

## Illinois Learner Competencies Working Group

Developing Learner
Competencies for
Use in a Competency-Based
Education System

**Guidance Document 1.0** 

September 2018





## **Learner Competencies Working Group (LCWG)**

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## **Acknowledgments**

The contents of this guidance document are the product of a collaboration among Learner Competencies Working Group members, an informal, collaborative body convened by the Illinois State Board of Education (ISBE) Office of Innovation and Secondary Transformation in February 2018. The group includes Illinois competency-based education pilot sites (Huntley, Ridgewood, and Round Lake), ISBE staff, Center for Innovations in Learning, the Midwest Comprehensive Center, and collaborating field experts.

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# **Developing Learner Competencies for Use in a Competency-Based Education System: Guidance Document 1.0**

This guidance document is organized into three sections:

- 1. An overview of the CBE pilot, overview of CBE implementation components, and definitions of key CBE terms and concepts
- 2. Detailed guidance on ways to get started developing learner competencies and associated frameworks
- 3. Advice from early implementers and resources to support designing of learner competencies and frameworks

## 1. Purpose/Overview

The purpose of this guidance document is to provide pilot sites in Illinois with initial guidance for developing academic and adaptive learner competencies as part of implementing a competency-based education (CBE) system. The document was created through the collaborative efforts of the members of the Illinois Learner Competencies Working Group (LCWG) based on their early experiences with pilot sites and key CBE national experts and advisers. This guide should be considered a "living document," one that will change and grow over time to encompass concepts and lessons learned from other districts as they transition from traditional school environments to a CBE system.

In contrast to an education model focused on "seat time" (the amount of time a child spends in a classroom), a CBE model awards students credit once they have demonstrated mastery of broad competencies necessary for postsecondary success. Credit based on demonstrated mastery is one of the most common features of CBE, but a CBE approach is comprised of much more. A CBE approach aims to transform teaching and learning in multiple areas. An outline of four guideposts for CBE implementation is included on pages 2–3 under "Key CBE Terms and Concepts." This document provides guidance specifically on one core CBE feature: **designing learner competencies to ensure students' postsecondary and career success.** 

## Illinois Postsecondary and Workforce Readiness Act and CBE Pilot

In Illinois, the *Postsecondary and Workforce Readiness* (PWR) *Act* (110 ILCS 148<sup>i</sup>) has set the stage for piloting and growing CBE systems in schools and districts. The PWR Act establishes a voluntary pilot program for school districts transitioning from "seat time" graduation requirements to competency-based high school graduation requirements. The act outlines a streamlined process whereby pilot districts may petition the State Superintendent of Education for a waiver or modification of laws and regulations that may restrict implementation of the competency-based system. (See Appendix A for more background on the PWR Act.)

The PWR Act enables each district participating in the pilot to select the years and the course graduation requirements the district wants to replace with a CBE system. Districts apply for participation through an initial Request for Application, which requires a demonstration of commitment among a school district, higher education partners, and community leaders. Once accepted into the pilot, school districts must then develop a detailed plan for their CBE system.

School districts participating in the pilot must demonstrate the proposed CBE system represents a core strategy which supports community efforts to better prepare students for college, career, and life. With this overarching framework, the PWR Act requires the inclusion of six elements in a CBE system, outlined in Table 1.

#### Table 1: Required Elements of a Competency-Based Education System

- 1. Students must demonstrate mastery of all required competencies to earn credit. In a competency-based education system, competencies represent students' learning goals, including the application of that learning.
- 2. Students must demonstrate mastery of adaptive competencies defined by the school district in addition to academic competencies. Adaptive competencies are foundational skills needed for success in college, career, and life, such as work ethic, professionalism, communication, collaboration, and problem solving.
- 3. Students advance once they have demonstrated mastery. Students must receive more time and personalized instruction, if necessary, to demonstrate mastery.
- 4. Students have the ability to attain advanced postsecondary education and career-related competencies beyond those needed for graduation.
- 5. Students must be assessed using multiple measures to determine mastery, usually requiring application of knowledge.
- 6. Students must be able to earn credit toward graduation requirements in ways other than traditional coursework, including learning opportunities outside the traditional classroom setting.

Finally, the PWR Act directs ISBE to provide technical assistance and support to school districts in the pilot program, including peer-to-peer coaching models and materials and supports to help develop competency statements.

#### **Key CBE Terms and Concepts**

CBE is a term used to refer to an array of approaches designed to set a high bar for learning while offering students greater flexibility and support. Those working toward fully implementing a CBE model typically strive to implement the following four core elements<sup>ii</sup>:

1. **Learning goals.** Educators in CBE settings establish a set of learner competencies which represent broad and rigorous learning goals designed to ensure students' postsecondary success. CBE systems establish learning goals in both academic and nonacademic areas, such as problem solving and communication, that cut across academic disciplines. These skills are important not only for supporting transitioning to the workplace but also because they can support independent thinking, a higher level of academic achievement. These learning goals and performance standards are transparent (i.e., communicated openly to students).

- 2. **Learning strategies and supports.** Educators in CBE settings recognize that traditional one-size-fits-all, teacher-led instruction will not adequately prepare students for postsecondary success. Those working toward implementing a CBE model offer students greater flexibility, more varied learning opportunities including work-based learning and more personalized supports. Educators in a CBE system aim to capitalize on students' individual strengths and interests while addressing personal areas of challenge.
- 3. **Measurement of learning.** Educators in CBE settings devise assessments that can inform teaching and learning and more authentically capture student's mastery of learning competencies and further needs. Educators offer students more frequent, learner-focused feedback and formative assessment to inform learning and promote mastery, and they encourage students to assume greater ownership of and responsibility for their own learning and progress. Students may be offered multiple options for assessment in a CBE model, enabling them to demonstrate competency through application, or by making learning visible.
- 4. **Learning recognition, progression, and pathways.** Students in a CBE system earn credit and advance upon mastery of required competencies.

These four core CBE features serve as guideposts for districts, schools, and educators who employ a variety of approaches to achieve these goals. This document provides guidance specifically on one core CBE feature: designing learner competencies to ensure students' postsecondary and career success.

This LCWG document contains several key terms and concepts foundational to understanding CBE, along with information on creating competency statements, associated frameworks, and guidance for implementing CBE systems. These terms are highlighted in boldface, explained in the text, and defined in the glossary presented in Table 2.

