

SCALING UP FASTSTART@CCD

Debra D. Bragg, Ph.D.

Office of Community College Research and Leadership

University of Illinois

*A Report on Scaling
Up of the Breaking
Through Initiative
at the Community
College of Denver*

Submitted to Jobs for the
Future (JFF) and National
Council for Workforce
Education (NCWE) on
December 31, 2010

INTRODUCTION

This report discusses on-going efforts of the Community College of Denver (CCD) to scale-up FastStart@CCD program where the notion of scaling up refers to expanding initial ideas, practices, and policies to a critical mass of users and embed the innovation in the structural fabric and culture of the larger organization. Scaling up is fundamentally about creating change, optimizing internal and external resources, and institutionalizing and sustaining the change over time. With respect to the FastStart program, scaling up refers to growing CCD's accelerated developmental education program to an ever-larger group of students who can benefit, including low-skilled adults targeted by Breaking Through. Scaling up of FastStart is also about enhancing outreach with professionals inside and outside of CCD who seek to understand how the program operates so they can adopt or adapt the ideas to their own organizational contexts.

Scaling up requires strategic development, implementation and dissemination, including bringing about change both within and beyond the classroom. Samoff (1996) observed that research on scaling up involves studying the “intricate web of processes, some integrally related and others distantly connected” (p. 268) to the innovation. This view of scaling up recognizes that no one person, process or policy can scale up an innovation, it takes a collective effort. Scaling up a program such as FastStart is an incredibly complex and sometimes chaotic adventure that requires careful nurturing, using information collected through planned and serendipitous means. Christina and Nicholson-Goodman (2005) associated four characteristics with scaling up educational reforms that are useful to understanding the scale-up of FastStart@CCD. They are:

- Spread: Implementation of programs and practices at additional sites and in additional groups within existing sites.
- Depth: Significant improvements to programs and practices that demonstrate impact.
- Sustainability: Policy and infrastructure systems that support continued improvement and impact over time.
- Shift in ownership: The transfer of knowledge and authority to new programs and practices, allowing continuous improvement and further scale-up.

Research conducted by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2005) revealed three approaches to scaling up an innovation: a) scaling up by replication, b) scaling up by explosion, and c) scaling up by association. *Scaling up by replication* includes starting small and increasing gradually, based on successes. *Scaling up by explosion* involves bypassing the pilot stage and starting full-scale. *Scaling up by association* involves linking distinct efforts together to create a large-scale change strategy, along with the data systems to document change.

FastStart@CCD displays elements of two of these three scaling up approaches. In its initial stages of implementation, the FastStart program was most closely associated with *scaling up by replication*, wherein FastStart course pairings were replicated in core subjects of developmental math, English and reading within CCD. The Colorado SUN initiative used this approach too, taking the FastStart program model and replicating it in six other community colleges in Colorado (discussed in more detail later in this report). In implementing FastStart in the different sites, data were collected to measure program effectiveness and impact and these data were used to improve the local programs. As FastStart matured at CCD, the strategy shifted to *scaling up by association* wherein the FastStart program was connected strategically to other aspects of the curriculum, including linking developmental courses to the college-credit curriculum and associating the developmental curriculum

with student support services, such as academic advising and financial aid. Scaling up also involved aligning the FastStart program with existing CCD policies and creating new policies conducive to long-term sustainability, including advocating for the adoption of a new form of the *AAA101 College Success* course that included content on both college and career success.

INITIAL FUNDING AND SCALE-UP

The first funding for FastStart@CCD came from Lumina Foundation for Education as part of a three-college grant to the Colorado Community College System (CCCS) to study costs and strategies for serving academically underprepared students (Corash & Baker, 2009). This early work on FastStart program design involved Elaine Baker and Ruth Brancard, both CCD administrators who advocated for changes in the curriculum that would accelerate students' developmental course-taking. Baker and Brancard worked together closely to integrate developmental courses, support services, and career development into an accelerated program of study for students who tested into CCD's developmental curriculum based on the CCCS-mandated Accuplacer exam scores. Baker and Brancard believed that students could succeed at moving through developmental education more rapidly than the traditional format, which often requires multiple semesters when students are placed two, three or more courses below college level. Researchers such as Attewell, Lavin, Domina and Levey (2006) and Bailey, Jeong, and Cho (2010) point out that enrollment in multiple developmental courses is associated with a diminished likelihood of students' ever enrolling in college-level courses and equally disconcerting, the accumulation of substantial debt. When students acquire debt without ever reaching college-credit coursework, they have little to show for their efforts. To address this serious problem, the FastStart model calls for the pairing of two or more courses in developmental math, English, or reading so that students could accelerate the pace of learning of developmental content and reach college-level courses more rapidly. Because of their shared commitment to the idea of accelerated developmental education and their senior status at CCD, Baker and Brancard brought a great deal of credibility to their work on FastStart. They worked tirelessly to inform other colleagues about the idea and to integrate it into CCD's developmental curriculum. They also continued to seek funds to scale-up the FastStart program and share their accelerated developmental model with educators within and outside of Colorado.

