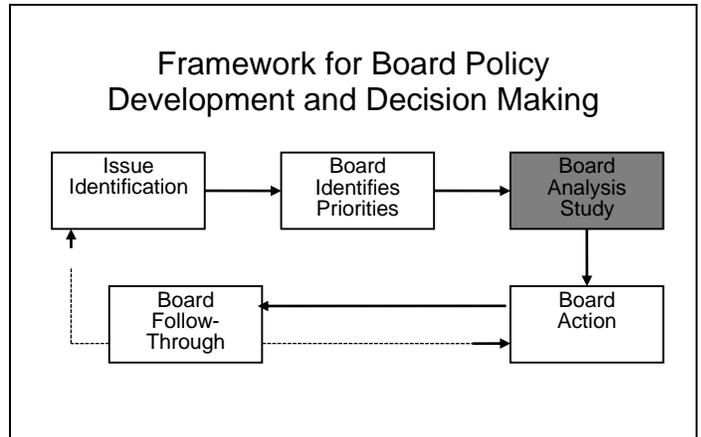


# Iowa State Board of Education

## Executive Summary

November 19, 2014



**Agenda Item:** Competency-based Education (CBE) District Reports

**Iowa Goal:** All PK-12 students will achieve at a high level.

**State Board Role/Authority**

The State Board acts in an advocacy role to promote effective education opportunities for all students in Iowa. In that capacity, they identify policy development priorities each year and advocate for change as necessary to implement those policies.

**Presenter:** Sandra Dop, Consultant  
Bureau of Standards and Curriculum

**Attachments:** 3

**Recommendation:** It is recommended that the State Board hear and discuss this information.

**Background:** Members of the Iowa CBE Collaborative from Mason City and Nevada will update the State Board on progress their districts have made toward competency-based pathways for their students. They will discuss the characteristics of a CBE educational system and present draft competencies.

## Iowa Department of Education Guidelines for PK-12 Competency-based Pathways

This document provides guidelines for developing competency-based pathways in Iowa districts and schools.

Competency-based pathways provide ways to validate learning of competencies that occurs outside the structure of the traditional school and offer flexibility for schools to engage students in learning that moves beyond the traditional constraints of seat time and divisions among content areas. These pathways provide opportunities for students to advance through content or earn credit toward high school graduation regardless of age or amount of time in the classroom, online, or in a setting off campus. They will enable districts and schools to provide student-centered, personalized learning systems through which students of all ages develop both ownership and control of their own learning. Educators and students will be better able to connect learning to students' interests.

### I. \*Principles

#### A. Students Advance upon Proficiency

- Students advance to higher-level work upon demonstration of proficiency of competencies rather than according to age or seat time.
- Students are evaluated on performance and application.
- Students will master competencies and earn credit or advance in content at their own pace. They will work through some competencies more rapidly while taking more time to ensure proficiency on others.

#### B. Competencies Include Explicit, Measurable, and Transferable Learning Objectives that Empower Students

- The relationship between student and teacher is fundamentally changed as students gain understanding of what working with competencies requires and take ownership of learning and teachers provide the appropriate supports for learning.
- The unit of learning becomes modular.
- Learning expands beyond the classroom.

#### C. Assessment Is Meaningful and a Positive Learning Experience for Students

- Schools embrace a strong emphasis on formative assessment as the unit of learning becomes modular.
- Teachers collaborate to develop understanding of what is an adequate demonstration of proficiency.
- Teachers assess skills or concepts in multiple contexts and multiple ways.
- Attention is on student learning, not student grades.
- Summative assessments are adaptive and timely.
- Assessment rubrics are explicit in what students must be able to know and do to progress to the next level of study.
- Examples of student work that demonstrate skills development throughout a learning continuum help students understand their own progress.

#### D. Students Receive Rapid, Differentiated Support Based on Their Individual Learning Needs

- Educator capacity, and students' own capacity to seek out help, will be enhanced by technology-enabled solutions that incorporate predictive analytic tools.
- Pacing matters. Although students will progress at their own speeds, students who are proceeding more slowly will need more help, and educators must provide high quality interventions.

