

# Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit

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In light of the significant gap between the persistence and attainment of students who begin their community college education at pre-college levels in reading, writing and mathematics and those who place them directly into college level courses, the **Massachusetts Community Colleges Executive Office** commissioned a study of developmental education best practices within the state's 15 community colleges. The Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit Report, funded through a grant from *Jobs for the Future*, examines the colleges' developmental education practices and policies within the context of developmental education best practice research. It presents findings, recommendations and resources to assist the Massachusetts community colleges in improving the success of academically vulnerable students within and beyond developmental education.

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## **Executive Summary**

The effective education of underprepared students has long been a challenge for the nation's 1200 community colleges; and the urgency to prepare greater numbers of students to participate in a 21<sup>st</sup> century economy that increasingly requires successful completion of post-secondary education, is, if anything, increasing. In light of national and regional research that highlights the significant persistence and achievement gaps between students who enter community colleges "college-ready" and those whose skills in math, writing and/or reading place them into developmental education courses as a precursor to college-level study, the Massachusetts Executive Office of Community Colleges initiated a 15-month Audit of Massachusetts developmental education policies, practices and strategies. The purpose was to provide an update on the status of developmental education system wide and to determine the alignment of recognized best practices and policies and those in use within Massachusetts' community colleges. The resultant Massachusetts Community College Developmental Education Best Policy and Practice Audit Report:

- presents current research findings regarding best practices and policies for promoting success among developmental learners;
- sheds light on the alignment between research-based practices and policies and the practices and policies currently in use within Massachusetts community colleges to advance student success in developmental courses;
- gauges the extent to which the community colleges in Massachusetts collect and make use of outcomes information to improve success in and beyond developmental courses and programs;
- updates the system on the status of Massachusetts community colleges' implementation of policies and practices recommended by the *100% Math Initiative*, a 2006 FIPSE-funded initiative to improve developmental mathematics instruction within Massachusetts community colleges.
- provides a repository of practices and policies in place and "under construction" to advance the persistence and attainment of underprepared learners within the Commonwealth's community colleges; and
- provides recommendations for improvement and areas for further inquiry.

### *The Process*

The Audit was conducted through several key steps, including the development of a literature review of best practices and policies, and the utilization of research-based best practices and policies as the basis for development of Institutional Inventories to gather campus-based information. Because it was recognized that different departments and offices within an institution do things differently, separate inventories were created to capture the perspectives of chief academic officers; faculty chairs of departments that included developmental math, reading, and writing courses; and coordinators of self-contained college programs that exist to promote the achievement and advancement of academically-underprepared learners. Inventories for all five categories of participants were administered online.

Based on a preliminary analysis of the resultant data, campus interviews were conducted to clarify ambiguous Inventory responses and to expand upon information already collected. Quantitative and qualitative data informed one another, and both were used in formulating findings, conclusions and recommendations.

*Identified Areas for Further Development*

An analysis of the findings yielded the following areas for focused attention over the next several years:

*Linking commitment, inquiry, intentionality, and accountability.* Good pilots adhere to the precept, “Plan your flight, and fly your plan”. Developing a carefully-considered coherent plan for increased student attainment requires asking the right questions, applying rigor and candor to data collection and analysis, determining critical domains for improvement, and establishing clear goals, strategies and incremental benchmarks by which progress can be measured. Intentionality is key to accomplishment; and getting results requires sustained focus, an openness to new ways of approaching old challenges, and persistent effort over time.

*Pushing the fragments together in ways that best serve student attainment goals.* There is strong evidence that the marriage of strong academic instruction and intrusive and proactive student support is key to the effectiveness of programs that have a significant impact on student persistence and attainment. When advising, tutoring, counseling, instruction, and student success strategies are not working together to present students with a holistic vision of what it takes to move forward with increased competence and confidence, there is less chance they will do so. The more connected these elements are, the more connected students are to their goals, their trajectory in the learning process, and their accomplishments along the way. College organizational structures notwithstanding, coordinated support across departmental lines is critical to the success of students for whom stepping up to college is an enormous step up.

*Requiring what is necessary for student progress and success.* A commitment to effective practice for developmental students means applying what works unapologetically and enthusiastically. There are practices that, to date, have proven efficacious for underprepared learners. Among them are Learning Communities, where there is close coordination between and among faculty, students and content; Student Success courses linked to content that provides a meaningful context for skills reinforcement; Supplemental Instruction, integrated tutoring and labs that provide practice, time on task, feedback and reinforcement; accelerated options that allow for rapid advancement of those prepared to move on; and proactive, intrusive advisement that provides students with a reliable and committed *go-to* person on an ongoing basis. Given options, many students will opt out of some or all of the services available to them. Knowing what a key role these interventions play in student progress and achievement, colleges should give thought to how best to build effective support strategies into the core of at-risk students’ college experience.

*Aligning professional development goals and outcomes with student development and achievement goals.* Given the fact that at least two thirds of incoming students at each college test into pre-college coursework, it is incumbent upon college staff and faculty to fashion professional development opportunities and resources that enhance the skills, knowledge and effectiveness of those who work on a day-to-day basis to advance the attainment of underprepared students. Activities that pair theory with practice, and practice with follow-up student assessment, are encouraged; and handbooks that summarize and reinforce best practice research and strategies should be made available to full- and part-time faculty, advisors, tutors, and lab personnel

whose focus is the increased attainment of underprepared learners. Performance measures for professional development should go beyond user satisfaction, focusing more directly on the impact of professional development on faculty and staff practice and on student learning and achievement that accrues from newly-implemented or modified approaches.

*Bridging the chasm between secondary and post-secondary education.* Large numbers of students graduate from high school unprepared for college-level study. While *Accuplacer* administration at the junior and senior high school levels provides information about where a prospective student would place in math, reading and writing courses within a Massachusetts public higher education institution, it does not do anything to prepare students for college-level work. Working with high school English and Math teachers to align curricula and expected outcomes is key and needs to receive greater focus and attention. And, though necessary, it may still not be sufficient. Actual student preparation may be aided by the provision of bridge programs, college courses in high schools, dual enrollment, early college high schools, high school/college team teaching, and/or joint professional development. Given the uphill climb for students who begin college in more than one developmental course, it is extremely important that greater numbers of high school students arrive at college adequately prepared for college-level study.

*Nurturing and growing successful practices.* Best practices often emerge from experimentation with ideas that seem to lead in the right direction. Faculty and staff with good ideas are best nourished in an environment where taking risks is not risky. Encouraging a balance between creative and informed investigation and candid assessment and refinement is vitally important to the growth and development of an institution in search of good solutions. Good solutions for a small cohort of students, however, should not be enough. Bringing best practices to scale is an enormous challenge in an environment in which resources are scarce, and cut-backs—rather than build-outs—are on the minds of those responsible for fiscal management. Yet given the important goal of increased achievement and persistence for greater numbers of students, there is a need to base funding decisions on evidence of accomplishment. For colleges to shape themselves in ways that support a greater measure of success for underprepared learners, strategies that demonstrate efficacy will likely have to reshape or replace those that cannot demonstrate equal effectiveness.

*Initiating collaborations to conduct further practice-based research and share effective interventions.* There is much to be learned from neighboring institutions and collaborative research. Based on the descriptions of individual initiatives at each of the colleges contained in the full Best Practices and Policies Audit Report, college staff from various institutions are encouraged to form professional Learning Communities to pursue collaborative research, development, and/or trial implementations; cooperate on data collection and analysis; and share models for growing and institutionalizing best practices.



**Massachusetts Community Colleges Developmental Education  
Best Policy and Practice Audit Report**

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## Part I: Introduction

The effective education of underprepared students has been a significant challenge for the Massachusetts Community Colleges—and indeed colleges throughout the nation— for many years. By virtue of incoming academic skills assessment and placement into indicated beginning-level coursework in reading, writing and mathematics, approximately 61% of Massachusetts Community College students begin their studies in at least one developmental course. Sadly, a small percentage of those students persist in their studies to the point of graduation or transfer to another institution<sup>1</sup>; and national and institutional data from community colleges throughout the country suggests that upwards of 50% of students referred to developmental education courses fail or withdraw from college before completing the very courses intended to prepare them for college-level study (McClenney, 2004; Bailey, 2008).

