft Word 2016 or later:
    2. In the Save As Dialog click **Tools**
    3. Click **Save Options**
    4. Under **Preserve fidelity when sharing this document** choose **Embed fonts in the file** and uncheck **Do not embed common system fonts**
2. Create an **Assignment**
3. Use **Student Preview** or test student users to upload each of the three files
4. View the submitted files in BB Annotate

### Expected Behavior

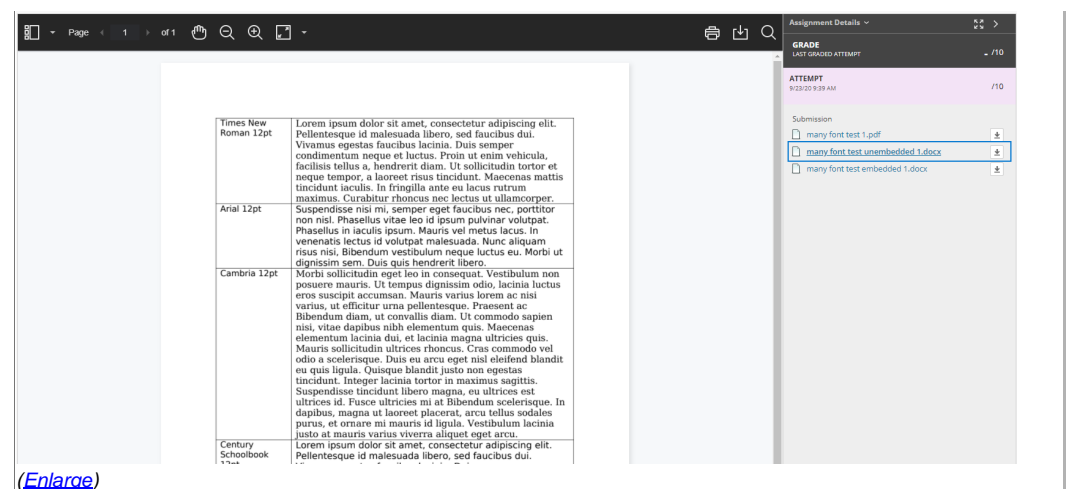
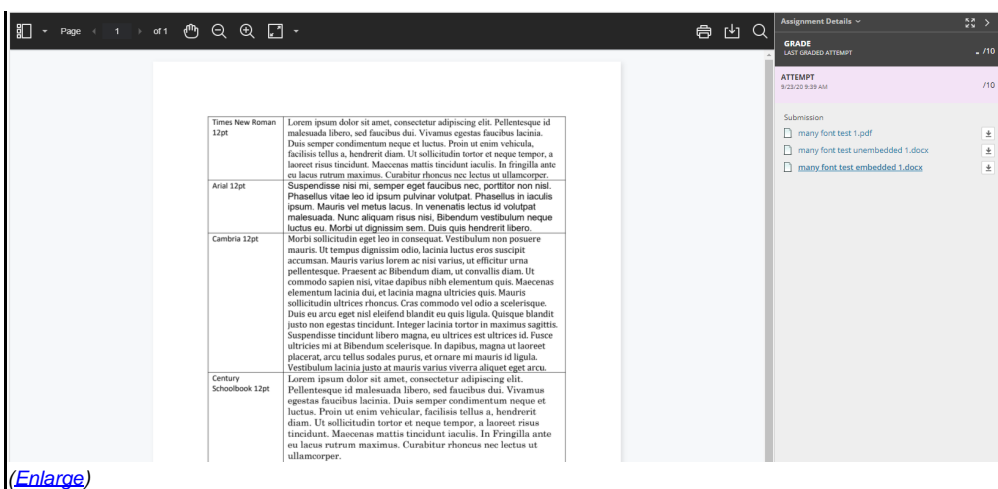
There is no material difference to how the files appear in Annotate compared with how they appear in the word-processing application. Nor is there any difference to how the three files appear to each other.

### Observed Behavior

The PDF and the DOCX with embedded fonts display correctly. The DOCX without embedded fonts is markedly different. The page layout may change and other fonts have been substituted.