In 2006, the Charles Stewart Mott Foundation funded Jobs for the Future (JFF) and the National Council on Workforce Education (NCWE) to administer Breaking Through, and FastStart was one of seven community colleges chosen to be a "leadership college" of Breaking Through. Funding from Mott enabled Baker and Brancard to select and work with a carefully chosen group of faculty to teach them about accelerated developmental teaching and nurture a like-minded commitment to scaling up the innovation. A number of outstanding faculty were employed to do this work, including Lisa Silverstein, a developmental English instructor. Silverstein who resonated with the underlying goals of FastStart and excelled at using active instructional practices within her classes. Over time, her leadership potential was recognized, and she assumed the position of FastStart program coordinator upon Brancard's retirement. Another young professional who held an important position of leadership in the scaling up of FastStart is Rosalinda Martinez. Martinez started as an academic advisor and eventually became the lead teacher of the *AAA 101, College and Career Success* course in her position as an Educational Specialist. In fall 2010, a third professional, Joanna Conlin, was hired as a case manager for

FastStart students. Having worked in the for-profit sector, Conlin brought experience working in student recruitment and advising, and she possessed skills in using educational technology to support the growing FastStart student population. Other institutional leaders at CCD vital to scaling up FastStart are Nancy Story, Dean of the Center for Educational Advancement, which is the unit at CCD that houses developmental education; and several program chairs within the Center, including Roberta Ware, the English as a Second Language (ESL) chair; Brian Dickson, the developmental English chair; and Brad Sullivan, the developmental math chair. Together, Nancy Story, Lisa Silverstein, and these other program leaders created a cohesive team to help FastStart find its niche in CCD's large developmental curriculum. Never intended for all students, FastStart became the strategy of choice for students who showed the ability to benefit from an accelerated developmental program, meaning they had sufficient prior experience with the content and they had current life circumstances that would allow for the rapid pace of learning. A current description of FastStart@CCD appears on CCD's website at: <http://www.ccd.edu/ccd.nsf/html/WEBB87UAA8-FastStart+at+CCD>.

In Fall 2007, additional funds were awarded to CCD through a grant to the CCCS from the "Ready for College" program of the U.S. Department of Education, Office of Vocational and Adult Education. This 2-year grant (which was extended for a third year through Fall 2010) was used to adapt the FastStart model to an out-of-school youth population aged 18-24, and this latest initiative was named Colorado Success UNlimited (Colorado SUN). Modeled after FastStart@CCD, the "College Connection" program associated with Colorado SUN offered an accelerated developmental curriculum that used the learning community format, along with case management and wrap-around services. In total, seven Colorado community colleges were involved between summer 2008 and summer 2010. During this period, CCD offered a cohort each summer of 2008, 2009 and 2010, enrolling a total of 46 students, with 19 of these students being out-of-school youth. A description of the Colorado SUN initiative appears on the CCCS's website at: <http://www.cccs.edu/foundation/sun.html>.

Finally, beginning a few years ago, CCD leaders worked with educators at Metropolitan State College of Denver, an urban land-grant institution (see <http://www.mscd.edu/urbanimpact/>), to make accelerated courses available to Metro students who needed developmental courses to fulfill their baccalaureate-degree requirements. Over time, the relationship between Metro State and CCD evolved so that FastStart-type courses were offered to a substantial number of Metro State students, either at the CCD or Metro State campus, which is immediately adjacent to CCD-Auraria and part of the same campus location in downtown Denver.

THE FASTSTART@CCD AND COLLEGE CONNECTION PROGRAMS

Two recent reports provide detail on the FastStart@CCD program and its spin-off, the College Connection program. *2010 Follow-Up of the Community College of Denver FastStart Program* (Bragg, Baker & Puryear, 2010) and *Ready for College in Colorado: Evaluation of the Colorado SUN and College Connection Program* (Bragg, 2010) describe the educational programs and student outcomes associated with FastStart@CCD and College Connection. Table 1 and Figures 1 and 2 compare components of the FastStart@CCD and College Connection programs, showing how the core components of FastStart are replicated in College Connection.

(For other reports discussing the core components of the FastStart program, see Brancard, Baker, and Jenson [2006] and Bragg [2009].)

Table 1

Core Components of the FastStart@CCD and College Connection Programs

Core Component	FastStart@CCD	College Connection
Compressed and accelerated developmental education	X	X
College and career success course	X	X
Learning community	X	X
Case management	X	X
Wrap-around services	X	X
Formal and informal assessment	X	X
Student recruitment		X
Professional development	x	X
Continuous improvement	x	X

Figure 1 displays the core components of the FastStart@CCD program, including compressed and accelerated developmental (math, English, and reading) courses and the college and career success course, using a learning community approach. Wrap-around services, formal and informal assessment, and case management enhance the curricular and instructional experiences of students and provide support services that are intended to enhance their success in the classroom and contribute to other positive outcomes, including retention, transfer, and credential completion. As FastStart matured, additional instructional strategies have been employed to encourage student engagement, including the use of study groups that encourage students within and across cohorts to study together and support each other’s successes. Besides learning the essential academic content, these social-learning endeavors help students convey to one another core knowledge and values important to preparing for and succeeding in college.

