In the following report, Hanover Research examines best practices for accelerating adult student learning, with a specific focus on contextualized learning, competency-based learning, and accelerated developmental education strategies. The report discusses student outcomes, models for implementation, and considerations and best practices for each strategy. The report also includes profiles of programs recognized for excellence in accelerating adult students’ progress toward goals.
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EXECUTIVE SUMMARY AND KEY FINDINGS

Objective 5 of the Regional Comprehensive Plan that each AB 86 consortium must submit to the state requires each group to describe its “plan to employ approaches proven to accelerate a student’s progress toward his or her academic or career goals.”¹ This report explores strategies that have been shown to effectively accomplish this objective. The report specifically focuses on three main strategies: contextualized learning, competency-based learning, and accelerated developmental education.

The report includes discussions about student outcomes, models for implementation, and considerations and best practices for each strategy to allow West Hills Community College District to determine which strategies are most appropriate for the region and what resources and planning might be required to implement these strategies. The programs profiles included in the report illustrate common structural features, program offerings, faculty and instructional supports, necessary resources, and challenges of the various models. Overall, this report will help the consortium to develop a plan to employ strategies shown to accelerate students’ progress toward academic or career goals.

KEY FINDINGS

- **Contextualized teaching and learning (CTL), competency-based learning, and accelerated developmental education are three key strategies commonly discussed in literature about accelerating students’ progress.** These strategies have been shown to improve student outcomes, although there are some challenges for implementing them. Limiting student options, student support and follow-up, and improving pathways into apprenticeships through participation with organizations like the Registered Apprenticeship College Consortium (RACC) are examples of other strategies for accelerating students’ progress.

- **Contextualized teaching and learning strategies place learning in a broader framework that illustrates the real-world relevancy of skills that students are learning.** There are two general models for CTL strategies: stand-alone classrooms and linked courses or learning communities. Institutions that implement CTL practices should prioritize interdisciplinary collaboration, professional development, assessment procedures, effective selection of CTL courses, and outcome data collection.

- **Competency-based learning allows students to progress as they demonstrate mastery of academic content – regardless of time, place, or pace of learning.** Competency-based learning practices require explicit, measurable learning objectives; formative assessments; and a generally large investment in financial

¹ “Certification of Eligibility Instructions, Terms & Conditions AB 86 Adult Education Consortium Planning Grant.” California Community College Chancellor’s Office. p. 33. http://ab86.cccco.edu/portals/7/docs/AB86%20Certification%20of%20Eligibility%205.12.14%20with%20Updated%20Appendix%20C.pdf
resources. Although competency-based learning can be an effective and plausible method of learning, there are several challenges that may hinder an institution’s ability to implement this model, such as protecting high levels of proficiency and integrating student information and learning management systems.

- **Accelerated developmental education minimizes exit points and limits the amount of time students spend in developmental education.** Implementing an accelerated developmental education model involves curricular restructuring that reduces the length of developmental sequences. Institutions adopting this model will need to consider curricular redesign, modifications to the current placement system, and faculty development to support the transition to this new model.

- **To maximize student outcomes in any of the models, it is important for institutions to provide effective educational planning support, including regularly following up with students.** Support services should be available to all students and personalized to meet individual students’ needs. Effective support services include academic, nonacademic, career, personal, and financial elements. Research has shown that students may benefit from “intrusive advising,” which can include structured meetings with advisors, mandatory activities such as academic planning, and close tracking of student success.
SECTION I: CONTEXTUALIZED LEARNING

DESCRIPTION

Contextualized teaching and learning (CTL) has been defined as:

A diverse family of instructional strategies designed to more seamlessly link the learning of foundational skills and academic or occupational content by focusing teaching and learning squarely on concrete applications in a specific context that is of interest to the student.²

There are several psychological and educational theories driving the implementation of CTL as a learning mechanism, which bolster it as a legitimate pedagogy.³ Some of the principles upon which the CTL conception is based are highlighted in Figure 1.1 on the next page. Overall, CTL focuses on placing learning in a broader framework that illustrates the relevancy of skills, which motivates students to make connections between subject knowledge and real-world application.

According to a Community College Research Center (CCRC) report, CTL strategies often contain one or more of the following components:⁴

- Interdisciplinary learning;
- Use of students’ informal, out-of-school knowledge;
- Active, student-centered learning;
- Student collaboration;
- Use of explicit literary strategies;
- Authentic assessment; and
- Teacher collaboration to identify real world examples.

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³ Ibid.

## Figure 1.1: Psychological and Educational Theories Underlying CTL

<table>
<thead>
<tr>
<th>Constructivist Learning Theory</th>
<th>Motivation Theory</th>
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</thead>
</table>
| • Relies on the notion that students create their own meaning of concepts when they learn through experience, which furthers an innate motivation and desire to learn. | • Focuses on students’ perceived value of the mode of instruction and the development of self-efficacy, which is a key component of CTL.  
• Students are encouraged to reflect on their own ideas and the experiences in which the instruction and materials are embedded. |

<table>
<thead>
<tr>
<th>Problem-Centered Learning</th>
<th>Social Learning Theory</th>
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</table>
| • Requires students to work in teams to progress through a network of interconnected problems that leads to a relevant conclusion.  
• Helps students to see the usefulness of certain skills because they are connected to a real-life problem-solving situation. | • Emphasizes a shift away from solitary studying and passive listening toward collaboration with peers.  
• Students are encouraged to create and understand their own learning within a social situation associated with CTL.  
• The social context of collaborative learning also often emulates what students can expect in a future work environment. |

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Brain Research</th>
</tr>
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</table>
| • Students have different prior knowledge and experience, motivational factors, and personalities. These elements affect the ways in which students learn most effectively.  
• CTL reaches a variety of learning styles in the classroom because the instructor can use different approaches within the experiential context, such as hands-on learning and collaborative learning. | • Emotion, practice, experience, and the environment can shape learning because "the human brain is highly responsive to association and sensory experience."  
• Brain research is important to CTL because it demonstrates that the brain can develop through connections between experience, sensory information, and learning new concepts. |

Source: Office of Community College Research and Leadership⁵

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**STUDENT OUTCOMES**

A California Career Ladders Project report, part of the California Basic Skills Initiative, aims to “build a toolkit for community college practitioners in the field of basic skills education.” According to this report, past research indicates that **CTL has a positive impact on student outcomes and overall learning experiences.** Through this strategy, learners can develop:

- Foundational knowledge (understanding specific ideas or concepts);
- Application (the ability to engage this information in action);
- Integration (understanding the relationships between the knowledge learned); and
- Human dimension (the capacity to understand one’s self or others).

Another report published by the Community College Research Center also supports the notion that CTL “seems to be a promising direction for accelerating the progress of academically underprepared college students.” The report reviews several studies in which low-skilled students learn effectively through CTL methods. Of the 27 studies examined for the report, “outcome measures for almost all of the studies focused exclusively on, and found gains for, specific basis skills outcomes,” i.e., reading, writing, or math scores. Although there are a few differences among studies, research generally indicates a strong trend toward positive student outcomes with CTL instruction.

However, conclusions are tentative due to the “shortage of rigorous studies with academically-unprepared students in college or adult basic education programs.” Currently, the majority of CTL research focuses on the K-12 population.

Studies have also illustrated that CTL often has a positive impact on students’ learning behavior. University of Georgia professor Richard Lynch states that “94 percent of the students said that they learned a lot more in CTL strategy classes than in traditional courses in that same subject area” because CTL experiences allowed students to “think more deeply about the topics and […] participate more actively in the learning.” Although data are self-reported, they suggest that “through this deep engagement, a learner may be able to demonstrate knowledge without articulating the aspects or dimensions of that knowledge, distinguishing knowing how to do something from knowing something.”

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7 Ibid., p. 13.  
8 Bullet points taken verbatim from: Ibid.  
10 Ibid., p. 28.  
11 Ibid.  
12 Contextualized Teaching & Learning: A Faculty Primer  
13 Ibid.  
14 Ibid.
MODELS FOR IMPLEMENTATION

The California Careers Ladder Project report focuses on CTL strategies as promising learning pathways for community college students. It examines how such strategies emerge in practice. There are two general categories of settings for CTL practices – stand-alone classroom practices and linked courses or learning communities. Details of these two models are outlined in Figure 1.2 below.

