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## TECHNOLOGY FOR COM GRADS?

As Graduate Students and Teaching Assistants in Communication, you should have more than a passing familiarity with technology, especially software. Yet where to start? As a new Graduate student, you may have noticed that many of your students or fellow cohort members seem to possess a high-level of mastery with certain software packages, filling you with a sense of dread or intimidation whenever the subject arises.

Never fear, with some background in the main packages, and perhaps some experimentation, you can quickly alleviate these fears and learn how important technology can be in your teaching and your research. Without further ado, let's run through some of the main packages with which I recommend that you become familiar:

### **Word Processing**

It goes without saying that you will be doing a great deal of writing in the department, and the *de facto* standard for your work will most assuredly be Microsoft Word. The version with which you will probably be most familiar is Word 2003 for Windows, or Word 2004 for Mac. These versions are stable, yet always remember to save your work often, and in multiple locations. Please do NOT keep the only copy of your work on a thumbdrive or any kind of removable media. I have seen students lose four or more years of work in one fell swoop when their drive gets lost or run through the washer. One of the easiest ways to back up your documents is to email files to yourself using gmail ([www.gmail.com](http://www.gmail.com)). Gmail gives you over 4GB of free storage, and if you run out, just open a new (free) account. This will easily store all of your work as a graduate student and beyond.

New versions of Word Processing software are emerging, namely Word 2007 for Windows and Word 2008 for Mac. Many users, especially those familiar with the 'tried and true' interfaces of 2003/2004, are initially confused with the new menus. My recommendation is to wait before installing the new versions. Endnote is also having major difficulties with the Mac versions.

The working versions that I find to be best are Word 2003/Endnote XI for PC, and Word 2004/Endnote X.0.2 for Mac. Do not install version XI for Mac, you will not be able to downgrade without major difficulties. I went through this early in the quarter to my chagrin.

One final note- the 'iwork' suite for Mac contains a word processor (which I am using to write this) called *Pages*. I like it: it creates quite beautiful documents for reports/newsletters. I would not use it for academic writing however: stick with Word for that. Endnote integration is a good thing. More on that later.

## Operating Systems

Being on the cutting edge can be adventurous and exciting, however early adopters should be prepared for problems. As a busy graduate student in Communication, beta testing new software should not be on your list of priorities. Windows XP is stable, however it took many years to become so. Windows Vista is the newest Microsoft operating system, however there is a reason why many labs on campus have not made the switch. For your important academic work, I strongly recommend sticking with XP.

The MacOS has just released Leopard, version 10.5. As expected, there have been issues, especially with networking and potential data loss. I would wait until the release of 10.5.1 which is expected in a few weeks. Otherwise, it is a very powerful OS which I recommend.

Other, more exotic operating systems should perhaps wait until after gradschool, unless you have pressing reasons to run them! These include Linux, and variants...more on that if you feel like dropping me an email. For now, Windows XP and MacOS should keep you running smoothly.

### Endnote- is it necessary?

In my opinion, yes. Endnote allows you to keep a library of all your major references at hand for dropping into your papers. As you write, you call up your Endnote library with a key command, type in the author you want to cite, and the reference drops into your paper, correctly formatted for the journal or style that you are writing for (Chicago, APA, etc). You get references into your library through connecting directly with university libraries around the world and importing them remotely. Endnote takes a little while to learn, and it's quirky; but once you get used to it you will not want to write without it. It is an absolute necessity, in my opinion, for the General Examinations. I would take the plunge early, get used to it, and start building your reference library. Once you experience writing a paper and having your bibliography generate itself automatically you will never want to go back. Although there are alternatives, Endnote is still considered the standard for bibliographic management software and I would make it an important part of your workflow.

## Quantitative and Qualitative Data Analysis

There are two packages whose names you should learn right from the start. They are:

*SPSS and atlas.ti.*

Let's think of SPSS as your quantitative friend and atlas.ti as your qualitative ally. These two packages will enable you to do (almost) anything you want with data, and the combination of the two make for a particularly powerful combination for mixed methods.

SPSS is the *statistical package for the social sciences* and is a very powerful platform for defining variables, entering data, and analyzing this data to look for significance, correlations between datasets, and much, much more. It's a good idea to pick up a copy at the bookstore: for \$75 you've just made yourself a very valuable investment (it costs several thousand dollars for the general public). If you can use SPSS well, and even better, teach it, you greatly improve your usefulness to a department and expand your research and publication potential.

SPSS is also used for content analysis. When coding, you can code directly into SPSS, and this will speed things up when it comes time to run your tests. I would recommend this rather than coding in Excel. Speaking of Excel however...

**Excel generates great graphs.** I recommend coding and analyzing in SPSS, then exporting to Excel for graphical generation. It's a nice workflow, and the two work well together.

Just for reference, there's a package called SAS. SAS can be thought of as a big brother to SPSS. They are not made by the same companies, and SAS is much more difficult to use (think of typing in code). However, SAS is the standard for running big datasets. If you are really serious about using large datasets (census data, corporate data), then SAS may be what you need. Some datasets are only available in SAS format. For most purposes, SPSS will be sufficient, but when you need the big guns, try SAS.

To summarize- with SPSS and Excel, you have a great partnership for your quantitative needs. SAS is the reserve in case you need it. If you have the time, and if you are planning on working heavily with quantitative datasets, start SAS and SPSS early. You won't regret it!

For **qualitative data analysis**, atlas.ti is a great package. Atlas.ti allows you to create codes in your textual (and rich media) datasources, scour these codes for 'nodes' of meaning, and perform word count analysis, find clusters and generally make sense of large documents. It plays well with Word and can create compelling arguments. Nvivo is another qualitative package; it is very expensive however and atlas.ti has a much more attractive pricing scheme for students. Of the two I recommend atlas.ti.

## **Presentations**

At conferences you will need either Powerpoint or Keynote. Powerpoint is great however I personally love Keynote for Mac. The ease of use and beauty of the finished product from this package often generates quite the favorable response. However, whatever presentation software you use, remember this caveat: KEEP IT SUBTLE. A little beauty and perhaps even some flair may be well received, but no one appreciates animation or sound effects. Even transitions should be used very judiciously. Forego the flashy presentations and keep the text to a minimum- a digital presentation should be used more for as a prompt than for reading. It takes effort to develop good Powerpoint creation and presentation skills, however effort in this area will help you with your conference work and further down the road in your job talks as well. Take the time to practice beforehand, even film yourself, to improve your delivery. Consider using the built-in timing tools and prompters (where you see notes, but the audience doesn't!)

## **PDF files**

As a graduate student in Communication you will be working with .pdf files on an almost daily basis as you read articles and journals online. As you accumulate many .pdfs it becomes important to be able to organize and edit these when necessary. I have found Adobe Acrobat 8 Professional to be invaluable as it lets you edit files (for grants, applications, articles etc) and allows you to create professional looking .pdfs. We have a stellar discount on the Adobe CS3 suite which can include Photoshop, Flash and Dreamweaver among others...check it out at the bookstore.

There is a very interesting program for the Mac right now called Papers. You can find it at <http://mekentosj.com/papers/>. This program organizes your .pdf files and can import .pdfs from Google Scholar and the Web of Science, along with exporting references in Endnote format. I really like the full-page .pdf reading mode, it's very comfortable and natural to read .pdf articles in Papers, and I find that I waste a lot less paper since I've been using it.

### **A Note on Printing**

One thing that I would highly recommend to any incoming students in COM is to invest in a laser printer. When submitting output for a course, there is nothing worse than unprofessional-looking documents. A laser printer is the best option for text. I have found that the departmental printers really take a lot of abuse! There are sometimes queues of students waiting to print, and I have seen jams and font issues, especially when the printers are in high demand. I would recommend investing in an inexpensive laser printer, so that you can print your work at home. Laser printers have truly plummeted in price. I personally use the Samsung ML-2010 which I love. It currently lists for \$109 at [www.newegg.com](http://www.newegg.com). This is an investment that will last you throughout your graduate work and beyond, and one toner cartridge usually lasts me for a year of heavy printing.

### **Catalyst**

Catalyst is a fantastic resource. I recommend becoming very familiar with these tools and learning how to integrate them into your research and teaching as soon as possible.

WebQ has been the most useful for me. Using this tool you can generate quizzes and web-based surveys for your courses or your research. Simplesite lets you generate a website for your courses. GoPost lets you create a message board for your students.

The UW has some of the best online resources in the world: check out Catalyst at

[www.catalyst.washington.edu](http://www.catalyst.washington.edu)

and integrate these stellar services into your coursework and teaching: you won't regret it! The usability of these packages has increased greatly and now I would say that they are (almost) a pleasure to use. :)

### **RSS feeds**

RSS stands for Really Simple Syndication, and it's a way for you to get the news that you care about directly without browsing to each individual website everyday. You can subscribe to RSS feeds by looking for the red symbol attached here. Click on the symbol to import that feed into your aggregator. This can be built-in to your web browser (Safari, Firefox) or can be an external program such as NetNewsWire (OSX) or GreatNews (Windows). Google also offers RSS aggregation online through its Google Reader service (just google it).



RSS feeds are an excellent way to keep up-to-date with the news sources that mean the most to you personally and professionally. Many academic and professional journals also publish new refereed article titles through RSS feeds, enabling you to stay aware of the latest

developments. I recommend getting started by setting up your own personal RSS aggregator as soon as possible.

As far as software that I recommend for your use as a graduate student in Communication, here is a little chart for your reference-

	<b>Windows</b>	<b>MacOS</b>
<b>Word Processing</b>	Word 2003	Word 2004
<b>Reference Manager</b>	Endnote X1	Endnote X.0.2
<b>Quantitative Coding and Analysis</b>	SPSS/SAS	I recommend using SPSS on Windows XP. The Mac version of SPSS has issues. You can run Windows on an Intel Mac using Parallels Virtualization.
<b>Qualitative Coding and Analysis</b>	Atlas.ti	Atlas.ti. (Run it using Parallels on your Mac)
<b>Graphics (Charts and Plotting)</b>	Excel 2003	Excel 2004
<b>RSS Feeds</b>	GreatNews	NetNewsWire
<b>Pdf Manager</b>	<b>Acrobat Pro</b>	<b>Acrobat Pro and/or Papers</b>

**A note on money.** At this point, you may be thinking “well, this sounds great, but it would be financially impossible to purchase all this.” I know how you feel. It is very daunting to see a list like this and imagine how much everything must cost. I’d like to bring up a couple of items at this point. First, we have some incredible opportunities as grad students. We get amazing discounts on software (and hardware!) For example, the bookstore has SPSS for \$75. This is a no-brainer, and the opportunity of a lifetime. Don’t hesitate! Go and ask for the site-license. You’ll get a CD with a serial number, that’s it. Don’t worry, the help files are extensive and I recommend running through them. This will keep you busy for a while!

When you’ve saved a little more, I really recommend the Adobe Creative Suite. Again, you don’t want the full boxed version, you need the site license. Believe me when I say that the site licenses are a small fraction of the prices that the general public pays (we get 80% off). The Design Standard contains Pro versions of Acrobat, Indesign, Photoshop and Illustrator; unheard of for \$199. You can read more about what is contained in each package here: <http://www.adobe.com/products/creativesuite/>. Atlas.ti is another package that you can purchase as a student for a great deal. [www.atlas.ti.com](http://www.atlas.ti.com) The Office suite is also heavily discounted at \$69.

I have generated a sample investment for an imaginary COM Graduate Student. .All prices are current as of 11/08/2007. Software prices assume that you are currently enrolled as a graduate student in Communication, and that you purchase the site licenses when applicable.

	<b>Mac</b>	<b>PC</b>
<b>Hardware</b>	849 (macbook)	849 (dell/lenovo)
<b>Endnote</b>	99.95 (buy version X for mac, not XI)	99.95 (XI)
<b>SPSS</b>	\$75 (use the windows version in parallels)	\$75 (ver 15)
<b>Papers</b>	€29 (\$42.50 today)	n/a
<b>Adobe CS3 site licenses</b>	(choose your best fit)	
<b>Design Standard</b>	\$199.95	\$199.95
<b>Design Premium</b>	\$299.95	\$299.95
<b>Web Standard</b>	\$199.95	\$199.95
<b>Production Premium</b>	\$299.95	\$299.95
<b>Master Collectio</b>	\$499.95	\$499.95
<b>atlas.ti (online only)</b>	n/a (use windows version in parallels)	€175 (\$256 today)
<b>Laser Printer</b>	\$109	\$109
<b>Parallels</b>	\$75	n/a
<b>Microsoft Office 2004.</b>	<b>\$64 (site license)</b>	<b>\$64</b>

Price for everything, including computer, laser printer, and all the software you need now and in your professional life (assuming Adobe Design Standard and running a Macbook) = \$1770. Just think...this is less than 1 retail copy of SPSS.

### **Mac or PC?**

This is a debate that has been going on for years, with passionate feelings on both sides of the camp. I don't propose to jump into that fray. All I can offer is my personal opinion, which is that at this point in the game, a Mac is a better investment. The reason that I suggest a Mac is that Macs will currently let you run every single software package I've mentioned in this paper. Macs currently use Intel Processors, the same as Windows machines (this is a relatively new development, as processors used to be much different, causing compatibility issues). Macs, in addition to running all the great software available exclusively for them (like Keynote, Papers, Pages, Finalcut Pro (for video) etc), can also run a magical program called *Parallels* ([www.parallels.com](http://www.parallels.com)) which allows you to run Windows XP, Vista, Linux, and more, right on your Mac. This means that you can run Windows-only programs by tricking them into thinking that they're really on a PC. They run well, and fast (this is also a new thing!) So, you can be running SPSS for Windows at the same time as you read .pdfs in Papers and write in Word with Endnote's help. Truly, the best of both worlds.

Macs have also become quite inexpensive. As I write this, there is a Macbook on sale at the bookstore for \$849. This includes 1GB of RAM and an 80GB Hard Drive, running at 2Ghz. A great deal for a very powerful machine!

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Whatever you decide, I'd like to wish you an excellent Graduate experience in Communication and success in your teaching and research. With some preparation, judicious purchases and experimentation, technology can be your friend in Grad School, and especially in COM!

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