**Symptoms:** Fonts in word-processor files saved with default settings may be substituted with DejaVu Serif or DejaVu Sans (Also known as Bitstream Vera Serif and Sans). These typefaces are visually and metrically different. Because the character forms are 'wider' at the same point-size, the page layout may re-flow causing additional pages to be used, unwanted line breaks, errors with spacing and similar problems.

Correct display with embedded fonts	Incorrect display without embedded fonts



**Cause:** This is an issue with the conversion process in the universal Blackboard Annotate microservice.

**Resolution/Workaround:** In October of 2020 the following fonts were added:

- Arial
- Calibri
- Cambria
- Century Schoolbook
- Comic Sans
- Courier
- Garamond
- Georgia
- Impact
- Times New Roman
- Trebuchet
- Verdana
- Yu Mincho (Japanese)
- MS Gothic/PGothic (Japanese)
- MS Mincho/PMincho (Japanese)

The fix is not retroactive to documents already converted.

At the end of October, some adjustments to kerning and hinting were also made to be more similar to the appearance of Microsoft Word. However there can still be minor variance in the conversion and rendition of typography in word processing formats which are optimized for editability to the expense of fidelity. See the table below for tips on what to expect

For fonts not in these lists, use PDF or embed the font in the DOCX or other Office file.

This fixes were applied universally in the Blackboard Annotate microservice. There is no need to update Learn software or apply a Cumulative Update to benefit. Listed release numbers are for convenience only.

**Information:** This issue might occur in other file types.

The testing team provided the following comparison on common font and style combinations compared with Microsoft Word and based on a corpus of sample documents. It may not cover every scenario but can give users information about what to expect. Note that some style combinations produced different results. For example Bold Roman or

Italic Regular "Times New Roman" was equal, but Bold Italic was assessed as slightly longer

### Informal Visual Comparison of Document Length for Common Typefaces and Styles in BB Annotate and Microsoft Word

Vs. Word	Total	List of Fonts and Styles
Equal	20	Arial, Arial Black, Arial Italic, Calibri, Cambria, Cambria Bold, Century Schoolbook, Century Schoolbook Bold, Century Schoolbook Bold Italic, Century Schoolbook Italic, Courier New, Courier New Bold, Courier New Italic, Georgia, Georgia Bold Italic, Impact, Times New Roman, Times New Roman Bold, Times New Roman Italic, Trebuchet Bold
Slightly Longer	5	Andale Mono, Courier New Bold Italic, Verdana Bold, Verdana Bold Italic, Webdings, Arial Bold, Arial Bold Italic, Cambria Bold Italic, Cambria Italic, Georgia Bold, Georgia Italic, Times New Roman Bold Italic
Slightly Shorter	11	Trebuchet, Trebuchet Italic, Verdana, Verdana Italic
Longer	2	Comic Sans Bold, Trebuchet Bold Italic
Shorter	4	Calibri Bold, Calibri Bold Italic, Calibri Italic, Comic Sans

Some font-faces do not have particular styles such as "italic" but if that formatting is applied by the user anyway, then the word processor may try to simulate the missing style by adjusting the letterforms. This can produce unpredictable results.

The amount of visual information available in the underlying DOCX file format is not amenable to absolute consistency in display. DOCX is optimized for editability. PDF files have intrinsically greater document fidelity across viewing applications. When visual, typographic and pagination accuracy is paramount: PDF may be a better choice to DOCX irrespective to the viewing application used. Annotate converts all non-PDF files to PDF, but generally correctly prepared PDF is used "as-is" where possible.

Blackboard, Inc does not endorse third party tools and products. They are mentioned as a convenience only. Blackboard does not provide support for configuration and use of specific word-processing applications.

**Target Release:** Learn 9.1, 3900.0.0 Release SaaS - Fixed (v3800.21.0)

**Patch Available:** No

#### Attachments

Filename	Notes	Last Updated
<a href="#">BBA_embedded.docx.png</a>		Sep 25,2020
<a href="#">BBA_unembedded.docx.png</a>		Sep 25,2020