Figure 1.2: CTL Models for Implementation

- These models focus on a single classroom and offer a flexible format.
- While faculty might work with peers in other disciplines to develop the course content, the primary locus of control rests with the individual instructor.
- There are two possible delivery modes: Infused Academic classrooms are individual courses focused on academic skill building. The context serves as a vehicle for enhancing the relevance of those skills to students and provides them with opportunities to engage in active learning. Infused Occupational classrooms are organized around teaching of specific occupational content. Academic skills are taught in the context of the vocational competencies, or "embedded" within the curriculum. The primary goal is to teach occupational content; academic skill development is the tool that advances this goal.

- These models involve a cohort of students taking two or more courses that are linked in content.
- Learning communities contextualize their basic skills instruction according to a variety of organizing principles, such as students' occupational goals, social justice interests, or cultural and community experiences.
- Some are delivered in short-term, intensive formats, while others take place over the course of one to two semesters or multiple years.
- While each course retains its own objectives, learning community courses connect to a set of mutually reinforce, shared goals.
- Faculty who implement these communities collaborate to ensure that the content of each course complements and supports the others.

Source: California Career Ladders Project

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15 Ibid., p. 15.
16 Bullet points taken verbatim, with a few minor modifications to improve readability, from: Ibid., pp. 15-16.
CONSiderations and Best Practices for Implementation\(^{17}\)

When implementing the CTL method for adult learners, there are several considerations and best practices to consider. Recommendations address the topics of interdisciplinary collaboration, professional development, assessment procedures, selection of CTL courses, and collection of outcome data.\(^{18}\)

Additionally, there are four general considerations – resources, research and assessments, replicability and scalability, and sustainability – that should be kept in mind when implementing CTL practices.

RESOURCES

CTL practices often involve an investment in resources, such as release time for faculty “for collaboration and curriculum and instructional material development,” as well as funds for materials and/or team teaching. Faculty members will also need support for program coordination, professional development, and/or data collection. Strong support from and collaboration with the student services division of an institution are also important for students in CTL programming to succeed. However, the total institutional investment in resources can vary, depending on the scope of CTL programming.

In general, many practices benefit “from some form of direct or in-kind support from their institution and/or an external funder.” Community colleges in California can benefit from a variety of grants and funding for CTL practices, including Basis Skills Initiative funding and Carl Perkins Career and Technical Education Act grants.

Research and Assessments

Institutions should to “pay […] attention to the role of initial assessment and ongoing evaluation as an integral component of CTL design.” By using assessments and evaluations, it will become easier to effectively compare CTL program effectiveness across institutions, and institutions will also be able to use data to more conclusively support statements about the impact of CTL practices.

Before any CTL programming is implemented, experts recommend that faculty members partner with institutional researchers to identify “which questions they are addressing in their inquiries and the type of data that could answer these questions.” Institutions should

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\(^{17}\) Unless otherwise noted, contents in this subsection are sourced from: “Contextualized Teaching & Learning: A Faculty Primer,” Op. cit., pp. 61-64.

also take advantage of any campus coordinators for student learning outcomes to best develop appropriate assessments and analysis.

**REPLICABILITY AND SCALABILITY**

For many institutions, it remains a challenge to document, disseminate, and expand CTL models. Institutions should aim to incorporate “documentation of curriculum and materials development, a description of the collaborations that were critical to the success of the venture, a detailed understanding of the resources required, and an overview of the initial and ongoing professional development needed to implement and continue innovation.” In this way, institutions that carefully document CTL practices are able to better replicate such models in the future.

Institutions can support CTL programming scalability through “conscious policy and diversified private and public funding.” Community colleges with strong CTL practices benefit from using a mix of state, federal, and private funds to support these initiatives.

**SUSTAINABILITY**

As “funds alone will not maintain innovation,” faculty interest and leadership are crucial components to sustain CTL efforts. Among CTL practices that are both small and large in scope, “initiatives that contribute to institutional change at the programmatic level must be integrated into the campus culture,” and leadership is needed at the administrative level.

Figure 1.3 on the following page presents key components of and recommendations for implementing CTL in a college setting.
## Figure 1.3: Recommendations for Implementing CTL in a College Setting

### Interdisciplinary Collaboration
- Create conditions for interdisciplinary collaboration so that basic skills and content area instructors can familiarize each other with their curricula, assessment approaches, standards, and teaching techniques.
- Instructors should visit each other's classrooms, look for intersects between instructional topics, and collaborate to align curricula.
- Substantial time is required for this effort.

### Professional Development
- Provide ongoing professional development led by trainers who have experience in contextualization. Leaders should also be experts from within the institution rather than outsiders.
- Evidence-based professional development methods should be utilized.
- Follow-up activities and supportive monitoring should be provided after the conclusion of formal training sessions.

### Assessment Procedures
- Develop assessment procedures that incorporate both basic skills and content area knowledge to evaluate the effects of CTL.
- Such measures should be locally developed because disciplinary curricula tend to change and conventional standardized tests do not capture students' progress in contextualized basic skills.

### Selection of CTL Courses
- Select discipline-area courses that are needed for graduation by large numbers of students but that also have high failure rates.
- Introductory science courses (e.g., anatomy and physiology) that are required for graduation by popular majors may be a useful place to start.

### Collection of Outcome Data
- When CTL courses are established, collect outcomes data that will be useful for instructors and administrators alike.
- Instructors and administrators should be made aware of both short- and longer-term outcomes.
- Evaluating CTL will indicate whether the effort is worthwhile and may point to the need to modify teaching techniques.

Source: Community College Research Center

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19 Figure contents taken verbatim, with some modifications to improve readability, from: Perin, Op. cit., p. 32.
PROFILE: WASHINGTON STATE’S INTEGRATED BASIC EDUCATION AND SKILLS TRAINING

The Washington State Board for Community and Technical Colleges (SBCTC) has instated an educational program called Integrated Basic Education and Skills Training, or I-BEST.20 I-BEST was developed to meet the needs of students who require basic workforce skills in addition to technical training as well as the needs of employers. I-BEST blends academics and career training with the goal of preparing students for employment. The program describes itself as a “nationally recognized model that quickly boosts students’ literacy and work skills.”21

I-BEST started at 10 community colleges and was designed “to reach students with limited English proficiency seeking the skills that lead to higher wage and higher skills jobs.”22 All demonstrations included an ESL component, but I-BEST students were generally “chosen from students scoring a three or higher (of a possible six) in English language proficiency on the Washington State Competency Exam.”23 Since the original pilot phase, I-BEST has expanded to all 34 colleges in the SBCTC system.24

STRUCTURE

All I-BEST programs are informed by the following guidelines:25

- **Curriculum:** Design new curricular materials and approaches that integrate developmental education and professional-technical curriculum. Equal attention is to be paid to both disciplines resulting in a redesigned curriculum that includes active learning pedagogies.

- **Instructional Approaches/Teacher Support:** Use data and a culture of evidence to modify, refine, and improve practices that advance student success. Provide shared/coordinated faculty planning time.

- **Student Support:** Provide learning opportunities that are contextual and integrated, including integrated program outcomes, use cohort and learning community-type models, including multiple modes, methods, and pedagogical strategies that appeal to diverse student populations, and provide clear career and educational pathways for students. Develop an integrated curriculum that focuses on what students need to know and be able to do to work in their chosen profession.

- **Institutional Support:** Provide professional development tools and other resources necessary to help all students succeed with consideration on how to make necessary changes in structures, attitudes, paradigms, and strategies for student success by

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21 Ibid.
23 Ibid.
building on strengths of students, faculty, staff, and the institution – adopting a strength-based rather than a deficit approach to students, faculty, etc. Also, create strong collaborative internal and external partnerships to support the program.

I-BEST classes are offered in career-oriented programs of study and teach both technical and job-training skills as well as basic skills in the same class, thus accelerating the path to a career for the student.\textsuperscript{26} I-BEST assigns two instructors to the same classroom. One instructor teaches remedial skills while the other instructor focuses on technical content. The co-instructors must work jointly to develop the curriculum and syllabi, teach, and assess student learning.