#### E. Learning Outcomes Emphasize Competencies that Include Application and Creation of Knowledge along with Development of Important Skills and Dispositions

- Competencies will include the standards, concepts, and skills of the Iowa Core as well as the universal constructs (creativity, complex communication, collaboration, critical thinking, flexibility and adaptability, and productivity and accountability).
- Lifelong learning skills are designed around students needs, life experiences, and the skills needed for them to be ready for college, career, and citizenry.
- Expanded learning opportunities are created as opportunities for students to develop and apply skills as they are earning credit.

\*Adapted from International Association for K-12 Online Learning (iNACOL)

## II. Definitions and Explanations

- A. Advancement:** Progress to more advanced work within the content area.
- B. Assessment:** A variety of methods used to determine where students are in their learning before, during, and after instruction. All assessments, including examinations, performance tasks, and other evidence of learning must be instructionally sensitive and align with the standards. Assessments, not machine scored, should be scored by educators appropriately licensed and endorsed in the grade level and content area.
- C. Competency:** A competency is an enduring understanding that requires the transfer of knowledge, skills, and dispositions to complex situations in and/or across content areas and/or beyond the classroom.
- Multiple standards both within & across disciplines outline the knowledge, conceptual understanding, abilities, and skills required to meet the complex demands of the competency. Although individual standards may be assessed/demonstrated at any level of Blooms Taxonomy or Webb's Depth of Knowledge, the expectation of deeper learning related to the competency requires assessment/demonstration at the upper levels of Bloom's (analyze, evaluate, create/synthesize) or Webb's (Level 3: Strategic Thinking, Level 4: Extended Thinking) as well as the appropriate use of the universal constructs, dispositions, & employability skills.
- D. Competency-based Education:** Learners advance through content or earn credit based on demonstration of proficiency of competencies. Some students may advance through more content or earn more credit than in a traditional school year while others might take more than a traditional school year to advance through the same content or to earn credit. Credit may also be earned for out-of-school experiences and/or accomplishments. Students at all grade levels are afforded opportunities for more explicit or intensive instruction or enrichment within the content.
- E. Credit:** A unit awarded toward high school graduation. Credit awarded toward high school graduation should be the same for students demonstrating proficiency on standards through competency-based pathways as for those working through the same standards in a traditional time-based pathway or other nontraditional pathways such as online learning. PK-8<sup>th</sup> grade students advance through content independent of units of credit.
- F. Flexibility:** Students may work as individuals or in groups and are provided appropriately challenging work according to their identified needs and not always a common learning objective. Elementary students may be distributed among teachers at or across grade levels and support personnel for targeted or intensified support as they struggle or advance. Students may be grouped with multi-age peers. The amount of time each student works on a specific standard and/or remains in an assigned group is determined by performance on ongoing assessments.
- H. Formative Assessment:** Formative assessment is a process teachers and students use during instruction to determine feedback to adjust further teaching and learning toward improved student achievement of the instructional outcomes. CBE schools embrace a strong emphasis on formative assessment practices as the unit of learning becomes modular. Formative assessment:
- provides students with a clear understanding of the intended learning (e.g. learning goals, success criteria) aligned to the standards and linked within a learning progression;
  - includes elicit on-going evidence of student learning using instructionally sensitive assessment methods (e.g. rubrics/scoring guides for performance tasks, exit tickets for conceptual understanding, quick writes for pre-assessment);
  - uses evidence of student learning to make instructional decisions and to help students learn to make learning strategy decisions;
  - provides students with non-judgmental, immediate, and actionable feedback based on the learning goals and the evidence collected of current learning;
  - provides students with opportunities for self assessment/reflection on their learning, and
  - provides students with opportunities to provide non-judgmental and actionable peer feedback in a collaborative setting.
- I. Proficiency:** Demonstrated skill or knowledge required to advance to and be successful in higher levels of learning in that content area or using that content. Districts and schools participating in competency-based pathways will determine proficiency levels and appropriate assessments to ensure all students being awarded credit toward high school graduation or advanced through content at any level have demonstrated the skills and knowledge required to be successful at the next level of advanced learning in the content or related areas as appropriate.