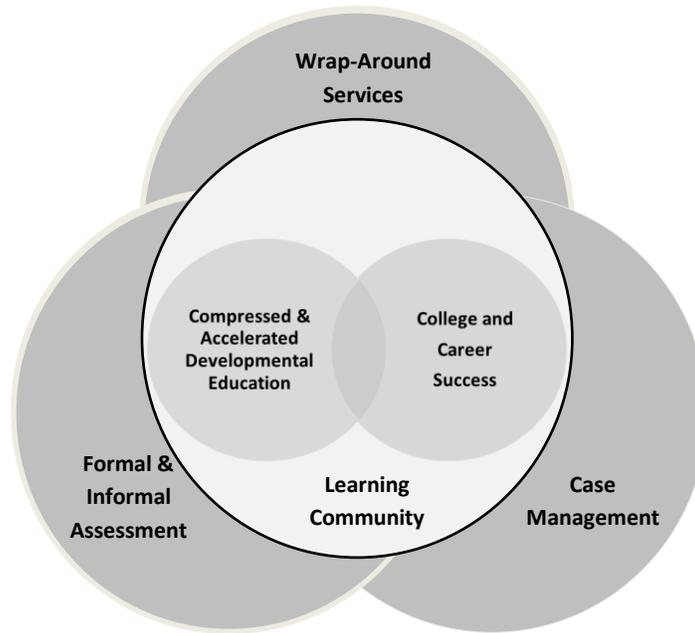


Figure 1. FastStart@CCD core components

Figure 2 shows a graphic representation of the FastStart model as transformed into the College Connection program. The center of the figure shows the compressed and accelerated developmental education curriculum that is integrated with the *College and Career Success* course and central to the FastStart model. In both College Connection and FastStart, the format for instruction builds on the learning community approach where students stay together through multiple courses, and they are encouraged to engage social-learning experiences. Similar to FastStart, case management, wrap-around services, and formal and informal assessment are core components, with special emphasis placed on case management. In the College Connection program, the case manager position is referred to as a “navigator” to depict the role that an adult professional plays in guiding out-of-school youth who benefit from an intrusive advising approach. In addition to the core components of the original FastStart model, the Colorado SUN initiative supplements the FastStart curricular model with student recruitment to ensure that the target population of out-of-school youth is enrolled in the program. Professional development is used to ensure that instructors and support staff are prepared to work with the target group, and continuous improvement is integrated into the program evaluation design to encourage the use of data at the state and local levels to improve programs and advance policies conducive to increasing student success in developmental education.

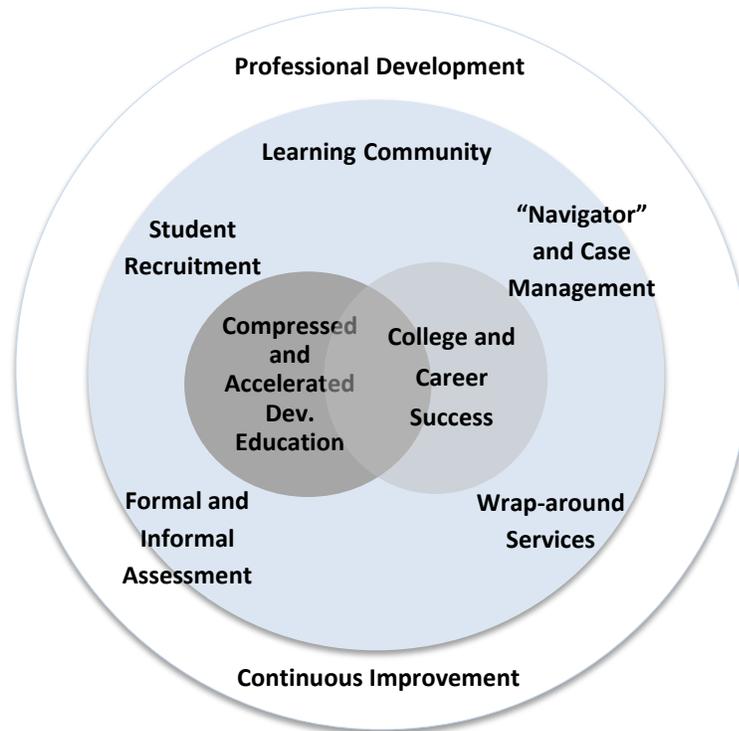
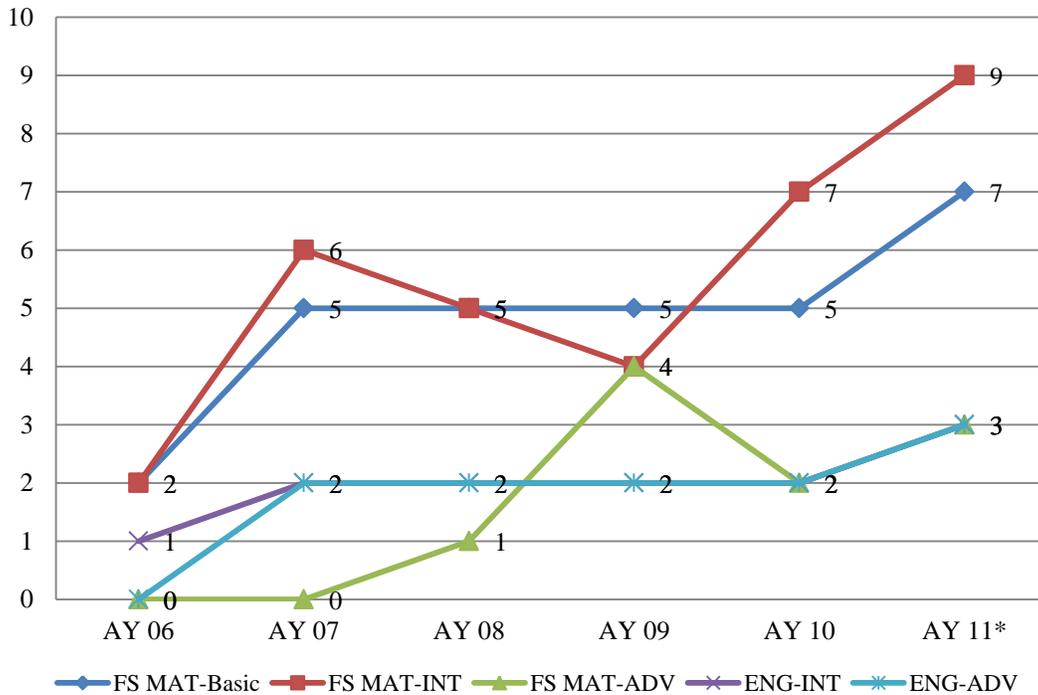


Figure 2. College Connection core components

ENROLLMENT TRENDS WITH FASTSTART@CCD

Scaling up is about growing enrollments and reaching more students, and results of the FastStart program confirm the number of developmental math, English, and reading courses has grown from the first semester that students were enrolled in Spring 2006 to the most recent semester that enrollments were obtained in Fall 2010. Figure 3 shows that the number of courses grew between Academic Year (AY) 2006 and AY 2007, then held steady or fluctuated from AY 2007 to AY 2010 before rising precipitously between AY 2010 and AY 2011.¹ MAT-Basic and MAT-Intermediate had the most course offerings of all content areas throughout the entire period, with fewer courses offered in MAT-Advanced, ENG-Intermediate and ENG-Advanced. (See Appendix A for a listing of course sequences and titles for the FastStart program.) It is important to note, however, that the number of course offerings is small in many of the academic years, so change from one academic year to the next may involve the difference of one or two courses only.

¹ The computation for AY 2011 includes current enrollments for Spring 2011, based on institutional records; however, this number is expected to rise as students continue to register for FastStart courses until the new semester begins in January, 2011.

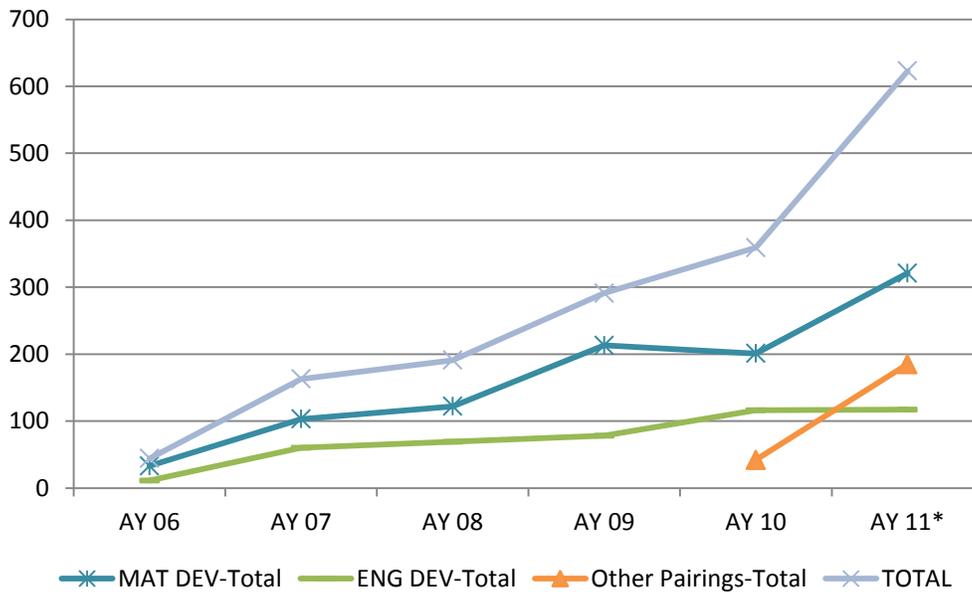


Note: *Connotes enrollment projection

Figure 3. Trend in number of FastStart Courses AY 2006 to AY 2011

In addition to growth in course offerings, student enrollments have grown since the FastStart program was first offered in Spring 2006 (See Appendix B for enrollment statistics used to create Figures 4-7).² In that term, 44 students were enrolled in MAT-Basic, MAT-Intermediate and ENG-Intermediate but by AY 2010, the number of students enrolled in FastStart courses had grown to 359, with enrollment of over 600 students projected for AY 2011 (see Figure 4). These enrollments pertain to the continuation of course sequences in MAT-Basic, MAT-Intermediate, MAT-Advanced, ENG-Intermediate, and ENG-Advanced, but also new course combinations that link advanced developmental math, English, and reading to a wide range of college-level courses, such as U.S. History, Public Speaking, and Introduction to Political Science (for specific course combinations, see Appendix A). When the Spring 2011 term begins in January 2011, FastStart leaders expect enrollment to grow beyond the current level. Since student enrollment is already over 600, the overall enrollment for AY 2011 may rise to as high as 800 by the time the Spring 2011 term begins, according to FastStart program leaders.

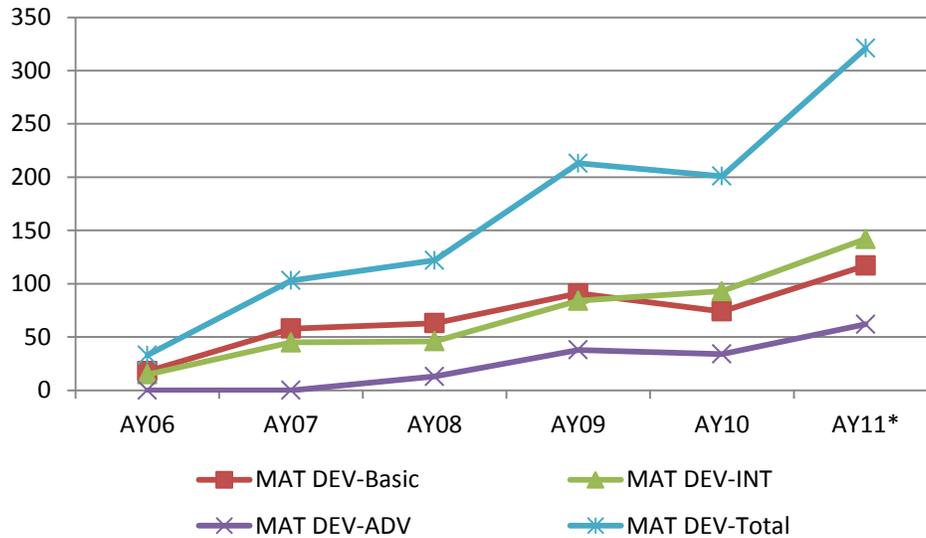
² Enrollment statistics are based on program records for student enrollments for the Spring 2006 through Spring 2008 terms and institutional records for the Fall 2008 through the present term, using enrollment projections for Spring 2011 based on registrations through the end of the Fall 2010 semester.