SBCTC funds only those colleges in the Washington community and technical college system that have received approval.\textsuperscript{27} Such approval is typically contingent on whether a proposed I-BEST program is part of a “career pathway” meaning “a course of study that leads to postsecondary credentials and career-path employment in a given field for which colleges must document demand.” Therefore, I-BEST provides a “structured pathway to college credentials and employment so that students do not have to find their way on their own.”\textsuperscript{28}

The following list highlights the most popular I-BEST programs in the state according to student enrollment in 2006-2007 and 2007-2008.\textsuperscript{29}

1. Medical Assistant
2. Nurse’s Aide
3. Office Manager
4. Microcomputer Applications Specialist
5. Early Childhood Teacher
6. Auto Mechanic
7. Welder
8. Criminal Justice/Law Enforcement
9. Office/Clerical
10. Home Health Aide

\textit{Effectiveness}

In a study conducted by the Community College Research Center of students who enrolled in I-BEST in 2006-2007 and 2007-2008, “I-BEST students earned substantially more college credits (both total and CTE [career and technical education]) than their peers, were much more likely to earn an award, and were moderately more likely to achieve a basic skills gain.”\textsuperscript{30} The report cautioned, however, that increased availability to financial aid may also

\textsuperscript{28} Ibid.
\textsuperscript{29} Ibid., p. 5.
\textsuperscript{30} Ibid., p. 28.
be playing a part in these positive outcomes. More than 55 percent of I-BEST students received some sort of financial aid, and the report notes that “it is possible that the positive effects of I-BEST are due not to the program content or structure but to the improved access to financial aid that allows students to progress.”

Irrespective of the impact of financial aid, an I-BEST fact sheet claims that I-BEST students are:

- Three times more likely to earn college credits;
- Nine times more likely to earn a workforce credential;
- Employed at double the hours per week (35 hours versus 15 hours); and
- Earning an average of $2,310 more per year than similar adults who did not receive the training.

Individual institutions in Washington develop their own I-BEST programs with guidance from the SBCTC. Details for one such program are provided below.

**PROGRAMS AND PEDAGOGY AT HIGHLINE COMMUNITY COLLEGE**

Highline Community College, located in Des Moines, Washington, offers a variety of I-BEST programs for students. Students can receive a short-term certificate in one quarter and have the certificate credits apply directly toward a specific Associate of Applied Science (AAS) degree. The classes for these I-BEST programs “integrate college credit courses with English language and adult basic skills, including "five hours a week of non-credit Adult Basic Education (ABE) and English as a Second Language (ESL) instruction." The current I-BEST programs at Highline are listed below:

- Business Pathways (Customer Service, Intro to Office Assistant, and Intro to Web Support)
- Health and Wellness Pathways (Caregiving Pathways (Home Care Aide))
- Education and Library Services Pathways (Early Childhood Education Initial Certificate, Family Child Care, Infant Toddler, School-Age)

According to the Highline Community College I-BEST website, I-BEST works by pairing content and basic skills instructors. Both instructors must be present in the classroom for at least half of the total instruction time. The other half of the time, the instructors may teach

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31 Ibid.
34 Ibid.
35 Bulleted list taken verbatim from: Ibid.
on their own. The program emphasizes that “successful co-teaching or team teaching is dynamic, interactive, and engaging for students and instructors.”

Co-instructors also identify course outcomes and integrate them, jointly plan activities and assessments, choose textbooks and required materials, and write the course syllabi. Co-instructors are instructed to meet to assess the course and the progress of the students once a week.

The program website includes information for instructors and students alike. For example, the site has a video about “how students feel about I-BEST” and a link to a page that lists funding source names and contact information to connect students with sources that may offer financial assistance.

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SECTION II: COMPETENCY-BASED LEARNING

DESCRIPTION

According to the U.S. Department of Education, competency-based learning – often referred to as personalized learning – “allows students to progress as they demonstrate mastery of academic content, regardless of time, place, or pace of learning.”40 More specifically:

Competency-based strategies provide flexibility in the way that credit can be earned or awarded, and provide students with personalized learning opportunities. These strategies include online and blended learning, dual enrollment and early college high schools, project-based and community-based learning, and credit recovery, among others. This type of learning leads to better student engagement because the content is relevant to each student and tailored to their unique needs. It also leads to better student outcomes because the pace of learning is customized to each student.81

Advocates of competency-based learning point to the fact that “breaking the link between learning and time provides the flexibility that many nontraditional students need.”42 Specifically, “emphasizing the demonstration of learning, rather than the process of learning, allows students to gain recognition of their competencies at entry as well as progress faster through school.”43

Below, Figure 2.1 highlights the main differences between traditional education and competency-based learning, according to advocates of this type of programming.

Figure 2.1: Traditional Education Versus Competency-Based Learning

<table>
<thead>
<tr>
<th>Traditional Education</th>
<th>Competency-Based Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time spent is fixed</td>
<td>Time spent is variable</td>
</tr>
<tr>
<td>Amount learned is variable</td>
<td>Amount learned is fixed</td>
</tr>
</tbody>
</table>

Source: National Institute for Learning Outcomes Assessment44

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41 Ibid.
43 Ibid.
The vast majority of research on competency-based learning focuses on K-12 programs, with few studies and research completed in an adult education setting. However, K-12 research on competency-based learning proves helpful in examining the best practices and details of this type of model. According to a report compiled by CompetencyWorks and the International Association for K-12 Online Learning (iNACOL), there are five key elements of competency-based learning:

- Students advance upon mastery;
- Competencies include explicit, measurable, transferable learning objectives that empower students;
- Assessment is meaningful and a positive learning experience for students;
- Students receive timely, differentiated support based on their individual learning needs; and
- Learning outcomes emphasize competencies that include application and creation of knowledge along with the development of important skills and dispositions.

**Student Outcomes**

There is minimal research about competency-based education at the undergraduate level. Critics of the model argue that this type of education “does not result in adequate learning on the part of students, compared with what they would have learned if they had attended a traditional degree program.” In addition, many competency-based learning programs are low in cost and are marketed to disadvantaged students, and critics have expressed concern that such students will not be “receiving a ‘real’ education,” thus leading to an inadvertent creation of a “two-tiered system of learning.”

On the other hand, proponents of the model point to the idea of mastery of competencies, which is the core component of this type of program. Specifically, institutions with competency-based learning programs “usually define mastery-level as a B+ both for student transcripts and to conform to federal financial aid regulations.” In this way, due to the fact that “many students can graduate with less than a B+ grade point average within the traditional credit-hour-based system,” the competency-based learning model “will actually be raising standards.” Ideally, students will also be fully engaged in the material, as the content is relevant and personalized to each student.

Students enrolled in competency-based learning programs have the ability to benefit financially as well. They are able to maximize learning while keeping costs to a minimum, generally due to “aggressive recognition of prior achievement by the student, tuition that is

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both low and based on time periods rather than number of registered courses, and the availability of online learning resources.”

**CONSIDERATIONS AND BEST PRACTICES FOR IMPLEMENTATION**

Another iNACOL report provides more detail on some of the main elements of competency-based learning, which are discussed briefly above and in more detail below.

**STUDENT ADVANCEMENT UPON MASTERY**

The key element of competency-based learning is that students progress to more advanced work upon demonstration of mastery of the material. This ensures that students work at levels that are appropriately challenging, thus helping to increase intrinsic motivation. Students should be evaluated on multiple demonstrations of their performance, and subjective indicators (e.g., attendance, submission of homework assignments, classroom participation) should not be considered unless they are specifically built into competencies.

**EXPLICIT AND MEASURABLE LEARNING OBJECTIVES**

It is important for competency-based courses to be “organized into measurable learning objectives that are shared with students.” In this way, students will have higher levels of engagement and motivation due to their taking responsibility for learning. This implies that the relationship between the student and teacher is different than a usual relationship – teachers “take on a stronger role as facilitator and coach of learning rather than simply delivering content.”

Additionally, with explicit and measurable learning objectives, “the unit of learning becomes modular,” and students earn credit for all work completed – even if they did not complete an entire course. Additionally, learning expands beyond the classroom, with students benefiting from informal and formal learning opportunities (e.g., digital learning, programs and mentors, independent work).

**FORMATIVE ASSESSMENT**

In competency-based learning, formative assessments should be aligned with learning objectives. To “encourage students to return to difficult concepts and skills until they achieve mastery,” students should also receive immediate feedback on assessments.

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In helping to encourage formative assessment, institutions need to provide “information management systems to support teachers, including learning management systems that are integrated with student information systems.” The use of high-level and sophisticated systems allows teachers to closely examine the areas in which students are struggling. Principals and administrators can also use these systems to detect areas in which teachers are failing to help their students understand material so they can determine appropriate training or support required.

Collaborate among teachers is encouraged “to develop understanding of what is an adequate demonstration of proficiency.” Teachers should assess students’ knowledge of skills or concepts in “multiple contexts and multiple ways” to ensure that students are ready to progress to a higher level. There are a variety of techniques that can be used to identify students’ levels of proficiency – formative assessments, digital learning tools, performance-based assessments, presentations, and peer-to-peer instruction.

A report compiled by HCM Strategists, an education policy and advocacy firm, also details six recommendations for institutions considering implementing a competency-based learning program.\(^\text{48}\) Several of the recommendations are presented on the next page in Figure 2.2.

Figure 2.2: Recommendations for Institutions Considering Competency-Based Learning Programs

- Consider carefully and articulate the relation of competency-based education to the institution’s mission.
  - The more closely [competency-based education] can be tied to the teaching and research traditions and aspirations of the campus, the more institutional “owners” and supporters it will attract.

- Ensure that the major shared governing bodies support the move toward competency-based education.
  - A coalition of trustees, student government officers, and faculty leaders who see its potential can be powerful allies.

- Provide compelling reasons for adopting competency-based education.
  - These might include such benefits as enhancing enrollment, developing new revenue sources, serving adult student taxpayers more effectively, addressing the workforce needs of the region and state, more sharply defining learning outcomes, and experimenting with new pedagogies in ways that will burnish the faculty’s reputation for quality innovation.

- Pledge that faculty will maintain control of the curriculum and assessments in the new programs.
  - Competency-based education will succeed in most mature public institutions only if faculty members believe that the quality of education can be improved by the change, and that crucial decisions regarding content and testing will remain within the purview of their expertise.

- Do not underestimate the financial resources required to build competency-based programs.
  - In addition to investments in curriculum overhaul, the costs of adjusting operational systems such as financial aid, advising, and course registration, tracking, and certifying must be faced. A “venture capital” attitude toward up-front investment with the prospect of longer-term productivity gains is appropriate.

Source: HCM Strategists

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Figure contents taken verbatim, with some modifications to improve readability, from: Ibid.
IMPLEMENTATION CHALLENGES

Despite the potential advantages that advocates of competency-based learning, there are several challenges that could hinder an institution’s ability to effectively implement the model should they not be considered during the planning phase. Some of the most common and difficult challenges are presented below.

PROTECTING HIGH LEVELS OF PROFICIENCY

- It is possible that teachers will set proficiency on learning objectives too low.
- Achievement gaps may continue – or even expand – if educators direct resources toward students who are progressing most rapidly and away from students who are struggling.

RE-ENGINEERING FOR STUDENT LEARNING

- It will require a great investment in resources and time to redesign management information systems and system infrastructure around student learning.
- The requirements needed to run two systems simultaneously – developing innovative competency-based metrics while trying to improve the traditional system – may be too cumbersome to be realistic.

INTEGRATING STUDENT INFORMATION AND LEARNING MANAGEMENT SYSTEMS

- Without adequate technology, the paperwork involved in competency-based systems can be overwhelming.
- Unless the architecture of the system is changed, the data systems will be aligned to capture "grade levels" and courses rather than competencies attained.
- Competency-based approaches require technology to be relatively sophisticated, which is not always easy to do given the technological infrastructure and resources at some institutions.

ALIGNING INCENTIVES FOR STUDENTS, EDUCATORS, AND COMMUNITIES

- The challenge is how to align the incentive structures of policy, accountability, and funding to support customization.
- Reward systems should be focused, at least partially, on attainment – yet, redesigning funding is filled with its own pitfalls and obstacles.
- Competency-based learning will also raise the question of how to engage and reward the organizations or people outside of the classroom that help students progress.

**NURTURING ORGANIC EXPANSION AND INNOVATIVE SPACE**

- The growth of competency-based programming will likely be organic. Top-down approaches may be difficult primarily because of the small pool of innovators and limited technical assistance capacity.

**PROFILE: STATE OF NEW HAMPSHIRE’S HIGH SCHOOL REDESIGN**

The vast majority of research on competency-based learning focuses on K-12 programs, as mentioned previously. As such, some of the strongest existing models exist in this space. The state of New Hampshire is a leader in competency-based learning practices at the high school level, and recently has initiated a high school redesign that replaces the time-based system with a competency-based system. According to the U.S. Department of Education, New Hampshire’s high school redesign focuses on “personalized learning, strong teacher-student relationships, flexible supports, and development of 21st century skills.”

To support this type of learning, the state of New Hampshire has implemented several initiatives:

- Supporting the development and implementation of high school course-level Competencies
- Providing technical assistance and tools to implement Extended Learning Opportunities
- Connecting to drop-out prevention, recovery, and Adult Education initiatives
- Providing multi-state opportunities through the New England Secondary School Consortium
- Connecting to education technology for 21st century high schools
- Highlighting Charter Schools’ promising practices
- Supporting teacher/leader development initiatives

**COURSE-LEVEL AND STATEWIDE COMPETENCIES**

In 2013, the New Hampshire Department of Education and educators collaborated to create statewide college and career-ready competencies. To validate the strength of competencies, a validation rubric tool was developed and tested for reliability and validity. Specifically, four main elements are assessed using the rubric – Relevance to Content Area, Enduring Concepts, Cognitive Demand, and Relative to Assessment. Today, the “competencies are approved by the State Board of Education for statewide use.” In addition, the Minimum Standards for School Approval “state that local districts must have a

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54 Ibid.
competency assessment process and defined course-level competencies in place for all public high schools,” and graduation credit is to be awarded “on student demonstration of mastery of these course-level competencies.”

**EXTENDED LEARNING OPPORTUNITIES**

To maximize students’ learning to master competencies, the New Hampshire Department of Education encourages school districts to support extended learning, defined as “the primary acquisition of knowledge and skills through instruction or study outside of the traditional classroom methodology.” There are several forms of extended learning opportunities (ELO), including the following:

- Apprenticeships;
- Community service;
- Independent study;
- Online courses;
- Internships;
- Performing groups; and
- Private instruction.

As ELO are a key part of New Hampshire’s competency-based learning strategy, the state reports that 1,218 ELO projects were completed between January 1, 2009 and December 31, 2010. Additionally, the evaluation report on New Hampshire’s ELO states that “the ELO coordinator is central to the ELO system development, implementation, and quality assurance.” Although school districts are not required to offer ELO, if such opportunities are offered, they must be available to all students. Additionally, ELO may be offered in any course area, and may “provide credit for all or some of a core course.” In this way, such opportunities allow students to earn graduation credit outside of traditional classrooms.

Rigorous ELO, or “those that result in the highest levels of academic and personal learning for students,” generally have four components – research, reflection, product, and presentation. Details of these components are highlighted in Figure 2.3 on the next page.

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57 Ibid.
59 Ibid.
Figure 2.3: Components of a Rigorous Extended Learning Opportunity

**Research**
- Research is a good place for a student to start with any exploration.
- Learning where and how to find more information about a subject can turn a lukewarm interest into an engaged enthusiasm.

**Reflection**
- When you ask your students to reflect often and regularly on their ELO, you teach them how to examine their experience and interpret it in ways that lead to new understanding.
- By varying the reflection activities, you can accommodate multiple learning styles and help students understand that reflection is part of the learning process, not an isolated activity.

**Product**
- Learner-centered activities often include student-created products that demonstrate the results of their learning.
- The creation of products that reflect the knowledge and information constructed by students is one of the focal points of learner-centered instruction.

**Presentation**
- The presentation is an authentic assessment tool. It is a venue for student demonstration of mastery of those course-level competencies connected with the ELO.
- The "demonstration" is multi-layered, showing the student growth in personal, social, academic, and skill areas, as well as planfully demonstrating the ability to synthesize those areas which good presentation always requires.