### III. License and Endorsement

- A. Development of Assessments:** Assessments used to determine proficiency must be developed by educators properly licensed and endorsed in the content and academic level of the advancement or credit awarded.
- B. Determination of Proficiency:** Proficiency of competencies for advancement or credit must be determined by an educator properly licensed and endorsed in the content area of the advancement or credit awarded.
- IV. Examples:** The following scenarios are provided as examples and are not intended to be all inclusive of the varied examples that may be encountered with moving to competency-based education models.
- A.** A high school student, who has designed several websites including one for the scout troop and one for a family member's small business, might request credit for Web Design 1 and placement in Web Design 2. An educator who holds a license valid at the high school level determines appropriate assessment(s) and whether credit, and in this case advancement, is awarded—or if further work is necessary to complete other competencies, which were not demonstrated in the websites presented, but are associated with the credit.
- B.** An eighth grade student demonstrates advanced understanding of algebraic concepts. When the appropriately endorsed teacher determines through assessment, observation, etc. that the student understands and can apply the competencies associated with the Algebra 1 credit, the teacher awards the Algebra 1 credit and moves the student to another advance math class. If there is no appropriately licensed teacher at the middle school, the student should be guided to the appropriate high school teacher. (The district must also have a policy allowing middle school students to earn high school credit as per 2011 Iowa Acts, Senate File 453, which amended Iowa Code 256.7(26)(a).)
- C.** An Algebra 1 student struggles and needs extra time with many of the algebraic concepts. The appropriately endorsed algebra teacher works with the student at the student's pace and at the end of the year awards credit according to the competencies in which the student has demonstrated proficiency. The student has the opportunity to work over the summer to demonstrate competency or can start in the next school year where he/she left off in the spring. The student may also work to master the concepts over the summer through formal or informal education and be awarded credit and move forward as appropriate when school starts. (It is also possible that this student might have been more appropriately placed in a pre-algebra class rather than in Algebra 1.)
- D.** A fifth grade student has an avid interest in science and can demonstrate the essential concepts and skills of scientific inquiry. The student has maintained a personal record of a wide variety of scientific investigations conducted at home, including the appropriate tools and techniques necessary to gather, process, and analyze scientific data. The student communicates his scientific understanding using appropriate vocabulary and makes scientifically valid conclusions from the data collected. The teacher might choose to 1) offer an opportunity for the student to conduct scientific experiments under the supervision of a certified middle or high school science instructor, 2) challenge the student with virtual learning opportunities using online science resources, 3) collaborate with science professionals in the community to conduct real-world science experiments that address the Iowa Core science standards at a deeper and more quantitative level than would be possible in an elementary classroom. (Options listed or examples and not exhaustive.)
- E.** A fourth grade student has attended sessions of the state legislature and otherwise been exposed to the branches of the government. Progressions of learning for this student are based on what the student already knows and understands about the competencies and takes the student deeper and broader in the same content area or moves the student through the competencies at a faster rate. This student might be given other learning opportunities while the class works on the understanding of the three branches of government. Options might include, but are not limited to: 1) interview legislatures about how they became involved in politics and how they work together with the other two branches of government (or judges/the mayor along similar lines), 2) prepare a report or classroom display on how a bill becomes a law and how each branch of government functions in the process or after the law is passed, 3) contact legislators for information about current legislation affecting the local community or education and how they and those in other branches of government are affected by that legislation, 4) do other work to enrich understanding, or 5) work toward proficiency on other competencies.

**V. Student Access:** As plans to include competency-based pathways in the educational system are made, districts and schools are encouraged to consider how all students and parents, as well as the community, will know about and understand the concept and process as well as what it means for student learning.

**VI. District Policy:** Each district or school should develop policy that outlines district or school competency-based pathways.

Policy should include, but is not limited to:

- Student access.
- Connecting middle school students to high school teachers if other district policy provides for middle school students to earn high school credit.
- If there is a limit, and what that limit would be, to the number of credits through competency-based pathway that would be used toward high school graduation.

**VII. Resources:** Although there are many resources for information about competency-based education, the following sources are offered as a starting point for districts interested in working toward competency-based pathways for their students.

**A.** *Delivering on the Promise: The Education Revolution* (2009). R.A. DeLorenzo, W.J. Battino, R.M. Schreiber, and B.G. Carrio. Solution Tree: Bloomington, Indiana.

