

Identify Career Opportunities Resulting from New Technologies

YOU ENCOUNTER new technologies every day. Almost everywhere you go, you are exposed to the latest technological development. At school there may be a new scanner in the cafeteria; at work, there may be a new software system. At the grocery store, there is a fingertip debit system. At the mall, flat screens, iPhones, and 500-GB PCs are a sampling of the new technologies available. These advancements may be of interest to you, but to what careers do they point?



Objectives:



1. Identify new technologies.
2. Recognize career cluster information.
3. Obtain firsthand knowledge of career opportunities.

Key Terms:



career clusters
career pathways
new technologies
terminology

New Technologies

Do new and exciting technological developments always catch your attention? Is the cutting edge where you want to be? Where is the cutting edge? How do you begin to learn about what is about to be created? How can you be a part of the creation and discovery process?

You are exposed to new technologies almost daily. The career opportunities that result, however, are more difficult to recognize. The ability to recognize the career opportunities resulting from new technology takes some skill. First, you must research the new technology. When it is better understood, the technology can point to a career cluster, which in turn points to a career pathway. Once you possess knowledge and experience, the door to the actual career opportunity will become more visible and will eventually open.

EXPOSURE

As consumers, employees, and peers, we are all exposed to **new technologies** (the application of science for the development of new tools, machines, and systems used for human benefit).

Consumers

As consumers, we are hit with a barrage of advertising messages introducing us to the latest technological development in the form of commercials, billboards, mail, radio ads, and computer pop-ups. Some grocery stores have installed screens in the aisles and the check-out areas with additional information about new developments. The daily news on television, in newspapers, and on online news sites offers sections dedicated to recent technological developments.

Employees

Students and employees can see the effects of new technological developments in terms of new degrees, new course offerings, new training sessions, and new systems. Typically, for an employee, a trade show (trade journal) or an annual association conference highlights the latest technological development in that particular field.

Peers

Friends and family often are a source of information when it comes to technology. Consider when one of your friends or family members purchased the latest iPhone, Wii, or gaming software. You probably asked to see a live demonstration, and they were likely happy to comply. Exposure to new technologies can come from almost anywhere.



FIGURE 1. A person can be exposed to new technologies in various places.

KNOWLEDGE

After you have heard about a new technology or maybe seen it or experienced it for a few minutes, you may want to dig deeper and know more. To really learn about a new technology, you have to do research.

Researching

Begin researching by using a meta search engine like <http://Clusty.com> and then do some wide searches using a large search engine like <http://Google.com>. Also, go to your high school Career Resource Center and learn more about your particular career interests.

Interviewing

You can also interview current users of the technology. See if you can find a local business that uses the technology or contributes to its development. Create some meaningful questions. Then, with the help of a career counselor from your school, see if you can arrange a phone interview with someone from the business. One of your questions should ask about the preparatory courses a student should take to be best prepared for a career in the field of that technology.

Checking Course Offerings

Once you are armed with that information, you can check school course offerings. Read the course descriptions because they are very specific and often use the terminology of that particular field. Make sure to check your high school, the local community college, four-year colleges, and trade or technical schools.

Career Cluster Information

Career clusters (a grouping of occupations and broad industries based on commonalities) are another helpful tool. The technology of interest to you fits neatly into one of the clusters below. The career clusters are an organizational tool for linking student interests with the skills and knowledge required in the area of study.

CAREER CLUSTERS

1. Agriculture, Food & Natural Resources
2. Architecture & Construction
3. Arts, A/V Technology & Communications



FURTHER EXPLORATION...

ONLINE CONNECTION: New Technology Terms and Career Opportunities

Visit the Web site <http://online.onetcenter.org/search/t2/?s=&g=Go>, and enter some new technology terms that you have heard. See what careers are listed. Then do some research on those careers. What career opportunities can you identify?

You can use the career cluster information from the following Web sites for help:

<http://www.careerclusters.org/16clusters.cfm>

<http://www.careerclusters.org/list16clusters.php>

4. Business Management & Administration
5. Education & Training
6. Finance
7. Government & Public Administration
8. Health Science
9. Hospitality & Tourism
10. Human Services
11. Information Technology
12. Law, Public Safety, Corrections & Security
13. Manufacturing
14. Marketing
15. Science, Technology, Engineering & Mathematics
16. Transportation, Distribution & Logistics

CAREER PATHWAYS

Each of the 16 career clusters is further broken down into **career pathways** that represent a grouping of occupations within a cluster based on commonalities; they are subtopics of the career clusters. Every job you could possibly imagine is represented within these pathways.

TERMINOLOGY

Note the **terminology** (technical terms of a particular trade) used in the descriptions within the pathways. Each of the career pathways include specific knowledge and skills

required for the pathway. New technologies and new terminology are often strongly linked. When a new piece of technology is created, it is given a name.

The knowledge and skill requirements listed in the career pathways have been created with the help of education and business leaders. The educators have been from the academic areas as well as from the career and technical areas. However, the direct input of business and industry leaders presently working in these fields gave the charts their validity.



FIGURE 2. Even refinery workers are surrounded by new technologies.

Firsthand Knowledge of Career Opportunities

Once you have been exposed to a new technology, completed some research, and looked into the career clusters, it is time to gain some firsthand knowledge of the field. As a beginner, this is accomplished by enrolling in coursework and obtaining some type of educational credential (e.g., a two- or four-year degree). It could be a professional certification, license, or a trade endorsement.

For someone who already has an educational foundation, firsthand experience can come in the form of actual work. For inexperienced individuals, an internship is an excellent way to bridge educational experience and the world of work. These steps of exposure, research, and firsthand experience lead to the clear identification of career opportunities that result from new technologies.

Summary:



We are constantly exposed to new technological developments. But it is not always easy to recognize or to identify the career opportunities that result from the new technologies. Like all good things, this takes some effort. The exposure inspires the research, and the research leads to the firsthand experience via education or entry-level work in the field. Identification of the career opportunities that result

from new technologies are seen once the research has been completed and the experiences have been started.

Checking Your Knowledge:



1. List three ways in which you are exposed to new technology.
2. What are the three ways in which you learn about a new technology?
3. Define new technology.
4. How do the career clusters help with research?
5. Where can you go to research a new technology term to learn about the field to which it is connected?

Expanding Your Knowledge:



Go to the following Web site (<http://www.informationweek.com/>) and read about the new technologies being discussed this week.

Web Links:



Sixteen Career Clusters and Their Pathways

<http://www.careerclusters.org/list16clusters.php>

Career Planning

<http://www.workforceinfo.state.il.us/>

Employment Assistance

<http://www.acinet.org/acinet/>

Curriculum Revitalization

<http://ilcte.org>

Workforce and Career Information

<http://www.ilworkinfo.com/>

Illinois Career Clusters

<http://ilprogramsofstudy.org/CareerClusters.action>

Occupations

<http://online.onetcenter.org/search/t2/?s=&g=Go>