Effective Career Awareness and Development Programs for K-8 Students

In this report, Hanover Research examines the importance of career development programs for elementary and middle school students, as well as effective practices in the delivery of career-focused educational programs. The report draws on a review of the literature, as well as case examples from across the nation and Texas, specifically.
# Table of Contents

**Introduction** ............................................................................................................... 3

**Section I: The Importance of Career Development Programs in Elementary and Middle School** .................................................................................................................. 5

  - The Importance of Career Development Programs in Middle Schools ........... 5
  - Best Practices for Middle School Programs ...................................................... 7
  - The Importance of Career Development Programs in Elementary School .... 10

**Section II: National Standards for Career Development Programs ............. 14**

  - Common Concepts Found in the Literature and National Standards .......... 15
  - National Career Development Guidelines ...................................................... 16
  - The Secretary’s Commission on Achieving Necessary Skills .................... 18
  - The National Content Standards for Entrepreneurship Education .......... 21
  - National Business Education Standards ....................................................... 23
  - National Standards for Family and Consumer Science Education ........... 24

**Section III: National Program Profiles ................................................................. 26**

  - Georgia Department of Education ................................................................. 26
  - Pennsylvania Department of Education ......................................................... 31

**Section IV: Texas Program Profiles ................................................................. 33**

  - Texas Statewide Programs ............................................................................ 33
  - Texas District Profiles ................................................................................... 35
Introduction

In this report, Hanover Research provides information on career awareness and development programs at the elementary and middle school levels. The report begins with a literature review focused on the importance of career development programs in both elementary and middle schools. As many of the programs presented later in the report refer to national standards that state and local district programs are based on, the second section presents information on five national standards frameworks. This discussion is followed by profiles of two career development programs selected from across the nation—those designed by the Georgia Department of Education and the Pennsylvania Department of Education. Finally, the last section explores two statewide career development initiatives in Texas and the specific programs and resources provided by two school districts in Texas.

Though in high school there are differences in career and college preparation, this distinction is not as well defined in the earlier years. As such, the elementary and middle school programs presented in this report refer to career awareness and development, which includes varied career paths that range from those which require no postsecondary training to those which require extensive postsecondary training. The term career, then, in this context refers to postsecondary plans, rather than strictly preparation for trade or other occupations.

Key Findings:

❖ Researchers have found that middle school students benefit, both academically and vocationally, from career development programs that promote career exploration skills, as well as increase knowledge of career options and career paths.

❖ Elementary school career development programs often focus on career awareness, presenting students with experiences to learn about careers, to visit career sites, and to meet workers and professionals in a variety of settings. An essential component of the career awareness phase often taught in elementary schools is the development of self-awareness.

❖ Middle school programs often focus on the identification and articulation of interests and skills, as well as a clear understanding of career paths.

❖ There are many sets of national standards that have been developed to describe the skills that students should learn in career development programs before high school. Many state and local school districts cite these national standards when developing their own programs.
The list below summarizes common concepts found in research and among national standards that address the field of career development. The following six concepts can serve as guiding principles for K-8 career programs:

- Lifelong Learning
- Understanding of Careers and Information on Careers
- Understanding of Self, Interests, and Skills
- Developmental Steps
- Connections Between Career Development and Academics
- Value of Integrated Classroom Learning
Section I: The Importance of Career Development Programs in Elementary and Middle School

Career awareness and development programs have been recommended by educational researchers since the 1990s. Further, many have recommended beginning this process before high school:

Researchers have recommended that career exploration and awareness begin before high school, when students have already made major decisions about courses… To encourage students to make informed decisions, middle schools must introduce career awareness, such as the concept that success in most careers requires education and training.1

Researcher Donna E. Palladino Schultheiss supports this finding, noting that, “although the school-to-work movement was intended to impact all students K-12, recent research and practice have focused almost exclusively on enriching the learning and work experiences of high school students.”2 As such, there is currently limited information on research-tested programs in elementary and middle schools.3 As more states and districts institute formalized career development programs at the elementary and middle school levels, more research will be available on the effectiveness of specific program models.

The Importance of Career Development Programs in Middle Schools

In 2004, in response to No Child Left Behind’s requirement to utilize evidence-based research, Katherine Hughes and Melinda Mechur Karp, researchers at Teachers College, Columbia University, published research on the value of current career development programs. Upon analyzing programs across the country for effectiveness, the authors found two key elements of career development programs—

“to focus practice and research on middle-school students, and [to] target resources towards ensuring that all middle- and high-school students have regular conferences with counselors to discuss their current and future academic programs.”4 Overall, their research contends that “students do seem to benefit, both vocationally and academically, from participation in career courses. In particular, they seem to increase their knowledge of careers and their ability to make career-related decisions.”5 Their suggested focus for research and future program

---

3 Ibid.
5 Ibid., p. 29.
development is to ensure that programs not only introduce knowledge to students, but also support behavioral changes. Relating to middle school students, their research found that career guidance and academic counseling are particularly effective methods of career development. They suggest greater investment in these programs in middle schools and an enhanced research focus on these interventions.6

In an article titled The Economic Benefits of Academic and Career Preparation, ACT—an organization that provides assessment, research, information, and program management solutions in the education and workforce development fields—reports that students should start the career planning process in middle school.7 By learning about their interests and academic strengths and weaknesses, students benefit from career and skills awareness during the middle school years. Finding that career plans form around the sixth grade, and develop throughout middle school and high school, this report encourages career assessment activities and career exploration throughout the middle school years. Specifically, it encourage educators to help students identify career fields that they are interested in pursuing, as well as understand the connections between performance in school and future endeavors.8

Another ACT article, titled Career Planning: Students Need Help Starting Early and Staying Focused, emphasizes the need to support students’ discovery of their interests and connections between these interests and academic pursuits. This article highlights the need to expose middle school students to a variety of experiences, citing research that “interests develop as a result of experience.”9 To support a systematic career development process, ACT makes broad suggestions for parents, educators and counselors, including the following:10

- Begin talking to students about their academic and career interests during elementary and middle school.
- Help students think about the connections between academic coursework, college, and future career.
- Help students establish goals for getting more information about colleges and careers.
- Spend time reviewing students’ interest inventory results.
- Promote students’ college and career planning at school.
- Help students learn how to use sources of college and career information.
- Promote creative and informed career exploration through the use of structured programs or activities.

6 Ibid.
8 Ibid.
10 Ibid., pp. 2-3.
These suggestions emphasize the need for programs to provide information to students, as the experiences and knowledge learned during the middle school years influences the decisions made in later years.

Overall, the research presented above emphasizes the need to encourage middle school students to better understand their interests, academic skills, and weaknesses, and to make resources available for career and college planning at the middle school level.

**Best Practices for Middle School Programs**

Sandra Kerka, in an article titled *Middle School Career Education and Development*, presents research on the need for middle school career development programs, as well as best practices for these programs. Kerka notes that, while some researchers argue that middle school students experiencing the developmental challenges of puberty and other adolescent experiences are not at the appropriate age to begin career development, other researchers present the argument that career development is a lifelong process and should be initiated in elementary or middle school. Kerka contends that, “as the threshold between elementary and high school, between childhood and adulthood, middle school provides a significant opportunity for the development of knowledge, skills, attitudes, and awareness that are the foundation for the next stage of life.”

Kerka presents research that refutes two major concerns of scholars and educators focused on middle school career development programs. While researchers cited in Kerka’s work acknowledge the danger in the possibility of tracking students into certain career or college paths too early and the possibility that career development awareness in middle schools will add to an already overburdened curriculum, they nonetheless feel that the benefits of career development awareness at this level outweighs the risks. Specifically, Kerka points to the following research findings in support of career focused programs in middle schools:

- Sex-role stereotypes, particularly about gender-appropriate occupations, are formed early (Guss and Adams 1998)
- Students at risk, girls, and minority group children often limit their career choices early (O’Brien *et al.* 1999)

---

12 Ibid., p. 1
13 Ibid., p.1. References to:
Few middle schoolers have realistic career plans, and many lack awareness of the world of work (Finch and Mooney 1997).

Kerka goes on to present research from the American Counseling Association, which has found that career development awareness programs in middle schools help students to:

- Become aware of personal characteristics, interests, aptitudes, and skills
- Develop an awareness of and respect for the diversity of the world of work
- Understand the relationship between school performance and future choices
- Develop a positive attitude toward work

Developing knowledge and awareness in these areas will address the following developmental needs of middle school students: “academic and social skill development, identity formation, development of a future orientation, and testing of adult roles.”

