Promoting **Student Success** in the
21st Century School and Workplace
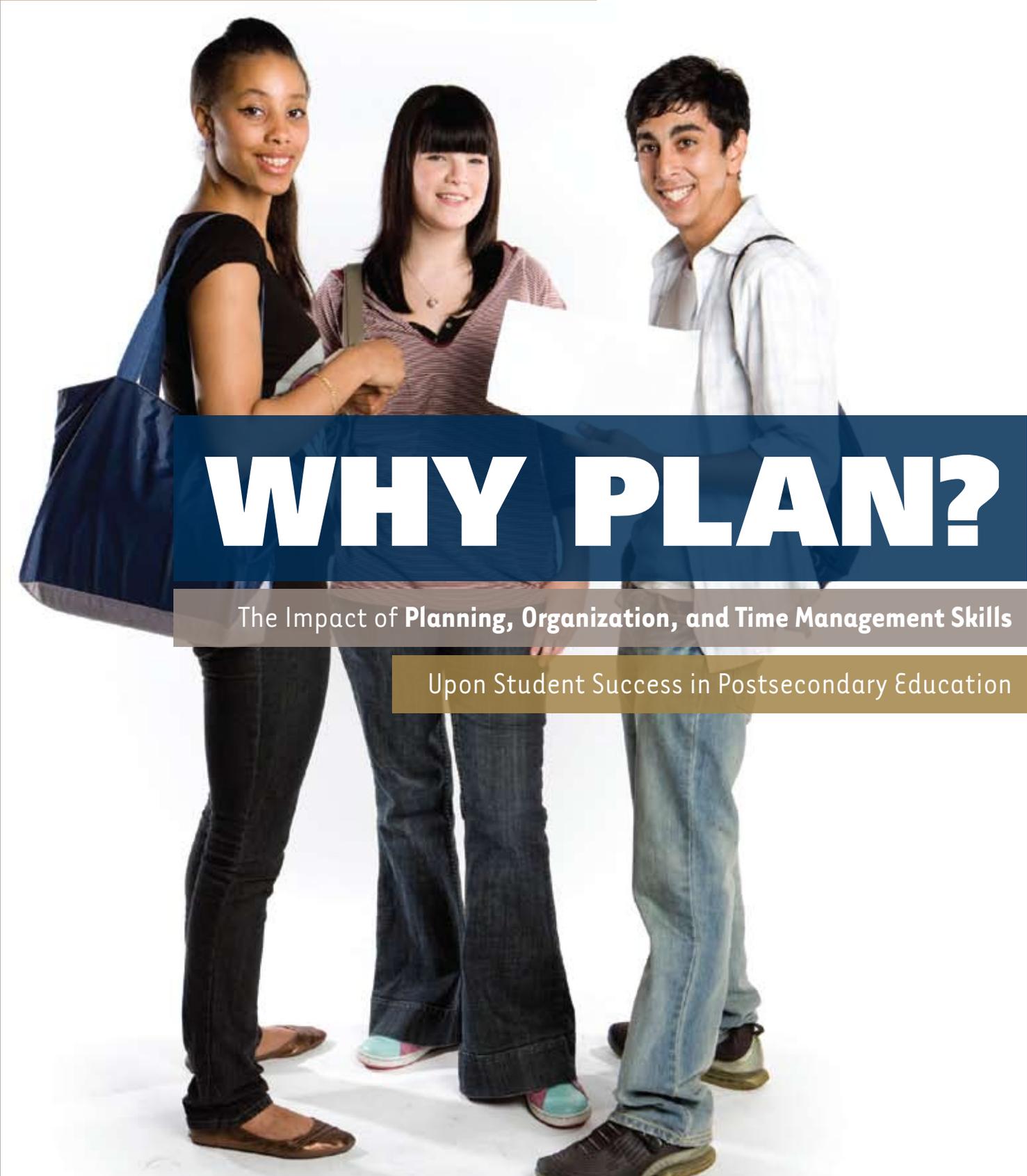
WHY PLAN?

The Impact of **Planning, Organization, and Time Management Skills**

Upon Student Success in Postsecondary Education

Table of Contents

Why Plan?

We live in interesting—and sometimes overwhelming—times. For students, the world of postsecondary education and the world of work are becoming increasingly challenging. As *Time Magazine* predicts in its special report *The Way We'll Work* (May 25, 2009):

Ten years ago, Facebook didn't exist. Ten years before that, we didn't have the Web. So who knows what jobs will be born a decade from now? Though unemployment is at a 25-year high, work will eventually return. But it won't look the same. … We will see a more flexible, more freelance, more collaborative and far less secure work world (p. 39).

Added to these workplace challenges are changes in learning. Numerous studies—from *Redefining College Readiness* (Conley, 2007) to *Understanding University Success: A Project of the Association of American Universities and the Pew Charitable Trusts* (Conley, 2003)—confirm that success in the 21st-century college and university requires that students be active, self-regulated learners. Students must gain expertise in such metacompetencies as planning, time management, self-monitoring, and organization.