Source: New Hampshire Department of Education

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**SUPPORT FOR HIGH SCHOOL REDESIGN WORK**

The New Hampshire Department of Education website details several conferences, department initiatives, grant award opportunities, and workshops and training that all support the state’s competency-based learning practices.

- **Conferences:** New Hampshire Association for Supervision and Curriculum Development (NH ASCD) offers workshops of interest to high schools working on Redesign efforts.

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62 Figure contents are taken verbatim from: Ibid.
Department Initiatives: The Department of Education has teamed with PlusTime NH, the Concord Area Center for Educational Support, QED, and a number of local school districts to pilot the assessment of ELO with course-level competencies.

Grant Award Opportunities: Requests for proposals are currently being accepted.

Workshops and Training: The NH e-Learning for Educators project offers professional development courses through OPEN NH. Examples of courses include:
- Data Driven Teaching;
- School Policies for 21st Century Learning;
- Using Web 2.0 Tools for 21st Century Teaching and Learning;
- Incorporating Project Based Learning in Your Classroom;
- Universal Design: Teaching and Learning in the 21st Century;
- Inquiry Based Teaching Using a SmartBoard and Web Resources;
- Developing Competencies for High School Courses;
- Recognizing and Developing Extended Learning Opportunities; and
- Using Mimeo Interactive Whiteboard and Pad to Deliver Engaging Instruction.
SECTION III: ACCELERATED DEVELOPMENTAL EDUCATION

Studies specific to California and broader research have demonstrated that “the more levels of developmental courses a student must take, the less likely the student is to ever complete college courses in English and Math.” This problem is typically not due to students’ lack of skills or motivation; instead, the curricular sequences create barriers for students. Below, Figure 3.1 illustrates the ways in which the multiple levels of development courses are harmful to students. The “multiplication principle” describes how more and more students drop out at each level of the curricular sequence – resulting in very few students who ultimately reach the college level.

Figure 3.1: Developmental Reading Exit Points Analysis

Source: Community College Research Center

DESCRIPTION

Accelerated developmental education aims to improve these curricular sequences so that more students are ultimately able to enroll in college courses. California Community

66 Figure taken from: Ibid.
Colleges’ Success Network (3CSN) provides a working definition of accelerated developmental education:

Accelerated developmental education involves curricular restructuring that reduces sequence length and eliminates exit points. Ideally, it also includes a reconsideration of curricular content: Is what we are teaching in developmental courses what students truly need to succeed in college English or Math?\(^67\)

Community college students can greatly benefit from accelerated developmental education. When taking placement exams to assess their readiness for college-level work, many students are “deemed unprepared” and are “referred to a three-or even four-course developmental education sequence in math or English before they can proceed to college-level work.”\(^68\) However, such students are likely to drop out before completing these sequences, often due to course failure or not enrolling in the next course.\(^69\) Accelerated developmental education is a strategy for community college students to complete remediation more quickly.

Supporters of accelerated developmental education point to two main benefits – **fewer opportunities for exiting the developmental course sequences** and **better alignment with college-level curricula.**\(^70\) These benefits are more closely detailed in Figure 3.2 on the next page.

Critics of this strategy, on the other hand, state that “underprepared students need more time – in and out of class – to master competencies required for college-level coursework,” and therefore “acceleration may not be an effective alternative to the traditional sequence” for these students.\(^71\)

**STUDENT OUTCOMES**

Research indicates that accelerated developmental education “is associated with increased enrollment in and completion of gatekeeper math and English” courses.\(^72\) Additionally, “students who take accelerated developmental courses typically perform as well in gatekeeper courses as their non-accelerated peers.”\(^73\) Acceleration also often furthers students’ progress along the path to a degree, as acceleration can provide a boost to students’ overall college-level credit accumulation.

Student outcomes from an accelerated developmental English course at Chabot College in California, for example, demonstrate a positive effect. Specifically, “participation in the

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\(^{69}\) Ibid.

\(^{70}\) Ibid., p. 3.

\(^{71}\) Edgecombe, Op. cit., p. 3.


\(^{73}\) Ibid.
accelerated course was positively associated with a range of positive short-, medium-, and long-term outcomes, including entry-level college English completion, credit accumulation, grade point average, transfer to a four-year institution, and certificate and degree attainment.”

Offering additional support to students enrolled in accelerated development education programs helps to fully maximize student outcomes. For example, the following strategies may further support at-risk students in these programs:

- Required tutoring or co-requisite coursework;
- Early-warning systems to identify underperforming students so that instructors may intervene early in the course; and
- A support network for instructors to help them collaboratively develop strategies for working with struggling students.

Figure 3.2: Potential Benefits of Accelerated Developmental Education

- **Fewer Opportunities for Exit**
  - Lengthy developmental sequences give students multiple opportunities to drop out.
  - Acceleration strategies are designed to minimize exit points and limit the time students spend in developmental education.
  - This reduces the likelihood that outside commitments or events will pull students away from college before they complete their developmental sequence.

- **Better Alignment with College-Level Curricula**
  - Developmental education courses sometimes teach skills that are not clearly relevant to the tasks and assignments used in college-level programs of study.
  - Some acceleration strategies tailor the developmental curriculum to the skills required for success in introductory college-level courses, which eliminates unnecessary topics and allows students to move through the course material more quickly.
  - Some may also employ assignments that approximate college-level expectations, along with pedagogies designed to support students' efforts to meet these challenging expectations.

Source: Community College Research Center

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76 Ibid., pp. 1-2.
MODELS FOR IMPLEMENTATION

A presentation for 3CSN’s 2011 Acceleration Initiative outlines several models for implementation of accelerated developmental education. It is evident that this type of education can manifest itself in a variety of different forms, as highlighted in Figure 3.3.

**Figure 3.3: Models for Implementation of Accelerated Developmental Education**

<table>
<thead>
<tr>
<th>Avoidance Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Programs and policies that provide alternative pathways and/or help students skip levels, such as:</td>
</tr>
<tr>
<td>• Changing cut scores to advance students in sequence;</td>
</tr>
<tr>
<td>• Creating easy mechanisms for students to skip levels;</td>
</tr>
<tr>
<td>• Directed self-placement that enables students to enroll in transfer-level courses regardless of placement score;</td>
</tr>
<tr>
<td>• Allowing students who have passed Algebra II in high school to move directly into college-level Statistics;</td>
</tr>
<tr>
<td>• Bridge and/or review programs that enable students to move into a higher level of coursework; or</td>
</tr>
<tr>
<td>• Contextualized reading/writing/math/ESL embedded in Career-Technical programs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compression Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Combining levels of a sequence into an intensive format within the same semester.</td>
</tr>
<tr>
<td>• The total number of units can be kept the same or can be reduced.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mainstreaming Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Placing developmental students into a transfer-level course with some kind of additional support built in (e.g., supplemental instruction, additional lab hours, or student tutors embedded in class).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modular Redesign</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Replacing the traditional course sequence with individualized learning modules.</td>
</tr>
<tr>
<td>• More fine-grained diagnostic tests assess students' incoming levels of skill/understanding and instruction focuses on these areas, often aided by computer software.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stretch-and-Skip Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Teaching a lower course to the outcomes of a higher course, then providing an easy skip mechanism to advance high-achieving students past level(s) of the sequence.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sequence Redesign</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Restructuring curricula to engage developmental students in more complex reading, writing, and thinking tasks sooner and prioritize the most essential skills and knowledge needed in college courses.</td>
</tr>
</tbody>
</table>

Source: California Community Colleges Success Network

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77 Figure contents taken verbatim from: Hern, K., and M. Snell. “Select Models of Accelerated Developmental English and Math.” California Community Colleges Success Network, Spring, 2011. 
https://app.box.com/shared/d6zk5yo7xc
CONSIDERATIONS AND BEST PRACTICES FOR IMPLEMENTATION

To be most effective, institutions developing accelerated developmental education initiatives should consider curricular redesign, overhaul of current placement systems, and faculty development to support transition to new models.