Table 2. A Glossary of Key Competency-Based Education Terms

Key Term	Definition
Competency	The Learner Competencies Working Group has defined <i>competencies</i> as "broad, overarching concepts supported by clusters of standards that can be applied across disciplines as well as outside the classroom." CBE experts have created similar definitions of competency. For instance, Building 21, a national network of CBE schools, describes competencies which are "essential skillsets of postsecondary success," written in "student-facing language," so students can see what success in all components look like. National CBE expert and author Rose Colby notes in her book <i>Competency-Based Education: A New Architecture for K–12 Schooling</i> that a competency encompasses several standards and "is meant to be a higher-order demand" on students' thinking. <sup>iv</sup>

Key Term	Definition
Competency framework	A <i>competency framework</i> describes all the components of a competency, including the competency statement and the elements that support the statement, as well as the clusters of standards it represents, the key skills students are required to demonstrate, and a set of performance indicators along a progression of increasing complexity for demonstrating mastery (including increasing levels of cognitive demand).
Competency statement	Competencies are summarized in a brief <i>competency statement</i> , or a written description of an enduring concept (or big idea) that describes an applied or transferable use of these key concepts and skills. Competency statements may represent learning within a specific academic discipline, across multiple disciplines, or outside of academic disciplines. (Such as problem solving.)
Performance indicator	Performance indicators are the specific, concrete descriptors that serve as benchmarks for determining the level of a student's learning for each skill area as he or she progresses along a continuum toward postsecondary readiness. These indicators are written in student-facing language that enables students and educators to know which skills and behaviors are required of students to demonstrate mastery. Performance indicators typically are written as "I can" statements and are demonstrated through performance tasks. In some districts, the term performance indicator is used to refer to a cluster of learning targets written as "I can" statements. Performance indicators can guide teachers in scoring student performance tasks and can help educators provide clear, constructive feedback to students.
Learning progression	The term <i>learning progression</i> refers to the description <sup>1</sup> within a competency framework of how students' demonstrations of learning must involve increasing complexity over time, particularly in deepening and broadening their understandings of a big idea (enduring concept) represented by a competency statement or framework. Each competency has its own continuum that describes in detail for teachers and students the <i>progression</i> of learning toward postsecondary readiness.

the same areas over time.

<sup>&</sup>lt;sup>1</sup> Our use of the term *learning progression* is similar but not identical to the use of the term *continu*a by Building 21, who define criteria as not only a tool for scoring student work but also a common set of student-facing descriptions that illustrate for students what success looks like at each level of performance and that remain constant across years and traditional grade levels, so that work is vertically aligned and students are consistently increasing their skills in

Key Term	Definition
Adaptive competencies	As defined in the PWR Act, <i>adaptive competencies</i> are the "foundational skills necessary for success in college, careers, and life, such as, but not limited to, work ethic, professionalism, communication, collaboration and interpersonal skills, and problem-solving." Adaptive competencies are the nonacademic knowledge, skills, and dispositions that learners need to address novel and complex problems. Adaptive competencies are known by a wide variety of terms, including <i>cross-disciplinary employability skills</i> , <i>social-emotional skills</i> , <i>habits of success</i> , <i>personal success skills</i> , and <i>21st century skills</i> .

### What Is a Competency?

The breadth and nature of learning goals in a CBE system differ from the targets established in traditional educational settings. As noted in the opening section, demonstrating competency means not only mastering core academic concepts but also displaying cross-disciplinary skills, such as analytical thinking, problem solving, and the capacity to transfer learning to novel contexts or problems. The term competency, therefore, refers to the notion that students possess the necessary capabilities to succeed in college, career, and life.

Competency is a broad term with definitions varying somewhat among CBE experts, states, and districts across the country. Members of the LCWG shared local definitions of competency, reviewed sample definitions from multiple sources, and collectively developed the definition of learner competency displayed in Table 3.

#### Table 3. Definition of Learner Competency Developed by Illinois Working Group

A **learner competency** is a broad, overarching concept supported by a cluster of standards that can be applied across disciplines and outside the classroom.<sup>vi</sup>

#### **Components of Learner Competencies**

As shown in Exhibit 1a, a competency framework — and its constituent elements — can be conveyed through the analogy of an umbrella.<sup>2</sup> Members of the LCWG chose this umbrella analogy to illustrate their belief about the core components of a competency.

The **canopy** of the umbrella illustrates a **competency statement** can be viewed as an overarching concept that reflects what students should know and master to be prepared for postsecondary or career success. Competency statements and associated frameworks should be aligned with industry and higher education performance expectations and readiness standards. In the same way that quality courses are constructed, a backward design is recommended. The LCWG suggests staff in CBE pilot sites tasked with developing competency statements should first consider how the school, district, community, and state define the profile of a high school graduate and align the competency statements with those values.

<sup>&</sup>lt;sup>2</sup> This analogy was developed by Andrea Stewart, competency design lead for the Competency Collaborative of the Iowa Department of Education. Ms. Stewart is currently the director of The Center, a coalition of area education agencies, districts, institutions of higher education, and local education organizations.

The **ribs** of the umbrella show that each competency statement is derived from and supported by clusters of specific learning standards. Multiple standards (potentially from different disciplines) are typically used to support an overarching competency statement which encompasses a wider set of knowledge and skills. This approach differs from a standards-based approach wherein educators define learning based on measuring mastery of individual learning standards. A similar approach is used in a CBE system to define adaptive competencies such as collaboration and communication skills, or for technical competencies such as health sciences. For these adaptive competency areas, the ribs of the umbrella represent the clusters of performance standards or subcompetencies that make up the broader technical or adaptive competency area.

Educators who build instruction around competencies plan for students to demonstrate learning by showing what they know and can do. In the umbrella metaphor, these criteria are represented by the **spreader** that describes the **performance indicators** in the competency framework. Performance indicators (i.e., "I can" or "Students can" statements) are in place to describe for educators *and* students what successful demonstration of a competency looks like. These performance indicators scaffold the learning toward demonstrating mastery of the competency. (See Exhibit 1b.)