It was thought, and now known with more certainty, that pre-screened students who complete required developmental coursework early in their academic career are more likely to continue their studies and to graduate than students who take longer or do not successfully complete pre-college courses. (DataNotes: Keeping Informed about *Achieving the Dream* Data, 2006; Massachusetts Board of Higher Education<sup>2</sup>, 2007) While the Department of Higher Education research to date is only explicit regarding the startling difference in success rates between students who complete developmental coursework in one term and those who take longer<sup>3</sup>, it validates a growing concern that significant numbers of students who struggle with—and sometimes languish in—pre-college courses are pre-destined to fail. Bunker’s Hill Community College’s preliminary data, accumulated through their ongoing *Achieving the Dream* project, underscores that understanding by showing the inverse relationship between students’ required developmental education course load and their successful completion of developmental course work within two years. That relationship obtains as well with regard to the successful completion of fifteen college level hours in a three-year

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<sup>1</sup> 12.7% graduate or transfer within three years, as opposed to 25% for students who begin in college-level courses. (Massachusetts Board of Higher Education, 2007)

<sup>2</sup> Now the Massachusetts Department of Higher Education

<sup>3</sup> 3.8% vs. 19.1%. In addition, both fall-to-fall and three-year retention rates evidence similar discrepancies between first semester completers and non-completers. (Ibid.)

timeframe: the likelihood of reaching that benchmark decreases in proportion to the amount of developmental course work students must take.<sup>4</sup>

The challenge of early successful completion seems most vivid with regard to students who enter college with insufficient preparation for college-level mathematics courses. Springfield Technical Community College found that students who place into **any** developmental math level and do not successfully complete in the first semester face tremendous odds (4:1) of passing the repeated course in the subsequent semester, making them least likely of all developmental cohorts to earn a community college credential. Like Bunker Hill Community College, STCC found that early completers of developmental courses in any basic skill area (i.e. reading, writing, math) are far more likely to succeed in successive courses. (Northern Essex Community College Office of Institutional Research and Planning, 2007; Springfield Technical Community College, 2007)

The news on the national front has confirmed conclusions reached in Massachusetts regarding early completers, as well as those who delay developmental course work or fail to complete it early in their academic careers. However, a new—and extremely encouraging finding has emerged, based on five years of data from the initial 27 *Achieving the Dream* colleges: First-term completers of any developmental course(s) are “more likely to persist and succeed than **any other** student groups, including those who did not need any developmental education.” (CCSSE, 2007). Placed in the context of recent research that found that a minimum of one year of college coursework, combined with a postsecondary credential, was the ‘tipping point’ for students’ [ability to] reap labor market gains upon leaving college” (Goldberger, 2007), there is additional incentive to facilitate early progress and persistence of low-income underprepared students.

Clearly, it is incumbent upon community college educators to dig deeper and harder into proven and promising strategies that promote early and sustained achievement for developmental learners.

The Massachusetts community colleges have, over the past ten years, paid particular attention to the improvement of student success in developmental courses through two statewide initiatives and many individual campus ones. The report, *Access and Quality: Improving the Performance of Massachusetts Community College Developmental Education Programs* (Massachusetts Community College Developmental

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<sup>4</sup> Data provided by the Institutional Effectiveness Office, Bunker Hill Community College (2008)

Education Committee, 1998), takes stock of the developmental education practices reported, at that time, by each of 15 community colleges through a survey instrument; and, based on a best-practice literature review, made recommendations regarding effective developmental education teaching and administrative practices. It also made specific recommendations pertaining to entering student academic assessment that clearly delineates pre-college skills from college-level skills in each basic skills area on a system wide basis. The incoming student assessment recommendations from this report were implemented system wide, providing for a consistently applied methodology for determining student placement into developmental courses in math, writing and reading at the 15 community colleges.

Subsequent to the *Access and Quality* report, the *100% Math Initiative*, funded by the Fund for the Improvement of Postsecondary Education (FIPSE) in 2002, represented a statewide effort “to improve the quality of developmental mathematics instruction at Massachusetts community colleges.” Its final report, *Building a Foundation for Student Success in Developmental Mathematics* (2006), acknowledges the developmental mathematics sequence as a significant barrier to attainment and underscores the urgency of improving student success rates in attainment of foundational math skills. The report relies upon recent literature and best practice research to support its recommendations for providing practices and strategies most likely to improve student performance in developmental mathematics, and defines and articulates specific parameters for the three-course developmental mathematics sequence it recommends. It also includes a recommendation for continued system wide collaboration through cross-campus professional development, a website for sharing promising practices, an annual conference, and the establishment of a statewide Developmental Mathematics Leadership Group to sustain the implementation of the Report’s recommendations.

Several externally funded multiyear design and implementation projects are currently contributing to overall efforts within the Commonwealth’s community colleges to generate and make use of relevant research to improve the success and retention of students who are placed into developmental courses. Currently, four Massachusetts community colleges are undertaking specific initiatives, as part of the *Achieving the Dream* national effort, to improve community college student success. One key goal of *Achieving the Dream* is for students to **successfully complete developmental courses and progress to credit-bearing courses**. The other four key goals follow on the first, in as much as they look to academic progress and successful completion

beyond developmental courses. They call for significant increases in students who: **enroll in and successfully complete gatekeeper courses; complete the courses they take, with a grade of C or higher; re-enroll from one semester to the next; and earn certificates and degrees.** (*Achieving the Dream: Success is What Counts*)

The specific improvement goals and strategies within the designated Massachusetts community colleges—Bunker Hill Community College, Roxbury Community College, Springfield Technical Community College and Northern Essex Community College—are predicated on findings that accrued from student success data mining within each institution. Over the next three years, each college will pursue unique efforts to improve institution-specific outcomes. While one may focus specifically on improvement in developmental mathematics completion rates for particular populations, another will direct its efforts toward students who place into developmental reading, based upon need established through its own data mining and analysis processes. The work of these colleges, as well as more than 80 other ATD colleges across the country, will, by design, inform the collective efforts of community colleges across the state and the nation to improve success for students who are academically disadvantaged and/or underprepared for college level studies.

In addition, Berkshire Community College—also nationally funded, through a Title III Strengthening Institutions Program—is pursuing similar goals. The College is currently approaching the midpoint of a four-year Teaching and Learning Project Activity directed toward improvement of student performance in developmental education courses and the promotion of student success through improved student support programs and services. The project calls for significant increases in:

- successful completion of developmental courses,
- the percent of Developmental Education students who complete a degree or certificate with three and a half years, and
- the fall-to-fall retention rates of a cohort of developmental education students.

Project objectives and related activities include a redesign of BCC's overall developmental program; significant professional development; transformation of curricula to reflect more effective teaching and learning pedagogy; focused activities to revise particular content courses (e.g. Developmental Reading, Development Math) in specific funding years; and infusion of student tracking, monitoring, and intervention systems.

Middlesex Community College, just beginning a Title III initiative to increase student achievement and persistence among both full- and part-time students, intends to focus on curriculum reform and comprehensive advising to reduce attrition and increase student success. Specific project objectives call for embedding core student success skills into developmental and college-level gateway courses; including courses with embedded core student skills into Learning Communities; and designing a comprehensive and integrated advising system that includes identification of academic and career goals, creation of an educational plan, and continuous tracking and intervention.

Clearly, there are other targeted efforts underway—some externally funded, others absorbed within institutional budgets—that aspire to increase student success among students who begin their college career with enrollment in developmental courses in Writing, Reading and Mathematics. Many of them are identified through the findings in this Report.

This project, funded by Jobs for the Future as an extension of the Massachusetts *Achieving the Dream* Lumina- and locally-funded state policy initiative, continues the system’s focus on fact-finding and continuous improvement in promoting achievement and success for developmental students on all of the Commonwealth’s community college campuses. It responds, in part, to the 2007 Board of Higher Education Task Force finding that there is currently “incomplete data on and assessment of the effectiveness of existing programs and services available to help students succeed” (Task Force on Retention and Completion Rates at the Community Colleges, 2007), and is structured to update and refine system wide scanning efforts begun through the *Access and Quality* inquiry.