Note: *Connotes enrollment projection

Figure 4. Trend in FastStart enrollment between AY 2006 and AY 2011

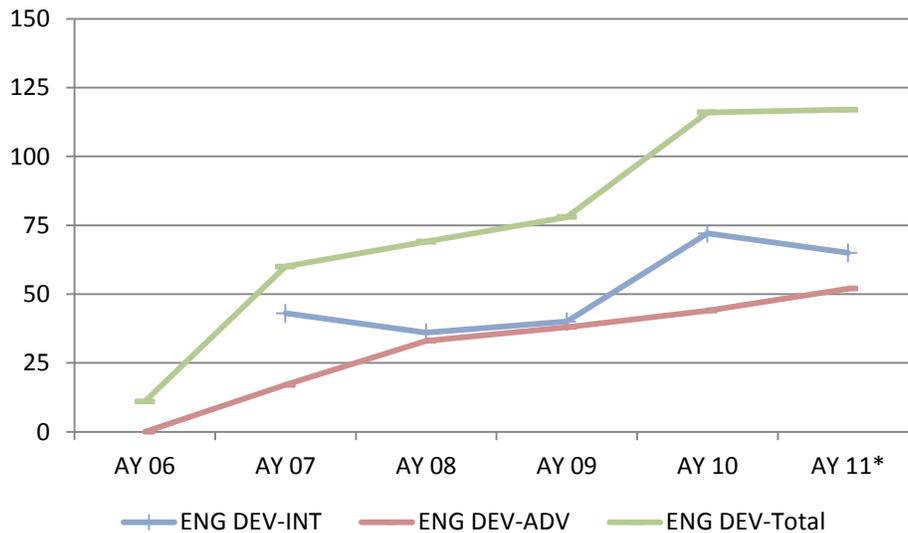
Figures 5 through 7 show the trend in student enrollment by subject and by semester from Spring 2006 through Spring 2011, using program records for student enrollments for the Spring 2006 through Spring 2008 terms and institutional records for enrollments from Fall 2008 through Spring 2011. Figure 5 shows the rise in FastStart math enrollments due mainly to increased enrollment in the MAT-Basic and MAT-Intermediate courses, particularly between Fall 2009 and Spring 2011. Notably, the total FastStart math enrollment more than doubled from under 50 in AY 2006 to about 100 in AY 2007, and doubled again from about 100 in AY 2007 to over 200 in AY 2009. Total math enrollment was relatively flat between AY 2009 and AY 2010, but rose precipitously to 321 in Spring 2011 and as noted previously, the enrollment for Spring 2011 is likely to rise further by the time the Spring 2011 term begins.



Note: *Connotes enrollment projection

Figure 5. Trend in FastStart math enrollment from Spring 2006 through Spring 2011

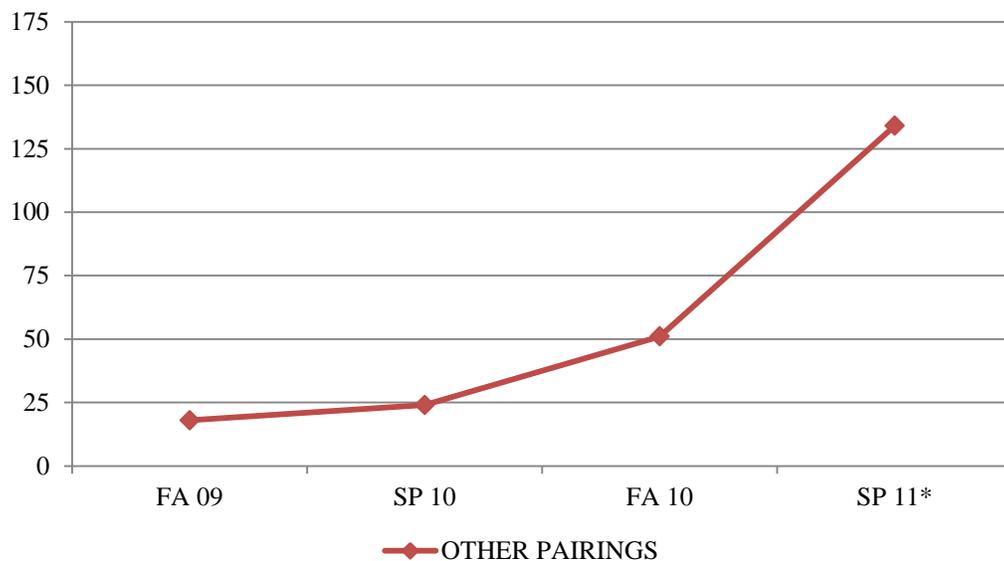
Figure 6 shows a gradual rise in enrollment in developmental English and reading from AY 2006 to AY 2010, and then flat enrollment from AY 2010 to AY 2011 (although the AY 2011 statistic may rise once Spring 2011 enrollments are firm). In most academic years the English and reading sequences were offered, enrollment in the English-Intermediate course was slightly higher than English-Advanced due to more offerings of the English-Intermediate course.



Note: *Connotes enrollment projection

Figure 6. Trend in FastStart English and reading enrollment for Spring 2006 through Spring 2011

Beginning in Fall 2009, the FastStart program began offering more combinations of developmental courses and college-level courses, starting with a few course pairings in Fall 2009 and numerous options in Spring 2011. During the upcoming semester, advanced math, English, and reading courses are being linked to transfer courses to create new FastStart options, including COM 115, Public Speaking; ESL 053, English as Second Language; HIS 201, United States History; LIT 115, Introduction to Literature; POS 105, Introduction to Political Science; and PSY 101, General Psychology (see again Appendix A for a list of the course pairings).



