

A GUIDE TO:

Creating Accessible PDF Documents



As greater numbers of faculty use Canvas to provide reading material for their students, opportunities for learning are greatly enhanced. Typically such materials are digitized using a flat bed scanner or photocopier with scanning capability, then saved as a PDF file. Students with print-related impairments appreciate the digitization of course materials, which often makes it easier for them to access their learning materials. Unfortunately, digitized course materials are often created in a manner that limits how usable (or accessible) they are for students with print-impairments who are making use of Access Technologies.

Student Accessibility Services (SAS) assists students in converting text-based materials to alternative and accessible formats for students with print-based disabilities. Such accessible formats may include converted PDF files, RTF (Rich Text Format) files, and DOC (document) files. This conversion process is time consuming and is more difficult when the PDF documents posted to Canvas or being used as classroom handouts are of poorly quality. Like any recipe, the better the ingredients (input) the better the final product (output).

This guide provides a brief tutorial for faculty and staff who are creating PDF documents for use with classroom lectures and/or for posting to course connected Canvas sites. Our goal is to provide information that will enable you to create high-quality, clean PDF documents. Not only will these clean PDF files make it easier for SAS to support the needs of USF students with disabilities, but these more readable documents will also be appreciated by other students and colleagues attending to your course materials.

This document is broken into four (4) examples of PDFs with explanations:

1. An example of a poorly scanned and created PDF document file.
2. An example of an improved PDF document using simple techniques.
3. An example of a greatly improved PDF document using slightly more advanced techniques.
4. For the advanced interest, creating a PDF document with basic accessible functionality.

Also included are the steps for using the software program Adobe Reader to have your computer read the document out loud as student would use the program. This is a good test of the accessibility of any PDF document.

Student Accessibility Services thanks you for taking the time to review this document and consider these best practices while developing course



Student Accessibility Services

4202 E. Fowler Ave. SVC1133
Tampa FL, 33620

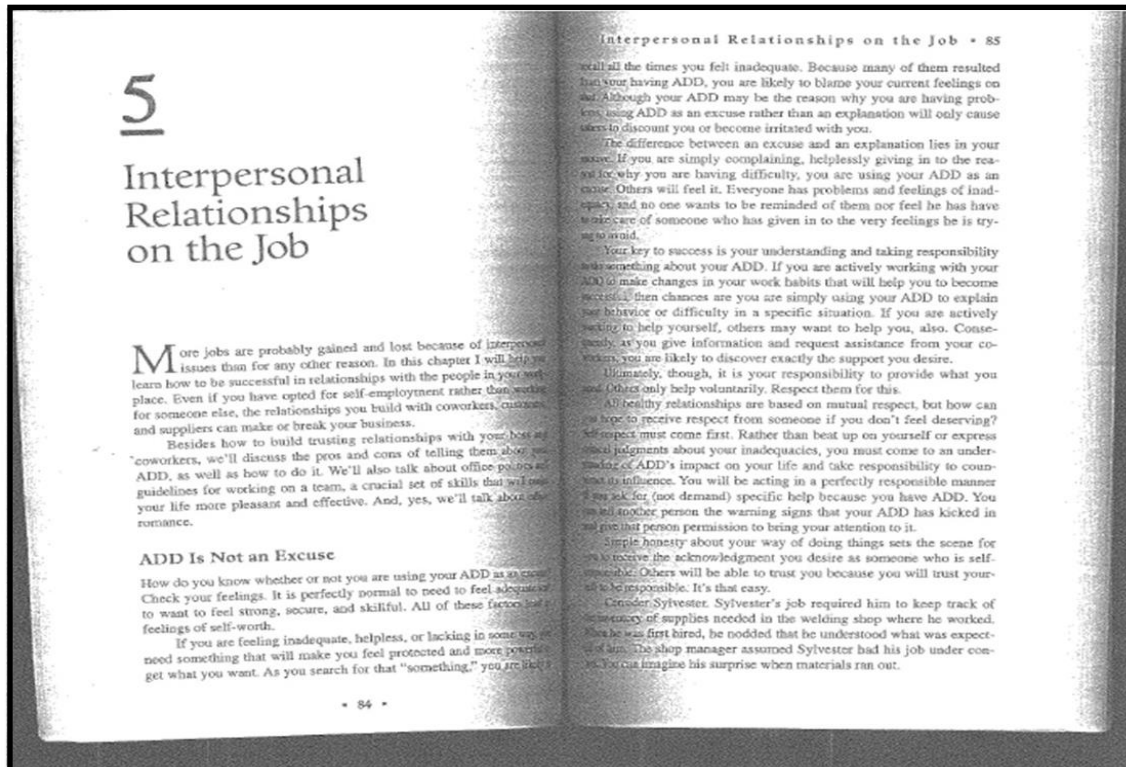
Phone: (813) 974-4309

Fax: (813) 974-7337

<http://www.usf.edu/sas>

EXAMPLE 1:

