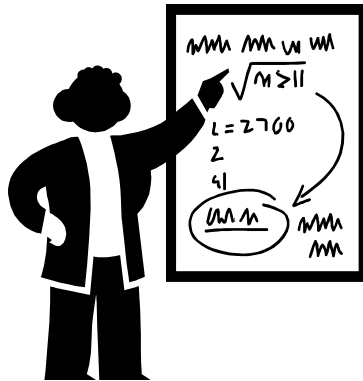


A GUIDE TO TECHNICAL VOCABULARY



ACADEMIC SUPPORT CENTER

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TECHNICAL VOCABULARY

Introduction

Each field of study has its own set of specialized terminology. By understanding this vocabulary, you will be able to comprehend the theories and concepts based on it. In addition, mastery of this language allows you to communicate accurately with other members of your profession or technical field. Finally, your instructors expect you to become well acquainted with this language and often create test items related to specialized vocabulary.

Each technical term has a precise meaning. This is different from the way we usually use language. For example, the word “elastic” may be defined and visualized in a variety of ways. One person may say that it means “stretchable” and another that it means “flexible”. A third individual may visualize “elastic” as a rubber band on the waist of underwear. In contrast, the word “elasticity” has a technical meaning that does not change from person to person. “Elasticity” is “the ability of a solid to regain its shape after a deforming force has been applied”. That is what it means in a specific, scientific sense no matter who you are or where in the world you are from.

Technical terms can often be confused. Words like “mass” and “weight” are often interchanged in everyday usage. Technically used, however, they have very different, precise definitions. “Mass” is a measure of the amount of matter in an object. “Weight” is a measure of the gravitational force or pull acting on an object. To assume that these words mean the same thing would create an error.

Identifying Technical Vocabulary

1. In class lectures
 - A. Clues
 - 1) Written words from the board.
 - 2) Repeated words from the instructor.
 - 3) Instructor use of slow speaking pace.
 - B. How to record
 - 1) Circle important items in your notes.
 - 2) Write the definition in the margin.
 - 3) Underline /highlight notes.
2. In textbooks
 - A. Clues
 - 1) Words in italics.
 - 2) Words in boldface.
 - 3) Colored print.
 - 4) Vocabulary list.
 - 5) Marginal definitions.
 - B. How to record
 - 1) Underline/highlight words or phrases.
 - 2) Write definition in margin.

Identifying Definitions

In your textbooks, definitions for important terminology are usually provided by the author. The term is most often stated first, followed by the definition.

Example 1: Matter is anything that has weight and that occupies space.

This sequence can be reversed, with the definition preceding the term.

Example 2: One property of matter is that it occupies space, which is called volume.

Definitions within written text are often signaled by words such as “is defined as”, “means”, “refers to”, “that is”, “is called”, and “is known as”.

Example 1: Garagenesis refers to those conditions that usually occur as the body ages. (Nursing Assessment and Health Promotion Through the Life Span, Prentice-Hall, 1979, p.362).

Example 2: Metals with the face-centered lattice are generally ductile; that is, plastic and workable. (Welding Skills, American Technical, 1985, p. 19).

At other times, a definition may be set off from the rest of a paragraph by use of punctuation. This is done with commas, dashes, and parentheses.

Example 1: The reason is that the death rate, or mortality rate, among males is higher than among females at all ages. (Sociology: The Human Science, McGraw-Hill, p. 532).

Example 2: Commercial and fleet –diesel engine—oils use the letter “C” and are classified as CA, CB, CC, and CD. (Auto Service and Repair, Goodheart-Wilcox, p.304).

Example 3: The moth lays its eggs on the fabric, and when the larvae (grubs) hatch, wool becomes their source of food. (Understanding Textiles, Macmillan, 1982, p. 333).

Expanding Definitions

Clear word definitions are not always provided by an author. Meanings may be presented or suggested in a variety of other ways.

1. Through examples

Addictive drugs such as heroin, codeine, and morphine in the mother's blood are related to a high incidence of obstetric complications. (Nursing Assessment and Health Promotion Through the Life Span, Prentice-Hall, 1979, p. 13).

2. Through restatement

The numerical values indicated on the scale of galvanometer do not represent actual values. In other words, a galvanometer normally indicates only the relative magnitude, as well as the direction, of the current. (Mathematics for Electronics, Prentice-Hall, 1976, p. 162).