Note: *Connotes enrollment projection

Figure 7. Enrollment trend in other FastStart pairings from Fall 2009 through Spring 2011

STUDENT OUTCOMES

The success of scaling up an innovation requires demonstrating a positive impact. In the case of FastStart, the ultimate beneficiaries are students. The 2010 report of student outcomes for FastStart (Bragg, Baker & Puryear, 2010) revealed numerous positive outcomes for students who participated in the program. Selected findings from this report follow:

- The diverse cohorts of CCD’s FastStart math students outperformed CCD’s general remedial math student population on remedial course progression measures, including passing the developmental sequence and passing gatekeeper math, based on a comparison of these descriptive results to a 48-month math tracking study performed by CCCS (2009).
- The initial period of enrollment in FastStart is important to developmental progression, beginning with accelerated instruction in the first semester and extending through 24 months. This result suggests an accelerated curriculum can facilitate progression through

the developmental curriculum at a pace that allows between 40 and 65% of students to demonstrate success on college success measures such as retention, transfer, and graduation.

- The closer students place to college level when entering in the FastStart developmental math course sequences and English and reading sequences, the more successful they are at achieving positive outcomes on developmental progression and college success measures of retention, transfer, and graduation.
- When conducting follow-up studies such as this one, it is important to define college success in multiple ways, including retention, transfer, and graduation, to document the multitude of ways that FastStart students demonstrate successful performance. Using one of these measures without the others provides an incomplete picture of the ways that students' developmental education experiences contribute to their subsequent college endeavors.

Quantitative and qualitative results of the evaluation of Colorado's "Ready for College" (RFC) grant (Bragg, 2010) revealed the following selected findings:

- The majority of RFC learners³ showed gains on the TABE reading and math tests. Of the 56 RFC learners who had the pre- and posttest scores required to compute gain scores, 38 (67.8%) showed a gain of one level or more on the TABE reading test, math test, or both.
- A total of 16 (26.2%) RFC learners tested college ready in at least one subject. For these 16 RFC learners, 7 placed into college-level English, 7 placed into college-level reading, and 5 placed into college-level math. Six RFC learners were college-ready in more than one subject.
- The majority of RFC learners in five of six pilot sites showed one or more level gains in developmental math, with 64.6% of the RFC learners in Site 1, 73.9% in Site 2, 100% in Site 3, and 50% in Sites 4 and 5 showing one or more level gains. A sizeable percentage of RFC learners showed two or more level gains in math in three sites, specifically 35.2% of RFC learners in Site 1, 30.4% in Site 2 and 100% in Site 3.
- RFC learners in five sites showed gains of one or more levels in developmental reading, with 59.9% of RFC learners in Site 1 showing a gain of one or two levels and 55.5% of RFC learners in Site 2 showing a similar level of achievement. Half to two-thirds of RFC learners in two other sites demonstrated a gain of one level.
- RFC learners in two pilot sites showed gains of one or more levels in developmental English, specifically 59.5% of RFC learners at Site 1 and 50% of RFC learners at Site 3. Between 22% and 37.5% of RFC learners in three other sites showed a one-level gain.

³ The criteria for the RFC learner group were: a) 18 to 24 years of age prior to or during the Colorado SUN program, b) TABE reading or math pretest (or both) test-taker, and c) 60% or better attendance in the Colorado SUN program.

- A total of 49 (80.3%) of the 61 RFC learners enrolled in college-level community college courses, either while participating in the CO SUN program or after completing it. The average number of college credits earned was 10.2.

The sub-group of CCD's RFC learners at CCD showed the following results:

- Of the 19 RFC learners enrolled in CCD's College Connection program, 65% advanced one or two levels in developmental math, with a slight majority advancing two levels; 60% advanced one or two levels in developmental reading, with most advancing one level; and 47% advanced one or two levels in developmental English (writing), with most advancing one level.
- All 19 of CCD's RFC learners progressed through the College Connection program to take some college-credit courses, with 5 of the 19 completing all developmental courses and advancing to take college-credit courses only. This group earned a mean of 5.5 college credits at the time the Colorado SUN evaluation was completed in Fall 2010. The other 14 RFC learners were enrolling in and earning both developmental credit ($\bar{x}=4.2$) and college credit ($\bar{x}=5.8$). In interpreting these results, it is important to know that 6 of CCD's RFC students were enrolled in the College Connection program in Summer 2010 so computation of credits beyond the summer 2010 term was not possible due to the lack of time that these students had to transition to and complete a semester at CCD.

These quantitative results are supported by qualitative data gathered through one-on-one and small group interviews of students and through open-ended items on a student questionnaire about the College Connection program. The following quotes provide an understanding of how students perceptions the program contributing to their learning:

I have experienced the best summer out of all of them. It's been a lot of help because I finally found what my true passion is. I have learned many time-management skills and ways to work around my schedule. I have learned a lot and feel prepared for college.

Being in College Connection felt like it was a helping hand [and a] stepping [stone] into college. It helped me lose some [of my] fear of college as well as helped me gain more confidence with basics in literacy and math.

The teachers and the navigator helped me with not only school but [with] issues that were preventing me from succeeding in college. I had no home to call my own, and with their help I received the encouragement to find a home and apply for a home.