In presenting best practices for middle school career development programs, Kerka contends that career development should be integrated into the curriculum in a systematic manner. Programs that are accessible to all learners and imbedded in the curriculum through multiple means will have the strongest desired effect. Specifically, Kerka lists the following best practices for the inclusion of career development in the middle school curriculum.

**Figure 1.1: Best Practices for Middle School Career Development Programs**

<table>
<thead>
<tr>
<th>Method</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Curriculum</td>
<td>In a middle school language arts class (Jacobs, Beane, and Malone, 1996), students compiled peer group expressions/slang and media examples of them, spent time free writing about them, held small-group discussions of language patterns, and interviewed adults about language and communication on the job. They examined a newspaper for technical language and developed an occupational information center with student-gathered resources. Using these resources for a research project, they investigated the power of language in a selected profession, learning how language use develops career awareness. Both language arts and career education goals were met as students developed a sense of individual uniqueness and their own patterns of usage, connected distinctive language with professions, and in the process learned how to research occupational information.</td>
</tr>
</tbody>
</table>


16 Kerka, S. *Op. cit.* (cited directly from source)
<table>
<thead>
<tr>
<th>Method</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructivism</td>
<td>A constructivist approach in which learners undertake inquiry and actively construct knowledge by integrating new information into their existing cognitive structure is exemplified in a 2-week summer program designed to promote interest in science careers among middle school students (Gibson, 1998). Inquiry-based science activities involved students in seeking answers to their own questions using science processes and critical thinking. The approach helped students with high science interest maintain their interest in high school; in addition, active, engaged teaching methods heavily influenced interest and achievement, whereas notetaking and memorization decreased interest.</td>
</tr>
<tr>
<td>Mentoring</td>
<td>The influence of a caring adult other than a parent can play a crucial role in adolescents’ development. For females struggling with women’s conflicting roles in society, nothing is more important to girls developing a sense of self than a mentor (Cohen et al. 1996, p. 86). Gonzalez et al. (2000) describe an allied health middle school mentoring program that had the following goals: broadening knowledge of allied health careers, fostering development of appropriate attitudes, and expanding knowledge of required job skills. Activities included a speakers bureau, service learning, career day, interdisciplinary presentations on how a team of professionals works on a case, and job shadowing. Not only did mentoring help with career choice, but the presence of a committed, caring adult helped in other ways.</td>
</tr>
<tr>
<td>Service Learning</td>
<td>Community service activities can have several benefits: developing students’ self-esteem and sense of civic responsibility and encouraging volunteerism while exploring the reality of jobs (Finch and Mooney, 1997). Ohio’s Individual Career Planning Program (Benz, 1996) includes a community service component (as well as integrated academics, mentoring, and portfolios). Most of the eighth graders who participated in the 9-week program showed an increase in career maturity, especially in terms of their post-high school future plans and knowledge of the best ways to prepare for future careers.</td>
</tr>
<tr>
<td>Contextualized</td>
<td>Hands-on, real-world experiences help students apply the information and skills acquired in the classroom in actual settings. In the Math Options Summer Institute (Van Leuvan, 1997), designed to expose girls to the health professions, students participated in math simulation activities during tours of hospital units. Learning to take pulses and calculate base, exercise, and resting heart rates allowed students to experience math as it is used in the workplace. Another school (Yatvin, 1995) provides actual in-school jobs for middle schoolers, who participate in real world personnel processes: applications, references, interviews, time sheets, and evaluations. Adult supervisors emphasize math, writing, reading, and problem solving on the job.</td>
</tr>
<tr>
<td>Other Resources</td>
<td>Dare and Maddy-Bernstein (1999) identify the National Career Development Guidelines’ middle school competencies for self-knowledge, exploration, and career planning addressed by school-and work-based activities. They describe appropriate middle school school-based activities including career-oriented interdisciplinary summer school, speakers bureau, high school and college field trips, career days, portfolios, school-based mentoring, and tech prep introduction. Work-based activities described include business field trips and job shadowing.</td>
</tr>
</tbody>
</table>

Source: Kerka, S. 2000. “Middle School Career Education and Development.” Clearinghouse on Adult, Career, and Vocational Education.
Further research on the outcomes of middle school students who completed career development programs found the following positive outcomes:

- Increased understanding of the world of work leading to an openness to an increased number of potential careers
- Improved skills to make informed decisions and complex career information problem solving
- Enhanced academic, personal, and teamwork skill development
- Increased career awareness, self-esteem, clearly defined goals, a sense of direction, and motivation to persist and attain a postsecondary education and training

The Importance of Career Development Programs in Elementary School

Researchers also support the introduction of career awareness as early as elementary school. Carolyn Magnuson and Marion Starr, in an article titled *How Early is Too Early to Begin Life Career Planning? The Importance of the Elementary School Years*, report that helping children to achieve self-fulfillment greatly benefits children as they develop. The later development of skills related to career awareness, career exploration, and skill development can be magnified through the early development of the skills that will be needed for this career awareness. Magnuson and Starr list five major premises which help to clarify the foundation for their research and findings. These premises are:

- Life Career Development is a Life-Long Spiraling Process
- Life Career Planning Includes a Series of Sub-Skills
- Career Awareness and Career Exploration Form the Foundation for Effective Life Career Planning
- Idiosyncratic Factors Influence the Decision Making of Each Person
- Child Development Theory and Career Development Theory Are Interrelated

Magnuson and Starr emphasize that “what happens at one level of development will influence subsequent levels.” They elaborate:

Our responsibility as adults in the lives of children and young adults is to provide many and varied developmentally appropriate opportunities for career awareness, career exploration and the development of life career awareness.

---

19 Ibid.
20 Ibid., p. 98.
21 Ibid., p. 98.
planning skills. To be personally meaningful to children as individuals, the experiences must be accompanied by opportunities to express individual thoughts and beliefs as they develop.

The authors provide strategies for the planning of activities for children, as well as the actions of mentors as they encourage the development of skills that will be beneficial to career and life planning. These strategies are presented in the table below.

Figure 1.2: Strategies for Children and Mentors for the Development of Skills Needed for Career Planning in Elementary School

<table>
<thead>
<tr>
<th>Common to all of the strategies are the processes of: encouragement of effort, self-evaluation, and planning for children’s growth via providing increasingly more complex tasks. The tasks will be varied, require a range of skills, and allow for successful problem solving.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To encourage curious spirit within children:</strong></td>
</tr>
<tr>
<td>❖ Provide areas in which children are free to explore and wonder. Include such things as: old, small household appliances that may be taken apart and put back together, magnifying glasses, construction tools, building blocks, and hats which may be used in a variety of ways. As children experiment with the objects, introduce them to workers who use the tools.</td>
</tr>
<tr>
<td>❖ Encourage make-believe play and the use of objects in creative ways, e.g., an eraser becomes a microphone for a budding rock star.</td>
</tr>
<tr>
<td><strong>To build bridges to more complex learning, begin with what children know to help them move to what is not yet known:</strong></td>
</tr>
<tr>
<td>❖ If a child repeatedly chooses the tools/hat of a firefighter, expand her possibilities by asking what she thinks about being a carpenter or physician. Make tools of other occupations available, without discouraging her choices of a firefighter’s tools.</td>
</tr>
<tr>
<td>❖ Encourage a youngster interested in plants to work with and talk with you as you care for the plants, gradually guiding him to learn when to water and how to identify leaves that need plucking.</td>
</tr>
<tr>
<td>❖ Provide free-time choices, academic project ideas, reading materials, and games on different levels of difficulty. As children grow in competence and confidence, they may choose from activities on their own or with your encouragement.</td>
</tr>
</tbody>
</table>

---

22 *Ibid.* (cited directly from source)
To develop social understanding (including the awareness of self and others) provide opportunities for individuals to engage in frequent interactions with a variety of people:

- Each day, a myriad of workers passes through the doors of your school. Invite workers to stop by your class for a few minutes. This will personalize their work and will create world-awareness in several ways: children will expand their knowledge about jobs; they will gain an understanding of the interrelatedness of people; they will hear first-hand that satisfaction can be gained through working; you will be modeling respect for all workers.

- Help children develop an understanding of their internal success criteria through self-evaluation and self-reflection. Provide sentence starters such as “Jobs I would not like and why ...” Children’s shared thoughts provide cues for understanding their interpretations of their experiences.

- Plan for the expression and exploration of children’s thoughts about specific work and workers through drawing, writing, talking in groups or in dyads. Encourage conversation and journal writing about work tasks.