CURRICULAR REDESIGN

Accelerated developmental education practices involve a shorter length of developmental sequences to “eliminate the many ‘exit points’ where students are lost by either not passing or not enrolling in courses in the sequence.” It is also important for institutions to provide under-prepared students with additional support to meet the demands of college-level courses.

The curriculum should be contextualized and created using a “backwards design.” In other words, all students should not be required to complete “a single generic English, Reading, or Algebra-based curriculum.” Instead, instruction should be “aligned with students’ educational pathways”:

For students pursuing career-technical credentials, this might involve contextualized literacy and quantitative skills embedded within their vocational program. Students pursuing majors that don’t rely on Algebra might enroll directly in college Statistics, or take a targeted pre-Statistics course developed through “backwards design” to include only the mathematics skills, content, and habits of mind required in that course.

It is also helpful if models of accelerated developmental education include “just-in-time remediation” instead of front-loading. Rather than teaching students segmented versions of complex skills in a step-by-step curriculum, courses should immerse students “in challenging, authentic literacy and quantitative tasks.” Providing “targeted reviews of foundational skills at the moment when they are relevant to the higher order work at hand” is also important.

OVERHAUL OF CURRENT PLACEMENT SYSTEMS

Students are generally unprepared for and unaware of the stakes of standardized placement tests, and such tests also often fail to capture a student’s level of college readiness. In this way, placement tests often “lead [institutions] to underestimate the capacity of low-scoring students” and deny students access to higher-level courses.

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78 Unless otherwise noted, contents in this subsection are sourced from: “Acceleration News.” California Acceleration Project, September 2011. pp. 4-5. https://app.box.com/shared/ublk2sm96491osj08cm7

79 Unless otherwise noted, contents in this subsection are sourced from: Ibid.
It is recommended, then, that current assessment instruments – and curricula to which they are tied – should be redesigned if this model is implemented. The literature indicates that it is most helpful if assessments do not simply track students into levels of remediation but instead “identify students at a greater risk and provide them simultaneous support to meet the challenges of accelerated developmental and college-level courses.”

For example, Chabot College in California has redesigned its placement systems so that students have more choices and greater access to courses. Chabot College students take placement tests in English, math, and sometimes English as a Second Language (ESL) upon enrollment and are then “referred to one of three main English coursework options: college-level English, developmental English, or ESL courses.” Students recommended for developmental English then go on to have two choices of pathways – English 102 (“an accelerated four-credit integrated reading and writing course”) or English 101A and 101B (“two four-credit integrated reading and writing courses taken over two semesters”). Other developmental course options include a faculty-student tutorial course, a course in English grammar, and learning skills courses designed for students with learning disabilities.

Students benefit from being allowed to self-place into developmental education courses. It is necessary, however, for “counselors, course catalogs, and other academic advising resources” to be available for students who need assistance in deciding which pathway to choose.

**Faculty Development**

Successful accelerated developmental education implementation also hinges on effective faculty support as they transition to this new model. Institutions should provide faculty members with models of “real-life accelerated classrooms,” including lessons, assignments, and samples of student work. Faculty members also need peer support, such as other “teachers with whom they can share ideas, trouble-shoot issues, and reason through questions and concerns.”

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81 Ibid., pp. 3-4.
82 Ibid., p. 4.
84 Ibid.
**CHALLENGES**

Institutions implementing accelerated developmental education may face several challenges of the model, which are described below, along with recommendations for addressing such challenges:

- **Assessment and Placement**: The sorting function of the assessment and placement process reinforces the sequential structure of developmental education, which may hamper student progress. Instruments and policies should be reconceived in order to match students more precisely with academic interventions that meet their needs.

- **Course Development and Curricular Alignment**: Strict system or college guidelines regarding course content and sequencing can undermine attempts to implement acceleration models, particularly those models that rationalize curricula or do not adhere to the traditional developmental education sequence. Academic administrators may want to consider reevaluating what students in developmental education are asked to learn and why. In instances where there is no clear connection between required content or desired skill development and the college-level curriculum, practitioners should consider rationalizing content and seeking means to accelerate student progress.

- **Student Recruitment**: It can be challenging to recruit students to participate in accelerated programs. The effective marketing of accelerated developmental education alternatives – both to students and to those who help them decide which courses to take – is underemphasized. Pre-term information sessions with counselors could help steer more students to appropriate courses. Communications to students through email, text message, and announcement boards could highlight developmental education alternatives.

- **Faculty Resistance**: Faculty members may be resistant to change, which can affect their willingness to participate in accelerated instructional reform. Faculty resistance may be reduced if faculty members feel that they have a role in leading instructional reforms. Institutions can encourage faculty to participate in acceleration efforts by developing faculty inquiry groups to evaluate reforms and using their results to further improve programs.

- **Financial Sustainability**: Community colleges are facing serious budget challenges. Colleges should consider rigorously assessing innovations in order to identify, sustain, and expand funding for those associated with superior student outcomes. Policymakers and practitioners may find cost-effectiveness analyses particularly useful when making resource allocation decisions.

- **Administrative Logistics**: Certain acceleration models present logistical challenges by virtue of their programmatic features. The use of non-traditional instructional spaces, such as small-group study rooms at libraries and conference rooms, is emerging as a potential solution to the space constraint issue.

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PROFILE: COMMUNITY COLLEGE OF DENVER’S FASTSTART PROGRAM

The Community College of Denver (CCD) started hosting FastStart, an accelerated learning community, in 2005.\textsuperscript{86} Several grants aided the program’s initial implementation, including one from the Lumina Foundation Initiative for Performance. FastStart supports working adults who need developmental education by providing accelerated courses in reading, math, and English.

The program structure is designed to:

\begin{itemize}
  \item Accelerate movement through the developmental course sequence;
  \item Reduce the social isolation often characteristic of commuter campuses; and
  \item Orient first-year students to the college environment on a schedule that is compatible with their job and family obligations.\textsuperscript{87}
\end{itemize}

The CCD Catalog describes the program as follows:

FastStart provides students with supportive, interactive instruction throughout the semester and an opportunity to share their knowledge and experiences with other students in the learning community setting. A Program Advisor, with help from student ambassadors, monitors FastStart students’ progress and refers them to the services they might need to succeed.\textsuperscript{88}

STRUCTURE

FastStart promotes student retention and success rates through a compressed model of accelerated developmental education. CCD’s model also incorporates other accelerated developmental education strategies such as paired courses and contextualization. Figure 3.4 on the next page details key features of the program, which include compressed and accelerated developmental education, college and career success courses, learning communities, formal and informal assessment, case management, and various wrap-around services.


\textsuperscript{87} Bulleted list taken verbatim from: Ibid.

Figure 3.4: FastStart Program Features

Compressed and Accelerated Developmental Education

- An accelerated and compressed developmental curriculum using contextualized instruction, active learning, and computer-based instruction epitomizes the instructional approach. Students advance through two levels of developmental math in one semester by combining the first and second levels (MAT 30-60), second and third levels (MAT 60-90), or the third level and first level of college study (MAT 90-106). The English option combines two, three, or four sequenced courses of developmental English and reading.

College and Career Success

- A for-credit college and career success course complements the developmental curriculum. This course assists FastStart students with college and career preparation by engaging them in contextualized, project-based instruction that encourages the development of college knowledge and the reinforcement of college behaviors, such as the development of study skills and the use of various college resources. Students are also engaged in career exploration activities.

Learning Community

- Cohorts acting as learning communities support formal and informal learning experiences, including integrated academic, career, and social learning activities. Students are encouraged to learn collaboratively and to support one another, with faculty playing a deliberate role in nurturing a supportive community of learners who strive for success. For example, an optional hour with a study group that includes instructor support is built into the students’ weekly schedule to help them learn how to study together outside class time.

Formal and Informal Assessment

- Formal assessments supplemented by locally developed diagnostics identify students who can benefit from the program. Students identified for FastStart take the Accuplacer placement tests, as required by CCD and consistent with the state’s community college system requirement. Students from low-income and diverse racial, ethnic, and cultural backgrounds are encouraged to participate.

Case Management

- A case manager and educational advisors help students develop individualized education and career plans. Case managers advise students on all aspects of their education, career, and life planning. This includes helping them to understand and use existing student support services at CCD, particularly services such as financial aid, academic advising, personal counseling, and tutoring.