How, then, can we as educators and publishers successfully equip every student to succeed in modern postsecondary educational settings—as well as in the change-dominated and technology-driven world of work in the global economy? How can we help all students to become independent, proactive, and self-actualized learners prepared for a possible *seven to nine major career changes* during the course of their lifetimes? Since postsecondary education has become a nonnegotiable requirement for success in many career pathways (National Center on Education and the Economy, 2007), how can we help every student be effective in planning, organization, and time management?
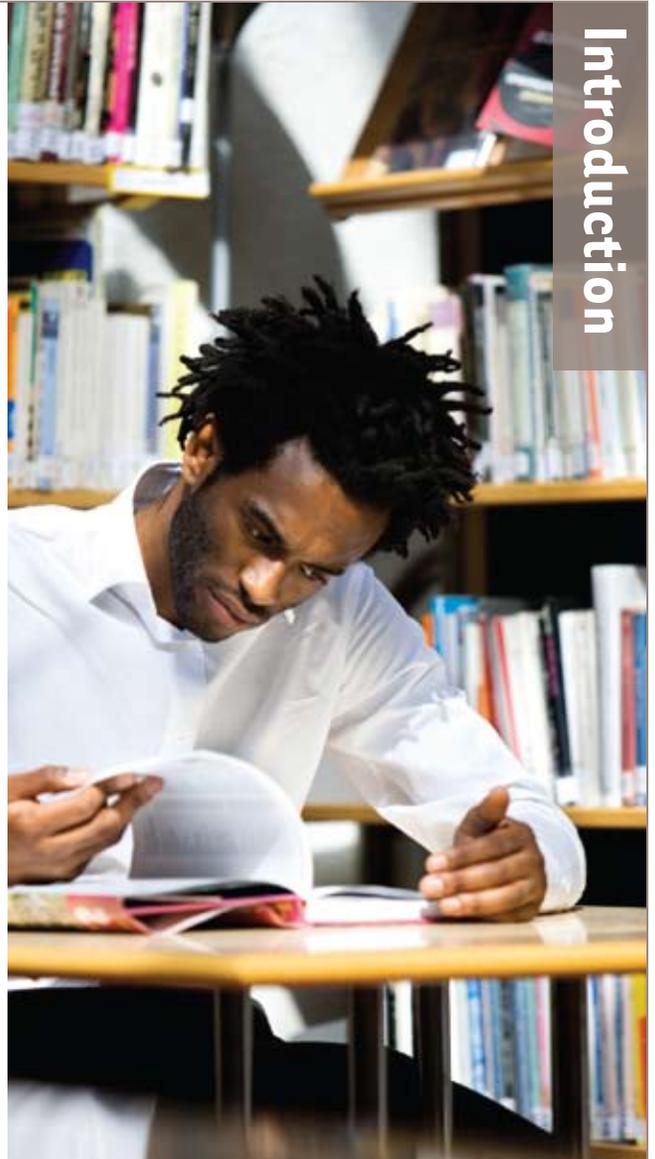
This white paper is designed to provide research-based responses to the following essential questions:

- **How are the 21st-century college/university and workplace changing? What are the implications for students?**
- **What does current educational research reveal about student success in higher education?**
- **What is the role of planning, organization, and self-management in promoting postsecondary student achievement?**

In addition, this report will align the answers to these questions with the design principles of the "onTRAC® Planning Process" published by School Specialty Planning & Student Development. We hope that readers will see the powerful connection between these materials and the preparation of every learner for success in the 21st Century school and workplace.

How are the The 21st Century College/University and Workplace changing?

In the face of breathtaking technological innovation, the explosion of information, and global interconnectedness, 21st-century postsecondary education and the modern workplace demand knowledgeable workers who are equipped for change, for shifting personal and group dynamics, and for self-management. Consider that the ten career fields predicted to grow the most by 2016 are what *Time Magazine* labels "High Tech, High Touch, High Growth" areas (*Time*, May 25, 2009, p. 40). These are arenas that require workers to be effective organizers, planners, and time managers.

According to *Beyond the Three Rs* (Partnership for 21st Century Skills, 2009): "Voters are clear: We are living in a different era that requires new thinking in our approach to educating our youth. 80 percent of voters say the things students need to learn today are different than 20 years ago. Six in 10 voters say our schools are not keeping pace with changing educational needs (p. 1)." The partnership—an internationally recognized organization whose aim is "to help students master the multi-dimensional abilities required of them in the 21st Century" (p. 1)—stresses the need for every student to acquire the ability to:

- **Think creatively** and **work creatively** with others;
- **Reason** effectively;
- Make **judgments** and **decisions**;
- **Solve** problems;
- **Access, evaluate, use,** and **manage** information;
- **Adapt to change** and be flexible;
- **Manage goals and time**, work independently, and be self-directed learners; and
- **Manage projects** and produce results
  (Partnership for 21st Century Skills 2008, pp. 3–7)

The 21st-century workplace requires individuals to be flexible, creative, self-directed, and self-managing (Secretary's Commission on Achieving Necessary Skills [SCANS], 1991; National Center on Education and the Economy, 2007; Kazis, Pennington & Conklin, 2003). According to these research studies, modern workers must be prepared to be effective in independent planning. They must also be well organized and manage time wisely—particularly when confronted with the challenges of potential information overload and the technological revolution that is transforming our collective approach to communication (Gerwitz, 2007).

Where do students entering college and university settings today stand in relationship to these competencies? Although longitudinal gains are evident in American students' basic reasoning and computation skills (National Assessment of Educational Progress [NAEP], 2008, 2009), American students still lag behind those in many other countries in such areas as practical reasoning, analytical and evaluative judgment, and authentic applications of knowledge and skills (Trends in International Mathematics and Science Study [TIMSS], 2007, 2008; NAEP, 2009; and Program for International Student Achievement [PISA], 2007). Critics contend that there is a clear and growing need to emphasize students' independent use of complex reasoning skills and related competencies, such as metacognition, self-assessment, and self-regulation—all of which are associated with the ability to plan, organize, and manage time and resources effectively.