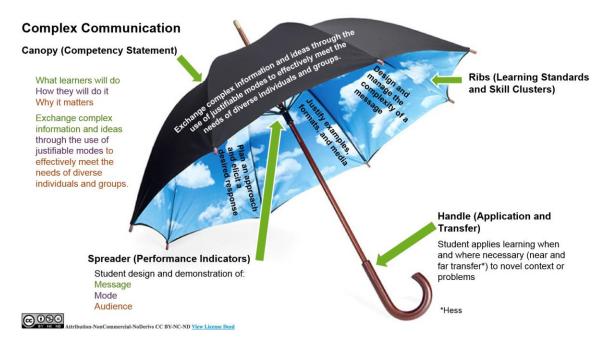
Finally, the umbrella **handle** illustrates that each competency should represent how the student can transfer the competency across disciplines and apply his or her learning to a variety of problems and contexts both within and outside of the classroom, including work-based and community settings. This is typically referred to as *far transfer*. An umbrella illustrating a particular competency statement is shown in Exhibit 1b.



Exhibit 1a. Umbrella Metaphor for Illustrating Student Competency

Source: Stewart, A. (2018, February). Cross-State Conversation Series Presentation

Exhibit 1b. An Umbrella Metaphor for Illustrating Student Competency in a Specific Academic Discipline, Complex Communication



Source: Stewart, A. (2018, February). Cross-State Conversation Series Presentation

## **Characteristics of Competencies: FAQs**

The Learner Competencies Working Group offers the following frequently asked questions (FAQs) and responses to help address common questions and misconceptions about developing competencies.

What is the difference between academic standards and academic competencies? Standards define the content and skills of a discipline. Academic competencies represent broader concepts and skills that encompass clusters of learning standards. Competencies take traditional standards, combine them to capture a smaller number of big ideas and essential concepts, and put these big ideas into student-facing language. This allows for transparency, student agency, and personalized learning. The grouping of standards into competencies also necessitates that students integrate and apply their learning to solve a wide range of problems. Academic competencies are rigorous, aligned to standards, concept-based, and assessable. In this case, rigor refers to the complexity of content, the cognitive engagement of that content, and the depth and scope of the planned learning activities. Wany competency-based learning staff at pilot sites believe that a competency should be written broadly enough to facilitate adaptation across traditional academic disciplines, allowing standards from various subject matters to support a single competency.

#### What are adaptive competencies?

Adaptive competencies are defined in the glossary in Table 2 as cross-disciplinary behaviors that contribute to student success. Adaptive competencies are foundational skills necessary for success in college, careers, and life, such as, but not limited to, work ethic, professionalism, communication, collaboration and interpersonal skills, and problem solving, according to the PWR Act.

Pilots are encouraged to identify and define which competencies will serve as the "adaptive competencies." Some CBE pilot sites are utilizing the Illinois Employability Skills,<sup>3</sup> and others are using the Illinois Social and Emotional Learning Standards.<sup>4</sup> Other pilot sites are identifying a set of 21st-century skills, or "personal success skills." Adaptive competencies are discussed in greater detail in a subsequent section.

#### Are competencies identified within or across courses and disciplines?

One attractive aspect of a CBE approach is that schools can give students opportunities to demonstrate mastery of broad, interdisciplinary concepts rather than narrow areas of content covered within individual courses. Therefore, many CBE pilot sites have designed systems which enable students to show mastery of multiple standards across years, courses, and even disciplines by completing a performance task requiring students to integrate a range of concepts and skills as they apply learning to a complex task or problem. Similarly, some CBE schools expect students to demonstrate competency over time by performing tasks of increasing complexity across several years or traditional grade levels. As students complete performance tasks, they can collect evidence of learning over time, building a portfolio of learning toward the overall goal of showing mastery of competencies and, therefore, varying levels of postsecondary readiness. The LCWG believes that expecting students to demonstrate application and proficiency across disciplines is more reflective of life outside the classroom and the practical work that awaits learners beyond graduation.

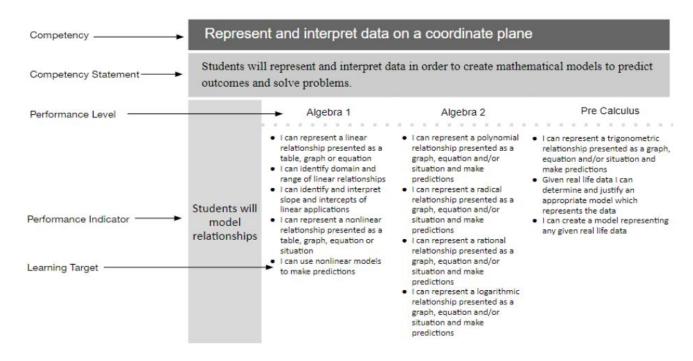
#### Should competencies align with postsecondary performance expectations?

The LCWG believes CBE pilot sites should consider a wide variety of factors when constructing competencies. Among these factors should be the performance expectations of industry and of postsecondary institutions to ensure students are properly prepared upon graduation. College readiness indicators, for example, could provide a strong reference for a CBE pilot site's competency construction committee to use when building competencies (or forming the "ribs," as illustrated in Exhibit 1a). Some pilot sites also have partnered with industry representatives to identify the specific performance expectations for a range of professions when developing competencies associated with both general graduation requirements and specific career pathways.

## 2. Getting Started: Developing Learner Competency Frameworks

Competencies exist within a broader framework that outlines what students should know and be able to do. This section focuses on how to develop learner competency frameworks. These frameworks have the following components: a competency statement, performance indicators, and a learning progression. Collectively, these components are referred to as a *competency framework*. These components are illustrated in an example from one Illinois CBE pilot site, Huntley High School. (See Exhibit 2.)

Exhibit 2. Illinois Example of a Competency Framework: The Huntley High School Model



Source: Huntley Community School District 158, Huntley, IL. (2018, September) Creative Commons license: Attribution-NonCommercial 3.0 United States (CC BY-NC 3.0 US)

Exhibit 2 shows that each learner competency is described in an overarching competency statement. This competency statement is supported by an associated **competency framework** that shows (a) the specific subcompetencies, standards, and clusters of standards supporting the **competency statement**; (b) the **performance indicators** (i.e., "I can..." statements) which describes what students should know and be able to do for each of these subcompetency areas; and (c) a **learning progression** to illustrate the increasing complexity of a key concept over

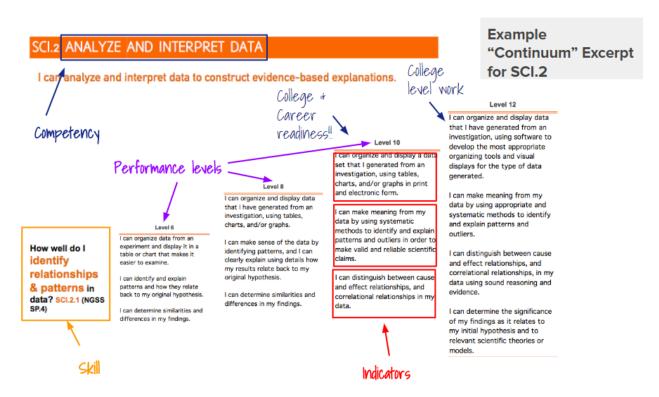
MWCC, ISBE, and Center on Innovations in Learning

<sup>&</sup>lt;sup>3</sup> Illinois Employability Skills Framework, available from Illinois Center for Specialized Professional Support: https://icsps.illinoisstate.edu/2017/07/illinois-essential-employability-skills-framework/.

