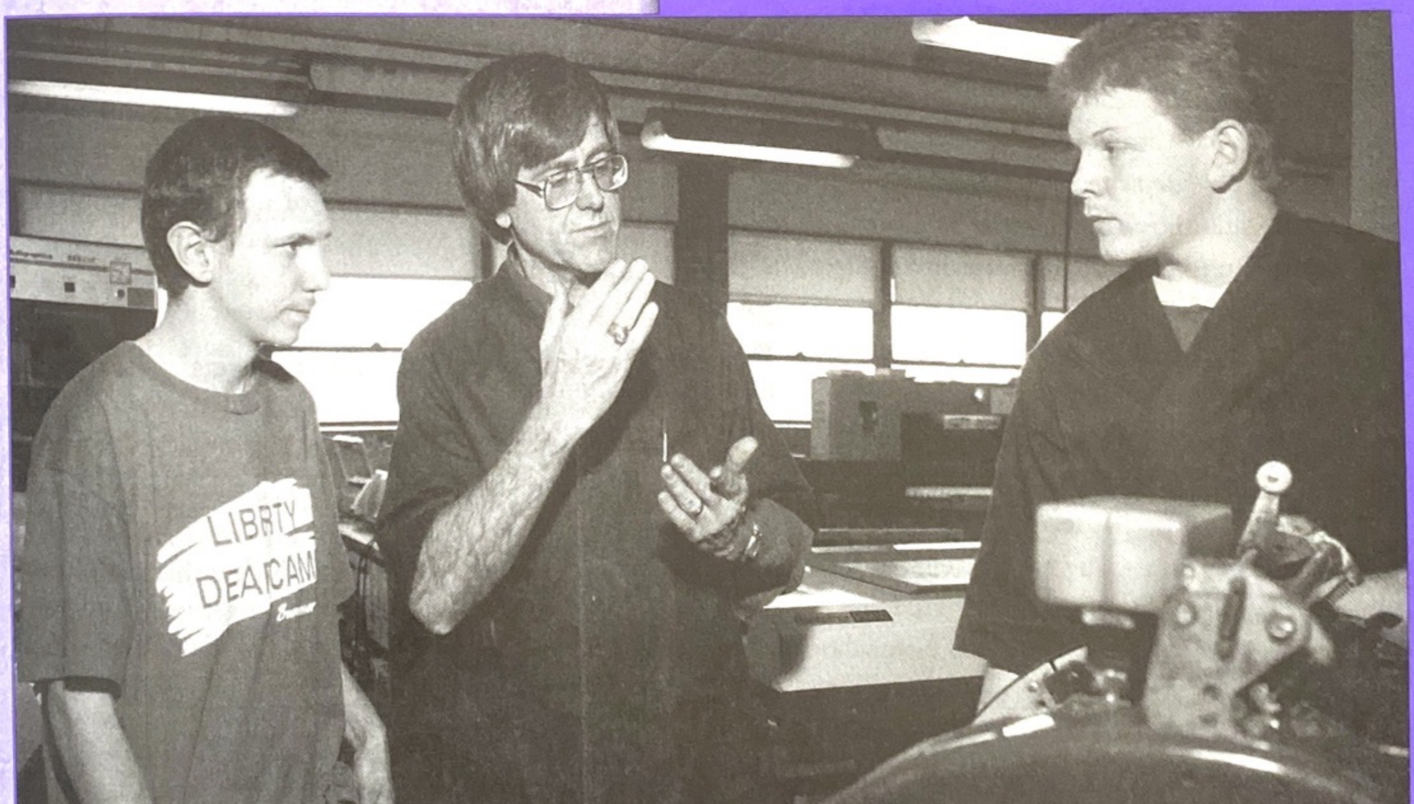
CHAPTER

13

Functional Academics



OBJECTIVES

Upon completion of this chapter, the reader should be able to:

1. Understand the concepts of personal and functional competence.
2. Identify the areas of functional academics within the curriculum and provide examples of the skills and strategies for each curricular area.
3. Identify strategies for the assessment of personal and functional competence.
4. Discuss ways in which functional academic instruction can be integrated into the curriculum.

Whatever goal of education one advocates, the ability to function in an ever-changing society has to be on the list. We want our children and our students to be productive and contributing citizens. All the skill- and content-related topics that have been covered in this book contribute in various ways to this goal.

Functioning effectively, whether it is at home, in post-secondary education, in the workplace, or in community settings, requires many skills—some skills are simple whereas others are more complex. Unfortunately, most students who have struggled in school are directly taught very few of the requisite skills needed to deal with the demands of adulthood that we all face on a daily basis. The assumptions that students automatically adjust to community living after exiting formal schooling and that they will demonstrate proficiency with a wide range of everyday challenges are erroneous, as the evidence from the many follow-up studies has shown (see M. Wagner, Newman, Cameto, Garza, & Levine, 2005).

The intent of this chapter is to explore a variety of topics that relate to dealing successfully with the many demands of adulthood that await *all* students who are moving into a new stage of life when high school ends. The first section of the chapter discusses the concepts of personal and functional competence, provides a framework for conceptualizing and operationalizing the specific demands of adulthood, and describes how functional topics relate to scholastic areas of the general education curriculum. The second section discusses the functional implications of the four key subject areas (language arts [reading and writing], math, science, and social studies) around which curricula are designed. The next section of the chapter covers formal and informal ways to assess functional competence. The last major section focuses on how to teach functional content, with an emphasis on how to integrate real-life topics into the general education curriculum and how to align this content with state content and performance standards.

PERSONAL AND FUNCTIONAL COMPETENCE

This section provides some basic information about functional knowledge and skills. The section has four major objectives: to discuss the general meaning of the concepts of personal and functional competence, to introduce typical terminology that is used in school settings in reference to personal and functional competence, to identify the major demands associated with functioning in adulthood, and to demonstrate the relationship of functional topics to the general education curriculum.

Personal and Functional Competence as Everyday or Applied Intelligence

To be able to deal effectively with the demands of everyday life at any stage of adulthood—personal and functional competence—requires three key components:

- Knowledge acquisition
- Development of relevant skill sets
- Intelligent application of knowledge and skills to various situations and settings

An individual needs to acquire knowledge about the various demands that he or she will be facing. The person must develop skills sets that enable him or her to deal with specific situations that arise. Ultimately, an individual must be able to apply the knowledge and skills that have been learned to new, novel situations that will inevitably occur.

For instance, learning how to take public transportation from home to work requires knowledge of the route, schedule, amount of time it will take to get to work, as well as the skills associated with purchasing

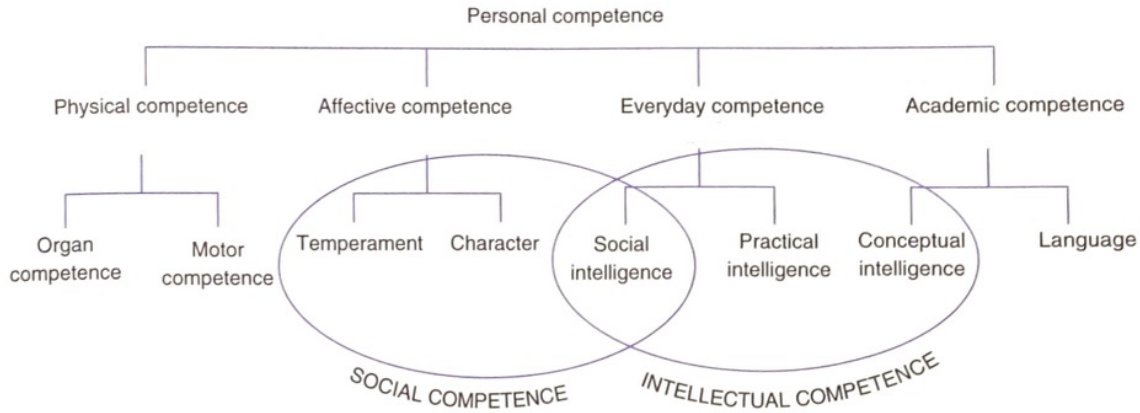


FIGURE 13–1 Greenspan's Model of Personal Competence

Source: From "The Role of Intelligence in a Broad Model of Personal Competence," by S. Greenspan & J. Driscoll, in D. P. Flanagan, J. O. Genshaft, & P. L. Harrison (Eds.), *Contemporary Intellectual Assessment: Theories, Tests, and Issues* (p.133), 1997, New York: Guilford. Copyright © 1997 by Guilford Press. Reprinted by permission.

a ticket and navigating the route that is required. However, the true essence of whether someone has developed the required competencies associated with using public transportation is demonstrated when an individual must use his or her knowledge of the system and the skills associated with orientation and mobility when taking a new route.