As early as 1991, with the publication of the SCANS Report, social and economic critics have continued to assert that there is a fundamental disconnect between how schools and districts are preparing students for postsecondary education and jobs and the requirements of those settings. Numerous national and international comparison studies of student progress reaffirm the importance of direct instruction of advanced workplace competencies—*and the dire consequences of failing to do so.* Bridgeland, Dilulio, and Morrison (2006), for example, describe *The Silent Epidemic: Perspectives of High School Dropouts*—and the social, economic, and emotional consequences of unprepared and disengaged students. Belfield and Levin (2007) discuss *The Price We Pay: The Economic and Social Consequences of Inadequate Education*—and make impressive and unsettling suggestions about what will happen to the United States if graduates are not prepared for 21st-century realities. Similarly, the National Center on Education and the Economy (2007) proposes an essential dichotomy: *Tough Choices or Tough Times.* And the researchers Lichtenberg, Woock, and Wright (2008) ask, *Are Educators and Executives Aligned on the Creative Readiness of the U.S. Workforce?*
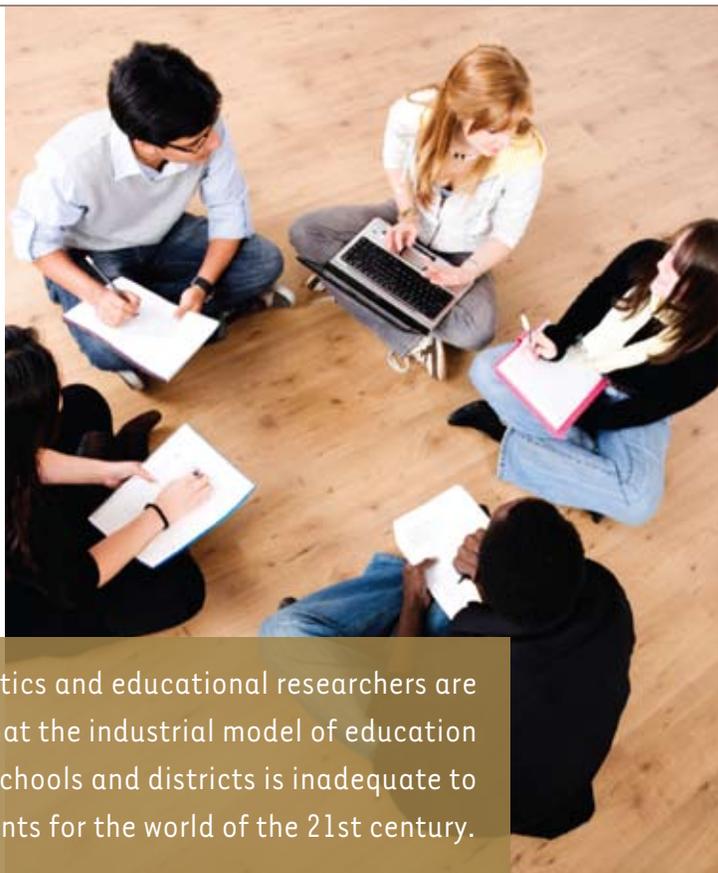
> A wide range of critics and educational researchers are unanimous in affirming that the industrial model of education still evident in many schools and districts is inadequate to prepare students for the world of the 21st century.

A wide range of critics and educational researchers are unanimous in affirming that the industrial model of education still evident in many schools and districts is inadequate to prepare students for the 21st century. Today's learner, for example, must be engaged actively and independently in the learning process (Bransford & Cocking, 2000). Constructivist, student-centered models of learning are replacing the didactic presentation of information and lecture-driven approaches to pedagogy. Robert J. Marzano, in his classic *Classroom Management that Works: Research-Based Strategies for Every Teacher* (2003), cites extensive research confirming the extraordinary value of teaching students what he calls "responsibility strategies, self-monitoring and control strategies, and cognitively-based strategies" (p. 78). Marzano affirms:

Marzano and many other prominent researchers (e.g., Piaget, 1928; Vygotsky, 1978; Bloom, 1956; Gardner, 1983) advocate engaging every learner in a *gradual release* of responsibility from the teacher to the student as students are taught to assume growing levels of self-management and self-regulation. According to Marzano (2003): "The research on the impact of teaching students strategies geared toward personal responsibility is strong. Positive results using self-regulatory techniques range from increasing competence in specific academic areas to increasing classroom participation" (p. 77). In effect, every student must learn to: (1) plan for success, (2) organize ideas and materials to achieve personal and academic goals, and (3) manage time and related resources in pursuit of both individual and shared aims and priorities.

> *The lack of attention paid to developing students' responsibility for their own behavior is probably a function of the fact that addressing this issue typically goes beyond the traditional duties of a classroom teacher... However, addressing student responsibility is a different order of magnitude than implementing rules and procedures, disciplinary interventions, and so on. It requires an extraordinary commitment—one that should be addressed thoughtfully. (p. 79)*
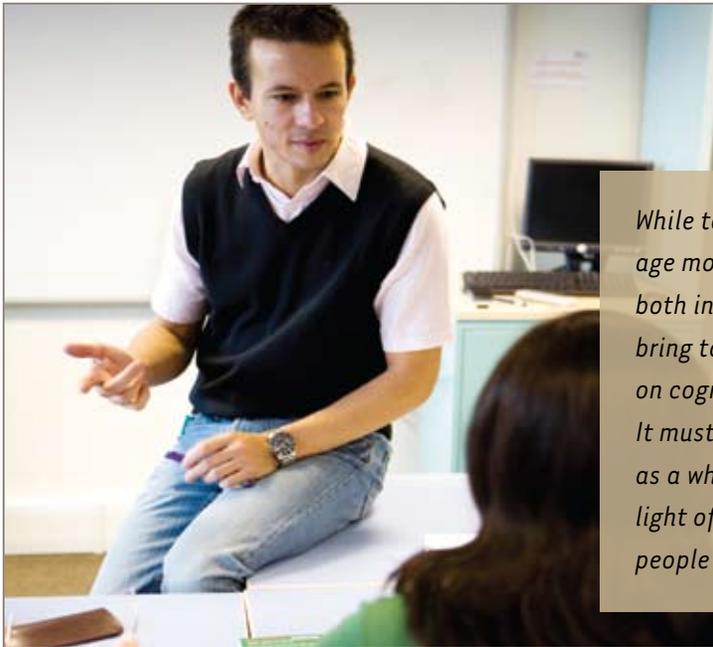
The need to address the startling changes the world is experiencing in the 21st century is powerfully summarized by the Partnership for 21st Century Skills (2008):

While today's schools show the influence of industrial and information age models, the 21st century modern school must appropriately employ both individualized and large scale approaches to assessment. It must bring together rigorous content and real world relevance. It must focus on cognitive skills as well as those in affective and aesthetic domains. It must be attentive to the needs of the individual child and to society as a whole.... At the same time, we can reinvigorate our schools in light of new opportunities in our world, and new understandings of how people learn. (p. 7)

Section One — What Can We Conclude?