<sup>&</sup>lt;sup>4</sup> Illinois State Learning Standards (Social-Emotional Learning Standards, Section 15(a), Public Act 93-0495), published 2010. Springfield, IL: Illinois State Board of Education.

time, articulating how a student's learning advances by developmental steps. (See concept definitions in Table 2.) Note that for all three example frameworks presented in Exhibits 2, 3, and 4, key points on the learning progression are labeled as *performance level* to indicate level of achievement as a student progresses toward college and career readiness.

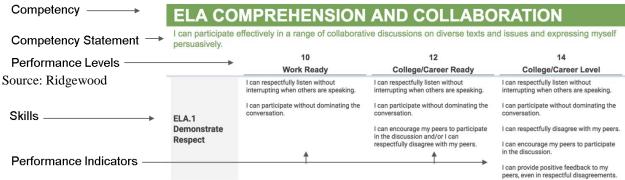
To further illustrate the idea of a competency framework, Exhibit 3 presents an example from a national CBE model, Building 21Exhibit 4 shows an example from another Illinois CBE pilot site, Ridgewood High School. Refer to the "Advice From Early CBE Pilot Sites" section, which highlights experiences and lessons learned from several Illinois pilot sites, for more guidance on developing learner competency frameworks.



**Exhibit 3:** Sample Competency Framework: The Building 21 Model

Source: Building 21, http://building21.org/. (Creative Commons license: Attribution-NonCommercial 3.0 United States (CC BY-NC 3.0 US)

Exhibit 4. Illinois Examples of a Competency Framework: The Ridgewood High School Model



Community High School District 234, Ridgewood, IL (2018, September). Creative Commons license: Attribution-NonCommercial 3.0 United States (CC BY-NC 3.0 US)

### Competency Statements

Within a competency framework, competencies are summarized in a brief *competency statement*, or a written description of an enduring concept (or big idea) that describes an applied or transferable use of key concepts and skills. Competency statements may represent learning within a specific academic discipline, across multiple disciplines, or outside of academic disciplines. Three examples of competency statements are provided as part of the sample frameworks in Exhibits 2, 3, and 4.

#### Performance Indicators

Performance indicators represent a critical component within competency frameworks. Performance indicators are defined in the glossary in Table 2 as the specific, concrete descriptors ("I can" statements) that serve as benchmarks to determine the level of a student's learning in each skill area. Examples of performance indicators are illustrated in Exhibits 2, 3, and 4. Please note that in Exhibit 2, Huntley High School refers to the "I can…" statements as *learning targets*. These targets fall within a performance indicator area.

The umbrella metaphor in Exhibit 1a illustrates that performance indicators represent a critical link between a group of learning standards and a student's ability to apply a competency to novel situations. Performance indicators give educators *and* students a transparent set of criteria with which to gauge student progress in preparing for their demonstration of competency. Performance indicators are about a student's *performance* of a skill, so it is important when writing a performance indicator statement to refer to the action the student will take to demonstrate proficiency of a critical benchmark necessary for achieving competency.

The LCWG suggests staff at CBE pilot sites not use words such as *understand*, *know*, or *comprehend*, which leave room for subjective interpretation. Rather, the LCWG suggests teams craft statements that use active verbs to describe a concrete action which can be easily observed or measured. Exhibit 5 presents examples of strong and weak performance indicators that describe student actions. In the left-hand column, the stronger examples illustrate ways to write clear, concrete, and measurable descriptors (i.e., "I can" statements).

**Exhibit 5. Examples of Strong and Weak Performance Indicators** 

Examples of Strong Performance Indicator Statements	Example of Weak Performance Indicator Statements
I can demonstrate my ability to comprehend, analyze, and critique a variety of increasingly complex print and nonprint literary texts.	I understand how to write a persuasive essay. (Limitation: Cannot observe or measure understanding.)
I can develop a step-by-step plan to solve a complex problem with little help.	I can learn mathematical problem-solving strategies. (Limitation: Must have a way of measuring what the students learned.)
I can use tools of technology (including digital media and the internet) to gather, interpret, and analyze information and create shareable products.	I know how to use technology. (Limitation: Must have a way of measuring what a student is able do with what they know.)
I can demonstrate my understanding of the necessity for establishing governments.	I recognize the need for establishing a government. (Limitation: Difficult to measure or observe this.)

### **Learning Progressions**

A learning progression in a CBE framework reflects mastery of competencies along a continuum toward college and career readiness with specific performance levels identified along the way. The learning progression comprises a set of performance indicators written as student-facing descriptions, illustrating how students' demonstrations of learning reflect increasing complexity over time, particularly in deepening and broadening student's understandings of a big idea within a discipline. Examples of learning progressions are represented as performance levels with associated numbers in Exhibits 2, 3, 4, and 6. Throughout these progressions, the language conveys what skills a student should display at each level, so that students can demonstrate learning in different ways and with increasing complexity while moving toward postsecondary readiness.

LCWG members suggest CBE pilot sites bear the following in mind when developing performance indicators and learning progressions as part of their competency frameworks:

- Teachers should use a common set of learning progressions for each competency with anchor performance tasks, including a baseline and post-assessment. The skills remain the same regardless of age, course, or grade level. This enables us to track students' scores on a continuum over their entire experience, allowing for specific feedback on the gradual progression toward mastery.
- The skills in the competency framework and levels of mastery remain the same at all grade levels and have specific criteria for progressing toward levels that indicate college and career readiness. The performance indicators clearly dictate the student's level of mastery and guide the teacher's feedback. Learning is no longer framed based on time, age, or grade level. This will enable all stakeholders to track growth over time along the learning progression or continuum.
- There is a transparent, commonly understood, and well-defined point along the learning progression or continuum at which a student demonstrates evidence of his or her level of mastery. This level of mastery indicates the student's readiness for college and career readiness. Students and teachers can then target the next or ultimate, desired level of readiness and performance (e.g., career ready, four-year university ready).