- Plan opportunities for children to have many successful tryouts of occupations. Role-playing allows children to try on many roles and (through feedback from self as well as peers and adults) enables them to gain information about themselves and work.

### Strategies for Mentors

#### Become a constant observer of children:

- Watch for the individual’s approach to tasks; idiosyncratic ways of approaching tasks provide insight about the learning style of a child.

- Watch for children’s choices of activities, e.g., the level of activity required, group or individual participation, being a leader or follower. Use these preferences to encourage the child’s efforts and emerging abilities.

- Observe the child’s initiative-taking. Initiative is a characteristic that contributes to ongoing success and it is in childhood that children are deciding about the value of their initiative.

- Watch, listen without judgment, take notes over time about individuals’ choices and monologues/dialogues and reflect on your observations. Patterns of choice and themes in self-talk will emerge and provide cues about the ideas children are forming about work, workers, and self.

#### Consider the processing of an activity as important as the activity itself. Processing includes feedback from others or self:

- Focus feedback on the specifics of children’s efforts. Keep in mind that adult response to the efforts of a child may mean the difference between the child developing a sense of industry or a sense of inferiority.

- Accompany career awareness and career exploration experiences with opportunities for students to express their beliefs about themselves in relation to the various occupations.

- Encourage reflection about classroom projects through discussions and/or writing, e.g., what they did, what pleased them about their efforts, what they would do differently if they were to do the same or a similar project another time and what is needed as they continue their exploration.


The strategies presented above encourage children to explore their interests and learn to problem solve through activities designed to facilitate creative thinking. Creating structured environments for students to learn about careers by articulating what they like about certain careers, as well as interacting with professionals in those careers, provides an open knowledge base for children to begin to explore their own career development. The strategies provided to mentors highlight the need to provide children with non-judgmental feedback based on their activities and natural
preferences. Together, these strategies emphasize the need to design creative and explorative ways for elementary-aged school children to begin their career development path.

In his work on the value of introducing elementary school children to a variety of career choices and the connection between skills and career paths, Andrew Beale presents similar findings as those highlighted by Magnuson and Starr. Beale stresses that career awareness experiences will help to develop skills and career understanding in elementary school-aged children. Specifically related to career awareness field trips, Beale reports that a well-planned field trip can have the following positive effects on students’ career awareness:

- It demonstrates the essentiality of work and how different kinds of work provide personal and societal benefits
- It acquaints students with local places of employment, thus allowing them to see the variety of settings and conditions in which work is performed
- It allows students to see how workers in various occupations use basic academic skills in their jobs
- It helps students to understand the need for cooperation and teamwork in the production of goods and services

Beale’s article highlights the need to have well-planned excursions for children so that they are able to maximize the benefits of career awareness opportunities. Beale emphasizes the need for detailed plans for preparation for the visit, the visit itself, and follow-up activities or discussions related to the visit.

Scholars Kimberly Howard and Mary Walsh similarly contend that the skills and experiences developed during early childhood impact later career development skills. The work of Howard and Walsh, in addition to the research presented above, highlights the need to provide elementary-aged school children with career awareness experiences and activities to strengthen and maximize their ability to develop career development skills later in their schooling career and throughout their lives.

---

24 Ibid., p. 66. (cited directly from source)
25 Ibid.
Section II: National Standards for Career Development Programs

There are several sets of national standards that have been developed to describe the skills that students should learn in career development programs before they enter high school. Many state and local school districts cite these national standards when developing their own programs. As such, this report will briefly present a selection of these national standards in order to lay the groundwork for the upcoming sections’ discussion of college and career readiness in action in school districts across the nation and in Texas. The Pennsylvania Department of Education’s Pennsylvania Career Education and Work Standards are directly connected to five sets of national standards.27 These standards will be described below to present how a state or district’s program can be derived from national standards. A description of how the Pennsylvania Department of Education uses each of these tools will be presented prior to a description of each national tool.28

In general, the five national sets of standards present varied perspectives on career development. Three of the five sets of standards—the National Career Development Guidelines, the Secretary’s Commission on Achieving Necessary Skills, and the National Business Education Standards—present guidelines that address career development broadly, without focusing on a specific sector. In contrast, the Entrepreneurship Standards and the National Standards for Family and Consumer Science Education present standards that address the needs of a specific component of the broader career development field.

The National Career Development Guidelines, which are profiled first in this section, were specifically used in the design of career development programs by the Georgia Department of Education and the Pennsylvania Department of Education, which are profiled later in this report. Our review of the literature also found that these standards were commonly referenced in scholarly studies, reports, and journal articles on the topic.

Together, these five national sets of standards promote many similar notions of critical elements of career development programs. Based on the standards presented below, and the research presented in the previous section of this report, Hanover has developed a list of common concepts found in the literature and these national guidelines that address the field of career development. These concepts are presented below.

28 Ibid.
Common Concepts Found in the Literature and National Standards

*Lifelong Learning*

Learning about the world of work and career options and developing the skills needed to be successful are lifelong goals that do not have a concrete beginning and end. Instead, these skills that are central to career development skills and knowledge will continue to be developed and refined throughout one’s life. As such, *career development in elementary and middle schools should be viewed and presented as building blocks for lifelong skills, rather than solely as preparation for high school or post-secondary plans.*

*Understanding of Careers and Information on Careers*

A central component of career development is the sharing of knowledge about career paths. *Many standards, as well as research studies and articles on career development, highlight the strategy of presenting students with information on career options, the skills and knowledge required for certain careers, and facilitating visits to career sites or meetings with professionals to develop students’ understanding of the multitude of potential careers open to them.* This strategy often helps to de-mystify certain careers that young students may not be familiar with.

*Understanding of Self, Interests, and Skills*

Before determining the role that one will play in our society, as well as developing a productive career path, *students should develop a sense of self and understand their own interests and skills.* This knowledge is developed over time, through life experiences as well as structured activities and experiences presented in schools. In addition to learning about types of careers, many of the activities suggested for elementary and middle school students focus on this type of learning, so that children are able to develop a strong sense of self.

*Many Developmental Steps*

Connected to the notion of lifelong learning, there are many different steps that compose career development. As such, *the research suggests different strategies for students as they progress from elementary to high school.* This notion of many developmental steps is apparent in several sets of standards in that they are either focused on the needs of students at a certain point in their education or include steps for students to progress to upon the completion of initial phases.
Connections Between Career Development and Academics

Much of the research and suggested practices incorporate basic academic learning into the necessary components of career development. For example, in the Secretary’s Commission on Achieving Necessary Skills, basic skills such as reading, writing, arithmetic/mathematics, listening, and speaking are included in the standards of a strong career development program. The connections made between career development and academic learning project the message of the importance of basic, and later advanced, knowledge and skills in the career development process.

Value of Integrated Classroom Learning

The research on career development programs overwhelmingly suggests the inclusion of career development learning within the classroom curriculum. This is especially important in elementary and middle schools, as such an approach allows students to see connections between learning and careers and to understand career knowledge as cohesive knowledge.

National Career Development Guidelines

The Pennsylvania Department of Education describes the National Career Development Guidelines as follows: 29

The National Career Development Guidelines (NCDG) are a framework for building and evaluating comprehensive career development programs for youth and adults in a variety of settings. The framework is organized into three domains, goals that support those domains, and indicators of mastery under each goal. The indicators are further grouped by learning stage. The three domains: Personal Social Development (PS), Educational Achievement and Lifelong Learning (ED) and Career Management (CM) describe content. Under each domain are goals (eleven in total). The goals define broad areas of career development competency. Under each goal in the framework are indicators of mastery that highlight the knowledge and skills needed to achieve that goal.