1. The college/university and workplace of the 21st century require people who are equipped to use such competencies as complex reasoning, information analysis, problem solving, and decision making.

2. Currently, secondary schools often do not prepare students for the realities they will face when they enter postsecondary education and the job market in the 21st century.

3. Schools at all levels must directly incorporate into their curriculum, instruction, and assessment programs such 21st-century competencies as planning, organization, and time management.

What Does Current Educational Research Reveal About Student Success in Higher Education?

Given the importance of postsecondary education—especially in light of the challenges and demands of the 21st century workplace—it is useful to understand what current research suggests about the determinants of success in postsecondary educational settings. At the same time, it is somewhat disconcerting to consider the powerful and frequent lack of alignment between many students' high school experience and the demands of modern higher education. According to David T. Conley (2003):

What must students know and be able to do in order to succeed in entry-level university courses? It is a difficult question because admissions requirements only hint at what is actually expected once students reach college… Even the best, brightest and most diligent high school students who easily meet admissions requirements may find themselves struggling in entry-level courses. They may be eligible for admission and still not be prepared to succeed. (p. 8)

Perhaps the most significant aspect of the distinction between the experience of high school and that of higher education is the challenge—too often unmet—for students to *assume full* *and complete responsibility for their own learning process*. According to a study by the Educational Policy Improvement Center (Conley, 2007):

College is the first setting where we expect young people to function as adults, not large children…. The student-teacher relationship changes dramatically, as do expectations for engagement, independent work, motivation, and intellectual development…. It is not surprising that moving from high school to college is one of the most difficult transitions that many people experience during their entire lives. (p. 6)

As we examine the available statistics about student participation in remedial and tutorial programs during the freshman year of college, we begin to see the enormity of this problem. According to Conley (2007): "Although the precise number of students requiring remediation is difficult to ascertain, federal statistics indicate that 40 percent of admitted and enrolled students take at least one remedial course (National Center for Education Statistics, 2004), reducing dramatically their probability of graduating and costing up to

an estimated $1 billion per year (ACT, 2005b)" (p.10). The Education Policy Improvement Center (Conley, 2007) suggests that students who require such remedial services often lack four key determinants of college readiness:

1. **Key cognitive strategies** (e.g., intellectual openness, precision, and accuracy) (p. 13);
2. **Essential academic knowledge and skills** (e.g., writing, research, and core academic subject knowledge) (p. 14);
3. **Essential academic behaviors** (e.g., self-awareness, self-monitoring, and self-control) (p. 16); and
4. **Contextual skills and awareness** (e.g., understanding of the culture and norms of postsecondary settings) (p. 17).

How can we minimize barriers to postsecondary educational success for our high school graduates? How can we help a majority of graduates to succeed in higher education? Many recently published research reports reinforce the complexity and multifaceted demands of students' freshman year—including the cognitive, social, and emotional adjustments required of the first-year college or university student. Studies published by such organizations as the Association of American Universities, the Pew Charitable Trusts, and the College Board all confirm that students' intellectual dispositions, habits of mind, and capacity for self-regulation and self-management are among the determining factors in college or university success. The National Research Council (2002), for example, suggests: "College instructors are more likely [than high school teachers] to emphasize a series of key thinking skills that students typically do not develop extensively in high school" (cited in Conley, 2007, p. 6). These cognitive skills and processes include expectations that students will be able to:

- Make inferences;
- Interpret results;
- Analyze conflicting explanations of phenomena;
- Support arguments with evidence;
- Solve complex problems that have no obvious answers;
- Draw conclusions;
- Offer explanations;
- Conduct research;
- Engage in the exchange of ideas; and
- Generally think deeply about what they are taught.

Promoting students' capacity for self-management necessitates the direct instruction of complex cognitive skills and processes, including metacognition, self-assessment, planning, organization skills, and time management (Marzano, 2003). Educational psychology and learning theory in the 21st century increasingly reject the idea that learning is a mechanical process of rote memorization or mindless skills repetition (Bransford, Brown & Cocking, 2000). True learning actively engages the learner in constructing meaning, making personal connections, and moving toward automaticity (i.e., spontaneous use) and transfer of knowledge (Brooks & Brooks, 1993; Gardner, 1985).

Modern researchers such as Bransford, Brown, and Cocking provide powerful evidence for these assertions in their synthesis of contemporary educational research, *How People Learn: Brain, Mind, Experience, and School* (2000). This ground-breaking publication presents research-based learning principles that confirm the value of students' learning to plan, organize, and manage time successfully—and independently. Essentially, the learner must make sense of knowledge through ongoing inquiry and experience-based learning, using self-regulation and self-management skills to revise and refine both what he or she is learning and how he or she is learning it.

In light of a powerful body of educational research that confirms the need to place the learner first, the value of incorporating such skills as planning, organization, and time management into students' daily experience becomes clear. However, as the Partnership for 21st Century Skills *Framework* (2008) and many other major international reports assert (Belfield & Levin, 2007; Bridgeland, Dilulio & Morrison, 2006; TIMSS, 2007; Kazis, Pennington & Conklin, 2003; Learning First Alliance, 2001; National Center on Education and the Economy, 2007; PISA, 2007; NAEP, 2009):

For all that has been learned about learning, few schools have been able to fully incorporate this research into their instructional mission. Institutional structures are highly resistant to change and implementation is fraught with difficulty, especially in a system as decentralized as that of the United States. Ideological conflicts and diverse goals further complicate reform. Much of the recent emphasis on accountability in U.S. schools can be seen as an attempt to unite the two principal strands of U.S. educational policy—a quest for both excellence and equity—as well as a reliance on large-scale testing to measure progress toward these two worthy aims. To provide an excellent and equitable education for every child, schools must more effectively incorporate advances in learning science into educational practice.
(Partnership for 21st Century Skills, 2008, p. 6)

1. There is frequently a mismatch between students' high school experience and the requirements of 21st-century higher education.

2. The entering college or university freshman may be confronting adult responsibilities and the demands of independence for the first time.

3. Students' experience and proficiency in such habits of mind as self-regulation, critical thinking, and planning and organization can shape and define their potential for success in higher education.