3. Through comparison

The stems, like the roots, are capable of storing the excess food produced by the process of photosynthesis. (Horticulture: A Basic Awareness, Reston, 1982, p. 3).

4. Through contrast

Larceny is different from criminal trespass, which requires an actual unpermitted entry upon the land of another. (Understanding Criminal Law, Little, Brown & Co., p. 98).

5. Through listing (series)

There are three major forms of business organization: the sole proprietorship, the partnership, and the corporation. (Introduction to Financial Management, Dryden, 1985, p. 24).

6. Through illustration or diagram

Illustration:

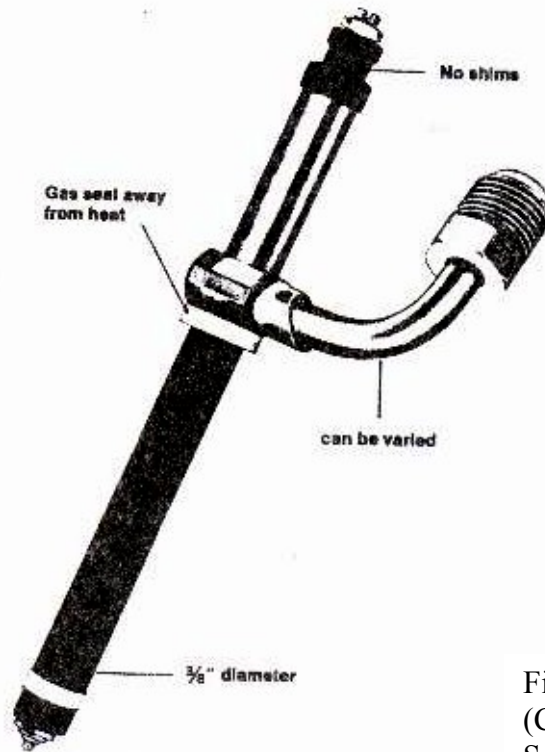


Figure 5.8 Pencil nozzle
(Courtesy of Stanadune Diesel
Systems. Hartford, Conn.)

In this illustration, the pencil nozzle is defined by using a labeled picture of the device. (Proof positive that a picture is worth a thousand words).

Diagram:

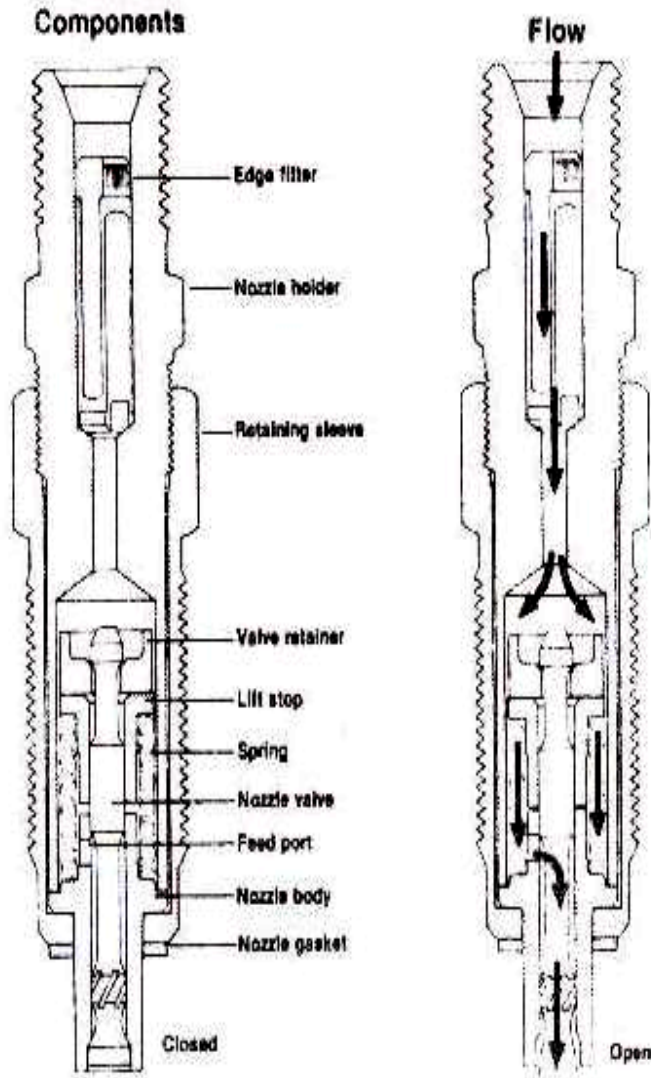


FIGURE 5.7 Outward opening nozzle
(Courtesy of Stanadyne Diesel Systems,
Hartford, Connecticut)

Here the outward opening nozzle is defined by using a diagram. The parts of the device are labeled, and the reader is shown how it functions.