The Massachusetts Community College Developmental Education Best Policy and Practice Audit was designed around two major tasks, scheduled for completion within a 15-month time frame:

1. to acquaint its audience with current research regarding best practices for promoting success among developmental learners, and the institutional and departmental policies that are most likely to contribute to that success;

2. to discover the extent to which developmental education programs within Massachusetts community colleges employ such research-based practices and policies to advance student success in developmental courses, and to determine commonalities and differences in design, implementation, and assessment of such practices and policies.

In addition, the Audit includes inquiries intended to gauge the extent to which Massachusetts community colleges collect and make use of outcomes information to improve student success in developmental programs and courses—as well as what institutions and programs that utilize such information may be learning.

An added purpose of the study emerged as a result of pre-Audit conversations with the colleges' Chief Academic Officers. They expressed concerns about the status of mathematics programming and student assessment, topics that were given focus and direction through the *100% Math Initiative*, commissioned and published by the Massachusetts Executive Office of Community Colleges in 2006. As a response to the need for follow-up, the Developmental Education Best Policy and Practice Audit effort took on an additional dimension: It has included the collection of additional information from Math departments system wide to shed light on the extent to which current practices align with *100% Math Initiative* recommendations. This information is intended to feed into further system wide collaboration to assist individual colleges and the system in planning and moving forward toward improved student performance in mathematics, the skill area that provides the greatest challenge to the largest number of Massachusetts community college students. An analysis of the collected data may be found in Appendix A of this report.

Campus interview sessions, too, provided perspectives for a somewhat different approach to the Report than that originally planned. As each group expressed what it hoped to get out of the study (Appendix B), it became clear that Massachusetts educators were eager to learn from one another's forays, innovations, and practice-based research. Not only were many interested in what approaches had proven to be effective in general; they had specific interests in strategies and interventions that they were contemplating, sometimes in a relative vacuum (e.g. Where in the system are there examples of online developmental classes, and how effective have they been? What experience do others have with assessment instruments that provide specific diagnostic information? Where are there effective models for accelerating student learning and acquisition of competence in specific basic skills areas?). Their eagerness for shared information made the product of the

study less a pure accounting of practices that align with best practices in the field— and more an analysis of policy and practice as they relate to the best practice literature *as well as* a resource for intra-system policy and practice models that can contribute to knowledge and deliberations at sister institutions.

As a result of this effort, educators within the system will know more about the status of Massachusetts community colleges with regard to current and ongoing efforts to improve achievement and goal attainment among students who are most vulnerable to derailment or failure. Knowing is a beginning. Shared knowledge can be a powerful tool for collaboration, smarter practice, and improvement based upon a broadened base of experience and enhanced understandings.

It is hoped that the Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit will serve as a significant piece of the tapestry that the Massachusetts *Achieving the Dream* initiative is weaving on behalf the Commonwealth's efforts to promote achievement among academically underprepared community college students. There is a collective understanding of how vital the student success agenda is to the future of America's community colleges. In the words of Thomas Bailey and Mariana Alfonso (2005) who have, through the Columbia University's Community College Research Center, contributed significantly to both theoretical and practice-based community college research, "Improving the effectiveness of developmental (remedial) education is perhaps the most important issue confronting community colleges today."

Within Massachusetts, there is enormous potential for each individual—but thematically connected— study or practice-based finding to contribute to the whole, providing greater collective wisdom, expertise and momentum for positive change. Our challenge is to know more and to do more with what we know. This system wide inquiry is intended to further that purpose on behalf of the Commonwealth's current and future students.

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Jan Motta, Executive Director of the Massachusetts Community College Executive Office (MCCEO) brought vision and leadership to the initiation of this Project. She identified needs others had not yet envisioned or articulated, and conceptualized the model for updating and bringing greater understanding to the ongoing efforts within the Massachusetts community colleges to serve underprepared students through developmental education programs and services. Moreover, she converted her vision to action by collaborating with Richard Kazis, Senior Vice President of Jobs for the Future, to augment the state's *Achieving the Dream* policy and institutional reform activities. Jobs for the Future has generously provided funding for this inquiry into practices and policies that contribute to student success throughout all of the Massachusetts community colleges.

Dr. Lois Alves, Vice President for Enrollment Services, Institutional Research and Planning at Middlesex Community College, was a committed research partner throughout the enterprise. She was an invaluable sounding board, and worked tirelessly to format and administer the Inventories, as well as to collect and compile the resultant data and generate data reports to support further inquiry. Both she and I were aided in this effort by Ms. Shirley Salamone, Staff Assistant for Enrollment Services, Institutional Research and Planning at MCC, who responded to every inquiry for guidance and new data reports with good-natured and timely responsiveness.

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Finally, there are the more than 150 faculty, staff and administrative officers of the Massachusetts community colleges who completed inventories and/or provided additional insights during campus interviews to contribute to the creation of a document intended to serve as an ongoing resource for the challenging work ahead. Their commitment to the goal of improving student attainment and success among at-risk students is what breathes life into this sort of enterprise and gives confidence that the results will be utilized to inform increasingly effective practice and policy for developmental learners within Massachusetts’ community colleges. Those contributors are:

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Karen Costa, Asst. Director of Enrollment Services  
Paul Laverty, Professor of Mathematics and Chair, Math Department  
Heather March, Professor of Developmental Reading  
David Patterson, Professor of English  
Paula Pitkiewicz, Professor of English  
Richard Shine, Dean of Special Projects

Northern Essex Community College

Lane Glenn, Vice President, Academic Affairs  
Irene Chalek, Director of Adult Literacy and Transition  
Joanna Fortna, Curriculum Coordinator, Developmental Writing  
Linda Giampa, Interim Reading Lab Coordinator  
Elaine Glennon, English Language Cluster for Deaf and Hard of Hearing Coordinator and Faculty  
Diane Gori, Writing Center Coordinator  
Angela Guarino, Assistant Dean of Assessment, Tutoring and Academic Support  
David Kelley, Dean, Instructional and Student Support  
Marilyn McCarthy, Professor, Reading  
Linda Murphy, Developmental Mathematics Curriculum Coordinator  
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Janice Rogers, Interim Assistant Dean of Developmental Education  
Joe Scascitelli, Math Center Coordinator  
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Paul Frydrych, Vice President, Academic Affairs  
Donna Richemond, Vice President, Student and Enrollment Services  
Nancy Albertson, Dean of Science and Math  
Martha A. Brine, Dean of Retention and Student Success  
Judy Carter, Math Department Faculty  
Sally Cohen, Director, TRIO/Student Support Services  
Lora Connelly, Math Department Chair  
Babo Kamel, Coordinator, Project Enable  
Maureen O'Neill, Dean of Liberal Studies  
Ralph Tufo, Communication Skills Department Chair  
Kathy Yanchus, Communication Skills/MCAS Coordinator

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Nicole Currier, Dean of Instruction for Humanities  
Colleen Doherty, Assistant Dean of Career and Academic Advising  
Andreana Grimaldo, Assistant Professor of Mathematics  
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Eileen Potvin, Assistant Professor of Mathematics

Jane Shea, Assistant Vice President of Academic Affairs  
Anne Shull, Associate Professor of Developmental English/English as a Second Language  
Martha Upton, Learning Manager/Mathematics Lab  
Betsy Zuegg, Coordinator and Professor, Developmental English

Roxbury Community College

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Springfield Technical Community College

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With profound thanks to all,

Charmian Sperling, Ed.D.,  
Principal Investigator and Author

## **Part II: Literature Review**

The literature on effective community college developmental education practices and policies is extensive; and, with the advent of the national *Achieving the Dream* initiative and a strong focus from governmental as well as private agencies and foundations on the higher education achievement gap between academically-prepared and underprepared students, more relevant research is emerging on a daily basis.

Two separate pieces comprise the literature review that follows. The first is a compilation, in chart form, of best practices that emerge from four important sources: *Basic Skills as a Foundation for Student Success in California Community Colleges: A Review of Literature and Effective Practices* (March 2007); *Promising Practices for Community College Developmental Education: A Discussion Resource for the Connecticut Community Colleges* (2007); *100% Math Initiative: Building a Foundation for Student Success in Developmental Mathematics* (2006); and *What Works: Research-Based Best Practices in Developmental Education* (2002).

Three of these sources were chosen because they contain or are, themselves, full literature reviews of best practices that synthesize varied research and summarize effective practice in the field. The first, *Basic Skills as a Foundation for Student Success in California Community Colleges*, synthesizes research from 250 studies conducted over the past 30 years. The best practices identified all meet a test of evidence of effectiveness based on sound research practice. In order to be included in the study, there had to be independent evidence of improvements in student learning and success. (The report indicates that research on successful practices generally use a standard of 5-15% improvement as an indication of success.) In addition to the findings reported, the document includes an overview of examples of strategies employed by 33 California community colleges and nine out-of-state institutions.

The second, Hunter Boylan's 2002 monograph, *What Works: Research-Based Best Practices in Developmental Education*, combines results from the CQIN (Continuous Quality Improvement Network)/APQC (American Productivity and Quality Center) benchmarking study with relevant findings from the National Study of Developmental Education, carried out from 1989 until 1996 under a grant from the Exxon Education Foundation; an Alfred P. Sloan Foundation minority retention study undertaken from 1950 until 1997; two

statewide studies of the Texas Academic Skills Program and Developmental Education in Texas colleges and universities, carried out by a grant to John Rouche under a grant from the Texas Higher Education Coordinating Board; and a series of developmental education literature reviews, funded by a variety of state, federal and private agencies.

The third monograph, *Promising Practices for Community College Developmental Education*, was commissioned by the Connecticut Community College System, with additional funding from the Lumina Foundation for Education to the Community College Research Center (CCRC) for work on *Achieving the Dream: Community Colleges Count*. The report's findings represent a synthesis of key findings from recent literature on effective developmental education practice, organized through relevant categories, to promote discussion among educators and state agency staff in Connecticut and to inform their consideration of methods to improve outcomes for academically-underprepared students. Its references are current and include a number of major studies of effective developmental education practice.

The final source for the chart that follows, *100% Math Initiative*, is the product of a FIPSE-funded collaboration among developmental Mathematics professionals within the Massachusetts community colleges who, over a three-year period, researched and explored various facets of developmental Mathematics and developed a set of recommendations to improve the quality and effectiveness of developmental Mathematics instruction. Like the other sources, the report establishes overall categories of practices and provides guidelines for implementation of specific practices and/or policies within each. Hunter Boylan, a leading developmental education researcher and author of another of this report's primary sources (*What Works: Research-Based Best Practices in Developmental Education*), characterizes the *100% Math Initiative's* recommendations as comprehensive and well-validated by research. His *Preface* to the final report describes it as "particularly important because it is the first in-depth discussion of developmental mathematics that acknowledges one of the most important characteristics of successful developmental education—what goes on between instructors and students in individual classrooms."

There was a great deal of consistency in many of the principles and clusters of ideas that emerged through comparing the documents' findings and recommendations. Yet one source might take additional or different elements into consideration, while another might not even suggest the efficacy of a specific practice. It is clear

from simply scanning the chart that most ideas were addressed, in some way, shape or form by at least three of the analyses consulted. The influence of one researcher on another was at times apparent. Footnotes or other references in the analyses noted, from time to time, that the recommended principle or practice was, in fact, derived from or supported by one or more of the other three studies.

The categories used by the Principal Investigator to organize the basic tenants, practices and policies do not represent those used in any single one of the documents summarized within the chart. Rather, they borrow from several of the sources and follow an organization that seemed most logical and reader-friendly. Within each category are statements that quote or summarize relevant findings or conclusions from each source. Where a particular source document was mute on a general policy or practice noted within the other sources, nothing was entered into the box “belonging to” that source. Where the references from the source documents represented numbered items from an overall list, those numbers were preserved for the reader’s reference.

The recommended practices and policies cited through this chart represent the basic tenants around which the Institutional Inventory items were developed. Additional—and, for the most part, more recent—studies and articles were consulted as well. In cases where the *Best Practice Findings and Recommendations* chart did not address findings that emerged from relevant additional studies, text was added to reflect those findings. That literature is discussed in the final section of the Literature Review.

**FOUR PRIMARY SOURCES: BEST PRACTICE FINDINGS AND RECOMMENDATIONS**

<p><b>CCRC's Promising Practices for Connecticut Community Colleges,</b> W. Schwartz and D. Jenkins</p>	<p><b>Effective Practices from Basic Skills as a Foundation for Success in California Community Colleges</b></p>	<p><b>100% Math Initiative Recommendations, Massachusetts Community Colleges</b></p>	<p><b>What Works: Research-Based Best Practices in Developmental Education</b> Hunter R. Boylan</p>
<p><b>INSTITUTIONAL POLICIES, ADMIN PRACTICES and LEADERSHIP</b></p>			
<p>The effectiveness of DE is enhanced when , through concrete action, there is a demonstrated commitment to: the efficacy of DE, the belief that it is equal in value and status with other college programs, the persistence of underprepared students, and the intent to move students seamlessly into college-level work.</p> <p>Data is collected, disseminated widely and analyzed to foster problem-solving with regard to improving student outcomes, education delivery, and professional development.</p>	<p>A1. DE is a clearly stated institutional priority. References to DE are public, prominent and clear.</p> <p>Institutional leadership demonstrates a commitment to DE through comprehensiveness and the integration of DE into the fabric of the college.</p>	<p>17. A statewide developmental mathematics leadership group should lead research, coordination, ongoing faculty development, reconsideration of developmental math assessment policies, and advocacy for increased support and implementation of improvements of developmental math.</p> <p>7. There should be a developmental mathematics coordinator for each campus, responsible for curriculum and instruction, and funded through an ample stipend and/or course reassignment.</p> <p>15.Contact time for</p>	<p>1.6 DE is most successful at institutions that consider it to be a priority. Priority status is demonstrated through: consistency between institutional and DE goals; DE is prominent in publications and catalog; DE is part of long-range planning; campus community outside of DE considers it important; and faculty and administrators share a common vision of DE goals.</p>

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<p>Adequate funds for the provision and evaluation of DE can promote better student outcomes. Providing early financial aid, and funds for child care, transportation, and other personal needs can facilitate stability and regular college attendance.</p>		<p>developmental math should be reconsidered in light of instructional needs.</p>	
<p>1.1 A clearly stated mission for DE enhances potential for success. Statement specifies principles, values, goals and objectives. It should be communicated throughout the college.</p>	<p>A2. A clearly stated mission based on shared philosophy drives the program. Clearly specified goals and objectives are established for DE courses and programs.</p>		<p>1.2 An overarching and clearly-articulated philosophy of developmental education guides program efforts.</p> <p>1.5 Several studies found that DE programs with written mission, goals and objectives statements had higher student pass rates than programs without written goals and objectives. The Mission Statement is a statement of purpose. Goal statements describe the end result the program hopes to accomplish. Objectives summarize the activities intended to meet the goals.</p>
<p><b>ORGANIZATION AND STRUCTURE</b></p>			
<p>1.2 DE programs may be centralized or decentralized, with each presenting benefits and weaknesses vis a vis integration and effectiveness.</p>	<p>A3. DE program should be centralized or highly coordinated.</p> <p>Regardless of which structure is chosen, a dedicated administrator or lead faculty is/are designated and afforded</p>	<p>7. There should be a campus-wide developmental mathematics coordinator to orient faculty, provide for relevant professional development, support instructional change, mentor, assist in the hiring process, and</p>	<p>1.1 The more centralized a program is, the greater its likelihood of success. A fully centralized program has several developmental subject areas coordinated under a single unit; combines support services, advising and laboratories within the unit; has a single individual responsible for coordinating the campus-wide</p>

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	<p>responsibility for college wide coordination of basic skills program(s).</p> <p>There is a designated budget for DE.</p> <p>Formal mechanisms facilitate communication/coordination between faculty and staff in different DE disciplines as well as with student services.</p> <p>There is a formal mechanism to facilitate communication/coordination between DE and college-level faculty within disciplines.</p>	<p>serve as a liaison for curriculum alignment, counseling and learning disabilities support, and statewide mathematics initiatives.</p>	<p>developmental education effort.</p> <p>1.2 Decentralized but highly coordinated programs are characterized by: regular meetings of those involved in delivery of courses and services; articulation of common goals and objectives across courses and services; integration of dev. courses and support services; coordinated by administrator with responsibility for campus wide developmental education.</p>
<p>2.3b Course sequencing to require DE completion prior to credit bearing courses increases retention. Two models are discussed: completion of all DE courses first, and mixing DE courses with selected college-level courses. Delaying remediation, however, is noted for negative effects.</p>	<p>A4. Institutional policies facilitate completion of DE coursework as early as possible within the educational sequence.</p> <p>Students are advised and encouraged to enroll only in college-level courses consistent with their basic skills preparation.</p>		
<p>3. Student persistence increases with the number and extent of coordination of</p>	<p>A5. A comprehensive system of support services are characterized by high degree of</p>	<p>4. There should be strong and systematic collaboration between mathematics faculty</p>	<p>1.1, 1.2 Integration and coordination of developmental courses and services are significant hallmarks of success.</p>

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<p>the support services offered, their availability, and their responsiveness to student needs.</p>	<p>integration among academic and student support services.</p>	<p>and learning disabilities support specialists to facilitate effective instruction and support for learning disabled students.</p> <p>6. DE instructors should identify and implement strategies for assisting students with learning skills (e.g. understanding textbook organization, note taking, study methods) and should integrate such skills directly into the curriculum and course activities.</p>	<p>1.7 The more comprehensive, systematic, and coordinated the services afforded DE students, the higher the success and retention rates of DE students.</p> <p>2.10 Integration of classrooms and laboratories appear to be an essential component of successful DE program. Integration is present when: instructor consults lab personnel in developing course for appropriate lab support; lab materials/activities are directly related to course goals and objectives; students are required to participate in specified lab activities as pt. of course assignments (this should be reflected in the course syllabus); lab activities count as part of students' grades; labs are in reasonable proximity to the courses they support.</p> <p>Programs in which classroom and laboratories are fully integrated have higher DE course pass rates.</p>
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<p><b>ASSESSMENT AND PLACEMENT</b></p>			
<p>2.1 Accurate assessment and placement is essential, though mandatory assessment and placement have been criticized for affecting minority students disproportionately.</p> <p>Colleges should consider whether they want to develop/utilize assessment to identify very specific skills (e.g. learning and study skills as well as academic skills).</p> <p>3.2 All new students should be provided with a comprehensive orientation.</p>	<p>B1. Orientation, assessment, and placement are mandatory for all new students.</p>	<p>12. Students should receive an orientation to the developmental math sequence, assessment and placement process, expectations and supports. The college should help students prepare for the placement testing process, including understanding its purpose and design.</p>	<p>2.1 Mandatory assessment and placement lead to student success. But mandatory placement can lead to lower retention in DE courses.</p> <p>2.1 Make free test-taking workshops available to students before they test to reduce the proportion of students who score low due to standardized test-taking unfamiliarity.</p>
	<p>B1 Institutional stakeholders engage in a routine review of the relationship between assessment instruments and student success in courses.</p>		<p>2.1 An evaluation of completion rates and grades in DE courses should be undertaken before requiring placement on the basis of assessment.</p>

<b>FACULTY QUALIFICATIONS, SELECTION AND ORIENTATION</b>			
<p>4.1 Faculty should be committed to the college’s DE approach and willing to participate in activities related to DE, whether or not DE constitutes their whole teaching load.</p> <p>They should have mastery over both content and diverse teaching strategies shown to be successful with developmental students.</p> <p>They should understand the unique challenges and special learning needs of their students and must respect their students’ efforts to succeed in college.</p> <p>Part-time faculty should be well integrated into the college community and available to students outside of class. (Difficult to accomplish).</p>	<p>A6 Faculty who are enthusiastic and knowledgeable about DE are recruited and hired to teach in the program.</p> <p>Faculty choose to teach DE as opposed to being assigned to them.</p> <p>A sufficient portion of DE course sections are taught by full-time faculty, and the full-time to part-time ratio for basic skills is similar to the ratio for college-level classes and disciplines.</p>	<p>17 The role of the Developmental Mathematics Leadership Group includes advocacy for increased funding to support the employment of more full-time developmental math faculty.</p>	<p>1.3 Full and part-time faculty should be committed to the goals of DE; those who disagree with objectives or expectations should not be assigned to DE classes.</p> <p>2.7 There is no evidence that adjunct faculty are less successful in teaching DE courses.</p> <p>2.7 Best practice institutions have at least 50% of DE courses taught by full-time faculty. Mentoring and professional development is provided to DE adjuncts.</p>

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<p>4.4 Colleges should communicate expectations to DE faculty and staff and define specific ways of supporting students' academic efforts. They should emphasize extra-classroom time, including involvement in academic supports provided to students.</p> <p>A handbook on DE and suggestions for teaching specific subjects may help to convey the unique aspects of teaching developmental courses.</p>	<p>A7. Institutions manage faculty and student expectations.</p> <p>Faculty share a common understanding of "successful developmental education".</p> <p>Faculty new to DE receive an orientation that conveys the goals and expectations of the program.</p>	<p>8. A handbook and orientation process for developmental math instructors should include information about logistical issues, curriculum, syllabus development, philosophy, recommended instructional approaches, and an inventory of relevant support services.</p>	<p>1.3 Successful programs manage faculty and students' expectations re. DE. They make DE goals, objectives, and definitions of student success explicit and communicate them to faculty and students.</p> <p>Those hired to teach DE courses should undergo a detailed orientation, including missions, goals, objectives and expectations of DE.</p>
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<b>PROGRAM ASSESSMENT</b>			
<p>Colleges should track students' progress through DE course to see whether they advance from one level to the next and, ultimately, take and pass related college-level courses.</p> <p>Faculty should meet after each term to examine short- and long-term outcomes of their programs and discuss ways to improve them. If results are broken down by instructor, there is the potential for faculty to learn from colleagues whose students are more successful in advancing to college-level work.</p> <p>Faculty should work with IR staff to evaluate the effectiveness of recent modifications and new interventions. Wherever possible, the performance of students who participated in the interventions should be compared to similar students who did not. Even when the</p>	<p>B2. Program evaluations are done regularly with results shared and used to improve practice.</p> <p>DE course content and entry/exit skills are regularly reviewed and revised as needed.</p> <p>Formative and summative evaluation activities, using multiple indices to evaluate the efficacy of DE courses and programs, occur on a regular basis.</p>		<p>2.2 Few program components more important than evaluation. Programs that conduct ongoing and regular evaluation of student outcomes retain students and have higher DE pass rates than programs that do not systematically evaluate outcomes. Systematic evaluation includes evaluations at regular intervals, undertaken as part of a systematic plan; activities use a variety of formative and summative measures; results are shared with a variety of audiences.</p> <p>2.2 Benchmark DE evaluation criteria include: DE course completion rates, DE grades, grades in post-DE courses in same subject area, DE student retention rates, grades in courses for which DE students are tutored, student satisfaction with courses and service, faculty satisfaction w. skills of DE students who participate, graduation rates for DE students.</p> <p>The most important measure of a developmental course's impact is whether students who pass the course also pass the sequential course in the same subject.</p> <p>2.3 Formative evaluation conducted by DE faculty and staff is the most essential aspect of program evaluation; programs</p>

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<p>controls are not perfect, it is possible to learn from the comparison.</p> <p>There is no one set of “best practices” for every college and its students. What is most important is a continuous improvement process that involves regular monitoring of students and trying and adjusting different approaches, based upon thoughtful evaluation of interventions.</p>			<p>using formative data for program improvement had highest retention and success rates.</p> <p>1.3 The campus community is regularly advised of the extent to which DE is accomplishing its stated goals and objectives.</p>
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<p><b>HOLISTIC APPROACH, COUNSELING AND ADVISING</b></p> <p>3.1 A holistic approach to providing services to meet the diverse needs of the student seems most effective. Student persistence appears to increase with the number and extent of coordination of the services offered, their availability, and their responsiveness for personal needs and schedules.</p>	<p>D3. The DE program addresses the holistic development of all aspects of the student. Attention is paid to the social, emotional and cognitive development of the student. Examples include in-class attention to students’ attitudes and emotions; support services that address external needs such as child care, financial aid, transportation; timely interventions for emotional and social obstacles and to promote</p>		<p>2.9 Best-practice institutions are guided by a holistic philosophy or common set of beliefs about student development. They recognize students as cognitive and affective, and they value learner-centered approaches that recognize and value students as individuals.</p>
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	continued learning and retention; DE course mechanisms to enhance motivation.		
<p>3.4 Counseling that is proactive, integrated into the structure of the DE program, and provided early on has shown promise in several studies.</p> <p>3.5 Colleges can implement an early warning system to facilitate closer monitoring, provision of supports, and appropriate interventions.</p>	<p>B3. Counseling support is substantial, accessible, and integrated with academic courses and programs.</p> <p>Counseling can be most effective when advisors work with students throughout their DE experience.</p> <p>D9. Faculty and advisors closely monitor student performance.</p> <p>B4. Financial aid supports the DE student and deliberate efforts are made to inform the DE student.</p>	<p>Students should have access to advising for course selection, access to support services, and self-assessment. In addition, each developmental math student should be assigned a faculty member to turn to regarding difficulties or questions.</p>	<p>2.8 In the best DE programs, monitoring of DE students is collaborative (DE faculty and advisors) and is initiated early in each semester.</p>

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<p><b>FACULTY DEVELOPMENT AND COLLABORATION WITHIN AND OUTSIDE OF D.E. DEPARTMENTS</b></p>			
<p>4.3 Colleges should provide opportunities for collaboration and communication among the DE faculty to discuss content, pedagogy, conference and seminar findings, coordination and alignment of other courses, and to share syllabi and effective strategies.</p> <p>Email and listservs can promote the exchange and discussion of ideas, information and strategies.</p> <p>4.4 Training can include instructional consultation through which an outside expert works with an individual or group on a specific issue.</p>		<p>4. There should be strong and systematic collaboration with college experts in learning disabilities to increase instructors’ awareness and provide relevant tools.</p>	<p>3.9 Best practice institutions promote and provide structured opportunities for collaboration and faculty sharing of instructional strategies on a routine basis.</p> <p>1.3 A high degree of centralization includes regular meetings of faculty and support staff and the integration of academic courses and support services.</p> <p>1.4 All best practice institutions in CQIN/APQC study engaged in mutual collaboration, consulting, and problem solving between DE and other academic units. Other forms of collaboration include governance, working on projects of mutual interest, writing articles</p>
<p>4.4 Training for DE faculty shows promise for increasing program effectiveness. Training that is specific,</p>	<p>C2. Faculty play a primary role in needs assessment, planning and implementation of basic skills staff development</p>	<p>9, A developmental mathematics workshop series for new faculty, planned and delivered by experienced DE</p>	<p>2.4 In the most successful DE programs (students with best performance and retention), training and professional development is a priority.</p>

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<p>flexible, varied and responsive to the diverse needs of both faculty and the students they teach is best.</p> <p>It can include peer mentoring, instructional consultation and reflective practice.</p>	<p>programs and activities.</p> <p>C3. Staff development programs are structured and supported to sustain them as ongoing efforts related to the improvement of teaching and learning.</p> <p>DE staff development activities are comprehensive and ongoing rather than based around “one shot” workshops.</p> <p>C.4 Staff development opportunities are flexible, varied, and responsive to developmental needs of individual faculty, diverse student populations and coordinated programs/services.</p>	<p>faculty, should include instructional strategies for accommodating a variety of learning styles and creatively engaging developmental learners, the integration of study skills into instruction, the use of technology tools, and student advising and support.</p> <p>3. Professional development for all DE faculty should include learning styles awareness and relevant pedagogy.</p>	<p>Ongoing, long-term professional development programs are the most effective. They include both pedagogy and content.</p> <p>2.5 The use of well-trained tutors, as opposed to untrained or marginally-trained tutors, is what separates successful tutoring programs from mediocre ones. Pre-service and in-service training should include: learning theory, metacognition, motivation, counseling, group dynamics, and adult learning models.</p> <p>2.5 No evidence to suggest that peer or professional tutors are best.</p>
<p>4.4 Training should align with college goals.</p>	<p>C3 The activities are linked to department, program and/or institutional goals.</p>		
<p>4.3 Colleges provide opportunities to attend and report on conferences seminars etc.</p>			<p>2.6 A new finding: faculty and staff in best practice programs are involved in DE professional associations.</p>
<p>4.4 Comprehensive training that is tied to faculty reward</p>	<p>C5. Faculty development is connected to intrinsic (e.g.</p>	<p>9. Financial support for adjunct faculty should be made</p>	

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structures [among other characteristics listed above] seems to have the most promise.	praise, support, peer recognition) and extrinsic (e.g. funding, time, salary advancement, formal recognition) reward structures.	available.	
	C2 The staff development program for developmental educators is regularly evaluated by participants and the data is used for improvement.		

<b>CURRICULUM AND INSTRUCTION</b>			
2.2a Developmental practices provide students in such programs with a new way of acquiring skills and understanding that are geared to the educational developmental of adults and customized to address varied personal interests and learning styles.	D1.Sound principles of learning theory are applied in the design and delivery of DE courses.		No program model or component has as much impact on student academic performance as the quality of instruction. Instructional activities must be carefully planned, diligently managed, and thoughtfully delivered.
2.2 The most effective developmental teaching strategies are characterized by dynamic student-student and teacher-student interactions as well as by efforts that awaken students' innate desire to acquire knowledge.	D2. Proven curricula and practices are employed, including: reading/writing integration, writing across the curriculum, use of writing labs, problem-based learning, small group instruction, contextual learning, learning labs, and appropriate use of technology.	1.Instructor should vary their classroom methodology to actively engage students in their learning process. The range of effective instructional strategies includes: hands-on work, discovery-based learning, peer review, peer coaching, problem-based	3.12 Active learning, designed to elicit students' active participation in the learning process, has been shown to be one of the most effective strategies with low-achieving students. Some examples cited in the CQIN/APQC study are: student engagement in problem solving groups, student design and delivery of in-class presentations, peer review and discussion

<p>Most of these approaches involve active or student-centered learning. Promising strategies include inquiry methods, students generating their own questions, peer critique, learning through visual stimuli, journaling, simulations and role playing, engaged classroom discussion.</p> <p>Collaborative learning provides a social component, which aids in cognition. Through it, they become problem posers, reflectors and solvers.</p> <p>While most of these strategies are untested with large numbers of students over time, informal studies and anecdotal evidence suggest their effectiveness in helping underprepared students achieve.</p>		<p>learning, distance lecture, small group, individualized, and self-paced instruction.</p> <p>Instructors should incorporate active learning approaches, as two-thirds of developmental students are visual or hands on learners. The <i>Rule of 4</i> calls for presentation in 4 ways: graphically, numerically, symbolically, and verbally.</p> <p>Activities should be varied to accommodate short attention spans of many developmental learners.</p> <p>2. Textbooks should be contextually rich, incorporating numerous applications of the material, and be activity-based and hands-on.</p>	<p>of written work, student journal re classroom experiences, student coaching in solving math problems, students engaging in simulations involving real-life experiences related to content, students preparing for and leading class discussions, students interviewing local employers or other experts in area of study, students writing sample test questions reflecting major pts of classroom lectures.</p> <p>3.2 No single instructional method has emerged as a panacea for the learning problems of DE students (the best instructors do not use the same techniques). Research emphasizes that the use of many different teaching modes and methods will accommodate the needs of as many different DE learners as possible. Instructors at best practice institutions use at least three different teaching modes in every class period. Those most often used in combination with others were: peer review of student work, collaborative learning, mastery learning, small group work and other forms of active learning, individualized instruction, self-paced instruction, distance learning.</p> <p>Lectures were used at many best practice institutions, but not as the sole means of instruction. Other regularly-used strategies</p>
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			<p>were group problem-solving, classroom assessment and small group discussions. Visual and hands-on learning are effective with DE students.</p> <p>Intensive, fast-track programs are not for all DE students; they best suited for those most motivated and disciplined.</p> <p>Learning styles inventories are sometimes administered, with instructors receiving results and encouraged to deliver instruction in modes that will accommodate dominant learning styles.</p>
2.2c Contextual teaching and learning approaches are promising. They include: using real world applications, problem solving through simulations or in actual settings in the workplace or elsewhere, teaching basic skills in the context of a technical subject matter.	D4 Instructional content and pedagogy capitalize on perspectives and life experiences of students from diverse backgrounds.	1.Developmental mathematics instructors should orient their presentation to real world applications of the material (e.g. rates of growth described in terms of a bank account or the stock market, percentages understood through the context of baseball statistics).	
2.2 One promising teaching approach is culturally responsive teaching that promotes learning for all students, regardless of socioeconomic, educational or ethnic background.	D4. Culturally responsive teaching theory and practice are applied to enhance learning among all students, regardless of background. Instruction reflects cultural sensitivity and instruction that acknowledges the ways in which		Tutor training in cross-cultural communications has been shown to be important.