4. By incorporating research-based principles into the design and delivery of their courses, secondary school teachers can greatly enhance students' readiness for higher education.

How Can Planning, Organization, and Self-management Promote Student Achievement in Higher Education?

Many research studies support the effectiveness of directly teaching planning, organization, and time-management skills (e.g., Bakunas & Holly, 2004; DiMartino & Castenada, 2007; Epstein, 2003; George et al., 2008; Reese, 2006). All of the studies cited here endorse four key unifying principles:

1. It is essential to create a school culture of high expectations that values such 21st-century competencies as organization and self-monitoring.

2. Educators must integrate self-management skills into every curriculum.

3. Research-based best practices will help students acquire, integrate, and use automatically such self-management skills as attaining goals, setting agendas, achieving deadlines and benchmarks, and organizing effectively to produce designated results.

4. All students should be encouraged to become metacognitive thinkers with the ability to track and adjust individual learning, ensure true understanding, and address the need for self-reflection and self-correction.

Planning, Organization, and Time Management as Key Elements of Academic Coursework in Higher Education

Conley (2003) and other recent studies reinforce the role of planning, organization, and time management skills in promoting students' success in postsecondary settings. Conley and others suggest that students must become proficient in key cognitive strategies, academic behaviors, and contextual skills and awareness. They must also develop expertise in foundational cognitive processes required by such core academic disciplines as English, mathematics, science, and social studies. Consider just a few of the research-based recommendations for required entry-level competencies during students' freshman year—and their implicit requirements for effective student planning, organization, time management, and self-regulation processes (Conley, 2003):

1. **English**: Students need the ability to understand "how personal experiences and values affect reading comprehension and interpretation ... [to be] comfortable formulating and expressing their own ideas ... [to know how to] support arguments with logic and evidence ... understand fully the scope of their arguments and the claims underlying them ... [and] reflect on and assess the strengths and weaknesses of their ideas and the expression of those ideas" (p. 27).
   - *Implications for Planning, Organization, and Self-Management: Successful students in English courses demonstrate metacognitive awareness, a capacity for self-regulation, and the ability to plan written and oral forms of expression that support original ideas and insights.*

2. **Mathematical Problem Solving**: "Successful students understand the process of modifying, adapting and combining mathematical tools to find new ways to reach a solution. They also need to question results until they can explain their answers and defend them" (p. 30).

   - *Implications for Planning, Organization, and Self-Management: Successful students in mathematics courses demonstrate a capacity for thinking beyond the algorithm or formula. They express a capacity for self-regulated and carefully planned approaches to solving problems elegantly and efficiently.*

3. **Natural Sciences**: Students should be adept at integrating scientific methods and contextual understanding, critical thinking, and hands-on skills. They should have demonstrated the capacity for experimental thinking and an understanding that experimentation is an inherent part of the scientific process. They should know how to design and conduct an experiment; and they should generate and weigh new options and questions as a result of the inquiry they undertake (pp. 39-40).

   - *Implications for Planning, Organization, and Self-Management: [Successful students in the natural sciences understand that]* "persistence is vital in the quest for solutions.… [and] beyond good study skills, successful entry-level students take responsibility for their own education. They structure and manage time according to course expectations" (p. 41).

4. **Social Sciences**: "In addition to reading and research, note-taking is an important part of college-level study.… Students need to know that taking notes is a learning process in itself. Successful students decide whether a piece of information is important or relevant before they write it down.… They know how to prepare an outline with coherent sections and subsections and understand how this exercise relates to organizing the information they collect, either from lectures or other sources" (p. 57).

   - *Implications for Planning, Organization, and Self-Management: Successful students in social science courses have the ability to critique and evaluate information, synthesize that information by discovering patterns and big ideas, and plan strategically for using that information to enhance their understanding of the content they study.*
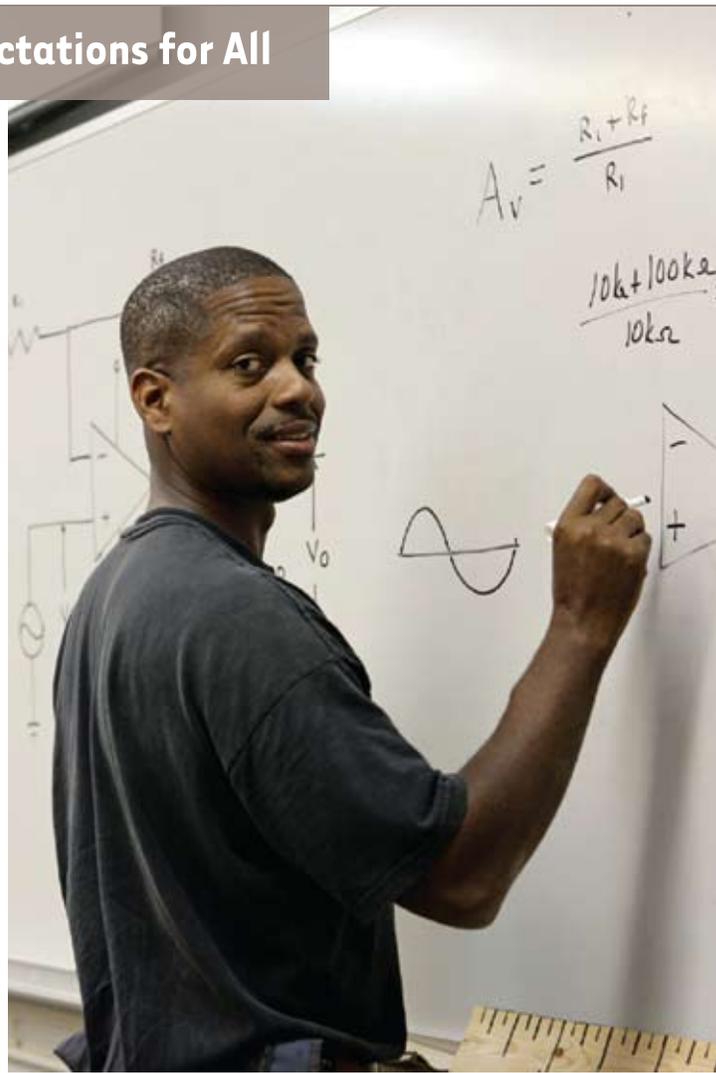
As the SCANS (1991) report suggests, direct and regular experiences with these skills and intellectual dispositions ensure that every learner will maximize opportunities for postsecondary success. Planning, organization, and time management are critical in numerous arenas. Consider key elements of teamwork, for example. Students are successful members of a team when they can: (1) contribute to the group with ideas and effort; (2) do their own share of work; (3) encourage other team members; (4) resolve differences for the benefit of the team; and (5) be capable of challenging existing procedures, policies, or authorities (SCANS Skills, p. 1). Similarly, in terms of self-management, all students should be able to: (1) assess their own knowledge and skills accurately; (2) set specific realistic personal goals; and (3) monitor progress toward those goals (SCANS Skills, p. 2).

Using Research-Based Instructional and Assessment Practices to Reinforce All Students' Planning, Organization, and Time-Management Skills

What does the research tell us about instructional and assessment practices that successfully reinforce all students' ability to plan, organize, and manage their time to achieve desired results? As suggested in previous sections of this report, there is unanimous support for the following key educational principles:

1. The learner must be at the center of his or her own learning process, encouraged to acquire the capacity for self-management and self-regulation and to discover and understand patterns and connections (Piaget, 1928; Vygotsky, 1978; Bransford, Brown & Cocking, 2000).
   - *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: The direct and sustained teaching of planning, organization, and time-management skills promotes self-management and student ownership of the learning process.*

2. The learner must construct meaning and internalize knowledge and skills with a growing level of internal understanding, independent application, and transfer (Dewey, 1980; Gardner, 1983; Marzano, 2003; Vygotsky, 1978).
   - *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Learning to plan effectively enhances students' ability to make sense of their world and experience—and promotes autonomy, efficacy, and independence.*

3. Students must understand both the learning goals for which they are responsible and how they will be evaluated (including self-monitoring and self-evaluation) as they learn (Marzano, 2003; Marzano & Brown, 2009).
   - *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Planning and its related learning goals of organization and time management should be incorporated into daily classroom instruction and articulated as part of lesson objectives.*

4. Students need daily criterion-based feedback and related coaching to ensure that they adjust their learning process and progress toward proficient and advanced levels of transfer (Reeves, 2002; Tomlinson & Allan, 2000; Marzano & Brown, 2009).
   - *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Rubrics, checklists, and scoring tools should be designed and used to help students understand the range of competency levels associated with planning, organization, and time-management skills at each grade level and within each content area.*

5. Students need direct and ongoing involvement to move along a learning continuum, from initial acquisition of core skills and knowledge toward growing levels of constructed meaning and independent transfer (Tomlinson & Allan, 2000; Vygotsky, 1978; Resnick & Hall, 1998; and Sylwester, 1995).
   - *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Planning, time management, and organization should be viewed as evolving and iterative processes requiring horizontal (within grade level), vertical (across grade levels), and spiraling (growing levels of proficiency and autonomous use) gains as students progress across grade levels and content areas.*

6. Ultimately, true learning occurs when students understand deeply what they are learning—and its connections to the world beyond the classroom. Understanding manifests itself in complex behaviors such as explanation, application, interpretation, and self-knowledge (Wiggins & McTighe, 2000).
   - *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Planning, organization, and time management should become essential learning goals and criteria in transfer tasks and performance-based projects requiring students to demonstrate autonomous, independent applications of planning skills.*

7. The more engaging and authentic the learning experience, the greater the likelihood students will retain the information or skills being taught. Therefore, experiential learning, inquiry-based investigations, and authentic cornerstone assessment tasks should be used to help the learner construct meaning and transfer learning (Marzano & Brown, 2009).

- *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Students need coaching and ongoing instructional support to understand the meaning and value of planning, organization, and time management as essential life skills and habits of mind.*

8. Learning is maximized when students are aware that their instructors and parents or guardians have high expectations for them and when those figures reinforce students' sense of personal efficacy (Marzano & Brown, 2009).

- *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Teachers, parents, guardians, and other family members need to model effective planning, organization, and time-management skills, reinforcing their importance to students as they mature and move into postsecondary education and the world of work.*

9. Effective college and career preparation inevitably involves all key stakeholders in providing a comprehensive support network to ensure that no student "falls through the cracks" and that *all* students perceive themselves as having potential for postsecondary success (Michaels & Ferrara, 2006).

- *Implications for Teaching Planning-Related Competencies to Promote Student Success in Higher Education: Classroom-based, school-based, and external (i.e., cross-institutional) early intervention programs need to emphasize the importance of teaching students to become effective planners, organizers, and time managers—including mentoring and tutorial programs that ensure that every student acquires and uses planning skills and competencies.*

These learning principles, research-based conclusions, and implications for teaching align powerfully with the commitment to helping all students become effective planners. In "Teaching Organizational Skills," for example, Bakunas and Holly (2004) reinforce the notion that such skills are not acquired spontaneously or magically. Instead, they require direct instruction and need to be integrated into daily classroom instruction: "One way is to teach organizational skills just as [teachers] would teach writing or computation skills. Explain and demonstrate what students are to do, provide plenty of opportunities for practice, and give necessary feedback" (p. 92).