In 1989, the National Occupational Information Coordinating Committee (NOICC) released the first National Career Development Guidelines. These guidelines included tools such as a framework of career development competencies, indicators of mastery, and a recommended strategy for implementing career development programs. However, in 2003, due to the expanding needs of career development programs, the U.S. Department of Education’s Office of Vocational and Adult Education (OVAE) commissioned the creation of updated guidelines. The goals of

29 Ibid.
these updates were to:\(^{30}\)

- Update and revise the framework of competencies and indicators to align with the goals of No Child Left Behind (NCLB)
- Expand the target audiences to include K-12 students and their parents, teachers, counselors and administrators, postsecondary students and other adults and the business community
- Broaden the scope and application by providing the target audiences with easily accessible career development information, learning activities and strategies that lead to informed career decision-making and lifelong learning
- Create a robust, career development website to deliver NCDG information, learning activities and strategies

These new guidelines, then, have been designed to empower students to manage their future careers and to help professionals design strong programs to deliver career development opportunities. As described above, the National Career Development Guidelines framework is divided into three domains. Within each of the three domains, there are a total of 11 goals. The following table presents each of the three domains and the goals within those domains.\(^ {31}\)

<table>
<thead>
<tr>
<th>Domains</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Social Development</td>
<td>♦ GOAL PS1 Develop understanding of self to build and maintain a positive self-concept</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL PS2 Develop positive interpersonal skills including respect for diversity</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL PS3 Integrate growth and change into your career development</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL PS4 Balance personal, leisure, community, learner, family and work roles</td>
</tr>
<tr>
<td>Educational Achievement and Lifelong Learning</td>
<td>♦ GOAL ED1 Attain educational achievement and performance levels needed to reach your personal and career goals</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL ED2 Participate in ongoing, lifelong learning experiences to enhance your ability to function effectively in a diverse and changing economy</td>
</tr>
<tr>
<td>Career Management</td>
<td>♦ GOAL CM1 Create and manage a career plan that meets your career goals</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL CM2 Use a process of decision-making as one component of career development</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL CM3 Use accurate, current and unbiased career information during career planning and management</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL CM4 Master academic, occupational and general employability skills in order to obtain, create, maintain and/or advance your employment</td>
</tr>
<tr>
<td></td>
<td>♦ GOAL CM5 Integrate changing employment trends, societal needs and economic conditions into your career plans</td>
</tr>
</tbody>
</table>


---


\(^{32}\) Ibid. (cited directly from source)
As illustrated by the three components, the NCDG framework is a broad framework that highlights the need for students to develop a sense of self and an understanding that they can be empowered by gaining personal skills and knowledge of potential career paths. It also connects these skills and knowledge areas with academic success and lifelong learning. The framework overall presents a vision of career development as a long-lasting, strategic learning process that will lead to benefits for students across many facets of their lives.

The NCDG uses a framework derived from Bloom’s Taxonomy to present the stages within each goal. These stages are knowledge acquisition, application and reflection.33

- **Knowledge Acquisition (K):** Youth and adults at the knowledge acquisition stage expand knowledge awareness and build comprehension. They can recall, recognize, describe, identify, clarify, discuss, explain, summarize, query, investigate and compile new information about the knowledge.

- **Application (A):** Youth and adults at the application stage apply acquired knowledge to situations and to self. They seek out ways to use the knowledge. For example, they can demonstrate, employ, perform, illustrate and solve problems related to the knowledge.

- **Reflection (R):** Youth and adults at the reflection stage analyze, synthesize, judge, assess and evaluate knowledge in accord with their own goals, values and beliefs. They decide whether or not to integrate the acquired knowledge into their ongoing response to situations and adjust their behavior accordingly.

The detailed framework of the NCDG, which highlights the framework’s premise of career development as a sequence of events over time, presents the stages of development from knowledge acquisition, to application, to reflection for each identified goal within the framework. This framework, then, presents the progression of personal social development, educational achievement and lifelong learning, and career management in a detailed manner.

**The Secretary’s Commission on Achieving Necessary Skills**

The Pennsylvania Department of Education describes the Secretary’s Commission on Achieving Necessary Skills as follows:34

In 1990, the Secretary of Labor appointed a commission to determine the skills our young people need to succeed in the world of work. The commission’s fundamental purpose was to encourage a high-performance economy characterized by high-skill, high-wage employment. Although the

---

33 Ibid., p. 1. (cited directly from source)
commission completed its work in 1992, its findings and recommendations continue to be a valuable source of information for individuals and organizations involved in education and workforce development.

The Secretary’s Commission on Achieving Necessary Skills was appointed by the Secretary of Labor to determine the skills that students need as they enter the workplace. One goal of the report is to provide teachers and educators with tools to update their curriculum to ensure that students are equipped with the skills necessary for high-performance workplaces. The report finds that “a high-performance workplace requires workers who have a solid foundation in the basic literacy and computational skills, in the thinking skills necessary to put knowledge to work, and in the personal qualities that make workers dedicated and trustworthy.”

The report highlights both functioning skills and workplace competencies that students must develop during their educational careers. The three functioning skills include:

- **Basic Skills**:Reads, writes, performs arithmetic and mathematical operations, listens and speaks
  - Reading: Locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules
  - Writing: Communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts
  - Arithmetic/Mathematics: Performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques
  - Listening: Receives, attends to, interprets, and responds to verbal messages and other cues
  - Speaking: Organizes ideas and communicates orally

- **Thinking Skills**: Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons
  - Creative Thinking: Generates new ideas
  - Decision Making: Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative
  - Problem Solving: Recognizes problems and devises and implements plan of action
  - Seeing Things in the Mind’s Eye: Organizes, and processes symbols, pictures, graphs, objects, and other information
  - Knowing How to Learn: Uses efficient learning techniques to acquire and apply new knowledge and skills
  - Reasoning: Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem

---

36 *Ibid.* (cited directly from source)
Personal Qualities: Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty

- Responsibility: Exerts a high level of effort and perseveres towards goal attainment
- Self-Esteem: Believes in own self-worth and maintains a positive view of self
- Sociability: Demonstrates understanding, friendliness, adaptability, and empathy
- Self-Management: Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control
- Integrity/Honesty: Chooses ethical courses of action

These *functioning skills* highlight the importance of acquisition of basic skills and a sense of self-worth that will empower students as they progress through their schooling, their career development, and their lives.

The following table presents the five *workplace competencies* identified in the report.

**Figure 2.2: Functional Skills Needed for Effective Work Performance**

<table>
<thead>
<tr>
<th>Skills</th>
<th>Detailed Description of Skills</th>
</tr>
</thead>
</table>
| **Resources: Identifies, organizes, plans, and allocates resources** | ✤ Time: Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules  
  ✤ Money: Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives  
  ✤ Materials and Facilities: Acquires, stores, allocates, and uses materials or space efficiently  
  ✤ Human Resources: Assesses skills and distributes work accordingly, evaluates performance and provides feedback |
| **Interpersonal: Works with others** | ✤ Participates as Member of a Team: Contributes to group effort  
  ✤ Teaches Others New Skills  
  ✤ Serves Clients/Customers: Works to satisfy customers’ expectations  
  ✤ Exercises Leadership: Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies  
  ✤ Negotiates: Works toward agreements involving exchange of resources, resolves divergent interests  
  ✤ Works with Diversity: Works well with men and women from diverse backgrounds |
| **Information: Acquires and uses information** | ✤ Acquires and Evaluates Information  
  ✤ Organizes and Maintains Information  
  ✤ Interprets and Communicates Information  
  ✤ Uses Computers to Process Information |

---

*Ibid.* (cited directly from source)
<table>
<thead>
<tr>
<th>Skills</th>
<th>Detailed Description of Skills</th>
</tr>
</thead>
</table>
| Systems: Understands complex inter-relationships | ▶ Understands Systems: Knows how social, organizational, and technological systems work and operates effectively with them  
▶ Monitors and Corrects Performance: Distinguishes trends, predicts impacts on systems operations, diagnoses deviations in systems’ performance and corrects malfunctions  
▶ Improves or Designs Systems: Suggests modifications to existing systems and develops new or alternative systems to improve performance |
| Technology: Works with a variety of technologies | ▶ Selects Technology: Chooses procedures, tools or equipment including computers and related technologies  
▶ Applies Technology to Task: Understands overall intent and proper procedures for setup and operation of equipment  
▶ Maintains and Troubleshoots Equipment: Prevents, identifies, or solves problems with equipment, including computers and other technologies |


These *workplace competencies* introduce advanced skills and problem solving abilities that students need to develop in order to be successful members of the workforce, as well as successful students. The *workplace competencies*, then, build on the *functioning skills* that students should master.

The National Content Standards for Entrepreneurship Education

The Pennsylvania Department of Education describes the National Content Standards for Entrepreneurship Education as follows: 38

> Created by the Consortium for Entrepreneurship Education, fifteen standards organized into entrepreneurship skills, ready skills, and business skills, the standards provide a foundation for developing entrepreneurship programs. The toolkit created by the consortium provides downloadable resources that will also support the Career Education and Work Academic Standards in Pennsylvania.

The National Content Standards for Entrepreneurship Education list 15 standards for entrepreneurship education, which are categorized into three sections—Entrepreneurship Skills, Ready Skills, and Business Functions. 39

These standards are presented in the table on the following page.

