



## Santa Ana College Analysis of Entering College Students' Self-Assessment of Computing Skills

September 2008

### **Background**

Technology has become an important component in Santa Ana College's mission to serve our students' needs. Under the guidance of SAC's Technology Advisory Committee (SACTAC), a survey containing a continuum of skills which they believe students should master in order to have a significant edge to transfer to the four-year universities and/or join the workforce. To identify which skills, and to what degree students have acquired or mastered those skills upon enrolling in college, the college administered the survey to high school seniors interested in attending SAC in Fall 2008.

The results will help SACTAC plan a direction for which additional technology-related classes/activities SAC should offer to enhance the skills students have already acquired. The committee also intends to survey students who leave SAC (via graduation or transfer to universities) to see if they have gained additional skills as a result of their studies at SAC.

876 new freshmen completed the survey; those data are included in this report.

### **Summary of Findings**

Overall, new college entering students report having basic-to-advanced computing skills in all basic operations and concepts, file management, maintenance/troubleshooting, internet and electronic mail, software and multimedia areas.

#### ***Basic Operations and Concepts, File Management & Maintenance/Troubleshooting:***

- Almost three-quarters (74%) of students who participated in Early Decision reported basic knowledge of computer- and software-related terms (e.g. RAM, ROM, operating system, hard drive, memory, etc.).
- The majority of the respondents reported basic or advanced file management skills such as creating and renaming folders and subfolders, copying, cutting or moving files from one folder to another, saving and backing up documents in different file formats as needed (e.g. ASCII, Rich Text Format and HTML).
- While most Early Decision students reported having basic or advanced maintenance/troubleshooting skills, only 29% have not used and/or maintain an up-to-date antivirus program to check programs and files for viruses.

***Internet and Electronic Mail:***

- Most respondents (93%) have basic or advanced skills using a web browser to go to a specific location and browse a website.
- 20% of respondents have not used web browser features, customized web browsers or know how to subscribe/unsubscribe to a listserv.
- Overall, Early Decision students reportedly possess good electronic mail skills. 92% of them have basic or advanced knowledge of using e-mail and online discussion groups to communicate. Half of respondents have advanced knowledge of how to perform many tasks such as inserting and attaching files, opening and saving attachments, and cutting and pasting text from other documents into e-mail.

***Software (Word, Excel PowerPoint):***

- Overall, respondents report that they possess good word processing skills. Over half of them have advanced knowledge of how to edit, copy, cut, paste, move blocks of text, add and format tables, use tools such as spelling and grammar, set print properties and format text.
- More than half of respondents have basic knowledge of how to create simple spreadsheets, insert/delete/merge rows and columns, edit and format the contents of cells, and create charts, tables and graphs. However, 22% of the Early Decision students do not know how to create and copy formulas.
- About half of respondents have basic knowledge of using PowerPoint, and most know how to create/modify slides using wizards, design templates, standard layouts and designs. However, 16% have no knowledge of how to create a presentation using wizard, design templates or blank presentation layouts.

***Multimedia:***

- Almost all respondents have knowledge of how to play and burn CDs or DVDs; 88% can also use a scanner and associated software to scan documents and pictures.
- Slightly more than one-quarter of the students have no knowledge of using, posting and managing presence in social networking sites or creating audio and video recordings to stream or podcast.

These findings will be presented for reviewed by SACTAC members. They will then forward a set of recommendations to college leadership of what classes/activities to offer students to ensure that they master these technological skills in their programs at SAC so that they are able to compete with others in the workforce or at higher educational institutions.