Wrap-Around Services

- Wrap-around services, including financial aid, career counseling, academic advising, and other services, are instrumental to students’ getting the support they need to be successful. Of these various services, advising on financial aid is especially important because many students lack knowledge of how to access financial resources to attend college.
This structure theoretically establishes a holistic approach to acceleration, which is diagrammed below in Figure 3.5.

**Figure 3.5: FastStart’s Holistic Approach to Acceleration**

Since FastStart’s inception in 2005, CCD has added more accelerated and compressed course options to the program. Initially, FastStart offered two math and two reading compressed course combinations. For example, a traditional sequence in math might consist of two semesters of classes, MATH 030: Fundamentals of Math and MATH 060: Pre-Algebra, with each meeting for 75 minutes twice per week. In the compressed FastStart
In spring 2012, the program expanded to include four math and four reading accelerated developmental courses. Figure 3.6 below demonstrates trends in the program’s growth between fall 2005 and spring 2012 and offers insight into potential remedial course combinations.

**Figure 3.6: FastStart Accelerated and Compressed Courses, 2005-2012**

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>NUMBER OF SECTIONS OFFERED</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>F 05</td>
</tr>
<tr>
<td>Math</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundamentals of Math/Pre-Algebra</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Pre-Algebra/Introductory Algebra</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Introductory Algebra/Intermediate Algebra</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Fundamentals of Math/Math Study Skills</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Pre-Algebra/Introductory Algebra &amp; Basic Composition</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>English/Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing Fundamentals/Foundations of Reading &amp; Basic Composition/College Preparatory Reading</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Writing Fundamentals/Basic Composition &amp; College Preparatory Reading</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Foundations of Reading/College Preparatory Reading &amp; Basic Composition</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Composition in ESL/Basic Composition</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Total (Math and English/Reading)</td>
<td>-</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Community College Research Center

CCD began offering FastStart learning communities in fall 2009. Learning communities pair developmental English or reading courses with college-level classes such as Introduction to Political Science or Public Speaking. Figure 3.7 on the following page offers insight into potential learning community pairings.

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92 Ibid., p. 7.
Figure 3.7: FastStart Learning Communities, 2009-2012

<table>
<thead>
<tr>
<th>LEARNING COMMUNITY</th>
<th>CREDITS</th>
<th>NUMBER OF SECTIONS OFFERED</th>
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<td></td>
<td></td>
<td>F 09</td>
</tr>
<tr>
<td>Basic Composition/English Composition I</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Basic Composition/English Composition I &amp; College Preparatory Reading</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Basic Composition &amp; Public Speaking</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Basic Composition &amp; Intro to Literature</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Basic Composition &amp; Intro to Political Science</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>College Preparatory Reading &amp; U.S. History to Reconstruction</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>College Preparatory Reading &amp; General Psychology I</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Basic Composition &amp; American Government</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Basic Composition &amp; Art Appreciation</td>
<td>6</td>
<td>-</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Community College Research Center

PEDAGOGY

The Community College Research Center’s 2013 report on FastStart highlights three of FastStart’s pedagogical strengths:  

- Extended instructional blocks;  
- Pedagogical experimentation and risk taking; and  
- Relationships and instructional delivery.

Extended Instructional Blocks: Having courses that meet for two hours and 45 minutes twice a week encourages instructors to diversify their instructional activities, going beyond lecturing and incorporating peer activities, games, assignments, and other student-oriented teaching practices. One CCD math instructor, for example, explains:

> You have to change it up a lot. If you’ve got three hours, you can’t just lecture for three hours. We’d all be wiped out at the end. So I think that I’ve found that the students really enjoy and benefit tremendously from being able to have instruction time and then work in groups.  

Pedagogical Experimentation and Risk Taking: The FastStart program encourages pedagogical experimentation in the classroom. This can be more demanding for teachers, and FastStart may attract those teachers who are willing to take on a challenge. Often experimentation occurs collaboratively among faculty.

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93 Ibid., p. 8.  
94 Ibid., pp. 13-18.  
95 Ibid., p. 13.  
96 Ibid., p. 16.
**Relationships and Instructional Delivery:** The combination of extended instructional blocks and learning communities helps to build relationships among students and between students and faculty. In addition, faculty report explicitly taking time to build community relationships. Pedagogically, cooperative learning encourages “students to talk intimately and publicly, be constructive, show tact, and brainstorm original ideas.”

A stronger relationship between students and faculty allows faculty to become more aware of the specialized needs of students and gives instructors the ability to address these needs personally. Students are also more comfortable interacting with faculty members if they feel that instructors know them. One FastStart student said, “I feel like this is like our homeroom class. I know all of the students that are there. I know the teacher better. It’s really going really good.”

**Faculty and Instructional Supports**

FastStart faculty began in the pilot phase as adjunct professors only, but grew to include full-time faculty as well. While faculty development was seen as a key aspect of the FastStart program from the start, it has progressed from a mostly informal system to a more structured system. According to a 2006 report on the project, FastStart faculty participated in a variety of professional development opportunities and met once a month (the entire FastStart team met three times during the semester, and twice in content-specific groups) to promote innovation and creativity within the program and classroom.

More recently, “faculty development has expanded to include a range of professional learning activities and has been structured in ways that encourage sustained and collaborative participation.” CCD has encouraged faculty participation by providing compensation for professional development activities for both full-time and adjunct instructors. Examples of structured professional development activities in support of the FastStart program at CCD include the following:

- The FastStart coordinator meets one-on-one with each instructor to provide targeted feedback and resources;
- Instructors, the coordinator, case managers, and the project director meet as a group at least two times each semester to discuss program plans and to review outcome data, among other activities;
- Discipline-specific “idea meetings” and workshops also are scheduled as warranted throughout the semester; and

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97 Ibid., p. 18.
98 Ibid., p. 22.
99 Ibid., p. 6.
102 Ibid., p. 12.
103 Bullet list taken verbatim, with slight modifications, from: Ibid., pp. 11-12.
Instructors are encouraged to partner with another faculty member teaching the same subject for structured observations and feedback.

**EFFECTIVENESS**

FastStart has demonstrated a consistent record of positive outcomes. A recent CCRC evaluation of FastStart’s effectiveness found that “students who participated in FastStart were more likely than otherwise similar students to pass the highest developmental math course [Math 090] as well as to enroll in and pass gatekeeper math courses.”

Specifically, the study compared learning outcomes for FastStart participants enrolled in compressed remedial math courses (e.g., MAT 030/060 or MAT 060/090) to students in non-FastStart sections of the same courses. The analysis did not review success rates in remedial English/reading courses. Figure 3.8 summarizes the combined results for students enrolled in MAT 030/060 and MAT 060/090.

### Figure 3.8: Learning Outcomes for FastStart Participants Versus Traditional Developmental Participants

<table>
<thead>
<tr>
<th>OUTCOME</th>
<th>FASTSTART (N=133)</th>
<th>REGULAR (N=1,222)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term persistence (next term)</td>
<td>69%</td>
<td>62%</td>
</tr>
<tr>
<td>Long-term positive outcome (3 years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Still enrolled at a CC</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>Transferred bachelor’s institution</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Earned certificate or degree</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Credits earned with C or higher</td>
<td>26%</td>
<td>21%</td>
</tr>
<tr>
<td>College credits earned with C or higher</td>
<td>17%</td>
<td>14%</td>
</tr>
<tr>
<td>Passed Math 090 with C or higher</td>
<td>49%</td>
<td>29%</td>
</tr>
<tr>
<td>Enrolled in gatekeeper math</td>
<td>41%</td>
<td>23%</td>
</tr>
<tr>
<td>Passed gatekeeper math with C or higher</td>
<td>33%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: Community College Research Center

An earlier evaluation of the FastStart program also yielded promising results. The study followed eight students enrolled in FastStart (the “intervention” group) and compared these students’ learning outcomes with two comparison groups. On the next page, Figure 3.9 highlights the following positive outcomes from the evaluation as identified by the Community College of Denver.

However, despite these successes, the program has faced several challenges. In particular, a lack of student demand has impeded program expansion efforts. The CCRC notes that “the program enrolls less than half of students referred to multiple levels of developmental education.” FastStart’s hallmark instructional blocks (i.e., two hours and 45 minutes for MAT 030/060 twice per week) pose a barrier to many students, especially part-time students, who cannot find adequate time in their schedules to accommodate these courses.