---


Figure 2.3: The National Content Standards for Entrepreneurship Education\(^{40}\)

<table>
<thead>
<tr>
<th>Standards</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneurial Skills:</strong></td>
<td>The processes and traits/behaviors associated with entrepreneurial success</td>
</tr>
<tr>
<td><strong>Entrepreneurial Processes:</strong></td>
<td>❖ Discovery</td>
</tr>
<tr>
<td></td>
<td>❖ Concept Development</td>
</tr>
<tr>
<td></td>
<td>❖ Resourcing</td>
</tr>
<tr>
<td></td>
<td>❖ Actualization</td>
</tr>
<tr>
<td></td>
<td>❖ Harvesting</td>
</tr>
<tr>
<td><strong>Entrepreneurial Traits/Behaviors:</strong></td>
<td>❖ Leadership</td>
</tr>
<tr>
<td></td>
<td>❖ Personal Assessment</td>
</tr>
<tr>
<td></td>
<td>❖ Personal Management</td>
</tr>
<tr>
<td><strong>Ready Skills:</strong></td>
<td>The basic business knowledge and skills that are prerequisites or co-requisites for becoming a successful entrepreneur</td>
</tr>
<tr>
<td><strong>Business Foundations:</strong></td>
<td>❖ Business Concepts</td>
</tr>
<tr>
<td></td>
<td>❖ Business Activities</td>
</tr>
<tr>
<td><strong>Communications and Interpersonal Skills:</strong></td>
<td>❖ Fundamentals of Communication</td>
</tr>
<tr>
<td></td>
<td>❖ Staff Communications</td>
</tr>
<tr>
<td></td>
<td>❖ Ethics in Communication</td>
</tr>
<tr>
<td></td>
<td>❖ Group Working Relationships</td>
</tr>
<tr>
<td></td>
<td>❖ Dealing with Conflict</td>
</tr>
<tr>
<td><strong>Digital Skills:</strong></td>
<td>❖ Computer Basics</td>
</tr>
<tr>
<td></td>
<td>❖ Computer Applications</td>
</tr>
<tr>
<td><strong>Economics:</strong></td>
<td>❖ Basic Concepts</td>
</tr>
<tr>
<td></td>
<td>❖ Cost-Profit Relationships</td>
</tr>
<tr>
<td></td>
<td>❖ Economic Indicators/Trends</td>
</tr>
<tr>
<td></td>
<td>❖ Economic Systems</td>
</tr>
<tr>
<td></td>
<td>❖ International Concepts</td>
</tr>
<tr>
<td><strong>Financial Literacy:</strong></td>
<td>❖ Money Basics</td>
</tr>
<tr>
<td></td>
<td>❖ Financial Services</td>
</tr>
<tr>
<td></td>
<td>❖ Personal Money Management</td>
</tr>
<tr>
<td><strong>Professional Development:</strong></td>
<td>❖ Career Planning</td>
</tr>
<tr>
<td></td>
<td>❖ Job-Seeking Skills</td>
</tr>
<tr>
<td><strong>Business Functions:</strong></td>
<td>The business activities performed by entrepreneurs in managing the business</td>
</tr>
<tr>
<td><strong>Financial Management:</strong></td>
<td>❖ Accounting</td>
</tr>
<tr>
<td></td>
<td>❖ Finance</td>
</tr>
<tr>
<td></td>
<td>❖ Money Management</td>
</tr>
</tbody>
</table>

\(^{40}\) Ibid. (cited directly from source)
The National Content Standards for Entrepreneurship Education present the skills and knowledge that students will need to succeed in the workplace, specifically in entrepreneurial business environments. These skills, while presented through the perspective of entrepreneurial environments, are skills that are needed for many career paths and most can be generalized outside of entrepreneurship. Together, these standards present the skills that entrepreneurs and business professionals, specifically, need, many of which overlap with the skills that students will need in most career paths beyond postsecondary education.

National Business Education Standards

The Pennsylvania Department of Education describes the National Business Education Standards as follows:

This collection of national standards is a forward-looking synthesis of what students should know and be able to do in business. The standards are based

---

on a vision and a set of competencies designed to prepare students to become knowledgeable and ethical decision makers as they fulfill their roles as consumers, workers, and citizens. The National Standards for Business Education are based on the conviction that business education competencies are essential for all students.

The National Business Education Standards are guided by the principle that career development is best taught as an integrated curriculum component, rather than a separate component. These standards center on six skills, presented in the following table.\(^1\)

<table>
<thead>
<tr>
<th>Skill</th>
<th>Achievement Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Awareness</td>
<td>Assess personal skills, abilities, and aptitudes and personal strengths and weaknesses as they relate to career exploration and development</td>
</tr>
<tr>
<td>Career Research</td>
<td>Utilize career resources to develop a career information database that includes international career opportunities</td>
</tr>
<tr>
<td>Workplace Expectations</td>
<td>Relate the importance of workplace expectations to career development</td>
</tr>
<tr>
<td>Career Strategy</td>
<td>Apply knowledge gained from individual assessment to a comprehensive set of goals and an individual career plan</td>
</tr>
<tr>
<td>School-to-Work Transition</td>
<td>Develop strategies to make an effective transition from school to career</td>
</tr>
<tr>
<td>Lifelong Learning</td>
<td>Relate the importance of lifelong learning to career success</td>
</tr>
</tbody>
</table>


The National Business Education Standards are broad skills that students will need as they embark on their chosen postsecondary endeavors. While the standards focus on career preparation, the suggestions also purposely present a broader look at the skills and knowledge that students should develop personally, specifically their “education, occupation, social responsibility, and leisure activities.”\(^4\)

National Standards for Family and Consumer Science Education

The Pennsylvania Department of Education describes the National Standards for Family and Consumer Science Education as follows:\(^5\)

The national standards were developed by the National Association of State Administrators for Family and Consumer Sciences (NASAFACS) in partnership with VTECS [now CTECS – the Career and Technical Education Consortium of States]. The curriculum standards organize the subject matter and processes of Family and Consumer Sciences Education, provide a strong and clear conceptualization of the field, and establish a

\(^1\) “Career Development.” National Business Education Association.  
\(^4\) Ibid. (cited directly from source)  
\(^5\) Ibid.
common direction for program development and revision at the national, state, and local levels.

The National Standards for Family and Consumer Science Education were formulated according to a flexible model that could accommodate the various needs of states. **The goal of these standards is to empower “individuals and families across the life span to manage the challenges of living and working in a diverse global society.”**46 There are 17 standards, and multiple competencies within each standard. The standards are presented below to demonstrate the range of topics covered.47

- Reasoning for Action
- Career, Community & Family Connections
- Consumer & Family Resources
- Consumer Services
- Education & Early Childhood
- Facilities Management & Maintenance
- Family
- Family & Community Services
- Food Production & Services
- Food Science, Dietetics & Nutrition
- Hospitality, Tourism & Recreation
- Housing, Interiors & Furnishings
- Human Development
- Interpersonal Relationships
- Nutrition & Wellness
- Parenting
- Textiles, Fashion & Apparel

As the goal of these standards is to present the knowledge needed for “family life, work life, and careers in Family and Consumer Sciences,” they include categories that combine career skills with the skills needed for a successful home and family life.48 Originally conceived as standards for teaching home economics, the standards have been drastically updated to reflect the skills that modern students need in their postsecondary endeavors.

Each of the standards frameworks presented here were used to develop Pennsylvania’s Career Education and Work Standards, which will be profiled in the following section. They are presented to demonstrate the range of topics that national standards cover and that states and school districts utilize when designing career development programs.

47 Ibid.
48 Ibid.
Section III: National Program Profiles

This section examines statewide career development programs from a national perspective. The two programs selected for examination here—the Georgia Department of Education and the Pennsylvania Department of Education—were chosen based on their use of national standards, as well as the amount of information made available to the public, including program curricula and resources.

Georgia Department of Education

The Georgia Department of Education, Office of Curriculum, Instruction, and Assessment has created Middle School Performance Standards for Career, Technical and Agricultural Education (CTAE). These new standards are designed to upgrade previous career readiness goals and include “national standards, CTAE standards, and Georgia Performance Standards, in addition to career development activities allowing students to make the connection between class work and workforce.” The previous curricula have been condensed to clearly demonstrate the essential elements of the program. Furthermore, “middle school CTAE courses [have been structured to] reinforce Reading Across the Content, Technical Writing standards, Entrepreneurship standards, and CTAE Foundation Skills.” The program is designed for three levels of education—6th, 7th and 8th grades. Below, each CTAE program area course is listed.