- Growth is explicitly tracked across the student's entire academic experience and is not restricted to one course, one academic discipline, or a single grade level.
- A set of agreed-upon adaptive competencies for all academic classes should be evaluated schoolwide. These competences should not be specific to any academic subject. Rather, they are skills that students need to be successful in career and life.

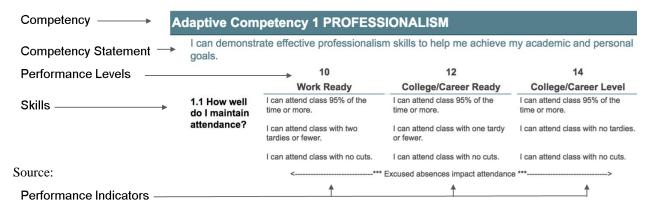
### **Designing Adaptive Competencies**

The glossary in Table 2 explains adaptive competencies which refer to cross-disciplinary knowledge, skills, and dispositions that serve as foundational skills for success in college, careers, and life, such as, but not limited to, work ethic, professionalism, communication, collaboration and interpersonal skills, and problem solving. Some authors refer to these as *personal success skills*<sup>ix</sup>; others as *habits of success*. A growing number of educators — and most employers — believe acquisition of adaptive competencies are as important — if not more important — than academic knowledge and skills for ensuring student success in school, work, and life. Common examples of adaptive competencies include problem solving, communication, planning, and collaboration skills. Districts and schools participating in the Illinois CBE pilot are granted the option of and flexibility in identifying a set of adaptive competencies reflective of the areas the school or district believes are most important for their students to succeed. A result of this decision-making latitude is that adaptive competencies are also called *employability skills*, *21st-century skills*, *habits of success*, *soft skills*, *social-emotional learning standards*, and *personal success skills* — to name just a few.

Adaptive competencies are also called employability skills, 21st-century skills, habits of success, soft skills, social-emotional learning standards, and personal success skills.

Adaptive competencies are represented through competency statements and competency frameworks, using structures similar to those described in the preceding section on academic learner competencies and associated frameworks. A sample adaptive competency framework from Ridgewood High School is displayed in Exhibit 6.

Exhibit 6. Illinois Example of an Adaptive Competency Framework: The Ridgewood High School Model



Ridgewood Community High School District 234, Ridgewood, IL (2018, September). Creative Commons license: Attribution-NonCommercial 3.0 United States (CC BY-NC 3.0 US)

Most pilot sites integrate at least some adaptive competencies *within* their academic competency statements and frameworks by referencing cross-disciplinary knowledge and skills within performance indicators, such as "I can clearly *communicate* how I arrived at my solution to mathematical problems." In addition, many CBE pilot sites identify a set of stand-alone adaptive competencies that are treated as distinctly separate from academic competencies.

Similar to academic competencies, pilot sites define each adaptive competency area with an overarching statement supported by a framework showing (a) the specific subcompetencies supporting the adaptive competency area, and (b) the performance indicators that describe what students should know and be able to do. This approach is illustrated in Exhibit 6 as well as in Exhibit 7, which shows the overarching competency statements for New Hampshire's adaptive competencies; the subcompetencies; and a set of consistent, adaptive competency performance indicators applicable to students of all grade levels and ages. New Hampshire educators refer to these as *work-study practices* or "behavioral qualities or habits of mind that students need to be successful in college, career, and life." xi

Exhibit 7. Sample Adaptive Competencies Used for All Ages/Grades: New Hampshire Work-Study Practices and Definitions

#### Communication

I can use various media to interpret, question, and express knowledge, information, ideas, feelings, and reasoning to create mutual understanding.

Graduating seniors will be able to demonstrate that they can:

- Communicate effectively using multiple modalities.
- Interpret information using multiple senses.
- Demonstrate ownership of their work.

#### Creativity

I can use original and flexible thinking to communicate my ideas or construct a unique product or solution. Graduating seniors should be able to demonstrate that they can:

- Think originally and independently.
- Take risks.
- Consider alternative perspectives.
- Incorporate diverse resources.

#### Collaboration

I can work in diverse groups to achieve a common goal.

*Graduating seniors will be able to demonstrate that they can:* 

- Contribute respectfully.
- Listen and share resources and ideas.
- Accept and fulfill roles.
- Exercise flexibility and willingness to compromise.

#### **Self-direction**

I can initiate and manage my learning, and can demonstrate a "growth" mindset, through self-awareness, self-motivation, self-control, self-advocacy, and adaptability as a reflective learner.

Graduating seniors will be able to demonstrate that they can:

- Persevere in completing complex, challenging tasks.
- *Use self-reflection to influence work and goals.*
- Engage stakeholders to gain support.

Some pilots identify how these adaptive competency performance indicators may evolve on a continuum, or learning progression, toward postsecondary readiness. An example of this approach from Building  $21^{xii}$  is shown in Exhibit 8. Pilots using this approach expect students to demonstrate gradual advances in their adaptive competencies over time.

Many CBE pilot sites believe that adaptive competencies are important contributors to success and that they therefore should be defined, taught, practiced, assessed, and explicitly reported in a manner similar to academic competencies (i.e., separately from students' academic performance ratings). Dedicating a portion of a student's record to performance of adaptive competencies allows for specific feedback on these cross-disciplinary skill areas. Various options exist for measuring and reporting on adaptive competencies within the pilot and across the country. See the Resources section for additional ideas on developing and assessing these cross-disciplinary skills.

#### **Exhibit 8:** Sample Adaptive Competency Statement Along a Learning Continuum Framework: Building 21

## HOS.3 BUILDING NETWORKS I can build relationships with diverse individuals and expand my network of people who can help and support me.

FINAL 2018-07-20

HOS.3.1

Build positive relationships

LEVEL 2

I can introduce myself to a new classmate or playmate whom I haven't met before.

I can make friends with people who are different from me.