**B.** International Association for K-12 Online Learning (iNACOL)  
<http://www.inacol.org/research/competency/index.php>      [www.CompetencyWorks.org](http://www.CompetencyWorks.org)

1. *Cracking the Code: Synchronizing Policy and Practice for Performance-Based Learning* by Susan Patrick (iNACOL) and Chris Sturgis (MetisNet)
2. *It's Not a Matter of Time: Highlights from the 2011 Competency-Based Learning Summit* by Chris Sturgis (MetisNet), Susan Patrick (iNACOL) and Linda Pittenger (CCSSO)

**C.** Iowa Collaboration Website, including Task Force information: [www.IACompEd.com](http://www.IACompEd.com)

**D.** Marzano study of the RISC competency-based education program  
[http://www.marzanoresearch.com/documents/RISC\\_vs\\_Non\\_RISC.pdf](http://www.marzanoresearch.com/documents/RISC_vs_Non_RISC.pdf)

**E.** Re-Inventing Schools Coalition (RISC) <http://www.reinventingschools.org/resources/results/>

1. Among the results realized through the RISC program are the following:
  - Significant, sustained increases in student achievement.
  - Increases in the number of students applying to, attending, and remaining in college.
  - Decreases in staff turnover.
  - Significantly higher percentages of students passing high-stakes state assessments.

2. Re-Inventing Schools Coalition videos <http://www.reinventingschools.org/resources/video/>

**F.** Research Base for Proficiency-based Instructional Practices: Drawing from empirically-based studies of teaching practice as well as practitioner-oriented prescriptions and frameworks for instructional practice, this research base provides a foundation for the attributes of proficiency-based teaching and learning.

<http://www.k-12leadership.org/proficiency-project/research-base>

**G.** *Off the Clock: Moving Education from Time to Competency* (2012). F. Bramante and R. Colby. Corwin: Thousand Oaks, California.

**H.** National website: [www.CompetencyWorks.org](http://www.CompetencyWorks.org)

**VIII. State Contact:** Sandra Dop 515-281-0127 [Sandra.Dop@iowa.gov](mailto:Sandra.Dop@iowa.gov)

# Part 1 Iowa Characteristics of a CBE System

## Indicators of a Healthy System

### **I. District has strong internal and external stakeholder involvement and shared vision**

1. School board endorsed a clear definition of competency-based education and what it means to be proficient aligned to the State Guidelines for PK-12 Competency-based Pathways and postsecondary education requirements and a vision of how proficiency is demonstrated and assessed
2. District/network has developed materials and vehicles for communicating the rationale and process of competency-based pathways to students, parents, teachers, and community members
3. Community members demonstrate understanding of the transformation to a competency based system, exhibited by:
  - a. Granting permission for and providing support of the transition;
  - b. Their ability to
    - i. Identify the inadequacies of the traditional system and, therefore, the reason for change,
    - ii. Articulate what the school is doing to facilitate this transformation, and
    - iii. Articulate their role in a competency-based system;
  - c. Taking responsibility for and paying attention to student learning.
4. Businesses, organizations, industry, etc. partner with the school to create learning environments/opportunities for students such as internships, clubs, and after school programs.
5. Internal and external stakeholders are appropriately involved in decision making.
6. Union contract allows for flexible scheduling and staffing.

### **II. District nurtures a culture of continual improvement**

1. Internal and external stakeholders are regularly provided vehicles for input and feedback such as, but not limited to, surveys, questionnaires, and meetings.
2. Key stakeholders (e.g., unions, community leaders, parents) are involved in development of a long-term strategic plan.
3. The district engages in
  - a. Continuous collaborative inquiry,
  - b. Ongoing study of content, practice, and student effects, and
  - c. Constant use of data to guide decisions.

### **III. District policies support a competency-based learning environment**

1. Key policy issues have been addressed and policy allows for:
  - a. Units/credits that are not exclusively time-based,
  - b. Opportunities to earn credit for learning that occurs outside the school walls but demonstrates proficiency on rigorous competencies, and
  - c. Progression based on demonstration of proficiency.
2. Policies are consistently reviewed in light of changes in the system.
3. District advocates for state policies that promote CBE.