## Detail Responses

Skill Areas and Skill Items	No Knowledge	Basic Knowledge	Advanced Knowledge
<b>Basic Operations and Concepts</b> 1. I understand general computer terms such as RAM, ROM, operating system, hard drive, memory, com port, DVD, CD ROM, download, etc.	7%	74%	19%
<b>File Management</b> 1. I use general window functions to create and rename folders and subfolders and to copy, cut or move files from one folder to another 2. I save and store documents to specific folders and in various file formats using the "Save As" command 3. I save documents in different file formats as needed (e.g., ASCII, Rich Text Format, HTML) 4. I backup, copy, and move documents from a hard disk to a floppy or USB Flash Drive and vice versa	5% 2% 16% 7%	50% 37% 58% 49%	44% 61% 27% 44%
<b>Maintenance/Troubleshooting</b> 1. I use and maintain an up-to-date antivirus program to check programs and files for viruses or SpyWare 2. I can troubleshoot basic printer problems, such as paper jams, printer cartridge replacement, and adding paper	29% 15%	53% 53%	18% 33%

Skill Areas and Skill Items	No Knowledge	Basic Knowledge	Advanced Knowledge
<b>Internet</b> 1. I can use a Web browser to go to specific locations and browse a Website 2. I use web browser features and customize web browser 3. I know how to subscribe/unsubscribe to a listserv, join discussion boards, chat rooms, blogs and wikis	6% 20% 18%	36% 53% 50%	57% 27% 32%
<b>Electronic Mail</b> 1. I use e-mail and online discussion groups to communicate with faculty, colleagues and friends 2. I use electronic address book to store individual and group e-mail addresses 3. I can insert and attach files, open and save attachments received 4. I can cut and paste text found in documents into e-mail 5. I know how to set up the e-mail preferences related to delivery formatting, spell check, security, message handling and file management	7% 16% 10% 9% 15%	43% 50% 40% 41% 53%	49% 35% 50% 50% 32%

Skill Areas and Skill Items	No Knowledge	Basic Knowledge	Advanced Knowledge
<b>Word Processing (WORD)</b>			
1. I know keyboard skills	3%	55%	43%
2. I can edit, copy, cut, paste, and move blocks of text	1%	32%	67%
3. I know how to add a table into a document; insert and delete rows and columns, format table	7%	42%	52%
4. I can use tools such as spelling and grammar, thesaurus	2%	37%	62%
5. I can set print properties, format text, insert bullets/numbers	4%	39%	57%
<b>Spreadsheets (EXCEL)</b>			
1. I can create a simple spreadsheet with rows, columns and headings	9%	61%	30%
2. I can insert/delete/merge rows and columns	9%	57%	34%
3. I can insert, edit, format, and delete the contents of cells	13%	55%	32%
4. I know how to change column width and row height	14%	57%	29%
5. I can create/copy formulas	22%	56%	22%
6. I can create charts, tables and graphs	11%	58%	31%
<b>Presentation Tools (POWERPOINT)</b>			
1. I can create a presentation using wizards, design templates or blank presentation layouts	16%	53%	32%
2. I can create/modify slides using standard layouts and designs	11%	54%	36%
3. I can format text fonts, add bullets or numbers, Move and resize objects	5%	53%	42%
4. I use spell-checker to check for typos and misspelled words	3%	50%	47%
5. I can add objects such as slides from other presentations, clip art, pictures, video clips and sound, and links	8%	52%	40%
6. I add animations and transitions	11%	52%	36%
7. I can include tables and charts in your presentation	12%	50%	38%
8. I can set up slide show, create notes/handouts	9%	52%	39%
<b>Multimedia</b>			
1. I can play CDs or DVDs in DVD/CD-ROM player	2%	35%	64%
2. I can burn CDs and DVDs	8%	38%	53%
3. I know how to view streaming data such as digital audio, DV, or live broadcasts	18%	55%	27%
4. I can use a scanner and associated software to scan documents and pictures	12%	52%	36%
5. I can use painting and drawing tools to create/edit images/graphics and to view an edit scanned pictures	10%	54%	35%
6. I can create audio and video recordings to stream or podcast	26%	53%	21%
7. I can create MySpace page, Facebook	12%	42%	46%
8. I can upload video file to YouTube	21%	45%	34%
9. I can use, post, manage presence in social networking sites	27%	52%	22%