Readers are encouraged to read the full evaluation reports on the FastStart and College Connection programs to understand how these programs operate and how they impact student outcomes, including students' completion of developmental coursework, their transition to college-credit courses, and their retention, transfer and completion of credentials. Links to two additional reports of student outcomes appear on the FastStart@CCD website at: [http://www.ccd.edu/ccd.nsf/html/WEBB88T8FG/\\$FILE/FastStart_summary+of+key+findings_comparison+charts.pdf](http://www.ccd.edu/ccd.nsf/html/WEBB88T8FG/$FILE/FastStart_summary+of+key+findings_comparison+charts.pdf) and [http://www.ccd.edu/ccd.nsf/html/WEBB88T8FG/\\$FILE/CCD_BT_report_9+20+09.pdf](http://www.ccd.edu/ccd.nsf/html/WEBB88T8FG/$FILE/CCD_BT_report_9+20+09.pdf).

FACTORS INFLUENCING THE SCALE-UP OF FASTSTART

This section discusses factors that emerged regarding scaling up FastStart over the 3-year period the evaluation was conducted, between fall 2007 and fall 2010. The section provides insights into the following five scale-up factors: leadership, experimentation and integration, professional development, sustained innovation, and widespread dissemination.

Leadership

Committed leadership has been demonstrated to be an important factor in scaling up an educational innovation, whereas turnover of leadership has been shown to diminish scale-up (see, for example, Rogers, 1995). Interestingly, during the period in which FastStart evolved from 2006 to the present, CCD saw considerable leadership turnover, from the executive- to the program-level. Leadership changes occurred in the presidency and vice presidency of CCD and in academic (transfer, general studies) education, developmental education, adult education, and student support services. These changes might have derailed FastStart, but the program evolved largely due to the program leaders who kept a laser-sharp focus on achieving full-scale implementation. In this sense, the program leaders emphasized what Christina and Nicholson-Goodman (2005) connected with the depth and spread of scaling up an innovation. When Ruth Brancard retired in 2008 and Baker moved from full time to two days a week in 2009, both maintained relationships with the program to support its continuity and continued growth. The program also benefited from their foresight in using a grow-your-own approach to prepare Lisa Silverstein, a FastStart English instructor, to move into a key leadership position and help to integrate the program into the mainstream of CCD's developmental education curriculum. Baker continued as FastStart Project Director on a part-time basis, working as a liaison with CCD leadership, Institutional Research and the project grantors. Brancard provided mentoring and instructional counsel to the FastStart co-coordinator and the dean of the center that oversaw the program. Their position as respected veterans was instrumental in advocating for the program as it grew to a new level, expanding course offerings and student enrollments.

Experimentation and Integration

Successful scale-up requires knowing how to nurture an innovation to the point of maturity that it can survive within the larger system. Christina and Nicholson-Goodman (2005) refer to this idea as sustainability in that the innovation becomes integrated into the larger system's policy and organizational infrastructure. With FastStart, program leaders sought to test various course sequences and gather data on student success prior to launching full-scale implementation. In this sense, FastStart demonstrated *scaling up by replication* wherein lessons were learned by program leaders by experimenting with the innovation and learning how to support its strategic integration into the organization. Once the program was established and demonstrated that it was capable of producing positive outcomes, program leaders sought broader organizational support. FastStart integrated curriculum with organizational policies pertaining to student services, including aligning the program with financial aid; scheduling classes and classrooms convenient to students; and employing qualified faculty (adjunct and full-time) to teaching in the program.

Professional Development

From the beginning of the creation of FastStart, program leaders recognized the importance of hiring instructors who could deliver high quality instruction in a way that would engage developmental learners. Various methods were used to prepare instructors for their FastStart teaching assignments, ranging from encouraging instructors to attend faculty meetings dedicated to conversations about pedagogical strategies to funding instructor participation in the cross-site learning community meetings associated with Breaking Through and other national meetings. During the current academic year (2010-11), the FastStart instructors supplemented the professional development strategies used in prior years with a web-based “inquiry board” that is intended to encourage shared communication, dialogue and reflection among FastStart instructors and other developmental faculty who can benefit from learning about the program and engaging in broader communications concerning developmental education. In this sense, FastStart demonstrates the *scaling up by association* approach in that shared pedagogical issues are considered by a growing circle of CCD developmental instructors. Without exception, the FastStart leaders, instructors and other stakeholders attributed the success of the program to the ability of instructors to provide a quality learning experience for students.

Sustained Innovation

From the very beginning, creativity and ingenuity were encouraged and valued by FastStart program leaders who envisioned FastStart@CCD as a think-tank endeavor. They demonstrated a high level of understanding of how educational innovations are transformed from fledgling ideas into full-scale program and organizational change. With respect to FastStart in particular, the program leaders showed a strong commitment to creating a new form of compressed and accelerated developmental education so that students at risk of failure could experience success, including college readiness, retention and eventually transfer and degree completion. To create and implement the FastStart program, the program leaders encouraged delivery of the core developmental content (math, English and reading) to students considered incapable of succeeding. This success can be attributed to the power of an innovative idea but also to the shared commitment of program leaders, instructors and support staff to a common goal of enabling students to reach college-level courses more rapidly and better prepared than they would have been without the innovation.

Widespread Dissemination

Over the last few years, interest in accelerated developmental education has grown throughout the country, and FastStart program leaders and faculty have been an important part of the national conversation. Baker and Brancard have been active speakers and writers on the topic, drawing on their experience as practitioner-leaders and using data gathered about the FastStart program’s successes and failures at implementation and impacting learners. As professionals join the leadership team, they are encouraged to share their insights and join in efforts to disseminate lessons learned as part of the cross-site meetings sponsored by Breaking Through and as part of other professional conference venues.