**IV. Competencies and scoring guides align with the Iowa Core and other content standards to describe what students need to know and be able to do.**

1. The district has declared college and career ready graduate outcomes and written (or adopted state model) competencies that guide student learning experiences toward proficiency in those graduate outcomes.
2. Competencies emphasize transfer of knowledge and skills in the Iowa content standards and the universal constructs.
3. Scoring guides are aligned to learning progressions and clearly articulate what is expected for a demonstration of proficiency.
4. District ensures that competencies, scoring guides, learning progressions, performance tasks, and performance assessment are tightly aligned to the Iowa Core and content standards in other content areas.
5. Proficiency is based on student demonstration of the ability to move to deeper or more advanced work in that content/skill and/or to use it in another context or curricular area.
6. Staff are prepared to facilitate learning in a competency-based environment. They:
  - a. Have deep understanding of the content/learning standards and the universal constructs,
  - b. Are able to select appropriate competencies and scoring guides from the models provided by the state or to develop competencies, scoring guides, and performance tasks that demonstrate student learning of the standards/universal constructs, and
  - c. Have the knowledge and skills to consistently assess student learning performances and monitor progress until standards and competencies are met.
7. Graduate outcomes, competencies, and scoring guides are reviewed on a regular basis and updated as necessary to ensure tight alignment to the Iowa Core and content standards of other content areas.

**V. Assessments are a meaningful and positive learning experience for students.**

1. Students are evaluated on performance and application.
2. Teachers and students use formative assessment to redirect teaching and learning throughout the learning process.
3. Skills, concepts, and dispositions are assessed in multiple contexts and multiple ways.
4. Examples of student work demonstrate knowledge and skill development and learning progressions to help students understand their own progress.
5. Adequate supports are available for students who do not become proficient.
6. Assessment practices are reviewed on a regular basis and updated as necessary.

**VI. Learning environment is student-centered and personalized**

1. Establish and maintain a safe and collaborative culture for students and adults.
2. Students, parents, teachers, and administrators provide feedback on the culture of the school on a regular basis.
3. Students:
  - a. Have voice and choice in when, how, and where they learn and how they demonstrate proficiency ,
  - b. Gradually take more responsibility for the design of their learning pathways toward proficiency on competencies, and
  - c. Have clarity about what they need to accomplish and ownership of the learning sequence.
4. Teachers:
  - a. Are supported in their own learning as they become more proficient in providing personalized learning experience for students,

- b. Are developed to be strong facilitators and coaches, skilled in deploying a broad range of instructional practices that engage all learners (project-based learning, collaborative learning, e.g.)
  - c. Collaborate with other adults both in and outside school to provide opportunities for their own growth as well as for their students' learning,
  - d. Partner with students to design learning around each student's needs, life experiences, and the skills needed for them to become college and career ready, and
  - e. Provide high quality resources/interventions to keep each student on track for successful learning and for graduation.
5. Students and families have deep understanding of the standards/constructs/competencies and are partners in determining how students will demonstrate proficiency.
  6. The district and community partner to provide all students with a variety of quality learning opportunities both in and out of the school building (e.g. project-based learning, internships, after school programs, clubs, and organizations)

### **VII. Shared leadership**

1. Leadership is formalized at all levels of the system. Students, teachers, and administrators, as well as, parents and community members provide leadership for ensuring students learn well.
2. Leaders at all levels are supported in their own learning as they become more proficient at development of personalized learning for everyone in the system.
3. District/network has a leadership development program in place to help school leaders tackle key issues in competency-based pathways including, for example, scheduling, teacher teaming, and coaching

### **VIII. Credit/advancement is based upon demonstration of proficiency**

1. Credit is based on demonstration of proficiency on competencies rather than time spent in class or on the work.
2. Students demonstrate proficiency on competencies and earn credit or advance in content at a negotiated pace. They work through some competencies more rapidly while taking more time to ensure proficiency on others.
3. Grading practices emphasize student-generated evidence of proficiency.