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104 Ibid., p. 46.
105 Ibid., p. 31.
Figure 3.9: Analysis of FastStart Program Student Outcomes

Retention

- After one semester the accelerated group had a significantly higher retention rate than the Fall 2004 comparison group. This comparison group enrolled in three of the developmental courses instead of all six. After three semesters, enough time to complete all six developmental courses in the intervention, the intervention group had a significantly higher retention rate.

Successful Course Completion

- The accelerated intervention group displayed significantly higher successful course completion rates than either comparison group for MAT 030 and a higher rate than comparison group 2 in ENG 090 (there were no ENG 090 students in comparison group 1). Other differences for MAT 060, ENG 060, REA 060, and REA 090 were not statistically significant. It is noteworthy, however, that the intervention group did successfully complete each of those courses more often than the other groups.

Overall Successful Course Completion for the Six Developmental Courses in the Intervention

- The intervention group had a higher overall success rate for the six developmental courses than either comparison group. These differences were statistically significant.

Overall Successful Course Completion

- The overall completion rate includes all courses attempted. The results mirrored those for the completion of the six developmental courses. The intervention group had a statistically significantly higher overall success rate than either comparison group.

Grade Point Average

- Although not statistically significant, the intervention group had a higher GPA than either comparison group.

Source: Community College of Denver

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107 Figure contents taken verbatim from: Brancard, Baker, and Jensen, Op. cit., p. 11.
SECTION IV: ADDITIONAL CONSIDERATIONS

This final section highlights several additional practices and considerations that should be contemplated when discussing strategies to accelerate adult students’ progress toward goals. The section specifically focuses on limitations to student options, the Registered Apprenticeship College Consortium, and the importance of student support services and follow-up.

LIMITATIONS TO STUDENT OPTIONS

Adding limits to student options is another strategy for accelerating students’ pathways to completion. This approach typically involves block scheduling “in which students select a block of time to take all their courses, with the same schedule each semester,” with the goal of making sure that “students select the correct courses, that courses are available when students need them, and that more students can attend college full-time.” A report published by the Indiana Commission for Higher Education that incorporates perspectives from Indiana College students and advisors highlights the controversial reactions to this strategy:

- Enthusiastic support from students and non-completers who prioritize predictability of schedules to help manage other life obligations;
- Hesitation from advisors who believe students with complex lives are better served by greater flexibility;
- Implementation concerns around the feasibility of offering required courses for multiple cohorts; and
- Concerns from advisors that block scheduling undercuts students learning to manage their own lives.

Some students find the predictability in scheduling and promised availability of courses attractive. Other students add that they would enjoy this type of cohort structure in which they could form friendships with peers. However, this type of model imposes a variety of potential complications, such as not having enough students to fill a course, issues with students completing college part-time, or time blocks not matching up with students’ schedules.

The Indiana Commission for Higher Education report also highlights strategies that might be more effective for reducing a student’s time to degree in addition to or instead of adding limitations to student options. These methods fall into two general categories –

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109 Bullet points taken verbatim from: Ibid., p. 15.
110 Ibid., p. 21.
111 Ibid.
for accelerating completion and strategies for preventing wasted credits. Main components of these strategies are presented below in Figure 4.1.

**Figure 4.1: State- and Institution-Level Best Practices in Reducing Time to Degree**

<table>
<thead>
<tr>
<th>Strategies for Accelerating Completion</th>
<th>Strategies for Preventing Wasted Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Encourage students to take more credits, especially in their first year of college.</td>
<td>• Supplement advising capacity with structured degree maps.</td>
</tr>
<tr>
<td>• Make the long-term consequences of course withdrawal apparent to students and alert them to courses that are high risk for failure or withdrawal.</td>
<td>• Use degree milestone systems to ensure completion of courses that all students must take to progress in a major or program of study.</td>
</tr>
<tr>
<td>• Alert students to relevant transfer and articulation information.</td>
<td>• Build the infrastructure for students to change course without having to backtrack or get off track entirely.</td>
</tr>
</tbody>
</table>

Source: Indiana Commission for Higher Education

**STUDENT SUPPORT AND FOLLOW-UP**

Research has shown that providing students with direction and support in adult educational planning, including regularly following up with students, is important for accelerating progress toward goals. A Jobs for the Future report, which works to “expand access to college and careers for low-income and underprepared learners across the country,” states that comprehensive support services should be a key component of any sort of accelerated learning practices. Specifically, support services should be available to all students and should be personalized for each student’s individual needs. Support services should incorporate academic, nonacademic, career, personal, and financial elements, as highlighted in Figure 4.2 on the next page.

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**Figure 4.2: Components of Comprehensive Student Support Systems**

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112 Ibid., p. 23.
114 Ibid., p. 4.
To maximize student outcomes, it is important for institutions to regularly follow up with students in such programs. Research has shown that students may benefit from “intrusive advising,” which can include “structured meetings with advisors, mandatory activities such as academic advising and nonacademic advising, and career services.”

### Source: Jobs for the Future

To foster students’ sense of connection to the college; enhance their self-confidence as members of the college community; and develop their ability to access college resources and make decisions that support their success as students.

- **Activities**: College navigation advising; time management training; study skills development.

### Nonacademic Advising

To support students in pursuing and succeeding in their academic studies.

- **Activities**: Assessment of academic skill needs; meeting with academic advisors to review course selection; tutoring; supplemental coursework; access to online learning supports.

### Career Services

To foster students’ sense of connection to the college; enhance their self-confidence as members of the college community; and develop their ability to access college resources and make decisions that support their success as students.

- **Activities**: College navigation advising; time management training; study skills development.

### Social Services and Counseling

To assist students in managing their personal lives in order to support persistence in and completion of their studies.

- **Activities**: Provision of or referral to child care resources, transportation assistance, housing assistance, or mental health counseling; life skills training.

### Financial Services

To support students in financing their postsecondary studies; to build students’ self-efficacy in managing their resources for school and personal needs.

- **Activities**: Financial need assessment; identification of applicable financial aid resources; access to benefits; assistance with completion of financial aid applications; financial literacy workshops.

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115 Figure contents taken verbatim from: Ibid., p. 5.
as academic planning, and close tracking of student success.”\textsuperscript{116} Regularly following up with students and requiring participation in promising activities often leads to positive student outcomes. For example, the report notes that community college students in South Texas who were in the institution’s Beacon Program, which is “designed to bring information on available tutoring services directly to students in remedial math classes,” ultimately used more tutoring services and were less likely to withdraw from the class.\textsuperscript{117}

\textit{Registered Apprenticeship College Consortium (RACC)}

Another option for supporting the acceleration of adult learning is enhancing apprenticeship opportunities in the region or through participation with a national organization like the \textit{Registered Apprenticeship College Consortium} (RACC). According to the program’s website, the RACC is “a national network of postsecondary institutions, employers, unions, and associations working to create opportunities for apprentice graduates who may want to further enhance their skills by completing an associate’s or bachelor’s degree.”\textsuperscript{118} The Consortium’s goals are listed in Figure 4.3 on the next page.

\textsuperscript{116} Ibid., p. 8.
\textsuperscript{117} Ibid., p. 9.
Registered apprenticeship (RA) programs offer several benefits for adult students:\(^{120}\)

- The potential to increase enrollment in credit-bearing coursework that builds on skills and education in a career field;
- The ability to increase the attainment of credit-bearing coursework that leads to an associate’s and/or bachelor’s degree; and
- An earn-as you-learn-model ensures earnings while training to build up technical skills.

This type of model also offers opportunities and benefits for education stakeholders, as outlined on the next page in Figure 4.4. The figure also includes implementation benchmarks.

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Overall, RA programs have noted benefits for both students and institutions. However, institutions’ programs and procedures should be flexible, particularly in “admissions, credit transfer, and recognition of other applicable learning, including that gained through an RA.” In addition, course schedule, format, and academic residency requirement flexibility can also prevent negative impacts on “apprentices’ mobility, potential isolation from campuses, and part-time student status.”

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121 Ibid., p. 18.
123 Ibid.
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