Phase I Career Exploratory Programs, implemented in the fall of 2009, include:

- Agriculture
  - Exploring Agricultural Education (Grade 6)
  - Exploring Agricultural Education (Grade 7)
  - Exploring Agricultural Education (Grade 8)
- Business and Computer Science
  - Business and Computer Science (Grade 6)
  - Business and Computer Science (Grade 7)
  - Business and Computer Science (Grade 8)
- Career Development
  - Career Awareness Grade 6
  - Career Discovery Grade 7
  - Career Management Grade 8
- Engineering and Technology
  - Exploring Engineering and Technology Grade 6
  - Invention and Innovation Grade 7
  - Technological Systems Grade 8

49 “Middle School Performance Standards.” Georgia Department of Education.
50 Ibid.
51 Ibid.
Family and Consumer Science
- Family and Consumer Science (Grade 6)
- Family and Consumer Science (Grade 7)
- Family and Consumer Science (Grade 8)

Healthcare Science
- Healthcare Science Grade 6
- Healthcare Science Grade 7
- Healthcare Science Grade 8

Phase II Career Exploratory Programs, implemented in the fall of 2010:

- Architecture, Construction, Communications & Transportation
  - Introduction to Architecture and Construction (Grade 6)
  - Fundamentals of Architecture and Construction (Grade 7)
  - Exploring Architecture and Construction (Grade 8)
  - Broadcast and Graphic Communications (Grade 6)
  - Introduction to Communications (Grade 7)
  - Applications of Communications (Grade 8)
  - Introduction to Ground, Air and Maritime Technology (Grade 6)
  - Foundations of Aerospace, Ground and Maritime Transportation (Grade 7)
  - Investigation into Aerospace, Ground and Maritime Transportation (Grade 8)

- Government and Public Safety
  - Exploring Public Safety and Government Education (Grade 6)
  - Exploring Public Safety and Government Education (Grade 7)
  - Exploring Public Safety and Government Education (Grade 8)

- Marketing, Sales & Services
  - Basic Skills of Marketing (Grade 6)
  - Exploring Marketing Education (Grade 7)
  - Pathways in Marketing (Grade 8)

In developing the curriculum for the Career Development (Phase 1) program, specifically, a planning committee reviewed programs nationwide to learn how other school systems were integrating career awareness into their middle schools. Attempting to understand the overall goal of each program, the committee determined a theme for each year in grades 6-8, the skills prioritized, and the names used by other states for their programs at these levels. Drawing on the information gathered, the group determined a set of skills that students at each of the three grade levels should develop, listed in the table on the following page.

---

52 Ibid.
Figure 3.1: Findings of the Georgia Department of Education’s Planning Committee

<table>
<thead>
<tr>
<th>Grade</th>
<th>Theme</th>
<th>Skills</th>
</tr>
</thead>
</table>
| 6th Grade| Who Am I?              | ☐ Self-Esteem – Self Concept – personal characteristics  
|          |                        | ☐ Assessment                                  |
|          |                        | ☐ Interpersonal Skills                      |
|          |                        | ☐ Personal Management Skills                |
|          |                        | ☐ Goal Setting/Planning                      |
| 7th Grade| Where Am I Going?      | ☐ Work Ethics                                |
|          |                        | ☐ Team Building                               |
|          |                        | ☐ Pathways/ Occupations                      |
|          |                        | ☐ Educational Performance                    |
|          |                        | ☐ Life Roles                                 |
| 8th Grade| How Do I Get There?    | ☐ Interpersonal Skills                       |
|          |                        | ☐ Management Skills                          |
|          |                        | ☐ Employability Skills                       |
|          |                        | ☐ Self-Awareness                             |
|          |                        | ☐ Educational Planning                       |
|          |                        | ☐ Career Planning                            |

Source: “Middle School Performance Standards.” Georgia Department of Education.

Following the three-tiered model, the “Career Development” category includes a course at each of the three grade levels. The table on the following page presents the course descriptions for each.

---

53 Ibid.
### Figure 3.2: Course Descriptions and Goals for the Career Development Program

<table>
<thead>
<tr>
<th>Course Title and Grade</th>
<th>Description and Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Career Awareness-6th Grade</strong></td>
<td>The goal of this course is to promote essential skills and knowledge students need to develop a positive self-concept. This course will provide students with opportunities to identify interests, abilities, aptitudes, values, and personality traits as they relate to career planning, to develop a keen understanding of the value and benefit of work, and to differentiate between jobs and careers. In this course, middle school students will experience a variety of activities that promote self-awareness, self-management skills, leadership, teamwork, career exploration, and educational planning related to students’ future educational and career plans. At the conclusion of this course, students will be able to analyze personal characteristics and apply these characteristics in the career planning process.</td>
</tr>
<tr>
<td>- Students will understand the personal nature of work and how it relates to them as individuals and as integral parts of society</td>
<td></td>
</tr>
<tr>
<td>- Students will demonstrate an understanding of how to build and maintain a positive self-concept and a positive self-esteem</td>
<td></td>
</tr>
<tr>
<td>- Students will describe, develop, and evaluate how positive interpersonal skills affect their ability to work successfully</td>
<td></td>
</tr>
<tr>
<td>- Students will illustrate effective personal management skills</td>
<td></td>
</tr>
<tr>
<td>- Students will participate in career-related assessments</td>
<td></td>
</tr>
<tr>
<td>- Students will utilize the planning process to assist in the achievement of personal, social, financial, educational, and career goals</td>
<td></td>
</tr>
<tr>
<td>- Students will analyze the relationship between societal issues and career options and opportunities</td>
<td></td>
</tr>
<tr>
<td><strong>Career Discovery-7th Grade</strong></td>
<td>The goal of this course is to promote essential skills and knowledge students need to apply self-assessments and decision-making skills while examining career concentrations and pathways. This course will expose students to positive work ethics, the importance of educational achievement, and the impact of societal issues on career choices. These essential components are necessary for educational and career planning success. In this course, middle school students will gain an understanding of career program concentrations and career pathways offerings in Georgia. Students will develop insight into how educational performance enhances career opportunities. Also, students will be exposed to work ethics and societal issues as they relate to educational and career goals.</td>
</tr>
<tr>
<td>- Students will identify and evaluate work ethics and behavior characteristics needed for success in a career and in life</td>
<td></td>
</tr>
<tr>
<td>- Students will investigate Georgia’s Career Program Concentrations that align with their personal assessments and identify possible career pathways</td>
<td></td>
</tr>
<tr>
<td>- Students will understand the importance of attaining educational achievement and performance levels needed to reach personal and career goals</td>
<td></td>
</tr>
<tr>
<td>- Students will recognize the impact of societal issues on their ability to function effectively in a diverse and changing world</td>
<td></td>
</tr>
</tbody>
</table>

54 *Ibid.* (cited directly from source)
### Course Title and Grade

<table>
<thead>
<tr>
<th>Course Title and Grade</th>
<th>Description and Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Management-8th Grade</td>
<td>The goal of this course is to promote essential knowledge, skills and attitudes students need to make key decisions about career options, high school curricular offerings relating to a pathway of their choice, as well as postsecondary and workforce opportunities. Instructional focus will address interpersonal skills, management skills, employability skills, self-awareness, educational and career planning. In this course, middle school students will increase awareness of resources available to support educational and career planning. Students will develop a personalized individual Peach State Pathways: Education and Career Plan, explore management skills, and investigate employability skills.</td>
</tr>
<tr>
<td></td>
<td>Students will develop and demonstrate positive interpersonal skills</td>
</tr>
<tr>
<td></td>
<td>Students will develop management skills that lead to academic and career success</td>
</tr>
<tr>
<td></td>
<td>Students will examine and demonstrate an understanding of employability skills to enhance career success</td>
</tr>
<tr>
<td></td>
<td>Students will personalize a self-selected Pathway that meets educational and career goals</td>
</tr>
</tbody>
</table>

Source: “Middle School Performance Standards.” Georgia Department of Education.

In order to provide a more detailed example of Georgia’s Career Development courses, the following table takes a closer look at the Career Discovery course offered to 7th grade students.