LEVEL 4

I can find opportunities to make new

different people at lunch, play with

school club, etc.).

friends with people who are like me and

who are different from me (i.e. sit with

different people at recess, join an after

I can initiate new relationships with peers who share my interests, as well as with peers who have different backgrounds or interests from mine.

LEVEL 6

I can participate in experiences that help me meet new people with shared interests (i.e., sports, clubs, volunteering, part-time job, etc.) LEVEL 8

I can identify and participate in formal and informal interactions with people who have interests, perspectives, experiences, or strengths that I can learn from.

I can participate in experiences that help me meet new people with shared interests (i.e., sports, clubs, volunteering, part-time job, etc.) LEVEL 10

I can identify and participate in formal and informal interactions with people who have interests, perspectives, experiences, or strengths that I can learn from.

I can actively seek out opportunities to meet people who work in my career field of interest to get more information and to build my network.

I can use my network to connect me with new people that can help me achieve my goals. LEVEL 12

I can purposefully participate in diverse formal and informal networking opportunities and interactions with people who have interests, perspectives, experiences, or strengths that I can learn

I can actively seek out opportunities to meet people who work in my career field of interest to get more information and to build my network.

I can use my network to connect me with new people that can help me achieve my goals.

I can prepare and practice and "elevator speech" for networking opportunities so that I can succinctly describe myself, my strengths, interests, and goals.

I can create contact cards with my name, phone number and email address as a professional way to share my contact information with new people I would like to add to my network.

- Competency statement
- 2 Skill<sup>5</sup>
- 3 LEVEL 8 is a performance level.
- Performance indicators: These are used to create learning targets for students during learning activities.
- In the Learning What Matters Framework, LEVEL 10 is college and career readiness.

Source: Building 21. Creative Commons license: Attribution-NonCommercial 3.0 United States (CC BY-NC 3.0 US)

<sup>&</sup>lt;sup>5</sup> Some CBE pilot sites refer to skills as *subcompetencies*.

## Checklist for Ensuring Quality and Rigor in Learner Competency Frameworks

The following checklist can be used as a planning tool when developing learner competencies and to assess draft competency statements and their associated frameworks to ensure that they reflect characteristics of high quality. When drafting these statements, consider all of those elements that make up a complete framework, including skills or subcompetencies, learning progressions, and performance indicators. (See Exhibits 2, 3, and 4.)

The Quality and Rigor Checklist, displayed in Exhibit 9, is organized in the following way: (a) the competency must include college- and career-relevant knowledge and skills, and (b) it must include some reference to how the students' learning will be meaningfully applied. Within each of these two domains, competency statements and their related frameworks should meet a set of desired criteria. (See a–g in the left column and defining criteria in the right column in Exhibit 9.)

Exhibit 9. Checklist for Assessing the Quality and Rigor of Competency Statements and Associated Frameworks

College- and Career-Relevant Knowledge and Skills

	sired Characteristic: What the competency tement and related framework should contain	Defining Criteria: How you will know you have satisfied these criteria
a.	The competency articulates a <b>core concept</b> , <b>understanding</b> , <b>or skills</b> essential to the discipline and aligned with college- and career-ready knowledge and skills.	■ The competency statement articulates a core concept, enduring understanding, or skill that has been identified by academic leaders and industry professionals within the discipline. (Note: It may also represent a core concept or broader understanding relevant across multiple disciplines.)
b.	The competency reflects a broad area that encompasses an underlying cluster of related academic learning standards, professional/industry standards, or other cross-disciplinary/adaptive skills.	■ The competency statement has an associated competency framework that includes multiple (e.g., three to five) prioritized academic learning standards, industry standards, or other established standards or skills associated with the nonacademic or adaptive competency.
c.	The competency reflects a high level of cognitive <b>rigor</b> appropriate to the learning level.	■ The competency statement, its associated competency framework, and performance indicators refer to or describe knowledge and skills that reflect strategic, <i>applied</i> , and extended cognitive engagement, or higher order thinking (e.g. Webb's Depth of Knowledge at level 3 or 4).
d.	The competency framework reflects a progression, or growth in student learning, over time.	The competency statement has an associated competency framework that describes a set of specific student performance indicators (i.e., "I can" statements) along a learning progression that charts increasingly complex benchmarks in mastery toward desired postsecondary performance level.

#### Meaningful Application of Learning

	sired Characteristic: What the competency tement and related framework should contain	Defining Criteria: How you will know you have satisfied these criteria	
e.	The competency reflects how all students must apply learning to complex, multifaceted problems within or across disciplines.	■ The competency statement, its associated competency framework, and performance indicators refer to or describe how all students must solve complex, multifaceted problems relevant within or across specific disciplines and appropriate for the learning level.	
f.	The competency reflects how all students must apply learning to authentic problems or unfamiliar contexts.	■ The competency statement, its associated competency framework, and performance indicators refer to or describe how all students must approach real-world, practical problems with authentic audiences.	
g.	The competency is broad and flexible enough to offer all students equitable opportunities to demonstrate their learning.	The competency can be applied to multiple courses or content domains and allows students to employ a variety of strategies and have multiple opportunities and modes for demonstration of their learning.	

## 3. Advice from Early CBE Pilot Implementers

Staff from Advance Illinois conducted interviews during the spring and early summer of 2018 with four CBE pilot sites. The Illinois pilot districts participating in the LCWG have identified some best practices for writing competencies as well as several "lessons learned" about the process as they have implemented their local CBE models. The following is a summary of key learnings from these early CBE implementers.

## Establish and Adopt a Structured, Schoolwide Approach to Developing Competencies

CBE pilot sites suggest that the process of developing learner competencies should be well managed and structured such that all participants are using a common language, including shared definitions of terms and concepts. Educators working to define competencies also should be provided with a framework, like the ones illustrated in Exhibits 2 and 3, to serve as a reference and to guide their work. One pilot site advises that districts and schools closely follow the research guidelines, such as developing no more than three to seven competencies per course, to avoid overcomplicating the process of writing competency statements.

The staff from current pilot sites agree with advice from experts and recommend creating a strategic process for writing competency statements, starting with the vision or culture of learning that educators desire to cultivate at their school. These principles serve as the foundation for designing high-quality competency statements. Before diving into the task of writing individual competency statements, early implementers suggest starting with larger thematic questions about what success in each discipline looks like. At one Illinois pilot school that began implementing CBE in mathematics, for example, the first step was to meet with the math department to brainstorm and document the "habits of mind" that teachers believed their students needed to learn. At another pilot school, multiple stakeholders were consulted to answer these questions, as content teachers worked with their departments and administrators to create competencies that reflected local business feedback and trends in education.

### Adopt a Collaborative and Inclusive Approach to Developing Competencies

The pilots participating in the LCWG agreed that involving teachers as leaders in the writing of competencies is of critical importance, both so that they have an opportunity to refine competencies using their own expertise and to ensure that teachers have a deep understanding of what mastery entails for each competency. This collaborative approach to designing competencies fosters shared ownership and understanding. It also provides an opportunity for teachers to identify cross-disciplinary competencies.

In one Illinois pilot district, a team of teachers worked with an instructional coach to write competency statements. Throughout the process, team members regularly reported their progress to their department and to their school in department and faculty meetings. At another pilot site, the work of drafting competencies has been led by a planning and implementation team, also known as a *school improvement leadership team*, made up of all building-level administration and selected members from each department. This team has guided other educators at the school through the process of writing competency statements and has found that setting aside daily collaboration time has been critical as teams of teachers draft learner competencies.

## Don't Re-Create the Wheel: Make Use of CBE Experts and Available Resources

Finally, pilot sites have leveraged expert knowledge throughout the process of writing competency statements. Besides using print and digital resources, the pilot sites have worked with national experts like Rose Colby and Thomas Gaffey of Building 21 to create and refine their competency statements. Corresponding with these experts and engaging them as reviewers have helped pilot staff fine-tune their competency statement language. In addition, peer reviewers have been cited as a valuable resource by the Illinois pilot districts, which have found it helpful to share draft competencies with one another to gather feedback on potential areas of enhancement.

## **Resources for Designing Competency Statements** and Frameworks

#### **DESIGNING LEARNER COMPETENCIES**

Competency-Based Education: A New Architecture for K–12 Schooling by Rose Colby (Harvard University Press, 2017).

#### **Art and Science of Designing Competencies**

Competency Works

https://www.competencyworks.org/wp-

 $\underline{content/uploads/2012/08/CompetencyWorks\_IssueBrief\_DesignCompetencies-Aug-2012.pdf}$ 

#### What IS the difference between competencies and standards?\*

ReDesign

https://www.redesignu.org/what-difference-between-competencies-and-standards

#### Rose Colby's Competency-Based Learning Design Template

http://iowaascd.org/index.php/download\_file/view/900/1016/

#### Aligning Competencies to Rigorous Standards for Off-Track Youth

Jobs For the Future

https://jfforg-prod-prime.s3.amazonaws.com/media/documents/AligningCompetencies\_112812.pdf

## **Progress and Proficiency: Redesigning Grading for Competency Education** iNACOL

 $\underline{https://www.competencyworks.org/wp-content/uploads/2014/01/CW-Progress-and-Proficiency-January-2014.pdf}$ 

#### **Great Schools Partnership**

Design Criteria for Developing Content-Area Graduation Competencies

https://www.greatschoolspartnership.org/wp-

content/uploads/2016/08/PBLS\_Design\_Criteria\_Chart\_Graduation\_Standards\_August\_2016.pdf

Design Criteria for Developing Content-Area Performance Indicators

https://www.greatschoolspartnership.org/wp-

content/uploads/2016/08/PBLS\_Design\_Criteria\_Chart\_Performance\_Indicators\_August\_2016.pdf

Guidance for Developing Scoring Criteria

https://www.greatschoolspartnership.org/proficiency-based-learning/assessment-verification/verifying-proficiency-scoring-criteria/

#### Assessment to Support Competency-Based Pathways from Achieve (2015)

https://www.achieve.org/files/AssessmenttoSupportCBP.pdf

When Success Is the Only Option: Designing Competency-Based Pathways for Next Generation Learning from iNACOL and Nellie Mae Foundation (2010)

 $\frac{https://www.nmefoundation.org/getmedia/ff40e810-7da2-4ff2-88dc-13076a582bcb/iNACOL-WhenSuccessOnlyOptn}{}$ 

Competency-Based Education: Staying Shallow or Going Deep? (College and Career Readiness Center at American Institutes for Research)

https://ccrscenter.org/products-resources/competency-based-education-staying-shallow-or-going-deep

#### SAMPLE COMPETENCIES AND FRAMEWORKS

Rochester, NH: Competencies by Grade and Subject http://rochesterschools.com/competencies/compkto8.html

**A Construction Kit for Personalized Assessment of Competency-Based Learning** Competency Works

https://www.competencyworks.org/how-to/a-construction-kit-for-personalized-assessment-of-competency-based-learning/

**Illinois Resource on Awarding College and Career Pathway Endorsements** Guide for awarding College and Career Pathway Endorsements (CCPEs) to high school graduates. Endorsements signify that a student is ready to pursue postsecondary education or enter a career. https://www.isbe.net/Documents/EDS-PWRAReport.pdf

Illinois Resource on Transitional Math Guide for high school students pursuing a mathematical foundation for college and careers which offers guaranteed placement in postsecondary credit bearing math courses. Transitional math instruction provides students with the mathematical knowledge and skills to be successful in college-level math courses. https://www.isbe.net/Documents/Statewide-Transitional-Math-Report.pdf

#### **TOOLKITS**

Making Mastery Accessible: A Self-Assessment Tool

reDesign

 $\frac{http://www.redesignu.org/sites/default/files/uploads/MMA\%20Self-Assessment\%20Tool\%20150723.pdf}{Assessment\%20Tool\%20150723.pdf}$ 

#### **Great Schools Partnership:**

Guidance on Crafting Scoring Criteria

https://www.greatschoolspartnership.org/proficiency-based-learning/assessment-verification/verifying-proficiency-scoring-criteria/

**Great Schools Partnership Transferable Skills Project** A resource related to adaptive competencies.

https://www.greatschoolspartnership.org/transferableskills/

## Resource Example 1: Essential Knowledge Rubric

## An Essential Knowledge Rubric, to be used in the Design Process, to guide application, and also used for Evaluation of the finished projects.

		of the finished p	rojects.	
	Emerging	Progressing	Proficient	Exemplary
Transfer (input)	Applies knowledge and skills in the situation it was originally encountered. (mimicry e.g.tracing a picture, practicing a soccer drill- with coaching guiding) simple	Begins to see similarities for application of knowledge and skills across situations (replication e.g. copying a picture freehand, executing a soccer drill solo) complex	Can make conscious choices about what knowledge and skills will and will not work in various contexts or situations (authentic application e.g. drawing a still life, using a soccer drill during a game) complex and novel	Applies underlying concepts to contexts spanning multiple content areas, determining which knowledge and skills will be most applicable. (authentic origination e.g. creating a new picture, making "plays" based on drill skills) complex, novel and open ended
Impact (outcome)	Application of learning affects the learner	Application of learning achieves some of intended purpose for limited audience	Application of learning achieves identified purpose/ desired result with intended audience	Application of learning achieves purpose/desired result beyond originally intended audience
Facet(s) of Understand		Understanding rubric; select 1 - 4	relevant facets of understandin	g and insert rubric criteria

Q.E.D. Foundation, 2014



Resource Example 2: Crosswalk of Essential Mathematics Practices With Habits of Mind (Source: CompetencyWorks)

## Habits of Mind Critical Thinking

	Proficient	Math
Distinguishing Fact from Opinion	Focuses on techniques to distinguish fact from opinion	Make sense of problems (1) Construct viable arguments (3)
Deduction	Asks clarifying questions when making conclusions	Use of Tools (5) Modeling (4) Make sense of problems (1)
Reasoning	Takes a position and changes position when reasons make sense	Use of Tools (5) Construct viable arguments (3) Reason Abs & Quant (2) Modeling (4) Make sense of problems (1)
Sources & Citation	Chooses appropriate resources and can support those choices	Use of Tools (5)
Cause & Effect	Understands how cause and effect are connected	Use of Tools (5) Modeling (4)

Q.E.D. Foundation, 2014



Resource Example 3: Selected New Hampshire Common Core Standards Aligned With Mathematics Competencies for Grades 9–12



## NEW HAMPSHIRE Common Core State Standards-Aligned MATHEMATICS MODEL GRADUATION COMPETENCIES

#### 1. Competency Statement for Symbolic Expression

"I can statements" are examples of what educators may see in performance tasks when students demonstrate their increasing understanding and use of the competencies.

#### 9-12

Students will reason abstractly and manipulate symbolic expressions and models to represent relationships and interpret expressions, equations, and inequalities in terms of a given context (including real-world phenomena) for determining unknown values.

- I can write, apply, and provide a rational for a mathematical model representing a given situation (e.g., linear, quadratic, exponential, trigonometric)
- I can analyze and symbolically represent complex numbers (both real and imaginary numbers)
- I can interpret and use symbols to express relationships and justify reasoning when solving problems (e.g., evaluating expressions; modeling equations, inequalities, systems of equations/ inequalities).
- I can apply properties of arithmetic and algebra to simplify and manipulate symbolic expressions or models involving real/imaginary numbers
- I can analyze and use the structure of expressions to generate equivalent forms which emphasize different properties of the
  quantity represented by the expression (e.g., factoring, completing the square, various linear/nonlinear forms)
- I can analyze, symbolically represent, and use vector and matrix quantities in problem solving (+)<sup>1</sup>

Source: New Hampshire Department of Education, 2014.

### **Endnotes**

- ii Wendy Surr and Jeremy Rasmussen, *Partners in Crafting Competency-Based Education Pathways to College and Career Readiness* (Washington, DC: American Institutes for Research, Great Lakes and Midwest Regional Deeper Learning Initiative, 2015).
- iii David T. Conley and Elizabeth M. French, "Student Ownership of Learning As a Key Component of College Readiness," *American Behavioral Scientist* 58, no. 8 (June 2013): 1018–1034.
- iv Rose L. Colby, *Competency-Based Education: A New Architecture for K–12 Schooling* (Cambridge, MA: Harvard University Press, 2017), 30.
- <sup>v</sup> Adapted from Colby, Competency-Based Education, 40.
- vi Illinois Learner Competencies Working Group, 2018.
- vii Karin J. Hess, *A Local Assessment Toolkit to Promote Deeper Learning: Transforming Research Into Practice* (Thousand Oaks, CA: Corwin Press, 2018).
- viii Hess, A Local Assessment Toolkit, 16.
- <sup>ix</sup> Colby, *Competency-Based Education*.
- <sup>x</sup> Building 21, "Building 21 Learning Model," accessed August 31, 2018. http://building21.org/learning-model/
- xi New Hampshire Department of Education, New Hampshire Work-Study Practices Rationale for Work-Study Practices—June 2014, accessed August 31, 2018.

  <a href="https://www.education.nh.gov/innovations/hs\_redesign/documents/nhsbea-approved-final.pdf">https://www.education.nh.gov/innovations/hs\_redesign/documents/nhsbea-approved-final.pdf</a>
- xii Building 21, "Building 21 Learning Model."

<sup>&</sup>lt;sup>i</sup> Illinois General Assembly, *Postsecondary and Workforce Readiness Act*, 110 ILCS 148, 2016.

## Appendix A

## Additional CBE Background in Illinois

### Illinois Postsecondary and Workforce Readiness Act

High schools in Illinois are engaging in the implementation of competency-based education systems through a new pilot program established under the Postsecondary and Workforce Readiness (PWR) Act. It is the experiences of these pilot sites that have shaped this guide.

The PWR Act, signed into law in 2016, is a four strategy, integrated, student-centered approach focused on student achievement and readiness for postsecondary and career success:

- The act establishes the **CBE pilot program**. The CBE pilot program enables school districts to replace course-based high school graduation requirements with competency-based expectations, coupled with flexibility regarding state laws and regulations that impede a competency-based approach. Nineteen Illinois districts are engaged in development.
- Under the PWR Act, the state's four education agencies adopted a new Postsecondary and Career Expectations (PaCE) framework that outlines what students should know about college, career, and financial aid each year from eighth to 12th grade.
- The act establishes a voluntary system for school districts to award College and Career Pathway Endorsements to high school graduates, signifying that the students are ready to pursue postsecondary education or enter a career related to a selected career interest.
- The act establishes a new state system for transitional math instruction for students to complete during their senior year of high school which, after successful completion, ensures placement place into credit-bearing math courses at any Illinois community college and participating universities.

All these strategies require coordinated community systems involving school districts, postsecondary education institutions, employers, and other civic and community-based organizations. This unique, aligned approach strengthens opportunities for all students' success after high school graduation. For more information, please visit <a href="www.isbe.net/pwr">www.isbe.net/pwr</a>.