Assignment 1: Technical Terminology in Textbooks

Directions:

1. Highlight all technical terms which are defined in a chapter.
2. Write the definition on an index card. Write the term on the other side of the card.
3. As you review each term, look at the word, see if you can recite its meaning, then check the card to see if you are correct.

Unidentified Flying Terminology

Sometimes authors omit crucial definitions. These meanings may not appear in print because the writer assumes that you are already familiar with the word. The author may also choose not to define a word when it is first presented because it is interdependent on other concepts. In other words, sometimes it doesn't make sense to list terms and definitions as if they existed in isolation. In these cases, it is best to keep reading, hopeful that hazy meanings will become clear as the author develops related concepts. If this strategy fails, you can use the book's glossary for a specific meaning. A dictionary may also be used as a resource for locating definitions not found in the passage.

Using the Dictionary

If your textbook has a glossary, the technical meaning of the word will be given. A technical dictionary will also provide the specialized meaning you need. A regular dictionary, however, provides both general and technical word meanings. For example:

a·mor·phous (ə môr fôz) adj. [Mod L. amorphous < Gr. amorphos < a-, without + morphé, form]

1. without definite form; shapeless
2. of no definite type; anomalous
3. unorganized; vague
4. Biol. without definite or specialized structure, as some lower forms of life
5. Chem. & Mineralogy lacking a definite crystalline form; not crystalline.

So you would need to select from this list of five the meaning which belongs to your field.

Some terminology is still being coined. For example, the specialized vocabulary of computer science and computer operation is so new that many dictionaries do not include much of it or do not give the technical meaning that has evolved. Some terminology is so specific to a particular field that a regular dictionary may omit much of it. For example, some photographic terminology is found within textbooks and technical dictionaries but not in a regular dictionary.

Assignment 2: Technical Terminology

Directions:

1. Using a textbook chapter, highlight words you don't know.
2. Choose ten of these words.
3. Write each term on one side of an index card.
4. Look up each word in a regular dictionary or the book's glossary.
5. Write the meaning on the other side of your card.
6. Review periodically by looking at the word and reciting its meaning.

Mapping Related Terminology

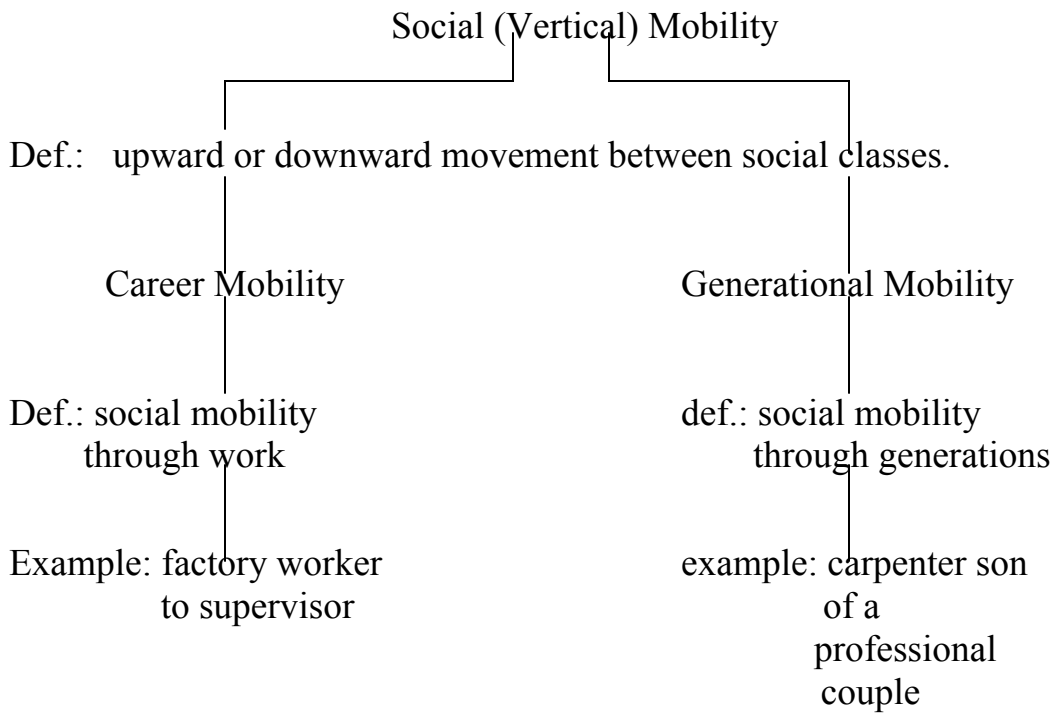
You will often be learning groups of related vocabulary. Mapping is an effective strategy to use when studying sets or clusters of terms. The process involves grouping related terms together and showing their relationships to each other.

