
“TECHNOLOGY AND WORKFORCE TRENDS— PREPARING STUDENTS FOR 2020 JOBS”

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The latest technology and workforce trends create both challenges and opportunities for equipping students to be productive immediately upon workforce entry. Learn how businesses apply technology to reconcile mobility and workforce productivity and view live demonstrations of selected technologies to enhance productivity.

Key Workforce and Technology Trends

Workforce and technology trends are now closely integrated. The focus today is on how to use technology strategically in most aspects of business. Technology is simply an effective tool that facilitates the solution of workplace problems and situations to achieve the results expected. The workplace trends for 2020 provide instructors with insight on how to best prepare students to be effective in an ever-changing work environment.

Workforce Trends

Preparing students for jobs in 2020 requires an understanding of the types of jobs that will exist in 2020 and the competencies needed to perform those jobs effectively. The report, *Recovery: Job Growth and Education Requirements Through 2020*, provides some valuable insight for business education instructors.

1. Jobs are expected to grow from 140 million jobs currently to 165 million by 2020—24 million newly created and 31 million baby boomer retirement jobs for **a total of 55 million new jobs available**.
2. By 2020, 65% of all jobs will require postsecondary education and training beyond high school.
3. The three fastest growing occupational clusters cited include:
 - a. Healthcare
 - b. Community Services
 - c. Science, technology, engineering, and mathematics (STEM)
4. The competencies most in-demand for the three clusters cited include:
 - a. Judgment and decision making
 - b. Communication
 - c. Analysis
 - d. Administration

A key issue discussed in this presentation is: Can and should business educators align business education content with the competencies needed for success in these occupational clusters?

Technology Trends

The focus on technology trends can range from a global perspective to a narrow focus on specific technologies that are in transition and are likely to have a strong impact on business education. Today's discussion focuses on specific changes in Microsoft products scheduled for release over the next few months because of their potential impact on business education courses.

Windows 10

Overall, *Microsoft Windows* has the dominant market share for PC operating systems. With 1.5 billion people using *Windows* every day, it deserves our attention. The new Microsoft *Windows 10* is currently in Beta and is expected to be released later in 2015. The new version is a significant departure from previous versions. A few of the many new features are listed below.



- *Windows 10* is designed to run on the desktop, laptop, tablet, phone, and even Xbox.
- The *Windows 10* Universal App Platform (UAP) enables apps including a version of *Word*, *Excel*, *PowerPoint*, and *Outlook* to run on all of the devices listed above. *OneNote* is also available.
- A new browser—currently called Project Spartan—is included.

How will these and many other new features impact business education classes?

Microsoft Office 365

Office 365, a comprehensive, full-featured software suite, is updated monthly with new features. All new features are provided through automatic Microsoft updates.

- *Office 365* is sold on a subscription basis.
- Home and Personal versions have 9.2 million subscribers. This number does not include businesses that use the Enterprise version.



How will using software on a subscription basis with features updated monthly impact business education classes?

Microsoft Office 2016

More than 1.2 billion people use *Office*—one in seven people on the planet. *Office 2013* was originally announced as the last standalone desktop version available for purchase rather than subscription. However, Microsoft announced that *Office 2016* will be released in the spring of 2015 on a standalone purchase basis.



- *Office 2016* will contain all of the features that have been updated automatically to *Office 365*.
- Will the price of *Office 2016* be competitive with the price of *Office 365*—particularly in the Education market?
- The “Tell Me” feature enhances the old “Help” feature and many other new features are being introduced.

Will *Office 365* and *Office 2016* be directed more toward employees who produce complex and “heavy” documents, worksheets, and presentations and *Windows Universal Apps Office 10* be directed to light users of *Word*, *Excel*, and *PowerPoint* and other applications as well as for remote use? What is the impact of this on business education?

Note: For more information on the workforce trends noted, please refer to “Time for a New Business Core?” in the *Business Education Forum*, Volume 69, Number 2, December 2014.

The Microsoft statistics are current as of February 2015 and can be accessed at http://news.microsoft.com/bythenumbers/ms_numbers.pdf.

Businesses Use Microsoft OneNote to Increase Workplace Productivity

Microsoft *OneNote*, launched over a decade ago, is a tool for managing freeform notes and by many businesses is considered a workflow optimization tool. *OneNote* is now a free cross-platform note-taking service for Windows, Mac, Android, iOS, and the web. With portability and accessibility, *OneNote* users are now taking notes on desktops, tablets, and phones anywhere anytime.

Bill Gates blogged on July 28, 2009 about his use of *OneNote*, “I always take a lot of notes about ideas to think about or things to follow up on. I try to bring my Tablet PC to meetings as often as possible so that I can use *OneNote 2007* to write notes in ink that can later be searched or converted to text.” He went on to explain that if he took notes on paper, he scanned the handwritten piece of paper and added the image to *OneNote*. Again, he noted the ability of *OneNote* to recognize the text and allow it to be searched later.

Now six years later, Microsoft reports *OneNote* users doubled in 2014 and is expected to double again in 2015.

Some productivity benefits of *OneNote* are listed below. Others will be discussed at the session.

- Keep related notes in one digital notebook for easy retrieval. Provides unlimited number of notebooks, sections, and pages, saving valuable shelf and file storage space.
- Save notes on the desktop or in the cloud.
- Use across multiple devices to offer a portable solution that is accessible anywhere.
- Set password protection on sections for security.
- Embed Office document, pdf, or other files directly in notebook; easy to retrieve when needed because in one place.
- Record notes as audio or video recordings. Use the start, pause, and stop motions of the Audio-Video Playback menu. *OneNote* provides audio search of audio and video recordings for words (Audio & Video Settings, Options, Audio and Video, Enable searching audio and video recordings for words).
- Supports Optical Character Recognition (OCR) and allows text copied from a picture or file printout to be edited and to be searched (right-click, Copy Text From Picture).
- Create an easy Quick Note for jotting down notes quickly. (Win + N).
- Create notes in your own handwriting and convert to text (Draw, Ink to Text).
- Convert inserted images to text (right-click an image, Alt Text); allows text to be searched.
- Use *OneNote* page templates or create your own page templates (Insert, Page Templates).
- Dock an *OneNote* note to the desktop while working in other applications (e.g., writing report in *Word* or browsing the web). (View, New Docked Window)
- Tag selected parts of a note as To Do, Important, or Question. Use Find Tags feature to locate those tags for the current notebook, yesterday's note, and many other options. Create a Summary page that lists your search results. (Home, Find Tags)
- Unleash creativity with features like changing paper color and rule lines (View tab).
- Collaborate with multiple users making changes on the same note or document.
- Use the page history to track versions with multiple users.
- Track individual contributions of collaborations through Hide and Unveil Authors feature.
- Compute arithmetic and calculus equations (Insert, Equation, Insert New Equation).

This session will focus on numerous ways that businesses are using *OneNote* to boost their productivity; a few are listed here. Business teachers will want to teach students how to use this productivity tool.

1. Create a notebook with information about each client; update after each meeting, phone call, or email with the client. Detailed client profile ensures up-to-date and consistent information when needed.
2. Create a notebook to seek ideas and suggestions. Share with employees and customers.
3. Maintain checklists to mark off when completed to keep everyone on track.
4. Keep reference materials in one location that is easy to retrieve. One company maintains a notebook titled Regulatory and keeps regulatory requirements in one place, e.g., travel, IRS requirements. Store company policy manuals and training manuals.
5. Maintain links that are often referenced.

6. Store passwords and password protect.
7. Save texts of emails sent regularly to clients in a section labeled "Communication Templates".
8. Use the OneNote Screen Clipper (Win + N) to capture ideas when browsing the web. Click to Send to Selected Location in OneNote (or Copy to Clipboard). In OneNote, right-click the image and click Copy Text from Picture. Now you can edit the text and search as well.
9. Use Quick Note feature to capture idea quickly; come back later and file in appropriate notebook.
10. Record a meeting instead of typing notes (Home, Meeting Details). Write notes on the blank page during the recording. Stop the recording. Click the play button next to the note to listen to that section of the audio.
11. Share a notebook in a meeting and simultaneously take notes with team members.
12. Compute equations easily in the OneNote notebook.
 - a. $10+15$ =(press space bar and answer displays)25
 - b. $\text{SQRT}(9)=3$ (square root)
 - c. $\$120,000/12$ =(space bar)\$10,000.00
 - d. $60*\$599$ =(space bar)\$35,940.00
 - e. $\sin(60)$ =(press space bar) 0.866025403784439 Sine of a 60-degree angle
13. Use the drawing tools on the Draw tab to doodle or sketch ideas. Use Ink to Text feature to convert to text.

Evernote vs OneNote. The session will briefly address some advantages of *OneNote* and *Evernote*. The bottom line is that both are excellent note taking tools. Offering a free version of *OneNote* for the Mac should eliminate some barriers for selecting *OneNote*.

The session will end with a live demonstration of selected productivity tools.

References

- 10 awesome OneNote tips you should be using all the time [Windows]. (2015, March 6). Retrieved from <http://www.makeuseof.com/tag/10-awesome-onenote-tips-time/>
- Business make simple with Microsoft OneNote: OneNote is now (even more) free! Just in time to pay taxes. (2015, February 15). Retrieved from <http://www.onenotemadesimple.com/>
- Carnevale, A., Smith, N., & Strohl, J. (2013, June). Recovery: Job growth and education requirements through 2020. Retrieved from <http://cew.georgetown.edu/recovery/2020>
- Crabtree, J. (2014, August 12). How to use OneNote like a pro! Retrieved from <http://blogs.perficient.com/microsoft/2014/08/how-to-use-onenote-like-a-pro/>
- Frank, B. H. (2014, March 17). First impressions: How Microsoft's new OneNote stacks up against Evernote. Retrieved from <http://www.geekwire.com/2014/first-impressions-onenote-stack-evernote/>

Gates, Bill. (2002, July 28). Bill Gates blogs how he uses Office and OneNote on his tablet pc. Retrieved from <http://www.gottabemobile.com/2009/07/28/bill-gates-blogs-how-he-uses-office-and-onenote-on-his-tablet-pc/>

How OneNote increases my productivity. (2013, October 2). Retrieved from <http://www.onenotemadesimple.com/?p=208>

Microsoft says OneNote users doubled in 2014, outlines plans for 2015. (2015, February 19). Retrieved from <http://venturebeat.com/2015/02/19/microsoft-says-onenote-users-doubled-in-2014-outlines-plans-for-2015/>

Pinola, M. (2014, March 25). [Lifehacker faceoff: OneNote vs. Evernote](http://lifehacker.com/lifehacker-faceoff-onenote-vs-evernote-1550697885). Retrieved from <http://lifehacker.com/lifehacker-faceoff-onenote-vs-evernote-1550697885>

VanHuss, S. H., & Schmohe, K. (2014). Time for a new business core? *Business Education Forum*, 69(2), 33-37.