The notion of "personal competence," as discussed by Greenspan and Driscoll (1997) and depicted in Figure 13–1, suggests that a person must be competent to some extent in four areas: physical, affective, everyday, and academic. Greenspan and Driscoll stated that "everyday competence" is a function of one's practical and social intelligence and is defined as

> one's ability to think about and understand problems found in such real-world settings as work, play, social relationships, and home. . . . Practical intelligence refers to the ability to think about and understand mechanical, technical, or physical problems in everyday settings. . . . Social intelligence refers to the ability to think about and understand problems found in relationships with other people. (p. 134)

Greenspan and Driscoll's conceptualizations of practical and social intelligence relate to the key component noted earlier of the intelligent application of knowledge and skills to new situations or settings.

The concept of "applied intelligence" (R. J. Sternberg, Kaufman, & Grigorenko, 2008) also has relevance to the notion of functional competence. As the authors stated, "being intelligent is more than being book-smart; it is knowing how to apply it" (p. 1). The ideas espoused by Sternberg and colleagues identified three parts (triarchic) to the theory: what goes on inside the person; the person's past experience in dealing with various situations; and the person's ability to adapt to, change, or find new environments in which one has to exist.

Terminology Defined

The term *functional* is used in different ways and its meaning is very much determined by context. A wide range of terms have been used to convey the concept of functional skills. Some of the most frequently used terms to describe those skills that are needed to "function" in everyday life include *activities of daily living, applied academics, daily living skills, everyday intelligence, functional academics, functional literacy, independent living skills, life skills, real-life skills,* and *survival skills*. Cronin et al. (2007) explained nuances of different terminology:

> At times, the meaning associated with the terms is interchangeable; however, at other times, differences in meaning are apparent. For instance, the term *applied academics* suggests skills that are clearly different from self-care skills of toileting and grooming that are associated with *daily living skills*. (p. 2)

Functionality, as stated, is also determined by context. It is safe to say that the term *functional* typically refers to practical types of everyday living skills. However, certain higher-order skills involving complex math calculations have "functionality" in the field of engineering. Nevertheless, notion of functionality will follow the more common application to everyday living situations.

This chapter covers two major functional topics and uses two specific terms: *functional academics* as well as other selected *real-life skills*. Both of these terms are defined as follows:

- **Functional academics:** the real-world application of core academic content and related skills that are meaningful and relevant to an individual's life now and in the future. (Table 13–1 lists some examples of functional academic content.)
- **Real-life skills:** specific competencies (i.e., knowledge, skills, intelligent application) of local and cultural relevance needed to perform everyday activities across a variety of settings.

The term *functional curriculum* must be distinguished from the terms presented previously, as it is used frequently in the field of special education. The term refers to a specifically designed scope and sequence of content coverage (i.e., curriculum) that is completely focused on functional topics. G. M. Clark, Field, Patton, Brolin, and Sitlington (1994) defined functional curriculum as "a way of delivering instructional content that focuses on the concepts and skills needed by all students with disabilities in the areas of personal-social, daily living, and occupational adjustment" (p. 37). Valletutti, Bender, and Baglin (2007) simply stated that "life is the curriculum" (p. 1).

Demands of Adulthood

Young adults with special needs face an array of challenges when they move from high school to community living. The identification of critical functional knowledge and skills needed in adulthood should be based on the behaviors that will be demanded of those individuals in the specific community settings in which they will live, learn, and work.

As can be seen in the data in Table 13–2 obtained in the National Longitudinal Transition

TABLE 13–1 Examples of functional academic activities

Academic Content Area	*Examples of Functional Activities*
Reading	Read a newspaper article Read a recipe Read the signs on restroom doors Read instructions for video game Read a job application Read a course schedule of classes for college
Expressive Writing	Write a thank-you note Dictate a personal story Write a biography for college entrance application
Math	Add sales tax to purchase order Use calculator to add grocery item totals Compare prices at a local video store Calculate income tax return Compute square footage for a carpentry task
Science	Calculate boiling point of candy recipe Use medication chart Plant and harvest vegetable garden Identify weather to select appropriate clothing
Science (Health)	Brush teeth and practice proper oral hygiene Plan balanced meals Identify and purchase items for class first aid kit Identify health services in the community Label sexual feelings and attitudes
Social Studies	Register to vote Identify cultural holidays and customs Identify headlines in newspapers Determine bus route in the community

Source: Adapted from *Functional Curriculum for Elementary, Middle, and Secondary Age Students with Special Needs*, 2nd ed., by P. Wehman, and V. Kregel, 2004. Copyright 2004 by PRO-ED, Inc. Adapted with permission.

TABLE 13–2 Functional skills of out-of-school youth, by disability category

	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities
Percentage rated by parents "high" on:											
Self-care skills	98.5	96.1	84.2	97.7	99.3	90.6	67.8	89.4	66.0	73.5	56.3
Functional cognitive skills	80.4	84.5	42.3	83.6	84.1	63.9	82.8	84.8	72.2	74.5	44.5
Percentage with social skills rated[a]:											
High	19.1	14.1	7.3	5.4	32.6	36.5	24.3	16.2	3.1	9.9	17.7
Low	17.4	16.5	26.0	45.8	9.7	10.6	17.1	22.5	28.1	30.0	25.9
Percentage communicating with no trouble	83.3	61.3	55.2	80.4	41.1	92.7	77.2	81.8	65.4	62.1	54.5
Percentage with health reported to be[b]:											
Excellent	41.2	50.7	30.4	36.0	40.8	50.7	28.1	40.5	47.0	21.1	27.3
Fair or poor	8.1	6.6	12.1	13.5	10.4	7.1	19.3	13.6	5.9	32.0	18.5

Source: NLTS2 (p. 2-5) Wave 2 parent/youth interviews.

[a] The category "medium" is omitted from the exhibit.

[b] The categories "very good" and "good" are omitted from the exhibit.

Study–2 (M. Wagner et al., 2005), the functional skill levels of many students, as reported by their parents, remained deficient after students left school. Although the data do not cover all areas where functional competence is needed, the data do provide insights in the areas of self-care, functional cognitive skills (e.g., making change), social skills, communication skills, and health status. This type of information underscores the importance of addressing functional skill areas prior to students leaving school, as these areas create barriers to functioning competently later in life.

The identification of the major demands of life after high school provides the foundation for local school systems to address the need to ensure competency across a range of everyday living areas. A number of taxonomies exist depicting the **demands of adulthood** (see Cronin et al., 2007, p. 16).

Two curricular sources that provide a useful framework for understanding the demands of everyday adult life and that are highlighted in this chapter include Cronin and colleagues' (2007) Major Life Demands model and Brolin's (2004) Life-Centered Career Education (LCCE) model. Table 13–3 provides an overview of these two models. As can be seen, the Major Life Demands model is organized according to 6 adult domains and 23 subdomains. These subdomains are further subdivided into 136 major life demands. The LCCE model includes 3 major domains and 22 competencies that are further subdivided into 97 subcompetencies. Both of these lists provide a comprehensive reference of the most demands that most adults in the United States are likely to face. It is important to recognize that some individuals will not need to become proficient on some of the knowledge or skill areas, as the topic will not apply to them. For example, a person who lives in a rural area of the country will not need to be competent in the use of a public transportation system, as long as he or she does not move to any area where one might be needed.

The list of subcompetencies used by Brolin (2004), the list of major life demands developed by Cronin and colleagues (2007), or any other list of functional competencies that can be found tend to correlate highly with one another. As a result, one resource is not necessarily any better than another; they all represent reasoned efforts to help practitioners develop meaningful programs for students.

Once key life demand areas are identified, specific life skills associated with these areas can be generated. This is an important level of activity because doing so allows for teachers to address knowledge areas and skill sets that are relevant locally.

Relationship of Functional Topics to the General Education Curriculum

Understanding the relationship of knowledge and skills associated with the general education curriculum to functional topics is very important. The merging of scholastic instruction and instruction on functional topics provides a likely solution to the balance between addressing content and performance standards and meeting the functional needs of students, as will be addressed later in the chapter. Figure 13–2 provides secondary-level examples of how the integration of these concepts into students' programs can take place. Activities emphasizing functional application of scholastic skills can, and should, be developed at the elementary level as well (see Cronin et al. [2007] for elementary examples).

FUNCTIONAL ACADEMICS

Functional academics refers to the real-world application of content and skills that are associated with the core subject areas. Traditionally, functional academics have been restricted to three areas: reading, writing, and math. We have expanded the view of functional academics to include the other core subject areas of science and social studies. Furthermore, we are collapsing functional reading and writing under the category of functional language arts.

A key distinction needs to be made in regard to the areas included under the term *functional academics*. Functional reading and functional writing really refer to skill areas, whereas functional math, science, and social studies refer to knowledge acquisition and skill performance associated with subject area content (see Figure 13–3). What this means is that functional reading and writing are essential tool skills that are not content-specific; they are used in a variety of ways and across many different settings. For instance, the reading as an academic area does not have content; the content comes from other areas such as literature, science, or social studies. Functional math, science, and social studies are content-laden and, as a result, a significant amount of information (facts, concepts) is considered part of the discipline. There is no

TABLE 13–3 Models of adult functioning

Model	Adult Domain/Curriculum Area	Subdomains/Competency Areas
Major Life Demands (Cronin, Patton, & Wood 2007)	Employment/education	General job skills General education/training considerations Employment setting Career refinement and reevaluation
	Home and family	Home management Financial management Family life Childrearing
	Leisure pursuits	Indoor activities Outdoor activities Community/neighborhood activities Travel Entertainment
	Community involvement	Citizenship Community awareness Services/resources
	Physical/emotional health	Physical health Emotional health
	Personal responsibility and relationships	Personal confidence/understanding Goal setting Self-improvement Relationships Personal expression
Life-Centered Career Education (Brolin, 2004)	Daily living skills	Managing personal finances Selecting and managing a household Caring for personal needs Raising children and meeting marriage responsibilities Buying, preparing, and consuming food Buying and caring for clothing Exhibiting responsible citizenship Utilizing recreational facilities and engaging in leisure Getting around the community
	Personal-social skills	Achieving self-awareness Acquiring self-confidence Achieving socially responsible behavior Maintaining good interpersonal skills Achieving independence Making adequate decisions Communicating with others
	Occupational guidance and preparation	Knowing and exploring occupational possibilities Selecting and planning occupational choices Exhibiting appropriate work habits and behavior Seeking, securing, and maintaining employment Exhibiting sufficient physical-manual skills Obtaining specific occupational skills

Source: Adapted from *Infusing Real-Life Topics into Existing Curricula at the Elementary, Middle, and High School Levels: Recommended Procedures and Instructional Examples*, by J. R. Patton, M. E. Cronin, and S. Wood, 1999, Austin, TX: PRO-ED.

FIGURE 13–2 Secondary Matrix: Relationship of Scholastic Skills to Functional Topics

	Employment/ Education	*Home and Family*	*Leisure Pursuits*	*Community Involvement*	*Emotional/ Physical Health*	*Personal Responsibility and Relationships*
Reading	Read classified ads for jobs.	Interpret bills.	Locate and understand movie information in a newspaper.	Follow directions on tax forms.	Comprehend directions on medication.	Read letters from friends.
Writing	Write a letter of application for a job.	Write checks.	Write for information on a city to visit.	Fill in a voter registration form.	Fill in your medical history on forms.	Send thank-you notes.
Listening	Understand oral directions of a procedure change.	Comprehend oral directions for making dinner.	Listen to a weather forecast to plan outdoor activity.	Understand campaign ads.	Attend lectures on stress.	Take turns in a conversation.
Speaking	Ask your boss for a raise.	Discuss morning routines with your family.	Inquire about tickets for a concert.	State your opinion at a school board meeting.	Describe symptoms to a doctor.	Give feedback to a friend about the purchase of a CD or DVD.
Math Applications	Understand the difference between net and gross pay.	Compute the cost of doing laundry in a laundromat versus at home.	Calculate the cost of a dinner out versus eating at home.	Obtain information for a building permit.	Use a thermometer.	Plan the costs of a date.
Problem Solving	Settle a dispute with a coworker.	Decide how much to budget for rent.	Role-play appropriate behaviors for various plates.	Know what to do if you are the victim of fraud.	Select a donor.	Decide how to ask someone for a date.
Survival Skills	Use a prepared career planning packet.	List emergency phone numbers.	Use a shopping center directory.	Mark a calendar for important dates (e.g., recycling, garbage collection).	Use a system to remember to take vitamins.	Develop a system to remember birthdays.
Personal/ Social	Apply appropriate interview skills.	Help a child with homework.	Know the rules of a neighborhood pool.	Locate self-improvement classes.	Get a yearly physical exam.	Discuss how to negotiate a price at a flea market.

Source: From *Life Skills Instruction* by M. E. Cronin, J. R. Patton, and S. J. Woods, 2007. Copyright 2007 by PRO-ED, Inc. Reprinted with permission.

question that, in addition to the knowledge that is imparted in these subjects, certain specific skills are typically developed in these subject areas as well (e.g., inquiry skills in science, problem-solving skills in math, research skills in social studies).

The general education curriculum is composed of four major subject areas for which content and performance standards have been created and on which students are tested regularly throughout their school careers. As indicated at the beginning of this section and to remain in line with the organization of the general education curriculum, we have conceptualized functional academics in the following way:

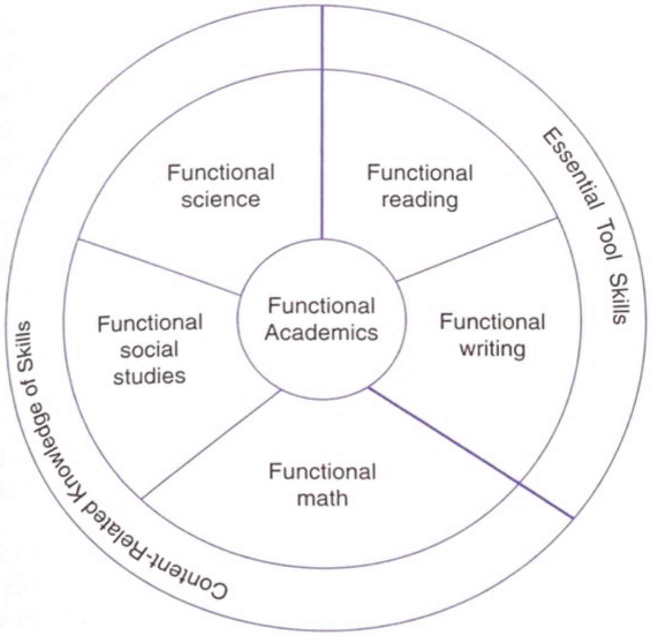


FIGURE 13–3 Functional Academics Components and Areas of Emphasis

- **Functional language arts**—includes functional reading and functional writing.
- **Functional math**—focuses on math content in the areas of money management and other measurement applications (volumetric, linear, temporal, temperature, weight).
- **Functional science**—focuses on science content as it relates to life (especially health), physical, and environmental science in the everyday world.
- **Functional social studies**—focuses on social studies content that relates to community involvement and citizenship.

Specific real-life applications for all these areas are listed in Appendixes 13–A to 13–E (located at the end of the chapter) and discussed in the following sections. Although the tables are comprehensive, they will not include every possible situation where functional competence is needed. We have organized each of the tables into five major life areas: everyday living, school, community, work, and leisure.

Functional Language Arts (Reading and Writing)

The subject area of language arts, at the elementary level, is dedicated to the development of critical tool skills in reading and writing that will be needed in school, at home, in the community, and in the workplace. As students move to the secondary level, critical reading and writing skills are emphasized and students engage various types of literature in their coursework. This subject area requires students to be able to read a variety of different types of narrative and expository material and be able to write coherently about what they have read.

Reading. The functional application of language arts includes a number of areas that individuals encounter every day. An extensive list of areas in which reading is needed in the real world is provided in Appendix 13–A. As can be seen from examining this appendix, various types of reading skills are used regularly in everyday life from reading notes left by other family members to reading instruction manuals for new electronic games and equipment. Accordingly, the reading skill level required varies according to the textual material. As an example of reading range, the readability of a car owner's manual can range from 4th-grade to over 10th-grade reading levels.

In addition to developing competence in comprehending a vast array of textual material, as highlighted in Appendix 13–A, students must also achieve mastery of other types of reading skills. For instance, the ability to scan and skim textual material (see Chapter 12) has high functional value in higher education settings. However, we use these skills regularly in our everyday lives as well. Hoover and Patton (2007) provided more detailed coverage on what these skills are and how to teach them.

Writing. Although not as extensive and arguably not as devastating if one has problems in this area, the need to be able to write in everyday life occurs in many different ways, as suggested in Appendix 13–B. Writing skills involve both the ability to generate written products by hand or by using a keyboard. As noted earlier in Chapter 7, the associated skills of handwriting and spelling also play important roles in this process.

Unless one chooses a career in which large amounts of writing are required, most of the everyday writing demands involve short writing tasks (writing notes, email or text messages, phone messages). Frequently writing tasks are coupled with the need to read materials as well (e.g., completing an application, responding to someone else's letter or email).

For those who pursue further education after high school, writing becomes a crucial tool skill for the successful completion of course requirements. Nowhere are adequate writing skills needed than in the taking of good notes during class. Today, emerging technology in the form of apps for one's computer or tablet-type device allows students to take notes and record audio at the same time. Such advances are of help to students who struggle in taking good notes. Writing skills in the postsecondary arena also include taking short-answer or essay type of tests, completing papers of various types and length, and developing PowerPoint presentations.

Functional Math

The idea of teaching functional math has been around for a long time. It has been a major component of many life skills programs over the years. One of the first comprehensive resources written for teachers to use with learners with special needs was a book titled *Functional Mathematics for the Mentally Retarded* (Peterson, 1972). Curricular materials such as *Real Life Math* (Glisan, 2001) were developed with a functional orientation to them.

In more recent years, the general education version of what could be referred to as "functional" math were courses that were called "practical math" or "consumer math." The No Child Left Behind Act and other aspects of educational reform has shifted the curricular landscape, resulting in different emphases and requirements, such as algebra. As a result, courses such as consumer math or practical math have been dropped from the curriculum in many school districts and have virtually disappeared. This is too bad because no other course that was part of the general education curriculum had more "functional" face value than these types of courses.

The usual content of practical math courses included units on topics such as (Staudacher & Turner, 1990):

- On Your Own (budgeting)
- Earning a Paycheck
- Banking and Saving (using a checking account)
- Selecting Housing
- Buying and Preparing Food
- Buying Personal Items
- Owning a Vehicle
- Cash or Credit
- Recreation, Travel, and Entertainment

There is no question that all of the broad topics on the preceding list have importance in contributing to personal and functional competence. Students have to acquire the knowledge and develop the skill sets to be able to accomplish the specific math situations that are associated with these topical areas. Coursework that was available in schools used to provide this opportunity; however, for most students, these opportunities no longer exist. The need to teach key functional math skills remains high; however, the means to do so remain elusive.

Everyday life is full of situations where math knowledge and skills are needed. What might be surprising is that a great deal of the math that we use on a daily basis involves estimation and approximations—not precise math. For instance, most of us estimate how long it will take to get to work or we have a general idea of how much money is in our checking account. Appendix 13–C provides a comprehensive list of essential math skills where some degree of competence is needed to deal successfully with the everyday demands of adulthood.

Functional Science

As noted earlier, functional science is not a term, or even a concept, that has been used often in school discussions. However, the implication that certain topics in science have key functional utility is no different than making the same claim in math. Nonetheless, the term *functional science* may be alien to many professionals.

The idea of considering the functional linkage of science facts, concepts, and skills to everyday lives of people is straightforward. Many topics covered in life, physical, and environmental science have real-world applications, as documented in Appendix 13–D.

Functional science extends beyond basic, simple science knowledge and skills competence; it also involves being scientifically literate. This notion is embodied in the idea that "scientifically literate people are able to use thought processes and the scientific knowledge they have acquired to think about and make sense of many ideas, claims, and events they encounter in their everyday lives" (American Association for the Advancement of Science, cited in Sunal & Sunal, 2003).

Science is one of easiest subjects to relate to one's everyday world, as it is all around us. Probably the most important functional application of science relates to "personal life science" in the form of health and hygiene. Examples include being able to plan a healthy diet, exercising regularly, and treating minor injuries. However, science is all around us at home and in the community. Being able to fix a toilet (really a simple appliance) or keeping pipes from freezing in the winter involve actions that are grounded in everyday science.

Aside from the benefit of having access to functional content that students need to know, another key reason exists for linking science topics covered in textbooks and in class to real-world situations to which students can relate: Doing so increases the chance that they will retain what is being presented.

Functional Social Studies

If the term *functional science* seemed strange at first, then *functional social studies* is likely to really seem odd. However, like science and math, the subject area of social studies includes many topics that have relevance to everyday life. Using the same rationale that was used with functional science, one could argue that every student should leave school being literate in a range of functional social studies topics, as identified in Appendix 13–E.

Functional topics related to social studies include important topics associated with one's legal rights across a range of areas, as provided in the following three examples. For instance, students need to know what a contract (i.e., renting furniture for an apartment) is and what it means for them if they sign it. Students with disabilities who go on to further education need to know what their rights are within this system (ADA and Section 504) and understand that the system operates very differently from the one they are leaving. Students also need to understand what their rights are if they encounter the criminal justice system (Miranda warning and its implications).

Another area that is discussed in social studies and has important functional value is the topic of transportation. Although a discussion on transportation in a world geography course may be more on the economic need for and relevance of various types of transportation systems, a functional application of this topic is also warranted for those settings where this knowledge and skill set will be needed.

ASSESSING PERSONAL AND FUNCTIONAL COMPETENCE

3

To adequately address the functional needs of students with special needs, teachers need to use appropriate functional assessments for the following four reasons. First, they must determine a student's present levels of functioning in key functional areas so that appropriate planning can be developed. IDEA 2004 now requires that the IEP contain goals that are focused on academic achievement and functional performance. Second, teachers must monitor the progress of students over time as instruction is provided. Third, teachers, particularly when a student approaches age 16, must engage in the process of identifying the transition needs of students and plan for their postschool life. This planning must, according to IDEA, be based on a student's strengths, preferences, and interests. Fourth, as a result of the 2004 reauthorization of IDEA, students must be provided with a summary of their functional performance and academic achievement prior to their exit from high school. The very intent of this mandate involves assembling all pertinent information for determining the functional impact of a student's disability in terms of living, working, and learning.

To accomplish these goals, teachers have a variety of instruments and techniques from which to choose. Some are formal (i.e., commercially available) instruments and may be standardized or nonstandardized. Other techniques are informal in nature and may include observation, recollection methods (interviews, checklists, rating scales), curriculum-based assessment, and performance-based procedures. This section examines formal and informal techniques for obtaining information about personal and functional competence and considers the importance of the summary of performance procedures as a way of operationalizing data regarding functional performance.

Formal Instruments

Two types of formal measures that provide information about functional competence (adaptive behavior instruments and life/functional skills instruments) are discussed in this section. Measures related to occupational interest and transition needs/strengths can also provide useful information; however, these measures will be discussed in some detail in the next chapter. Table 13–4 is a list of representative instruments in the areas of adaptive functioning and life/functional skills. For detailed information on these instruments, readers are encouraged to consult professional resources on assessment (e.g., L. G. Cohen & Spenciner, 2007; Power, 2006; Taylor, 2006).

TABLE 13–4 Formal instruments for assessing functional competence

Type of Assessment	*Specific Instruments*
Adaptive behavior	• AAMR Adaptive Behavior Scale—School—Second Edition (ABS-S:2) • Adaptive Behavior Assessment System—Second Edition (ABAS-II) • Adaptive Behavior Evaluation Scale—Revised Second Edition (ABES-2) • Adaptive Behavior Inventory (ABI) • Comprehensive Adaptive Behavior System (CABS) • Scales of Independent Behavior–R (SIB-R) • Vineland-II Adaptive Behavior Scales (VABS-II)
Life skills instruments	• Kauffman Functional Academic Skills Test (K-FAST) • Life Centered Career Education Knowledge Battery • Life Centered Career Education Performance Battery • Life Skills Inventory (LSI) • Quality of Student Life Questionnaire • Street Skills Survival Questionnaire (SSSQ)

Adaptive Behavior Measures. As Cronin and colleagues (2007) noted, "more than any other measure used in schools—excluding specific transition instruments—adaptive behavior measures provide the most extensive set of information about real-world functioning" (p. 30). These measures examine the following areas: self-care/daily living skills, home living skills, social behavior, communication skills, leisure skills, community use skills, health/safety skills, functional academic skills, self-direction, and work-related skills.

Adaptive behavior refers to the ability to cope with the demands of everyday life. The assessment of adaptive functioning focuses on the measurement of typical behavior over time—the fact that an individual was able to perform the behavior on some isolated occasion does not matter; what matters is the consistent trend of the behaviors. Consideration of age and cultural context is an essential caution when conducting this type of assessment.

Most adaptive behavior measures listed in Table 13–4 use a structured-interview format whereby information is obtained through the information provided by respondents who know about the performance of the individual on which the assessment is being conducted. For the most part, adaptive behavior measures do not use direct observation to generate data; the information is obtained indirectly through interviews with persons who have observed and are familiar with the individual.

The results of formal adaptive behavior assessments provide quantitative (i.e., scores) as well as qualitative data. However, for data from these types of measures to be useful, the information collected needs to be current. Because most of the more frequently used adaptive behavior measures are comprehensive in structure, they provide a wealth of information on a student's levels of performance in key areas.

Life Skills Instruments. Certain instruments measure only functional areas and do so primarily by directly assessing whether the person has the knowledge or can perform a particular skill or set of skills related to a functional area. In other words, life skill measures "typically involve the student in some observable activity—answering questions (knowledge-related) or performing activities (skill-related)" (Cronin et al., 2007, p. 30). Some of the more frequently used measures are listed in Table 13–4.

These types of instruments take more time to administer, as they require the administration of items to which a student responds. In addition, these instruments can measure only a limited number of knowledge and skill areas from a vast domain of possible questions. Often, teachers who work with students on a regular basis will know the levels of performance of their students, thus reducing the necessity of administering these types of measure.

Transition Instruments. The topic of transition is covered in detail in the next chapter and attention is given to assessment in that chapter. As Cronin and colleagues (2007) pointed out, "Transition instruments, while related in some ways to adaptive behavior and life skills measures, focus on the perceived competence levels of students. Most instruments seek the perspective of different parties—student, family, and school personnel. The main intent of these types of instruments is ultimately to guide programming and contribute to transition planning" (p. 30).

Transition measures do yield important information about functioning—much like that of adaptive behavior measures; however, as stated, the purpose of the assessment is to identify needs (and strengths) to develop transition-related to goals in helping the student move from school to whatever environments he or she will be in when school is over.

Informal Techniques

Information about the functional competence and career interests of students can be obtained through informal measures. These techniques can be used to complement, supplement, or replace the data generated through formal techniques. The key variable is that, whatever the technique that is selected, it should be appropriate and effective for the purpose of the assessment.

Two of the most popular informal techniques that teachers like to use are checklists and rating scales. Many instruments have been developed and can generate information that is useful for determining levels of personal and functional competence. Three "Informal Assessments for Transition" resources—each of which includes 50 + informal instruments—cover the areas of living, working, and learning: Independent Living and Community Participation (Synatschk, Clark, & Patton, 2008); Employment and Career Planning (Synatschk, Clark, Patton, & Copeland, 2007); and Postsecondary Education and Training (Sitlington, Clark, & Patton, 2008).

One of the most useful techniques for assessing functional competence is **performance assessment**. Wolfe and Kubina (2004) described performance assessment as "concerned with how a student applies knowledge" (p. 122) as opposed to whether he or she knows something or not. In this type of assessment the individual must "produce or perform a response" (Wolfe & Kubina, 2004, p. 122). **Authentic assessment** is a form of performance assessment that requires the individual to produce or perform certain behaviors in the natural context where these behaviors should be performed. For example, to determine whether a student can use a microwave oven, the assessment would occur in the kitchen and the person would have to perform the appropriate sequence of behaviors to cook an item in this device.

Ultimately, the method of assessing functional competence will be predicated on the following variables: the purpose of the assessment (i.e., the information that is needed), the amount of time available for performing the assessment (e.g., performance assessment takes much more time than a recollective technique), the availability of certain instruments, and the comfort level (i.e., the competence level) of the personnel doing the assessment with a specific instrument or technique.

Functional Impact and the Summary of Performance

IDEA 2004 introduced a new requirement when a student graduates from school or reaches the age of 22. The reauthorization required that "a summary of the child's academic achievement and functional performance" that includes recommendations on how to help the student in meeting his or her postsecondary goals be developed. This document, typically referred to as a summary of performance (SOP), has the potential to be one of the most important activities that the school can do in assisting the student to get ready for the life that will follow school.

The law and accompanying regulations specify only that the SOP contain three pieces (postsecondary goals, present levels, and recommendations). If sufficient work is put into developing quality SOPs that contain information in these three areas, the SOP can be a useful tool for students and their families as they embark into the world of young adulthood. This document could have been enriched if one other requirement had been included in the law. Descriptions of the functional impact of the person's disability in terms of work, education and training, and living make this document a very powerful tool. More specifically, as Patton, Clark, and Trainor (2009) noted, a functional impact statement "provides a realistic picture of how the areas of concern are likely to impact the functional performance of the student in various future situations" (p. 10). As Patton and colleagues stressed, the development of quality SOPs is a type of preventive problem-solving process.

TEACHING FUNCTIONAL CONTENT

This section focuses on the instructional dimensions of teaching functional topics. Seven topics are addressed and include considering various curricular issues related to teaching functional skills, developing real-life coursework, integrating real-life topics into existing content, aligning functional topics to standards, implementing effective instructional strategies, using assistive technology to enhance functional competence, and knowing about instructional materials that might be useful.

Curricular Considerations

As emphasized throughout this chapter, a great need exists to expose and to teach students with special needs a comprehensive set of functional skills within a framework of providing these students with access to the general education curriculum. The need to make the general education curriculum more relevant to students has been underscored for years by secondary-level teachers (e.g., Halpern & Benz, 1987).

Once a comprehensive list of functional skills has been identified at a local level, the next important task is to organize these topics so that they can be presented to students in their programs. Instruction of functional academics involves different things for different students. For example, students for whom higher education is a possibility should have access to academically oriented programs in general education. However, these students will need to have their academic coursework balanced with exposure to other important adult outcome areas. Other students, for whom high school may be the termination of formal schooling, are likely to be in different courses of study.

The challenge for school administrators, curriculum development specialists, and teachers is how to cover important life skills topics within existing curricular structures. Figure 13–4 depicts a continuum of options for teaching functional skills. The reality of schools today is that more students with special needs are pursuing more traditional diploma routes and are receiving their education in inclusive settings. Given this scenario, along with the IDEA mandate of access to the general education curriculum, the options at the right of the figure are the more likely avenues for covering functional topics.

Courses with a Functional Orientation

Three of the options depicted in Figure 13–4 involve teaching functional topics through the development of *life skills coursework.* The intent of this option is to offer coursework that is clearly adulthood-referenced but still academic in nature. The coursework could be either noncredit or credit; however, most often it will be the former. Moreover, this type of coursework is likely to be implemented in nondiploma-track programs that exist in most schools.

The advantage of dedicating coursework to functional topics is that the likelihood of covering topics more comprehensively and in more depth is increased. Moreover, the courses have a direct bearing on a person's immediate (relevancy) and later (meaningfulness) life. Courses with more functional characteristics are now being offered in college programs (Hart & Grigal, 2010) and as adult education programs for students with developmental disabilities in various locations. For more detailed coverage of life skill course development, see Cronin et al. (2007).