### Figure 3.3: Career Discovery, 7th Grade Course Description

<table>
<thead>
<tr>
<th>Critical Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students will identify and evaluate work ethics and behavior characteristics needed for success in a career and in life.</td>
</tr>
<tr>
<td></td>
<td>Students will investigate Georgia’s Career Program Concentrations that align with their personal assessments and identify possible career pathways.</td>
</tr>
<tr>
<td></td>
<td>Students will understand the importance of attaining educational achievement and performance levels needed to reach personal and career goals.</td>
</tr>
<tr>
<td></td>
<td>Students will recognize the impact of societal issues on their ability to function effectively in a diverse and changing world.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reading Standards</th>
<th>Students will enhance reading in all curriculum areas by:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reading in all curriculum areas</td>
</tr>
<tr>
<td></td>
<td>Discussing Books</td>
</tr>
<tr>
<td></td>
<td>Building vocabulary knowledge</td>
</tr>
<tr>
<td></td>
<td>Establishing context</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Writing Standards</th>
<th>The student writes clear, coherent text. The writing shows consideration of the audience and purpose. The student progresses through the stages of the writing process (e.g., prewriting, drafting, revising, and editing successive versions).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The student demonstrates competence in a variety of genres. The student produces technical writing (business correspondence: memoranda, emails, letters of inquiry, letters of complaint, instructions and procedures, lab reports, slide presentations).</td>
</tr>
<tr>
<td></td>
<td>The student uses research and technology to support writing.</td>
</tr>
<tr>
<td></td>
<td>The student consistently uses the writing process to develop, revise, and evaluate writing.</td>
</tr>
</tbody>
</table>

55 “Career Development: Career Discovery, Grade 7.” Georgia Department of Education. [http://www.gadoe.org/DMGetDocument.aspx/Career_Discovery_grade7.pdf?p=6CC6799F8C1371F671 F60A0FA9DE241019E5D3AC15585E0BA311DBD2292DD0D5&Type=D](http://www.gadoe.org/DMGetDocument.aspx/Career_Discovery_grade7.pdf?p=6CC6799F8C1371F671 F60A0FA9DE241019E5D3AC15585E0BA311DBD2292DD0D5&Type=D) (cited directly from source)
Entrepreneurship

- Understands concepts and processes associated with successful entrepreneurial performance.
- Explain the fundamental concepts of business ownership.

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations, these skills link career, technical and agricultural education to the state’s academic performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U.S. Department of Education’s 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEC), the foundation skills were developed from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and postsecondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

- Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.
- Academic Foundations: Learners achieve state academic standards at or above grade level.
- Communications: Learners use various communication skills in expressing and interpreting information.
- Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.
- Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.
- Systems: Learners understand a variety of organizational structures and functions.
- Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.
- Leadership and Teamwork: Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.
- Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the workplace.
- Career Development: Learners plan and manage academic-career plans and employment relations.
- Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.

Source: “Career Development: Career Discovery, Grade 7.” Georgia Department of Education.

Pennsylvania Department of Education

The Pennsylvania Department of Education’s Career Education and Work Standards have been designed to incorporate career and work education into the academic curriculum. Pennsylvania’s Career Education and Work Standards can be divided based on two sets of criteria. First, the curriculum can be grouped by grade level segment—grades K-3, 4-5, 6-8, and 9-12. Secondly, the standards can be grouped by thematic strands—defined as 13.1 Career Awareness and Preparation, 13.2 Career Acquisition, 13.3 Career Retention and Advancement, and 13.4 ...
Entrepreneurship. The Curriculum Search function on the Pennsylvania Department of Education’s website provides a full list of curriculum activities by grade level and by thematic strand. Each curriculum activity overview includes elements such as the activity title, standards addressed, brief overview, grade level, content area, other standards supported, preparation time, implementation time, learning objectives, necessary materials, detailed activity steps, theory basis, evaluation approach, enhancement activities, adaptations for at-risk students, and a list of additional resources that educators may reference in their implementation of the activity.

The Pennsylvania Department of Education also provides two lists of Academic Standards Crosswalks, which have been designed to help educators integrate the Career Education and Work (CEW) standards into the curriculum. The Core Academic Standards Crosswalk “identifies the CEW standards that are met when the listed standards in the other academic area are fully accomplished,” while the Extended Academic Standards Crosswalk “identifies the CEW standards that can be met through the careful selection and introduction of a topic directly related to the CEW standard.” These crosswalks are available for grades 3, 5, 8, and 11.

The Pennsylvania Department of Education offers numerous other resources to assist students and families as they explore career pathways, as well as educators and school administrators as they implement the CEW standards. The Department’s CareerZone website, for example, provides tools to help students complete self assessments, create budgets, and explore the following job families: Arts and Communications; Business, Finance, and Information Technology; Engineering and Industrial Technology; Human Services; and Science and Health.

As another example, to help individual schools and school districts evaluate their implementation of the CEW standards, the Pennsylvania Department of Education provides for download Assessment Surveys for the four grade segments (K-3, 4-5, 6-8, and 9-12) and a Gap Analysis Chart to be used by administrators, as well as a list of external assessment resources. Examples of other resources made available on the website include career guides, practices for standalone career courses, children’s literature resources that support the standards, classroom activity books, a real game series, an online learning program, and a job readiness training program.

---

57 Ibid.
58 Ibid.
Section IV: Texas Program Profiles

This section presents information on two statewide programs in Texas, as well as the individual career development programs implemented by two school districts in Texas.

Texas Statewide Programs

The State of Texas features multiple college and career readiness programs to be used statewide. This subsection briefly profiles two programs, the AchieveTexas College and Career Initiative and the Texas Essential Knowledge and Skills Development Standards. These two programs were chosen to correspond with the two Texas school districts which are profiled in the following subsection.

AchieveTexas College and Career Initiative

The AchieveTexas College and Career Initiative is an education initiative that strives to prepare students for their postsecondary endeavors through career preparation and life skills development. Based on the notion that career development should be combined with academic skill development, AchieveTexas utilizes integrated classroom learning to magnify the importance of career development. The program is designed as follows.63

This initiative uses the sixteen federally defined Career Clusters of the States’ Career Clusters initiative (www.careerclusters.org) as the foundation for restructuring how schools arrange their instructional programs. A Career Cluster is a grouping of occupations and broad industries based on commonalities. The sixteen Career Clusters provide an organizing tool for schools, small learning communities, academies, and magnet schools. Programs of Study (POS) have been developed for each of the Career Clusters. The POS represent a recommended sequence of coursework based on a student’s interest or career goal.

This program, then, utilizes career clusters to integrate career development into the school curriculum. The use of career clusters will be demonstrated in the profile of Garland Independent School District presented later in this section.

Texas Essential Knowledge and Skills Development Standards

The revision of the Texas Essential Knowledge and Skills Development Standards was mandated by the Texas Legislature in May 2007. These standards were revised in 2009, and the revised standards were first implemented in the 2010-2011 school year.

---

One specific section of the Standards focuses on career readiness in middle schools and proposes two courses for middle grades students, described in the following table.

**Figure 4.1: Proposed Middle School Career Development Courses**

![Table](http://example.com/table.png)

<table>
<thead>
<tr>
<th>Exploring Careers</th>
<th>Knowledge and Skills</th>
</tr>
</thead>
</table>
| **General Requirements** | **The student explores personal interests and aptitudes as they relate to education and career planning.**
| | **The student analyzes personal interests and aptitudes regarding education and career planning.**
| | **The student analyzes college and career opportunities.**
| | **The student evaluates skills for personal success.**
| | **The student recognizes the impact of career choice on personal lifestyle.**
| | **The student demonstrates an understanding of personal financial management.**
| | **The student develops skills for professional success.**
| | **The student identifies and explores technical skills essential to careers in multiple occupations, including those that are high skill, high wage, or high demand.** |

<table>
<thead>
<tr>
<th>Career Portals</th>
<th><strong>General Requirements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>This course is recommended for students in Grades 7-8.</strong></td>
<td></td>
</tr>
</tbody>
</table>

The career development process is unique to every person and evolves throughout one’s life. Students will use decision-making and problem-solving skills for college and career planning. Students will explore valid, reliable educational and career information to learn more about themselves and their interests and abilities. Students integrate skills from academic subjects, information technology, and interpersonal communication to make informed decisions. This course is designed to guide students through the process of investigation and in the development of a college and career achievement plan. Students will use interest inventory software or other tools to explore areas of personal interest. Students will use this information to explore educational requirements for a variety of chosen career paths. Districts have the flexibility of offering career exploration knowledge and skills in a variety of instructional arrangements.