Time management and the related skills of planning and organization are also consistently referenced in course materials and studies on student success in college or university settings. For example, these skill sets are addressed by Dave Ellis in his freshman seminar text, *Becoming a Master Student* (2007). In the research study "Time Diary and Questionnaire Assessment of Factors Associated with Academic and Personal Success Among University Undergraduates" (George et al., 2008), the authors conclude:

> The greatest predictors of GPA were *time management skills*, intelligence, *time spent studying*, computer ownership, *less time spent in passive leisure*, and a healthy diet. Predictors of Personal Success scores were clearly *defined goals*, overall health, personal spirituality, and *time management skills*. Predictors of Total Success scores were *clearly defined goals, time management skills, less time spent in passive leisure*, healthy diet, waking up early, computer ownership, and *less time spent sleeping*.
> (pp. 706–715, italics added)

As the italicized phrases suggest, the capacity for self-management via planning, organization, and time management continues to stand out as a nonnegotiable building block for postsecondary success. We find similar conclusions in a host of other related studies, including Gordon, Couture & Drefs (2000), DiMartino & Castaneda (2007), and Michaels & Ferrara (2006). Here is a brief sampling of their conclusions about the significance and impact of planning, organization, and time-management skills:

- Students and parents felt that the highest degree of need fell within the life-planning skills area. School staff, on the other hand, reported that the life-planning subscale was the least important area of need and scored self-management as the top need for the students they taught. (Gordon, Couture & Drefs, 2000)

- A recent employer survey sponsored by the Partnership for 21st Century Skills found that the skills new job entrants most need for success in the workplace—oral and written communication, time management, critical thinking, problem solving, personal accountability, and the ability to work effectively with others—are the areas in which recent high school and college graduates are the least well prepared. (DiMartino & Castaneda, 2007)

- Successful collaboration and problem solving are the foundational processes on which meaningful transition plans are constructed.… Person-centered planning is an ideal vehicle for promoting collaboration and problem solving to ensure that transition plans are created that are meaningful and student centered. (Michaels & Ferrara, 2006)

Section Three — What Can We Conclude?

1. Instructing every student in planning, organization, and time-management skills can promote a culture of high expectations and enhance college/university success.

2. Students benefit enormously from the integration of planning, organization, and time-management skills into the curricula they study.

3. Incorporating research-based best practices into instructional and assessment programs will ensure that every student is monitored and coached to master skills related to planning, organization, and time management.

How Does School Specialty Planning & Student Development Support Student Success?

School Specialty Planning & Development has developed materials to help educators and students in higher education improve planning, organization, and time-management skills. In line with current research, higher education materials focus on the student and place him or her at the center of the learning process.

The central component of these materials is a student planner that uses the onTRAC® planning process, which incorporates research-based principles that address the unique challenges of students in postsecondary education, especially those in their first year. The process is inquiry-based and student-centered, encouraging learners to become self-reflective as they plan to achieve articulated goals; acquire needed resources; and strategically achieve benchmark goals and deadlines in academic coursework, extracurricular activities, and career planning.

Within the Compass Planner's weekly calendar pages, the onTRAC® Planning System organizes planning into logical and transparent steps that can help every student plan, organize, and manage time more successfully. Perhaps most significantly, onTRAC® addresses the need to separate out planning and problem-solving, competencies required for students' success in any college or university setting.

By using the onTRAC® system, students reinforce effective organizational habits. Planning and organization become lifelong dispositions (i.e., habits of mind) that form an increasingly significant and automatic part of the learner's intellectual toolkit by using a student planner embedded with the onTRAC® planning steps, students extend and refine their ability to acquire, internalize, and transfer a coherent approach to planning that helps them systematically set goals and successfully manage daily assignments and long-term projects.

The "50 Tips: Planning for College Success" resource places information in the hands of students and then leads them through an assessment process structured both to guide and to jump-start students' responsibility for their learning. Similarly, the SKINNY ON™ series provides student-centered guides that address topics such as fortitude, self-management, finances, and healthy lifestyle. Through self-reflection and self-assessment, using reminders and web links, these guides encourage students to take initiative.

In support of students' preparation for the world of 21st-century postsecondary education and career pathways, the onTRAC® Planning Process and the resource materials available from School Specialty Planning & Student Development can help students, educators, and other stakeholders to address the following long-range priorities.

For students, these materials provide support as they:

1. study and plan;
2. set goals;
3. prepare for careers;
4. manage their time and balance their lives;
5. make wise choices about health and safety;
6. handle the academic and personal demands of higher education.

OnTRAC® materials can help students use a planning process that they can carry with them as an internal cognitive template as they work through the variety of problems, decisions, and challenges they encounter both within and outside of school.

For educators in higher education, these resources can reinforce the paradigm of teaching and learning as a planning and problem-solving process. By using the materials, teachers can help students extend and refine their use of skills related to planning, organization, self-reflection, and self-management. These competencies are important in the classroom and in daily life.

For developers of educational programs, these materials can be incorporated into the design of orientation, tutorial, and instructional programs. These resources can be especially useful in first-year student orientation programs, including traditional orientation programs, service experiences, common reading programs and freshman seminars, and extended and outdoor education programs (Skipper et. al, in press). The information and skill development provided by these resources support student success and address issues important on today's campuses, such as academic achievement, student engagement, career planning, student retention, and campus safety.

The ultimate goal of these rich and varied resources is to provide principle-based models and strategies that can reinforce students' lifelong use of intellectual dispositions and habits of mind—the essential building blocks of success in the 21st century educational and workplace arenas. Planning, organization, and time-management skills are the foundation for success in school, in work, and in life.

Section Four — What Can We Conclude?

1. School Specialty educational materials powerfully reflect research-based conclusions and instructional design principles, including the principle that students who are effective planners are effective problem solvers.

2. School Specialty educational programs and materials reflect coordinated and aligned components that reinforce students' sense of connection, authenticity, and efficacy.

3. The School Specialty onTRAC® planning process can enhance students' ability to plan, organize, and manage time—the building blocks of success in the 21st century.

References

ACT. (2005a). Average national ACT score unchanged in 2005: Students graduate from high school ready or not. Iowa City: ACT.

ACT. (2005b). Crisis at the core: Preparing all students for college and work access. Iowa City: ACT.

Altman, A., Fox, J., Goldberg, S., & Villano, M. (2009). High tech, high touch, high growth. Special Report: The way we'll work. *Time* (May 25), 39-40.

Bakunas, B., & Holly, W. Teaching organizational skills. (2004). *Clearing House* 77 (3), 92.

Belfield, C.R. & Levin, H. M. (eds.). (2007). *The price we pay: Economic and social consequences of inadequate education.* Washington, DC: Brookings Institution Press.