Integrating Real-Life Topics into Existing Content or Curricula

The more realistic option for covering functional topics, given the nature and structure of current school programs, involves the *integration of life skills topics*

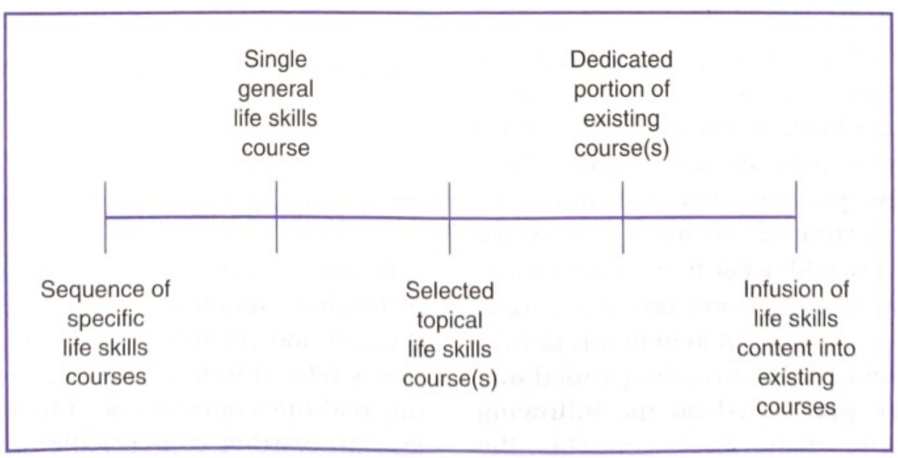


FIGURE 13–4 Options for Organizing Life Skills Content for Dormal Instruction

into the predetermined content of existing coursework. This approach is important and has received acceptance because it can be used in any type of educational setting in which many students with special needs receive their education and is inherently consistent with access to the general curriculum. Two variations of the integration technique exist: augmentation and infusion.

Augmentation. Augmentation implies extending the coverage of what is being taught as part of the explicit curriculum into more meaningful, functional areas. This can be accomplished by dedicating a portion of a course to "applied" topics. Teachers could set aside a day or two during each grading period or part of class each week to cover important functional topics that are related to the content of the course being provided.

The key features of this approach include the fact that covering functional topics has appeal and value for all students in the class. In addition, specific functional topics can be selected and planned for ahead of time, thereby allowing for adequate coverage of the topic. Another feature of the augmentation approach is that the functional topics covered will not take much of class time that has to be spent covering the explicit content of the course. A few examples follow:

- Math or economics course: Dedicate instructional time to addressing topics such as "the economics of dating" or the real-life skills associated with maintaining an apartment.
- Physical science course: Add a component called "appliance science" to the course and cover how everyday appliances found at home actually work (e.g., toilets, coffee maker).
- U.S. history course: Include a session on state, regional, and local parks in relation to the establishment of the National Park system that is typically covered in this class.

Infusion. In the infusion method, the objective is to infuse into the existing content real-life topics that are related to a topic being covered in the natural progression of a class. Two key features distinguish this approach from that of augmentation. First, the infusion approach relies on content that is "naturally" encountered as the course is being taught (e.g., topics that are mentioned in a textbook). Second, coverage is momentary—more of a "hit and run"—in that only a relatively brief amount of time is dedicated to talking about functional topics.

The infusion approach is typically characterized by some degree of advanced planning, although it does not require the same amount of planning that the augmentation approach requires. With this technique, the teacher needs to examine course content and identify "points" where functional topics can be infused. It is also important to recognize the age or grade level of the students with whom one is teaching to determine the nature of the functional topics to be covered.

Patton, Cronin, and Wood (1999) suggested that the functional content that is infused can be restricted to topics that relate to the subject matter that is being taught. For example, if the word *battery* is mentioned in a science textbook and therefore identified as the "infusion point," then discussion of how to maintain battery charge could be discussed. Such a discussion certainly relates to the science of batteries. However, Patton and colleagues also recommended infusing topics that go beyond the content area of the course. For instance, in the previous example, discussion could focus on where is the best place to buy batteries. This discussion has functional value but is more about consumer economics than science.

Since functional coverage is brief—what Patton and colleagues (1999) referred to as "infusion bursts"—the amount of planning and preparation is not as detailed or extensive as is required in an augmentation approach. However, the number of opportunities is more common. As a matter of fact, the number of "infusion points" (reference points that relate to functional topics) that exist in the content of most courses is plentiful. As a result, it is not possible to cover all potential "functional" topics and decisions about which topics to cover must be made.

Special education teachers who are working in collaborative roles with general education teachers can use their knowledge of major life demands and how to infuse functional topics into the existing content to enhance their contributions to the collaborative effort by making instruction more relevant for all students in the class. Most general education teachers will greatly appreciate the benefits of such contributions. Students certainly will.

How Real-Life Topics Align with Content and Performance Standards

Teachers can easily apply skills associated with reading, speaking, listening, writing, computing, and problem solving to the context of adult

TABLE 13–5 Alignment of functional areas with general education content

Social Studies	
Identify and participate in discussions about local, national, and world current event topics from newspapers, television, and current periodicals.	Use newspapers to identify current event topics. Discuss current event issues with regular education peers. Watch news and discuss events with parent, peers, and teacher. Read and recall current event articles from periodicals (e.g., *Newsweek*). Participate in current event games.
Use a map to plan a trip, calculating number of miles for the trip, identifying restaurants and hotels, and estimating the total cost for the trip.	Choose a rental car from a local dealership. Call or visit dealerships and compare prices, miles per gallon, safety features, and available options. Determine items needed for trip such as location, planned activities, and season of the year and write a detailed packing list. Plan route using map, including miles, cities, routes to follow, time required for trip, and when to stop for gas. Call travel agencies (e.g., AAA) for literature on hotels, restaurants, leisure activities, and local tourist attractions. Estimate costs of trip.

Source: From *Functional Curriculum for Elementary, Middle, and Secondary Age Students with Special Needs,* 2nd ed., by P. Wehman and J. Kregel, 2004. Copyright 2004 by PRO-ED, Inc. Reprinted with permission.

situations (i.e., functional academics) and relate these functional topics to content and performance standards. Patton and Trainor (2002) analyzed the content and performance standards from a number of states to determine how "functional" standards were—as written. The analysis found that most standards are either straight-on functional or have some element of functionality to them.

The suggestion that most standards have some level of functional value can be seen in Table 13–5. In this table, Wolfe and Kubina (2004) illustrated the functional implications of two standards from the content areas of social studies. These two standards exemplify (1) the different levels of functionality of a standard, as written and (2) how standards relate to very practical knowledge and skill areas. Note that the first standard in Table 13–5 does not seem, on face value, as functional, as the second standard. Nevertheless, a number of functional topics can be covered in relation to this first standard.

Instructional Considerations

The importance of applying various academic skills to and demonstrating competence in real-life situations cannot be overemphasized. The intent of teaching life skills is to prepare individuals to use foundational, basic tool skills in ways that will make their lives more productive and meaningful, leading to some sense of personal fulfillment.

When teaching functional topics, it is crucial to recognize the difference between two seemingly similar terms: *meaningful* and *relevant*. These terms are also used interchangeably but they have different meanings. Patton et al. (1999) distinguished the terms in the following way:

- **Meaningful:** implies that a given topic has some degree of impact on one's life, perhaps in some future sense or context.
- **Relevance:** implies that content is not only meaningful but also timely in that it has impact on one's life now. (p. 5)

Teaching content that is relevant is far easier than teaching content that is meaningful.

An instructional technique that teachers should adopt as a way of regularly self-assessing the importance of what they are teaching, and really what students are learning, is the set of "So What?" questions. The questions can be, and should be, incorporated into almost any lesson that is being taught. Their value is that they get the students to apply what they have learned. The questions are:

- So who else might use this _____?
- So what kinds of job, activities, etc., might use this _____?
- So when might you use this _____?
- So where might you use this _____?
- So how could you use this _____ in a job, with your friends, etc.?
- So why is this important?

The questions may have to be adapted somewhat depending on the topic(s) being discussed. However, the fundamental notion is that teachers should provide students with a rationale for why anything that is being taught is important. The intent of asking these questions relates to the suggestion that Wehman and Kregal (2004) made about considering the conditions under which a functional behavior may occur.

Assistive Technology

Some students will benefit from the support that comes with the use of various types of assistive technology. Assistive technology devices and services are mandated by IDEA to assist a student obtaining an appropriate education. Another perspective on the use of assistive technology is to consider its use in helping a student deal with the "functional" demands of everyday living outside of school.

Often, in the context of dealing successfully with the demands of the real world, simple, low-tech supports can make a big difference in the lives of individuals with learning-related challenges. Table 13–6 provides a few examples of how low-tech solutions can supplement attempts to develop competence in the functional academic areas described earlier in the chapter.

TABLE 13–6 Assistive technology contributions to functional competence

Functional Academic Area	*Assistive Tech Idea*
Functional Reading	• text-to-speech features of software (e.g., Word) • Reading pen that reads words aloud and provides definitions of words • digital books • book holders
Functional Writing	• voice recognition software • Note taking apps that record audio while taking notes • small, portable voice recorder/tape player to record notes instead of having to write them • various input devices for keying in information • specially designed writing instruments • spell-checker as part of word processing software • outlining and concept mapping software
Functional Math	• portable, pocket calculators • specialized calculators • personal finance software • prepaid tag—express lane of toll roads
Functional Science	• digital device for taking temperature • weekly pill boxes • weather alert radios • insulin level monitors • digital thermometers for outside temperature
Functional Social Studies	• GPS navigation systems for getting around in the community • responding to jury duty online • making reservations online • apps for identifying resources in community • Craigslist, Angie's list, etc.

Instructional Resources

To teach functional content, teachers need to have access to instructional materials and resources in all of the areas of interest. Cronin et al. (2007) dedicated over 60 pages of their book to a listing of materials that can be used to teach real-life topics. This resource focused mainly on instructional materials that can be used directly with students.

The major features that should characterize innovative instruction of functional topics for most students with learning-related problems include the following: adult-referenced, comprehensive, relevant to students, empirically and socially valid (i.e., appropriate to one's specific situation), flexible, community-based when possible, and sensitive to cultural and family values. Appendix 13–F provides a list of selected resources that teachers should find helpful for teaching functional topics. This list includes the type of resource, the title of the special product, the name of the publisher, and a brief description of the features of the material.

SUMMARY

This chapter presented a host of topics that were related to teaching functional topics to students with learning-related problems. The chapter began by introducing and defining what is meant by functional and with an examination of what are the demands of adulthood. This was followed by the topic of functional academics in the areas of language arts, math, science, and social studies. An expansive conceptualization of functional academics was introduced and discussed. This discussion was followed by coverage of how to assess functional competence using formal and informal techniques. The last major section of the chapter presented ideas on how to cover functional topics and how to teach these topics.

APPENDIX 13–A Functional reading: Real-life applications

<table>
<tr><th>Functional Setting</th><th>Specific Skills</th></tr>
<tr><td></td><td>Individual can read:</td></tr>
<tr><td>Everyday Living</td><td>

personal information (name, address, phone number)
important documents:

contracts (e.g., leases)
policies (e.g., insurance)
warranty information
terms of agreement (e.g., purchase of software)

tax-related documents
mail:

personal mail
bills
advertisements

manuals:

appliances
equipment
car/truck
technology
driver's license materials

various print materials:

catalogs
telephone books

directions:

recipes
food preparation
taking medicine
laundry recommendations
assembling materials

documents from service providers (e.g., plumber, vet)
shopping-related materials:

receipts for items purchased
return policy information

warning labels
applications (e.g., credit cards)
charts and tables

</td></tr>
<tr><td>School</td><td>

course schedules
syllabi
textual materials:

textbooks
required readings
printed class materials (e.g., handouts)

in-class materials:

exam materials
slides shown in class
materials written on board

internet materials:

searches
websites

menus—cafeteria
materials posted on bulletin boards
policies, rules, regulations of the school, dorm

</td></tr>
</table>

Functional Setting	Specific Skills
	Individual can read:

Community	• functional signage:
	  • restroom designations (men, women)
	  • warnings (e.g., "danger")
	  • directives (e.g., "keep off the grass")
	  • informational (e.g., "men working")
	• descriptive signage:
	  • road/street
	  • business names
	  • advertisements/billboards
	  • notices, announcements, directives
	  • posters
	• procedural signage:
	  • directions on how to use (e.g., gas pump)
	  • directions on where to go
	• menus in restaurants
	• shopping-related materials:
	  • hours of operation information
	  • unit price data
	• schedules (e.g., bus)
	• maps/other visual materials:
	  • directory of businesses (e.g., at a mall)
	  • room location in a building (e.g., courthouse)
	  • park
	  • campus

Workplace	• applications
	• policy manuals
	• notices, memos (print or electronic)
	• job-related manuals
	• reports and other documents
	• internet materials:
	  • searches
	  • websites

Leisure	• newspaper(s):
	  • front page
	  • local/state news
	  • weather information
	  • sports
	  • business section
	  • everyday section
	  • classified ads
	  • special advertisements
	• local entertainment periodicals
	• magazines
	• expository/narrative materials:
	  • books—fiction
	  • books—nonfiction
	  • short stories
	  • poetry
	• comic books
	• directions to boardgames, card activities, etc.
	• travel brochures

APPENDIX 13–B Functional writing: Real-life applications

Functional Setting	*Specific Skills*	
	Individual can write:	*Individual can complete:*

Everyday Living	• personal information (name, address, phone number)
	• letters:
	  • personal
	  • business
	  • action (e.g., complaint)
	• notes:
	  • to others
	  • on behalf of others (e.g., notes to school for children)
	• phone messages
	• information from other sources (e.g., telephone book)
	• greeting cards (e.g., birthday)
		• bills
		• legal documents:
		  • leases
		  • contracts
		• tax forms
		• order forms
		• product registration forms (print or Internet)

School	• in-class products:
	  • activities that are part of the class session
	  • assignments/information given in class
	• course requirements:
	  • papers
	  • reports
	  • other projects involving writing
	• exams/quizzes:
	  • essay
	  • short-answer
	• notes from:
	  • in-class lectures/presentations
	  • PowerPoint slides/board
	  • assigned readings
	  • materials from researching a topic (e.g., searchers)
	• messages to fellow students, instructor, or others (print or e-mail)
		• course registration materials
		• school-related forms:
		  • housing
		  • health services

Community	• directions for locating a street address	• bank (e.g., deposit/withdrawal/transfer slip) • surveys
Workplace	• memos/e-mail messages • reports	• job applications • job-related forms (e.g., W-4) • grievance forms • quality control materials
Leisure	• personal journal/diary • E-mails, text messages, instant messages with friends • creative writing products	• puzzles involving writing (e.g., crosswords)

Functional Setting	*Specific Skills*
	Individual can use math skills in the following areas:

Everyday Living	*Money management:*
	• budgeting income and expenses
	• banking-related services:
	  • checking and savings accounts
	  • online banking
	  • credit card use:
	    • APR
	    • credit limits
	    • payment cycles
	  • monitor investments
	  • retirement planning
	  • credit rating status
	• paying bills:
	  • due dates
	  • payment options
	  • late fees, penalties
	• insurance:
	  • life
	  • disability
	  • home/rental
	  • long-term care
	• paying fines/penalties
	• paying taxes
	• making and receiving change
	
	Living arrangements:
	• locating a place to live
	• comparison shopping
	• costs and affordability:
	  • rent or mortgage
	  • initial closing costs
	  • ongoing fees
	  • taxes
	  • insurance
	  • moving costs
	  • utilities
	
	Home management:
	• food preparation:
	  • scheduling meals throughout week
	  • measuring amounts for recipes
	  • cooking times
	  • appliances/equipment usage around the home:
	    • phone
	    • clocks (digital and analog)
	    • timer (for cooking)
	    • microwave
	    • stove/oven/crockpot
	    • washer/dryer
	    • thermostat
	• home repair and maintenance:
	  • seasonal needs
	  • repairs and upgrades:
	    • linear measurement
	  • yard maintenance
	  • contrast for services

(continued)

Functional Setting	*Specific Skills*
	Individual can use math skills in the following areas:
	Automobile/truck: • comparison shopping • costs and affordability: • price • insurance • maintenance costs • fuel costs • depreciation • payment options • scheduling: • routine maintenance • repairs *Heath-related:* • health management: • caloric intake • nutritional content of food • exercise schedule • measure weight of self and others • budgeting medical/dental costs: • regular checkups • treating problems • illness identification and treatment: • taking temperature • monitoring conditions (e.g., blood pressure, sugar levels, weight)
School	• budgeting: • finances • meal account • purchasing, school-related materials (books, equipment) • time management: • hours needed to graduate • scheduling of courses • scheduling of time for: • study, test preparation, projects • extracurricular activities • work responsibilities • meetings • rest and relaxation
Community	• paying for various transportation services • shopping/purchasing: • personal items • groceries • services (e.g., cell phone) • commodities (e.g., gas) • banking services: • ATM • walk-in services • drive-through services • restaurants: • menu use • payment • tipping • using specific devices: • vending machines • stamp machines

Functional Setting	Specific Skills
	Individual can use math skills in the following areas:

Workplace	• pay/salary:
	  • wages/income
	  • deductions (taxes, social security, retirement, insurance)
	  • commission
	• hours worked (including overtime)
	• benefits (number of personal/sick days, vacation)
	• scheduled holidays
	• time management (quotas, deadlines)
	• specific math skills related to a particular job (e.g., truck driver—miles driven, amount of gas used, etc.)
	• dues

Leisure	• home entertainment (costs— purchase/rental, math needed to use):
	  • TV
	  • VCR, DVD player, TiVo
	  • electronic devices
	• games/sports:
	  • keeping score
	• membership fees—clubs, organizations
	• subscription costs (newspaper, magazines, online services)
	• hobbies:
	  • measurement skills
	  • costs of equipment, supplies, etc.
	• entertainment costs
	• vacation/travel:
	  • scheduling
	  • budgeting
	• playing the lottery

APPENDIX 13–D Functional science: Real-life applications

Functional Setting	Specific Knowledge	Specific Skills
Everyday Living Health:	*Maintenance:*	
	• healthy lifestyle	• identifying and maintaining healthy diet • exercising regularly
	• personal care and hygiene	• dressing appropriately for situations • maintaining good self-care skills
	Prevention of problems:	
	• food tolerance	• avoiding certain foods
	Treatment:	
	• first aid/emergency procedures	• taking care of minor cuts, bites, allergic reactions
	• illness identification and treatment	• recognizing when someone is sick • using appropriate treatment for the illness • knowing when to consult professional help (doctor, ER, etc.)
Physical/Environmental:	• tool identification	• using tools appropriately
	• home maintenance and repair	• performing simple home repairs (e.g., toilet repair, screen door) • performing seasonal home maintenance • fertilizing lawn
	• Safety at home:	
	• fire	• implementing a home evacuation plan
	• electricity	• safeguarding outlets
	• poisonous materials	• keeping dangerous material in protected location
	• bathroom	• safeguarding bathrooms

(continued)

Functional Setting	*Specific Knowledge*	*Specific Skills*
School Health:	• unsafe conditions • possible activities: • tattoo/piercing	• avoiding situation where one's health is in jeopardy • getting safe procedure

Community Health:	• safety concerns:
	  • playgrounds
	  • bicycles
	  • skateboards
	  • animals	

Physical/Environmental:	• weather-related:
	  • severe storm:
	    • lightning
	    • flooding
	    • hurricanes
		• taking protective action
		• avoiding low water crossings

	• brush fire • drought	• implementing an evacuation plan • protecting one's house • implementing a mandated/volunteer watering schedule
Workplace Health:	• protection from contagious conditions • safe behaviors	• implementing protective measures (e.g., hand washing) • following work safety procedures • wearing protective gear as directed • lifting heavy items appropriately
Physical/Environmental:	• office machinery maintenance and repair • hazardous materials	• making simple repairs (e.g., jammed copy machine) • avoiding dangerous areas • initiating emergency procedures
	• operation of machinery, equipment, tools	• using machines, equipment, and tools as directed in the operation guidelines
Leisure Health:	• preventing illness when traveling	• keeping hydrated • washing hands regularly

	• sports-related injuries:
	  • prevention
	  • treatment
		• stretching before activity
		• wrapping ankles, using braces

Physical/Environmental:	• hobbies (select examples): • gardening	• choosing plants • using nutrients
	• astronomy	• using telescope
	• hiking	• selecting equipment • protecting environment
	• bicycling	• repairing flat tire

APPENDIX 13–E Functional social studies: Real-life applications

Functional Setting	*Specific Knowledge*	*Specific Skills*
Everyday Living	• contributing citizen:	
	• awareness of current events	• keeping up with local news and issues
	• personal legal information:	
	• rights	
	• procedural safeguards	• explaining and reacting to Miranda warning
		• filing a small claims complaint
	• home ownership:	
	• deed restrictions	
	• tax liability	
	• personal liabilities	• consulting with key individuals who provide insurance
	• personal grooming:	
	• stylish dress	
	• good appearance	
School	• legal rights as a student:	
	• confidentiality	
	• harassment	
	• protections	• filing a grievance
	• participation in various groups and organizations	• taking action to join
	• participation in student governance	• running for office or voting for candidates
	• advocate for issues of concern to students	• attending rallies, meetings, presentations
Community	• citizen responsibilities/choices:	
	• voting	• registering
		• participating in elections
	• jury duty	• responding to call for jury duty
	• neighborhood activities (e.g., crime watch)	
	• volunteer opportunities	
	• awareness of local community	• using map skills to identify locations in the community
	• governmental services:	• locating and contacting appropriate office
	• health	
	• social	
	• housing	
	• employment	
	• community services:	• locating, contacting, going to appropriate service
	• transportation:	• acquiring bus pass
	• bus	• contacting airlines
	• taxi	• purchasing tickets
	• train	• navigating an airport
	• plane	• distinguishing different types of mail service
	• post office	
	• recreation	
	• retail businesses:	
	• department store	
	• specialty store	
	• drug store	
	• grocery store	
	• convenience store/gas	
	• specialized service:	
	• lawn	
	• cleaning	
	• repair	
	• maintenance	
	• professional services:	

(*continued*)

APPENDIX 13–E *(continued)*

Functional Setting	*Specific Knowledge*	*Specific Skills*
Workplace	• legal rights as an employee: • discrimination • harassment • protections/safeguards • participation in a union	• filing a grievance • joining and maintaining membership
Leisure	• vacation planning	• contacting travel agent • making reservations
	• city, public, state, national parks	• locating and finding transportation
	• local hiking/biking trails	• locating and finding transportation
	• free, public entertainment: • cultural events • outdoor concerts	• scheduling, planning, arranging transportation
	• local entertainment venues: • sporting events • nightclubs	• scheduling, planning, arranging transportation
	• visual and performing arts: • theater • concerts • museums	• scheduling, planning, arranging transportation

APPENDIX 13–F Curricular and instructional materials in the life skills area

Type of Resource	*Title*	*Publisher*	*Feature(s)*
Comprehensive Curricula	• Life-Centered Career Education (LCCE)	Council for Exceptional Children	• 3 major areas: Daily Living Skills, Personal-Social Skills, Occupational Guidance & Preparation
	• The Transitions Curriculum	Stanfield House	• 3 modules: Get a Plan, Get a Job, Get a Life
	• Daily Experiences and Activities of Living (DEAL)	PRO-ED	• 6 areas: Working, Consumer Buying, Information Sources, Nutrition & Health, Housing, Transportation
	• The Syracuse Community-Referenced Curriculum		• 3 major domains: Community Living; Functional Paul Brooks Academic Communication, and Motor Skills
Activity Resources	• Life Skills Activities for Special Children	Center for Applied Research in Educ.	• 145 ready-to-use activities
	• Life Skills Activities for Secondary Students with Special Needs	Center for Applied Research in Educ.	• 190 ready-to-use activities
	• Finding Wheels	PRO-ED	• Transportation/mobility
	• Language for Living Series	PRO-ED	• Manuals on Practical Time, Out in the World, The Newspaper
Professional Resources	• Functional Curriculum for Elementary, Meddle, and Secondary Age Students with Special Needs (2nd ed.)	PRO-ED	• Includes ideas for self-determination, activities of daily living, community living, social skills, transportation, work, home living, money management