### **IX. District provides technical support for teachers, students, and parents**

1. Database system enables teachers, schools, and district/organization to track and report on student mastery, including credit accumulation and results on the full range of assessments of proficiency
2. Technology systems enable teachers, students, and their families to access individual student portfolio reports that show student progress at achieving proficiency of identified learning targets
3. A strategy is in place for teachers and other staff to regularly review performance data and make adjustments to instruction as needed
4. Teacher and student schedules support anytime/anywhere learning, progression based on proficiency, and other aspects of a CBE system.
5. Teacher teams are organized to support competency-based pathways through for example, common planning time and co-teaching models
6. School calendar enables extended learning opportunities
7. Staff are deployed/job descriptions are to support anytime/anywhere learning, progression based on proficiency, and other aspects of competency-based pathways (such as: blending: technology-based and classroom instruction)
8. Space is allocated to maximize student access to technology and to places for individualized as well as group or project-based work
9. Budget is reallocated to address necessary changes in staffing, scheduling, use of space, etc.

**X. District provides smooth transitions to post-secondary experiences**

1. Transcripts contain reliable evidence of student learning and information necessary for post-secondary institutions to admit and place students.
2. Open communication exists between the district and post-secondary providers that typically serve district's graduates.

## DRAFT COMPETENCIES

Competencies include three components of information for the student and teacher.

1. **Guidance for student on WHAT to do.**
2. **Guidance for student on HOW to accomplish it.**
3. **Guidance for the student on WHY or the purpose of the work.**

### Critical Thinking:

**Create solutions to complex problems through student-directed investigations to improve internal and/or external conditions.**

**Possible Rubric Content:** when and who to ask questions; how to ask for help; identify partners and resources germane to the situation; evaluate and select the best resources in context of the problem, and allocates them appropriately; identify root cause of problem; detail a course of action in writing with sequence of steps involved; bring to the surface and test mental models; consider unintended consequences; metacognition; analyze, evaluate

### Complex Communication:

**Exchange complex information and ideas through the evaluation of multiple platforms to effectively meet the needs of diverse individuals and groups.**

**Possible Rubric Content:** including visual, digital, verbal, and nonverbal interactions; appropriate, effective platforms--why use; appropriate integration of modes; meaningful and engaging interactions; message is powerful, clear, and concise; accurate exchange of information and ideas; cultural competence; awareness of nuances of effective communication; bring to the surface mental models; consider unintended consequences

### Collaboration:

**Negotiate in a respectful team process by contributing personal capacity to share ownership of outcomes that are larger than the individual.**

**Possible Rubric Content:** common purpose; shared outcomes; distributive leadership; cultural competence; respectful disagreement; contribution; participation; constructive feedback; facilitate and delegate responsibilities; identify points of leverage; balance listening and speaking; accept ownership for actions; working among or across networks; bring to the surface mental models; capitalize on interdependencies; seek to understand the big picture;

### Creativity:

**Generate ideas by reconfiguring current thinking or seemingly unrelated ideas for an aesthetic or practical purpose.**

**Possible Rubric Content:** risk-taking; generate new or original thoughts, interpretations, products, works, or techniques; divergent thinking/entrepreneurial thinking; open ended challenges, open minded, experiments, imagination, inspiration

### Flexibility and Adaptability:

**Adjust to novel information or situations with intellectual agility to be successful when facing challenges.**

**Possible Rubric Content:** balance beliefs with appropriate reaction to change; reflect; demonstrate metacognition; acknowledging dissonance; continuous improvement; engage in innovation and creativity; respect for uniqueness of self and others; learn from mistakes and accept feedback; continuously monitor the success of a project or task; cope with uncertainty; demonstrate a sense of comfort with lack of structure; remain composed and focused, even under stress; respond openly and constructively to change; bring to the surface and test mental models

### Productivity and Accountability:

**Exhibit responsibility through persistence and self-direction to create quality results that add value in an ever-changing environment.**

**Possible Rubric Content:** set goals, establish timelines (time management); checkpoints; establish quality control; initiative; responsibility; self-direction; planning and prioritizing; personal responsibility; quality results; add value; persistence; use of appropriate processes and tools; self-monitoring; appropriate resource allocation; approach conflict with win-win perspective; task integration; identify interdependencies; successive approximation