---


65 Ibid. (cited directly from source)
### Proposed Courses Implemented in the 2010-2011 School Year

<table>
<thead>
<tr>
<th>Knowledge and Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The student explores one or more career clusters of interest.</td>
</tr>
<tr>
<td>- The student explores pathways of interest within one or more career clusters.</td>
</tr>
<tr>
<td>- The student explores programs of study.</td>
</tr>
<tr>
<td>- The student explores the professional skills needed for college and career success</td>
</tr>
<tr>
<td>- The student understands personal financial management and recognizes the value of</td>
</tr>
<tr>
<td>personal fiscal responsibility.</td>
</tr>
<tr>
<td>- The student explores labor market information.</td>
</tr>
<tr>
<td>- The student explores job-seeking skills.</td>
</tr>
<tr>
<td>- The student creates professional documents required for employment</td>
</tr>
</tbody>
</table>

Source: “Career and Technical Education – Texas Essential Knowledge and Skills, Course Crosswalks and Coherent Sequences.” Texas Education Agency.

These proposed courses, *Exploring Careers* and *Career Portals*, are specific courses that provide the opportunity for students to develop skills and increase their understanding of career paths. In *Exploring Careers*, students investigate their skills and interests, learning how these interests connect to potential careers. Students also create a college or career achievement plan. In *Career Portals*, students explore college or career options through career clusters. Within each cluster, students explore labor market information, learn how to seek jobs in the field, and create documents needed to apply to jobs in the field. The *Exploring Careers* course replaces the 1997 standards’ *Career Investigation* course, while the *Career Portals* course replaces a sequence of previous courses focused on individual career clusters.66

### Texas District Profiles

The following two school districts in Texas were chosen based on their alignment with the previously discussed statewide programs and the amount of information made available to the public.

**Garland Independent School District**

The Garland Independent School District is located in Dallas County, Texas and enrolls over 57,000 students. Garland ISD is comprised of seven high schools, 12 middle schools, 47 elementary schools, two pre-kindergarten schools, and three alternative education centers.67 The district provides career and college readiness programs and resources to its elementary and middle school students, in addition to its high school students.

Garland ISD features a program titled *Ready! College. Career. Life.* that provides career development to students throughout the district. The program is described as an integral part of the district’s culture, and the program website provides a myriad of

---

66 Ibid.
resources for students at all grade levels.\textsuperscript{68} The goal of the website is to provide resources to students to supplement academic courses and events, such as College Days, career days, and career workshops that the district offers. The \textit{Ready! College. Career. Life.} program is based on three main components: Explore, Plan, and Act. While a significant portion of the resources provided are geared toward high school students planning for college or a career after graduation, the program’s website presents awareness and planning resources for students in elementary and middle school, as well.

\textbf{Career Development Websites as Resources}

To support students in determining their interests and identifying careers that align with those interests, the Garland website provides an interest survey as well as a career planning system to 8\textsuperscript{th} grade students through the Guidance and Counseling office.\textsuperscript{69} These resources utilize the career clusters in the Achieve Texas program, introduced earlier in this report. Resources such as this promote student learning about personal interests, skills, and possible career paths, which is supported by research as a beneficial resource for early career development.

\textbf{Academic Offerings}

Reflective of the recently created middle school career development courses designed as part of the Texas Essential Knowledge and Skills Development standards, Garland ISD presents middle school students with course options to develop their career awareness and exploration skills. Some of the available options include:

- Exploring Careers
- Career Portals
- Professional Communications
- Principles of Architecture and Construction
- Principles of Human Services
- Principles of Manufacturing\textsuperscript{70}

\textbf{Round Rock Independent School District}

Round Rock Independent School District serves southern Williamson County and northwest Travis County, Texas. There are approximately 45,000 students that attend the five high schools, ten middle schools, 32 elementary schools, and two alternative education schools.

\begin{itemize}
\item \textsuperscript{68} “GISD is Ready!” Garland Independent School District. http://www.garlandisd.net/about/ready/index.asp
\end{itemize}
learning centers in the district. Included in Round Rock’s strategic plan is the notion that each student will graduate with the skills needed for their postsecondary plans. Valuing the importance of career knowledge, Round Rock strives to present its students with the skills and resources needed to make informed career decisions upon graduation. The following table presents the district’s practices at each level of schooling related to career development.

**Figure 4.2: Best Practices Utilized by Round Rock ISD**

<table>
<thead>
<tr>
<th>Schooling Level</th>
<th>Description of Best Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary School:</strong></td>
<td>Career development at the elementary level includes helping students understand the role of work, one’s own uniqueness, and basic knowledge about different occupations. The classroom teacher, school counselor and administrators work together to plan how career development activities and career education can be infused into the ongoing educational program. This is an opportune time to introduce the concept of school as work and students as workers. Elementary students become aware of community workers. Parents or other class visitors can expand the child’s understanding of the world of work. Visits to community sites as well as local businesses broaden the child’s perspective of work.</td>
</tr>
<tr>
<td><strong>Middle School:</strong></td>
<td>The emphasis at the middle level is on the refinement of knowledge and awareness to the actual experience of simulated work tasks. It is a time to discover abilities and interests and to formulate career and educational plans. A true middle level structure provides many opportunities to integrate career development. Team teaching allows a group of teachers to work together in infusing career information into the regular educational program. The school counselor may serve as a resource for the team or to provide special instruction when needed. Libraries may have special middle-level career information software for student use. As in the elementary, many career development activities can be integrated into existing classroom curriculum, thus bringing relevance to academics. Visits to businesses can bring reality of the world of work to the students and emphasize the importance of strong academic and skill development. Whatever the chosen strategy, the middle years should be a time of expansion of opportunities through exploration activities.</td>
</tr>
</tbody>
</table>

---

71 “District Profile.” Round Rock Independent School District.”
http://www.roundrockisd.org/Index.aspx?page=1731

<table>
<thead>
<tr>
<th>Schooling Level</th>
<th>Description of Best Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School: Preparation Level</td>
<td>The greatest challenge and the greatest need for career development programs occur at the high school level. The challenge is finding time in the busy student schedule to implement career development activities in groups. The need is that graduation plans dictate certain educational selections that require guided reflection and decision-making. <strong>Teachers may not only promote careers relevant to their discipline, but also incorporate career development activities of general value, e.g., researching a career in an English class.</strong> Sometimes teachers, in collaboration with school counselors, actually provide mini-units within classes. Career software, available on all campuses, can help to sort the voluminous amount of educational, occupational, and career information available. Job shadowing and real work experience are often parts of the experiential career development process. Employability skills, job finding, and job keeping skills are all part of the competencies which students must master as they consider their future role in the world of work. Resume writing, interviewing skills analysis, team problem solving are just a few of the abilities that young people need to take to the workplace. Job shadows and industry visits can further connect the school to future employment. High schools must accept responsibility for assuring that every student has the opportunity to be prepared to achieve economic success.</td>
</tr>
</tbody>
</table>


Round Rock’s best practices highlight many of the practices suggested in the research presented in the first section of this report. For example, in elementary school, it is important to introduce concepts such as the understanding of a student’s skills and interests, as well as the wide array of career options. Introducing students to the world of work experiences provides valuable awareness to elementary-aged students. Additionally, field trips outside of the classroom where students can experience various careers in action can provide valuable knowledge to young students. In middle school, Round Rock’s practices encourage students to be able to articulate their interests and skills and to understand specific career paths. The integration of activities into academic learning connects the concepts of career awareness and academics.

**Career Development Websites as Resources**

In addition to Round Rock’s classroom activities, the district also provides career development resources on its website. Specifically, the website provides multiple links for accessing college information, evaluating personal skills, interests and abilities, general career exploration and information, career information on specific fields, and job search information. This website serves as a central information resource for students and parents to supplement the career awareness, exploration, and preparation that occurs in the classroom.73

---

Project Evaluation Form

Hanover Research is committed to providing a work product that meets or exceeds member expectations. In keeping with that goal, we would like to hear your opinions regarding our reports. Feedback is critically important and serves as the strongest mechanism by which we tailor our research to your organization. When you have had a chance to evaluate this report, please take a moment to fill out the following questionnaire.


Caveat

The publisher and authors have used their best efforts in preparing this brief. The publisher and authors make no representations or warranties with respect to the accuracy or completeness of the contents of this brief and specifically disclaim any implied warranties of fitness for a particular purpose. There are no warranties which extend beyond the descriptions contained in this paragraph. No warranty may be created or extended by representatives of Hanover Research or its marketing materials. The accuracy and completeness of the information provided herein and the opinions stated herein are not guaranteed or warranted to produce any particular results, and the advice and strategies contained herein may not be suitable for every member. Neither the publisher nor the authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages. Moreover, Hanover Research is not engaged in rendering legal, accounting, or other professional services. Members requiring such services are advised to consult an appropriate professional.