For example:

“Social mobility, or vertical mobility, is upward or downward movement between social classes. Despite the rigors of class exclusivity, most Americans claim social mobility as an ideal. People do move from class to class, and they do it in one of two ways. Career mobility is a social mobility through the course of one's work. A person who advanced from factory worker to supervisor, from mail room to boardroom, or conversely from engineer to skid row bum illustrates this concept. Generational mobility, another type of social mobility, takes place from one generation to another. The carpenter son of a professional couple is downwardly mobile;

the stewardess daughter of a shoemaker is upwardly mobile. As we will see, people's attitudes toward social mobility often reflect their own class backgrounds." (Sociology: The Human Science, p. 182).

The terminology in this passage could be mapped as follows:



Assignment 3: Mapping Related Terminology

Directions:

1. Select a textbook chapter which introduces a number of specialized terms.
2. Draw a map showing how the terminology introduced is related.

Other Specialized Elements

Besides terminology, most fields of study have frequently used abbreviations and/or symbols. In addition, some subject matter relies on the student's knowledge of prefixes, roots, and suffixes. This is particularly true in the health field, though each content area seems to target particular word elements to use with regularity.

Abbreviations

Agriculture	FCA (Farm Credit Administration) bot (botany)
Business:	CPA (Certified Public Accountant) FTC (Federal Trade Commission)
Criminal Justice:	DOA (Dead on arrival) Admin (Administration)
Electronics:	whr (watt-hour) SI (International System of Units)
Graphic Arts:	irid (iridescent) lith (lithography)
Health:	ECG (Electrocardiogram) Ger (geriatrics)
Industrial Tech:	cap (capacity) galv (galvanized)
Power Mechanics:	RPM (Revolutions per minute) AC (Alternating Current)

Symbols

Agriculture: x(hybrid) +(wild type)
Business: P(principal) c/o (in care of)
Criminal Justice: v(victim) L/F(left front)
Electronics: e(electronic charge) G(conductance)
Graphic Arts: f/(relative aperture) n(index of refraction)
Health: ♀(female) ♂(male)
Industrial Tech: Z(impedance) W(energy)
Power Mechanics: F(force) W(work)

Prefixes

Roots

Suffixes

Agriculture

mono-(one)
com-(together)

geo(earth)
terre(land)

-ology(study of)
-osis(condition)

Business

macro-(large)
micro-(small)

dic(tell)
scrib(write)

-ship(office)
-ity(quality)

Criminal Justice

anti-(against)
pseudo-(false)

corp(body)
cred(believe)

-cide(killing of)
-ism(doctrine)

Electronics

tele-(far)
deci-(ten)

mit(send)
phono(sound)

-ite(product)
-ity(degree)

Graphic Arts

semi-(half)
poly-(many)

graph(write/draw)
photo(light)

-ic(having the form of)
-ize(to make)

Health

electro-(electricity)
hyper-(excessive)

hem(blood)
cardi(heart)

-stasis(slowing)
-lysis(dissolution)

Industrial Technology

circum-(around)
equi-(equal)

fac(make)
tens(stretch)

-en(made of)
-fy(to make)

Power Mechanics

trans-(across)

port(carry)

-ize(to make)

retro-(backward)

vert(turn)

-ation(action)

Assignment 4: Specialized Elements

Directions:

1. Select a chapter from one of your content area textbooks.
2. List abbreviations, symbols, prefixes, roots, and suffixes that occur in this chapter and that relate specifically to the language of your field. Include meanings for these word elements.

Textbook Title:

Abbreviations:

Meanings:

Symbols:

Meanings:

Word Elements:

Meanings: