APPENDIX C

COMPONENTS OF THE DEFINITION TRAILER

I. DATE OF LAST UPDATE (DLU)

Listed as the final element in the trailer following the definition, the Date of Last Update indicates the last year in which material was gathered for that occupation. A DLU of "77" would indicate that the occupation has not been studied by an analyst since publication of the fourth edition DOT in 1977.

II. SPECIFIC VOCATIONAL PREPARATION (SVP)

Specific Vocational Preparation is defined as the amount of lapsed time required by a typical worker to learn the techniques, acquire the information, and develop the facility needed for average performance in a specific job-worker situation.

This training may be acquired in a school, work, military, institutional, or vocational environment. It does not include the orientation time required of a fully qualified worker to become accustomed to the special conditions of any new job. Specific vocational training includes: vocational education, apprenticeship training, in-plant training, on-the-job training, and essential experience in other jobs.

Specific vocational training includes training given in any of the following circumstances:

a. Vocational education (high school; commercial or shop training; technical school; art school; and that part of college training which is organized around a specific vocational objective);

b. Apprenticeship training (for apprenticeable jobs only);
c. In-plant training (organized classroom study provided by an employer);

d. On-the-job training (serving as learner or trainee on the job under the instruction of a qualified worker);

e. Essential experience in other jobs (serving in less responsible jobs which lead to the higher grade job or serving in other jobs which qualify).

The following is an explanation of the various levels of specific vocational preparation:

<table>
<thead>
<tr>
<th>Level</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Short demonstration only</td>
</tr>
<tr>
<td>2</td>
<td>Anything beyond short demonstration up to and including 1 month</td>
</tr>
<tr>
<td>3</td>
<td>Over 1 month up to and including 3 months</td>
</tr>
<tr>
<td>4</td>
<td>Over 3 months up to and including 6 months</td>
</tr>
<tr>
<td>5</td>
<td>Over 6 months up to and including 1 year</td>
</tr>
<tr>
<td>6</td>
<td>Over 1 year up to and including 2 years</td>
</tr>
<tr>
<td>7</td>
<td>Over 2 years up to and including 4 years</td>
</tr>
<tr>
<td>8</td>
<td>Over 4 years up to and including 10 years</td>
</tr>
<tr>
<td>9</td>
<td>Over 10 years</td>
</tr>
</tbody>
</table>

Note: The levels of this scale are mutually exclusive and do not overlap.

III. GENERAL EDUCATIONAL DEVELOPMENT (GED) General Educational Development embraces those aspects of education (formal and informal) which are required of the worker for satisfactory job performance. This is education of a general nature which does not have a recognized, fairly specific occupational objective. Ordinarily, such education is obtained in elementary school, high school, or college. However, it may be obtained from experience and self-study. The GED Scale is composed of three divisions: Reasoning Development, Mathematical Development, and Language Development. The description of the various levels of language and mathematical development are based on the curricula taught in schools throughout the United States. An analysis of mathematics courses in school curricula reveals distinct levels of progression in the primary and secondary grades and in college. These levels of progression facilitated the selection and assignment of six levels of GED for the mathematical development scale. However, though language courses follow a similar pattern of progression in primary and secondary school, particularly in learning and applying the principles of grammar, this pattern changes at the college level. The diversity of language courses offered at the college level precludes the establishment of distinct levels of language progression for these four years. Consequently, language development is limited to five defined levels of GED inasmuch as levels 5 and 6 share a common definition, even though they are distinct levels. Scale of General Education Development (GED)

06 LEVEL REASONING DEVELOPMENT Apply principles of logical or scientific thinking to a wide range of intellectual and practical problems. Deal with nonverbal symbolism (formulas, scientific equations, graphs, musical notes, etc.) in its most difficult phases. Deal with a variety of abstract and concrete variables. Apprehend the most abstruse classes of concepts. 06 MATHEMATICAL DEVELOPMENT Advanced calculus: Work with limits, continuity, real number systems, mean value theorems, and implicit functions theorems. Modern Algebra: Apply fundamental concepts of theories of groups, rings, and fields. Work with differential equations, linear algebra, infinite series, advanced operations methods, and functions of real and complex variables. Statistics: Work with mathematical statistics, mathematical probability and applications, experimental design, statistical inference, and econometrics. 06 LANGUAGE DEVELOPMENT Same as Level 5. 05 LEVEL REASONING DEVELOPMENT Apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions. Interpret an extensive variety of technical instructions in mathematical or diagrammatic form. Deal with several abstract and concrete variables. 05 MATHEMATICAL DEVELOPMENT Algebra: Work with exponents and logarithms, linear equations, quadratic equations, mathematical induction and binomial theorem, and permutations. Calculus: Apply concepts of analytic geometry, differentiations, and integration of algebraic functions with applications. Statistics: Apply mathematical operations to frequency distributions, reliability and validity of tests, normal curve, analysis of variance, correlation techniques, chi-square application and sampling theory, and factor analysis. 05 LANGUAGE DEVELOPMENT Reading: Read literature, book and play reviews, scientific and technical journals, abstracts, financial reports, and legal documents. Writing: Write novels, plays, editorials, journals, speeches, manuals, critiques, poetry, and songs. Speaking: Conversant in the theory, principles, and methods of effective and persuasive speaking, voice and diction, phonetics, and discussion and debate. 04 LEVEL REASONING DEVELOPMENT Apply principles of rational systems to solve practical problems and deal with a variety of
Appendix C: Components of the Definition Trailer - DOT Dictionary of O... http://www.occupationalinfo.org/appendxc_1.html# STRENGTH

not limited to buttons, knobs, pedals, levers, and cranks. Following are descriptions of the five terms in which
and/or one or both feet or legs (foot/leg) to move controls on machinery or equipment. Controls include but are
and/or over shorter distances. c. Controls Controls entail the use of one or both arms or hands (hand/arm)
the worker is required to lift and carry continuously or push and pull objects over long distances, the worker
is in a crouching position, it may be much more difficult to push an object than if pushed at waist height. Also, if
consideration is given to the weight handled, position of the worker's body, and the aid given by helpers or
the force (includes jerking). Lifting, pushing, and pulling are evaluated in terms of both intensity and duration.
Consideration is given to the weight handled, position of the worker's body, and the aid given by helpers or
the strength rating is expressed by one of five terms: Sedentary, Light, Medium, Heavy, and Very
Heavy. In order to determine the overall rating, an evaluation is made of the worker's involvement in the
following activities: a. Standing, Walking, Sitting Standing - Remaining on one's feet in an upright position at a
work station with-out moving about. Walking - Moving about on foot. Sitting - Remaining in a seated position. b.
Lifting, Carrying, Pushing, Pulling Lifting - Raising or lowering an object from one level to another (includes
upward pulling). Carrying - Transporting an object, usually holding it in the hands or arms, or on the shoulder.
Pushing - Exerting force upon an object so that the object moves away from the force (includes slapping,
striking, kicking, and treddle actions). Pulling - Exerting force upon an object so that the object moves toward
the force (includes jerking). Lifting, pushing, and pulling are evaluated in terms of both intensity and duration.
Consideration is given to the weight handled, position of the worker's body, and the aid given by helpers or
mechanical equipment. Carrying most often is evaluated in terms of duration, weight carried, and distance
carried. Estimating the Strength factor rating for an occupation requires the exercise of care on the part of
occupational analysts in evaluating the force and physical effort a worker must exert. For instance, if the worker
is in a crouching position, it may be much more difficult to push an object at waist height. Also, if the
worker is required to lift and carry continuously or push and pull objects over long distances, the worker
may exert as much physical effort as is required to similarly move objects twice as heavy, but less frequently
and/or over shorter distances. c. Controls Controls entail the use of one or both arms or hands (hand/arm)
and/or one or both feet or legs (foot/leg) to move controls on machinery or equipment. Controls include but are
not limited to buttons, knobs, pedals, levers, and cranks. Following are descriptions of the five terms in which
the Strength Factor is expressed: S-Sedentary Work - Exerting up to 10 pounds of force occasionally
(Occasionally: activity or condition exists up to 1/3 of the time) and/or a negligible amount of force frequently
Appendix C: Components of the Definition Trailer - DOT Dictionary of Occupations

The DOT Dictionary of Occupations (DOT) is a comprehensive catalog of occupations used by the U.S. Department of Labor. It serves as a tool for matching workers with suitable job opportunities and is designed to provide career counselors and other DOT users with additional information about the interests, aptitudes, entry level preparation and other traits required for successful performance in various occupations. The GOE is also useful in self-assessment and counselor-assisted settings to help people understand themselves realistically in regard to their ability to meet job requirements. Descriptive information provided for each work group assists the individual in evaluating his or her own interests and relating them to pertinent fields of work. The GOE code assigned to a definition provides a link between the occupation defined and the GOE arrangement of occupations with similar interests, aptitudes, adaptability requirements, and other descriptors. The GOE coding structure classifies jobs at three levels of consideration. The first level divides occupations according to twelve interest areas corresponding to interest factors identified through research conducted by the former Division of Testing in the US Employment Service. The interest factors, identified by a two-digit code, are defined in terms of broad interest requirements of occupations as well as vocational interests of individuals. The twelve interest areas are defined as follows: 01 Artistic 05 Mechanical 09 Accommodating 02 Scientific 06 Industrial 10 Humanitarian 03 Plants-Animals 07 Business Detail 11 Leading- Influencing 04 Protective 08 Selling 12 Physical Performing The interest areas are then subdivided into work groups (the second set of two digits within the six-digit GOE code). Each work group contains occupations requiring similar worker traits and capabilities in related work settings. The GOE contains descriptive information for each work group and identifies each occupation in the group with a four-digit code and title. In many interest areas, occupations that require the most education, training, and experience are in the first group, while those requiring less formal education or experience are listed in the last group. Work groups are then subdivided into subgroups (the third two-digit set in the GOE code) of occupations with even more homogeneous interests, aptitudes, and adaptability requirements. Each subgroup is identified by its unique six-digit code and title. Individual occupations are listed alphabetically within subgroups. Some subgroups contain occupations from more than one industry, listed within alphabetized industries.

- Dictionary of Occupational Titles (DOT) Index
- Standard Industrial Classifications (SIC) Index
- Occupational Information Network (ONET) Index
- US Census Statistical Tables
- China Statistical Tables
- World Facts
- Quick Maps (for your web site)
- Flags of All Countries (for your web site)