Bloom, B.S. (ed.). (1956). *Taxonomy of educational objectives: The classification of educational goals.* New York: Longmans, Green.

Bransford, J., Brown, A., & Cocking, R. (eds.). (2000). *How people learn: Brain, mind, experience, and school.* Washington, DC: National Academies Press.

Bridgeland, J.M., DiIulio, J.J., & Morrison, K.B. (2006). *The silent epidemic: Perspectives of high school dropouts.* Washington, DC: Civic Enterprises.

Brooks, J.G., & Brooks, M.G. (1993). *The case for constructivist classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.

Conley, D. (2003). *Understanding university success: A project of the Association of American Universities and the Pew Charitable Trusts.* Eugene, OR: Center for Educational Policy Research.

Conley, D. (2007). *Redefining college readiness* (vol. 3). Eugene, OR: Educational Policy Improvement Center.

Dewey, J. (1980). *The school and society.* Carbondale: Southern Illinois University Press.

DiMartino, J., & Castaneda, A. Assessing applied skills. (2007). In *Educational Leadership*, 64 (7), 38-42.

Ellis, D. (2007). *Becoming a master student*, 12th ed. Belmont, CA: Cengage Learning.

Epstein, A.S. (2003). How planning and reflection develop young children's thinking skills. *Beyond the Journal.* Retrieved May 14, 2006, from the National Association for the Education of Young Children.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.

Gardner, H. (1985). *The mind's new science.* New York: Basic Books.

George, D., Dixon, S., Stansal, E., Gelb, S.L., & Pheri, T. (2008). Time diary and questionnaire assessment of factors associated with academic and personal success among university undergraduates. *Journal of American College Health*, 56 (6), 706-715.

Gewertz, C. (2007). Soft skills in big demand. In Ready for what? Preparing students for college, careers, and life after high school. *Ed Week*, June 12.

Gordon, T.R., Couture, S.J., & Drefs, M.A. (2000). Career- and life-planning needs of children and adolescents. Paper presented at the Annual National Consultation on Career Development, Ottawa, Ontario, Canada, January 24-26.

Kazis, R., Pennington, H., & Conklin, K.D. (2003). *Ready for tomorrow: Helping all students achieve secondary and postsecondary success—A guide for governors.* Washington, DC: National Governors Association Center for Best Practices.

Kerachsky, S. (2009). Commissioner's remarks: National Assessment of Educational Progress (NAEP). US Department of Education, National Center for Education Statistics. www.Nces.ed.gov/whatsnew/commissioner/remarks2009.

Learning First Alliance (2001). *Every child learning: Safe and supportive schools.* Washington, DC: Learning First Alliance.

Lichtenberg, J., Woock, C., & Wright, M. (2008). *Ready to innovate: Are educators and executives aligned on the creative readiness of the U.S. workforce*? New York: Conference Board.

Marzano, R.J. (2003). *Classroom management that works: Research-based strategies for every teacher.* Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R.J., & Brown, J.L. (2009). *A handbook for the art and science of teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Michaels, C.A., & Ferrara, D.L. (2006). Promoting post-school success for all: The role of collaboration in person-centered transition planning. *Journal of Educational & Psychological Consultation*, 16 (4), 287-313.

National Assessment of Educational Progress (NAEP). Washington, DC: US Department of Education, National Center for Education Statistics. Annual publication.

National Center for Education Statistics. (2004). *Conditions of education 2004.* Washington, DC: US Department of Education.

National Center on Education and the Economy. (2007). *Tough choices or tough times: The report of the new commission on the skills of the American workforce.* San Francisco: Jossey-Bass.

National Research Council. (2002). *Learning and understanding: Improving advanced study of mathematics and science in U.S. high schools.* Washington, DC: National Academies Press.

Olson, L. (2007). What does "ready" mean? In: Ready for what? Preparing students for college, careers, and life after high school. *Ed Week* (June 12).

Partnership for 21st Century Skills. (2008). The intellectual and policy foundations of the 21st century skills framework. www.21stcenturyskills.org.

Partnership for 21st Century Skills. (2009). Beyond the three Rs: Voter attitudes toward 21st century skills. www.21stcenturyskills.org.

Piaget, J. (1928). *The child's conception of the world.* London: Routledge and Kegan Paul.

Program for International Student Achievement (PISA) (2007). *Highlights from PISA 2006: Performance of U.S. 15-year-old students in science and mathematics literacy in an international context.* Washington, DC: US Department of Education.

Reese, S. (October 2006). Helping your students manage their time. *Connecting education and careers*, 81 (7), 21.

Reeves, D.B. (2002). *Making standards work: How to implement standards-based assessments in the classroom, school, and district.* 3rd ed. Englewood, CO: Center for Performance Assessment.

Resnick, L., & Hall, M.W. (1998). Learning organizations for sustainable educational reform. *Daedalus: The Journal of the American Academy of Arts and Sciences*, 127 (4), 89-118.

Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). What work requires of schools: A SCANS report for America 2000. Washington, DC: US Department of Labor.

Skipper, T. L., Latino, J., Moody, B., & Weigel, D. (In press). Extensions of traditional orientation programs. In J. Ward-Roof (ed.), *Designing successful transitions: Orienting students to college* (3rd ed.). Columbia: University of South Carolina, National Resource Center for the First-Year Experience & Students in Transition.

Sylwester, R. (1995). *A celebration of neurons: An educator's guide to the human brain.* Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C.A., & Allan, S.D. (2000). *Leadership for differentiating schools and classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.

Trends in International Mathematics and Science Study (TIMSS, 2007). Washington, DC: US Department of Education, National Center for Education Statistics.

Trends in International Mathematics and Science Study. (2008). *Highlights from TIMSS 2007: Mathematics and science achievement of U.S. fourth- and eighth-grade students in an international context.* Washington, DC: US Department of Education.

Vygotsky, L. (1978). *Mind in society: Development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Wiggins, G., & McTighe, J. (2000). *Understanding by Design.* Alexandria, VA: Association for Supervision and Curriculum Development.