Poorly Developed PDF



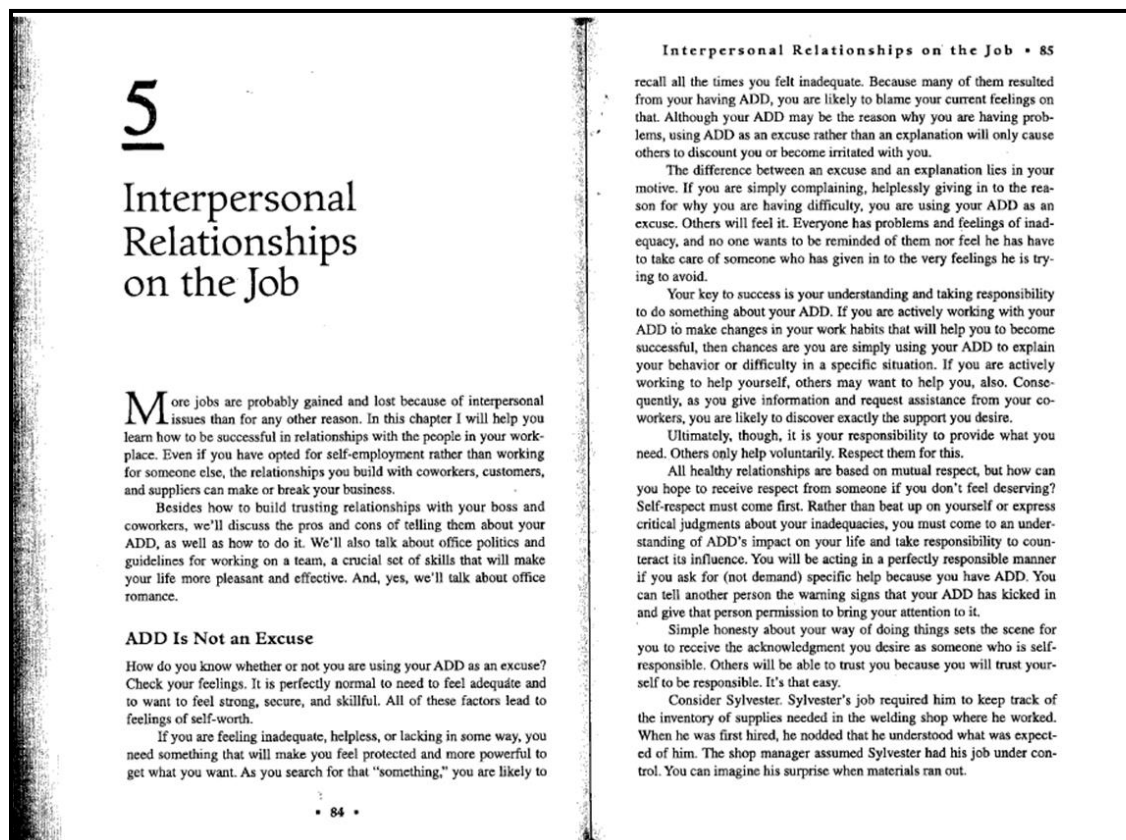
Basic PDF documents are actually pictures of text (image files) and cannot be read by assistive technologies such as text-to-speech and screen reader software programs. This is an example of poorly developed PDF document posted to Canvas. Its problems include:

1. Low resolution of text.
2. Poor visual reproduction.
3. Curved text to the center spine area.
4. Side-by-side horizontal reproduction.
5. Skewed (non-straight) representation of text.
6. Gray or darkened areas at center spine and around outside edges.