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	<p>communication and learning take place in students' cultures.</p> <p>D6. DE faculty employ a variety of instructional methods to accommodate diversity.</p>		
<p>2.2g In addition to basic academic subject matter, a comprehensive DE curriculum includes critical thinking, analytic reasoning, and problem solving skills.</p>	<p>D1.2 Problem-solving and critical-thinking skills are integrated into the DE curriculum.</p>	<p>1. Higher order thinking tasks, problem-solving, create meaningful engagement in the learning process.</p>	<p>3.10 The teaching of critical thinking enables students to transfer problem solving and thinking skills to content area courses. Stand-alone critical thinking courses have less impact on student grades and retention than when thinking skills are integrated into DE courses. Modeling of gathering information and making informed decisions helps students understand the various steps involved in solving problems.</p>
<p>2.2g Support offerings can include instruction on, and modeling of, effective learning strategies.</p> <p>2.2e Collaborative learning provides feedback to students in collaborative activities, giving them opportunities to reflect on their own participation.</p> <p>2.2h "Learning-to-learn" strategies are sometimes taught through separate</p>	<p>D1.1 DE focuses on self-directed learning, with students engaged in actively assessing and monitoring their own motivation and learning.</p>		<p>3.11 There is a variety of evidence that teaching learning strategies contributes to greater student mastery and retention of subject matter (latest study, McKeachie, 2002) Such skills include self-monitoring comprehension, observe and record progress in learning, understand learning strengths and weaknesses, understanding and using available resources to enhance one's own learning, study strategies and skills. There are inventories that are useful to help students identify learning strengths and weaknesses.</p> <p>3.13 Classroom assessment techniques provide important feedback to students</p>

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<p>courses or tutorials that include: note-taking strategies, group- and self-study, test taking, and time management.</p>			<p>and faculty re. what students are and are not learning. Such techniques are widely used by best practice institutions in the CQIN/APQC study.</p>
<p>2.3c Students feel a greater attachment to their college through participation in a learning community, and, thus, may be more likely to persist.</p> <p>A typical learning community that includes DE courses include a developmental course in a cluster of academic courses taken by a designated student cohort. DE instructors use college-level course material to contextualize learning, and instructors of college-level courses reinforce basic academic skills in specific content areas.</p> <p>Linked or paired courses rely on a belief that skills taught in isolation are less likely to be applied or used productively in other circumstances. Experience at some colleges</p>	<p>A5.2 Comprehensive learning systems (e.g. learning communities, course-embedded counseling, and team teaching) exist and include developmental education students.</p> <p>They are characterized by a high degree of integration among academic and student support services.</p>	<p>16. Learning communities that include developmental math should be developed to reduce isolation of students and content.</p>	<p>3.1 Use of learning communities, where students encounter a shared experience, contribute to student development, retention and enhanced student performance. LC's may be: a cohort of students taking several courses, usually linked together by a common theme, in which collaborative learning is emphasized; paired courses, where there is shared content and students are expected to apply skills in one course to the other.</p> <p>Support services that are integrated into the learning community have greater impact than when offered in isolation.</p>

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<p>suggests that students succeed when reading and writing instruction is integrated.</p>			
<p>2.2f Computer-assisted models offer a promising accompaniment to traditional means of teaching content in the classroom. They represent a way of varying instructional strategies to retain the interest of DE students.</p> <p>Computer models may allow for self-paced learning, reinforcement of an instructor's efforts, monitoring of student learning progress, and diagnostic feedback.</p>		<p>1. Faculty should understand, be familiar with and implement a range of effective instructional strategies, including the use of: interactive whiteboards; PC tablets; power point presentations that include of animated and sound-enhanced outlines, graphs, tables, video images, and internet links; and video lectures, which may also be integrated into power-point presentations.</p>	<p>3.5 Faculty in best practice DE programs use technology only in a supportive role, not as the primary means of instruction.</p> <p>Technology can be used effectively to create community and to focus interaction through online discussion groups.</p> <p>Student-generated power-point presentations demonstrating key class concepts provide for hands on and visual learning to reinforce the learning of important concepts.</p>

<p>4.3 Colleges can promote the sharing of syllabi to better align courses.</p>	<p>D7. Programs align entry/exit skills among levels and link courses to college-level performance requirements.</p> <p>A systemic approach exists within disciplines to insure continued alignment of DE course content and pedagogy to degree-applicable course content.</p>	<p>11. The developmental mathematics sequence should consist of three courses: Foundations of Mathematics, Foundations of Algebra I, and Foundations of Algebra II. This sequence, specifically delineated within the recommendations, effectively prepares students to succeed in future college mathematics courses.</p>	<p>3.8 Insuring the linkage between basic skills and college-level instruction in both content and thinking skills required in the subsequent course is a key component of successful programs.</p> <p>The most important measure of a developmental course's impact is whether students who pass the course also pass the sequential course in the same subject.</p> <p>DE Faculty and faculty who teach the college-level courses next in the sequence should review the syllabus of the relevant sequential course and the exit exam for the relevant DE course to insure a match between DE exit and next course entry criteria.</p>
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<p><b>GENERATION OF EXTERNAL PARTICIPATION AND RESOURCES</b></p>			
			<p>1.8 Best-practice DE programs are aggressive in seeking external grants to support innovation.</p>
			<p>1.9 Strong developmental programs are integrated into colleges' community outreach and workforce development activities ( new finding, CQIN/APQC, 2000).</p>

While the categories and themes that emerge from the four major sources are quite comprehensive and illustrate a good deal of commonality with regard to findings, they are not exhaustive. Some emerging areas of emphasis and focus add to the body of work that informs current practice within developmental education. Since those emerging ideas also informed the current inquiry, they are summarized below.

Student support is clearly an area that is discussed in the context of best practices to promote student success, but recent studies have given it even greater emphasis and have documented impressive gains in student persistence and achievement, based on aggressive outreach to and support of students with academic deficits. In 2005, one of two community colleges selected from 60 that applied for the MetLife Foundation Community College Excellence Award was the Community College of Denver, an institution that had demonstrated dramatic gains in the success of academically disadvantaged students. In 1990, leaders at the college pledged to eliminate the persistence and degree completion disparity between white and minority students. After making a number of adjustments in the college's approach, the percentage of minority graduates rose from 20% to 50% within a five-year period. Faculty and staff at CCD focus on the early semesters, using a team approach to "lead students up and out" of preparatory courses, in part to minimize their loss of momentum at an early juncture. Their approach involves listening to students, and fashioning programs and services that address problems students encounter. Through this approach, they determined that their most vulnerable students needed a "go-to" person: someone they could turn to and count on for a myriad of issues and concerns—and someone to whom they were accountable. They adopted a case management strategy as a key element of a holistic approach to student development. Case Managers at CCD wear many hats: they are "academic advisers and, in effect, mental health counselors; they connect students with financial aid and registration, they are troubleshooters, problem solvers, crisis counselors."<sup>5</sup> They interface with both students and faculty to collaborate on solutions to students' problems and to monitor students' progress. The College is clear about making student support a top priority, and involving faculty, counselors and case managers in an integrated support system on behalf of students.

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<sup>5</sup> *Walking the Talk: Community Colleges Where Everyone Wins*. Next Generation Press. 2005

Like many other colleges serving developmental learners, they adopted a Learning Communities approach; but structured such communities to ensure that students in developmental courses are also, concurrently, taking “regular courses” to encourage their progression, even as the college continues to support their greatest areas of need.

The second institutional winner of the Excellence Award, City College of San Francisco, has also made enormous strides in increasing student achievement and success by shaping and adapting programs to fit students’ needs. They too re-examined support for students with multiple barriers, and restructured counseling to respond to the variety of needs that their students presented. Counseling generalists gave way to distinct units that focus on the needs particular populations: new, continuing, first-generation, international, and transfer students.