CONCLUSIONS

Program leaders and other professionals having a long-time association with CCD have described scaling up of FastStart@CCD as orchestrating a transformation from a *boutique* program to a *signature* program. They noted the inevitable process of advancing a small, focused innovative program that serves relatively few students to a much more comprehensive program offered in more developmental subjects to a substantially larger number of students. In this sense, FastStart demonstrated the four characteristics of scaling up discussed by Christina and Nicholson-Goodman (2005), i.e., spreading, deepening, sustaining, and shifting ownership for the innovation. During its evolution, the FastStart program gained support from more professionals at CCD, it garnered more interest among students, and eventually it acquired more attention from professionals throughout the nation. The credibility and notoriety of the program has grown within CCD, and it has also become a model for other community colleges in the state of Colorado. Through the Ready for College grant, six community colleges have offered core components of the FastStart model through the College Connection program, with most continuing to offer elements of the program or to offer the entire program. In addition, multiple and diverse dissemination strategies have been used by CCD professionals to spread the idea of accelerated developmental education to audiences across the country, beginning with community colleges engaged in Breaking Through and extending to other institutions interested in adopting the program and transforming it into an innovation of their own.

REFERENCES

- Bailey, T., Jeong, D. W., & Cho, S. (2010). Referral, enrollment, and completion of developmental education sequences in community colleges. *Economics of Education Review, 29*, 255–270.
- Bragg, D. (2009). *Community College of Denver Breaking Through outcomes report*. Boston, MA: Jobs for the Future.
- Bragg, D. D. (2010, December). *Ready for College in Colorado: Evaluation of the Colorado SUN and the College Connection program*. Champaign, IL: University of Illinois, Office of Community College Research and Leadership.
- Bragg, D. D., Baker, E. D., & Puryear, M. (2010, December). *2010 follow-up of Community College of Denver FastStart program*. Champaign: University of Illinois, Office of Community College Research and Leadership.
- Brancard, R., Baker, E. D., & Jensen, L. (2006, June). *Accelerated developmental education project: Research report*. Denver, CO: Community College of Denver.
- Christina, R., & Nicholson-Goodman, J. (2005). Going to scale with high quality early education: Choices and consequences in universal Pre-kindergarten efforts. Santa Monica, CA: Author.
- Colorado Community College System, Office of Institutional Research. (2009). *Remedial course completers*. Denver, CO: author.
- Corash, K., & Baker, E.D. (2009, January). *Calculating the productivity of innovation*. Denver, CO: Colorado Community College System. Retrieved from <http://cccs.edu/Research/costeffect.html>
- Rogers, E. M. (1995). *Diffusion of innovations* (4th edition). New York: The Free Press, Simon & Schuster, Inc.
- Samoff, J. (1996). Which priorities and strategies for education? *International journal of educational development, 16*(3), 249-271.
- UNESCO. (2005). 'Scaling up' good practices in girls' education. Paris, France: Author.

APPENDIX A

Table A-1

FastStart@ CCD Course Pairings

Math				
MAT Dev-Basic	MAT 030	MAT 060		
MAT Dev-INT	MAT 060	MAT 090		
MAT Dev-ADV	MAT 090	MAT 099/106		
English & Reading				
ENG Dev-INT	ENG 060	ENG 090	REA 060	REA 090
ENG Dev-ADV	ENG 090	REA 060	REA 090	
Other Pairings				
MAT 030	AAA 090			
ENG 090	COM 115			
ENG 090	LIT 115			
REA 090	HIS 201			
ENG 090	POS 105			
ENG 090	ESL 530			
ENG 090	ENG 121			
REA 090	PSY 101			

Note: Course titles follow:

- AAA 090, Academic Achievement Strategies
- COM 115, Public Speaking
- ENG 060, Writing Fundamentals
- ENG 090, Basic Composition
- ENG 121, English Composition 1
- ESL 530, English as Second Language/FastStart
- HIS 201, United States History
- LIT 115, Introduction to Literature
- MAT 030, Fundamentals of Mathematics
- MAT 060, Pre-algebra
- MAT 090, Introductory Algebra
- MAT 099 or 106, Intermediate Algebra
- POS 105, Introduction to Political Science
- PSY 101, General Psychology
- REA 060, Foundations of Reading
- REA 090, College Preparatory Reading

APPENDIX B

Table B-1

Student Enrollment in FastStart Courses by Subject and by Semester and Academic Year (Spring 06 to Spring 2011)

FastStart COURSES	SP 06	AY 06	FA 06	SP 07	AY 07	FA 07	SP 08	AY 08	FA 08	SP 09	AY 09	FA 09	SP 10	AY 10	FA 10	SP 11*	AY 11*
MATH																	
MAT DEV-Basic	18	18	35	23	58	39	24	63	44	47	91	47	27	74	60	57	117
MAT DEV-INT	15	15	18	27	45	17	29	46	35	49	84	43	50	93	40	102	142
MAT DEV-ADV	--	--	--	--	--	--	13	13	24	14	38	10	24	34	19	43	62
MAT DEV-Total	33	33	53	50	103	56	66	122	103	110	213	100	101	201	119	202	321
ENGLISH & READING																	
ENG DEV-INT	11		32	11	43	20	16	36	18	22	40	35	37	72	33	32	65
ENG DEV-ADV	--	--	--	17	17	21	12	33	18	20	38	24	20	44	23	29	52
ENG DEV-Total	11	11	32	28	60	41	28	69	36	42	78	59	57	116	56	61	117
OTHER																	
Other Pairings	--	--	--	--	--	--	--	--	--	--	--	18	24	42	51	134	185
Other Total	--	--	--	--	--	--	--	--	--	--	--	18	24	42	51	134	185
TOTAL	44	44	85	78	163	97	94	191	139	152	291	177	182	359	226	397	623

Note: a) *Connotes enrollment projection for Spring 11 based on CCD institutional records, b) Student enrollments for Spring 06 through Spring 08 based on FastStart program records, c) Student enrollments for Fall 08 through Fall 10 based on CCD institutional records.