As it is, this PDF may be difficult for any student to read. Additionally, due to the factors listed above, conversion to an accessible format using OCR (Optical Character Recognition) would not be feasible. Thus, this document would be **inaccessible** to a student with a print-based impairment.

EXAMPLE 2:

Improved PDF



This improved PDF was created simply by pushing the spine of the book down against the copier-scanner. The key is to have the originating document as flat against the scanning screen and as straight on the scanning bed as possible. It is also important to make certain the scanning resolution is set to a minimum of 300 dots-per-inch (dpi).

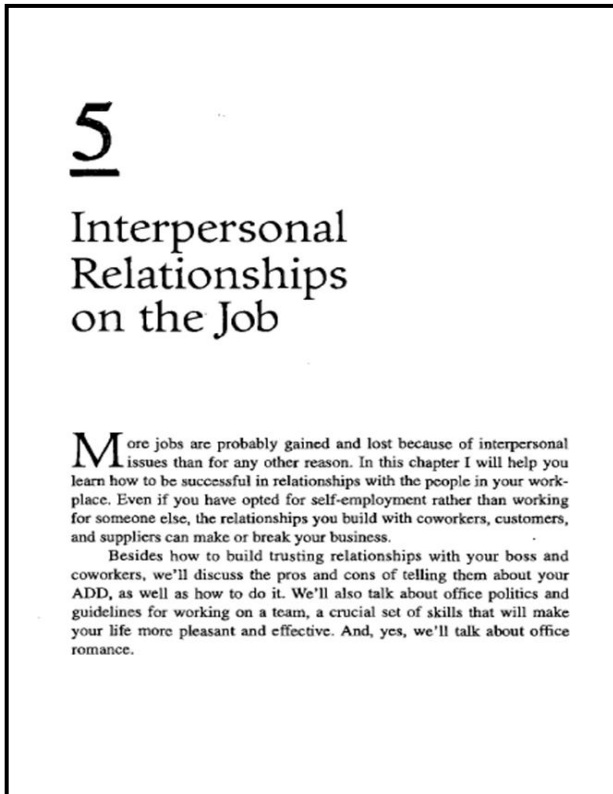
Although this document is easier to convert to an accessible version than the first example, there are still problems, which include:

1. Gray or darkened areas at center spine and around outside edges.
2. Side-by-side horizontal reproduction

The OCR text conversion would be difficult due to the dark edges, and a text reader would have trouble properly reading the side-by-side pages. This document is an improvement, but can be further improved with just a little additional effort.

EXAMPLE 3:

Great PDF Made Simple



It is easy to create clean PDF document files using Adobe Acrobat Pro DC (free download is available by accessing your university computer's "Control Panel—Run Advertised Programs") by using one of the following methods:

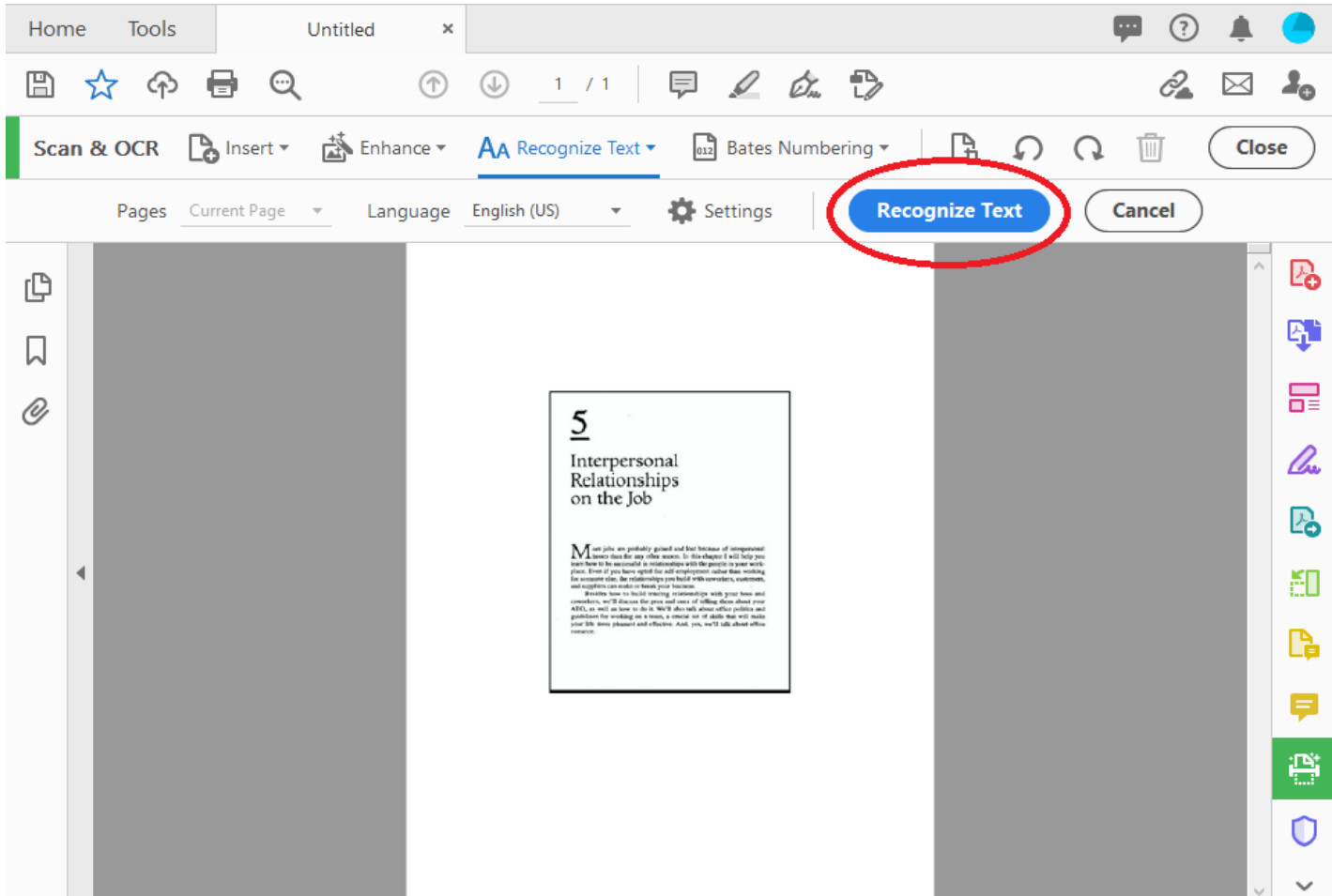
1. Remove the dark edges caused by scanning and separate the pages into an individually paged vertical document by cutting the copied pages and then copying the cleaned-up pages into new PDF file.
2. You can also use Adobe Acrobat Pro DC to electronically cut and separate the pages. Simply use the "Document" and "Crop Pages" options in the Adobe pull-down menu.

If possible, it may prove most efficient to remove the spine of the book and make perfect original copies for scanning into PDF. This is only feasible if you or the academic department owns the document.

These methods can produce a greatly improved PDF that is easier for all of your students to read. You will also create a document that can be converted into a fully accessible version for your students with print disabilities.

EXAMPLE 4:

Creating an Accessible PDF



Now that you have learned how easy it is to create a basic, high quality PDF document that is in a single-paged vertical format and free of darkened edges, the next step is to generate a fully accessible OCR-PDF that can be read aloud using text-to-speech and screen reader technologies.

1. Simply open the PDF you just created using Adobe Acrobat Pro DC and select "Scan & OCR" from the tools menu.
2. Click "Aa Recognize Text" from the top tool bar and then select "Aa in this file" then click "recognize text."
3. Specify the page or range of pages you wish to have recognized, then select "OK" from the Recognize Text dialog box.
4. Save the PDF document once the OCR text conversion is completed.

Congratulations! You have created a fully accessible OCR-PDF that can be "electronically read" by a host of access technologies. This will benefit all students who use these access technologies—not just students with print-related disabilities.

FINAL STEP:

Reading an OCR-PDF Document

To access and read-aloud an OCR-PDF document using Adobe Reader, follow these steps:

To Activate Read Out Loud

1. Open the document using Adobe Reader.
2. Select "View" from the toolbar.
3. Next select "Read Out Loud" and "Activate Read Out Loud" from the drop down menus.

To Read a Document

1. Select "View" again from the toolbar
2. Then "Read Out Loud"
3. Then choose "Read This Page Only" or "Read To End Of Document."

Questions?

Contact Assistive Technology Coordinator
Student Accessibility Services

(813) 974-4309
www.usf.edu/sas



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