In addition, they recognized barriers faced by students who had initially amassed a number of failed courses, and responded with a policy that allows students to exclude up to 24 units of D or F grades if current coursework is more reflective of academic achievements. Rather than viewing this practice as a compromise of academic integrity, they view it as providing opportunities for students with increasing motivation and strong achievement to continue to pursue higher learning and qualify for scholarships and aid that will allow them to pursue further education. Both institutions, however, continue to enforce policies to ensure that enrolled students are making progress toward their degree. Students cannot remain at the Community College of Denver if their GPA falls below a 2.0 for three consecutive semesters. The college takes the position that support includes setting boundaries and letting students know when other possible routes to their goals need to be considered.

While some of the approaches that these two institutions adopted are unconventional, both colleges meticulously monitor progress with careful formative data collection, and disseminate results on an ongoing basis for further problem solving and improvement efforts.

There is a natural tendency to look at the myriad of practices that are declared as promising in terms of their effectiveness in promoting student success, and to inquire, “Which ones are worth my college’s investment?”

As of this writing, it is worth noting that there are five prominent strategies that the 27 first-round *Achieving the Dream* colleges selected and are currently implementing to increase student success. All are included in the *Best Practices Findings and Recommendations* chart, but none is singled out as most efficacious. They are:

- Strengthening academic advising services;
- Creating or revamping orientation and “college success” programs or courses for incoming students;
- Supplemental instruction and tutoring;
- Learning communities, in which small groups of students take two or more linked courses together; and
- Professional development, including training in cultural competence and racial dynamics for faculty and staff. (Brock, et al., 2007)

In addition, other strategies intended to promote increased success among students who begin coursework at a developmental level are coming into more widespread use. One is the facilitation of students’ more rapid progress through the developmental education sequence. *Achieving the Dream* data has underscored the relationship between the number of developmental courses students are placed into and their persistence and attainment; early completers of developmental courses are much more likely to move on to college level courses and to earn a credential than those who take longer to complete pre-collegiate courses. As a result, colleges are increasingly interested in fashioning approaches that effectively accelerate a student’s progress to the extent of the student’s capabilities.

There are several issues that relate to the pace at which students are able to become competent enough to succeed in college-level coursework. One area that is receiving increased focus, both through the literature and through the experience within several Massachusetts community colleges, is what cut-off scores denote and/or suggest for students and college personnel. Several studies (Conley, 2005; Martorell and McFarlin, 2007; Calcagno, 2007) have looked at the impact of student placement—or non-placement—into developmental courses by examining the subsequent paths of students testing just below and just above the dividing line. Findings of these studies support the overall conclusion that students near the margin who are placed into developmental courses do not persist or graduate at a higher rate than their peers who tested close to the cut-off and were not required to enroll in developmental education courses. Since research has

pointed to the relationship between the length of time students take to complete the developmental sequence and their ultimate achievement of a credential, educators must consider carefully the value of developmental course placement for such students. Some argue that as programs are strengthened, students will benefit even more from the developmental education they are receiving; others contend that with the lack of agreement about whether the assessments are helping colleges to serve students in ways that benefit them the most, a re-examination of placement testing is in order. Thomas Bailey (2008) makes the point that “the sharp distinction in the services received” by students with very similar profiles, who all struggle with college-level coursework is “not justified”. He asserts that students with the same or similar scores can have very different skills gaps, and that even for those who test into the same level of developmental education, specific educational needs can be very different. This is underscored by Calcagno, Crosta, Bailey and Jenkins (Nov, 2007) who, in a study of the impact of age on developmental course outcomes, concluded that older students needing remediation were twice as likely that younger students to graduate. The authors suggests that younger students may require a different set of instructional and support services than older students, who may benefit more from more flexible opportunities to “brush up” on rusty skills. Bailey (2008) contends that assessment should focus on what students need to be successful rather than paying exclusive attention to their placement within a sequence of courses.

Many colleges have, in recent years, supplemented the *Accuplacer* or ACT examination with assessments that are more diagnostic and prescriptive in nature, in contemplation of creating different instructional modes that can more specifically address students’ needs in instances where an entire course is neither necessary nor appropriate. Pursuant to that thinking, the following recommendation was included in a Board of Higher Education memo to Public College and University Presidents :

Colleges are encouraged to continue to develop and employ creative options to assist students who do not meet the cut scores for college level math. Although some students will need a full semester of developmental math, many students who score just below the cut score would benefit from a brief refresher course. Other strategies...might include: short term individualized modules, computer based learning, tutorials, and retesting after a brief intervention....<sup>6</sup>

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<sup>6</sup> (Wall, 2001)

The references cited earlier seem to suggest that advising and other support services should be differentiated as well.

The related conversation about acceleration of students through the developmental sequence has increased within the developmental education community because of the intersection of several research findings. Both national and state studies indicate that students who take developmental coursework are less likely to complete an academic program than those who do not. (Massachusetts Board of Higher Education, 2007; Calcagno, Carlos, Crosta & Bailey, 2007; Russell, 2008). Additionally, the longer it takes students to complete a developmental sequence, the less likely they are to persist and achieve success. ((Massachusetts Board of Higher Education, 2007; Cattalozzi, 2008; *Achieving the Dream*, [www.achievingthedream.org](http://www.achievingthedream.org)) **However**, students who succeed in developmental courses are as likely—if not more likely—to persist in their studies as their peers who were not placed into developmental courses. (McClenney, 2007; CCSSE, 2007) It appears that recent questions have less to do with what each course should contain and how courses should be sequenced, and more to do with the design of teaching, learning and support strategies to meet students’ specific needs and expedite their progression, to the extent possible, toward their educational goals.

The forms of acceleration that are increasing in use at community colleges include summer bridge programs, intensive immersion programs, combining two levels of instruction into one, allowing students in Learning Communities containing developmental courses and appropriate support services to enroll in related college-level courses, and utilizing alternative approaches to instruction. (Bailey, 2009). Models currently being piloted among *Achieving the Dream* colleges include a Fast Track Math program at Mountain Empire Community College, and Guilford Technical Community College’s Transition Program. ((Zachary, 2008) A model that has proven to be extremely effective at the Community College of Denver, *FastStart@CCD*, was developed with support from a Lumina Foundation Initiative for Performance grant. Its outcomes, reported a year after its initiation, include:

1. success of the program in assisting students to complete developmental courses at a pace faster than their peers, and
2. dramatically higher retention for students who took compressed developmental courses through *FastStart@ CCD*. (Brancard, DeLott Baker, & Jensen, 2006)

Baltimore County Community College has documented the ongoing success of what they term an Accelerated Learning Program, which provides for common enrollment in college level writing, with a non-credit companion course that offers an intense form of supplemental instruction. Careful assessment over the three semesters that the program has been in place indicates that it doubles the success rate of entering developmental writing students, cuts the normal attrition rate in half, and is able to accomplish those outcomes in half the time. While class sizes are quite small, doubling the per student cost of traditional developmental writing courses, college data demonstrates that the expense per student—who persists and succeeds in developmental and college-level courses is slightly lower than that for traditionally-educated developmental writing students. There are plans for systematic expansion in scope and penetration into other basic skills areas. (McKusick and Adams, 2009)

It should be noted that in many instances, including those in Massachusetts, the efforts such as those noted above are not categorized by colleges as Accelerated Programs, but are clearly characterized by elements that keep momentum going for students most vulnerable to discouragement and failure.

In examining the factors that have the highest impact on underachieving students, Davis Jenkins (2006) identifies the following:

- A focus on student retention and graduation, rather than just on enrollment;
- Well-aligned and proactive student support services;
- Experimentation with ways to improve student success; and
- Use of data on students to improve programs and services.

Many researchers are currently of the mind that the more holistic and integrated instructional and support services are, the more likely they are to have a positive impact on student success. (Schwab and Walling, 2008; Catalozzi, 2009; Walking the Talk, 2005; Zachary, 2008; Jobs for the Future, 2008) Many students have that perception as well. McClenney (2006) reports that the service most important to students is academic planning and advising. They indicate that they are not referring to help in filling out their class schedule; rather, they most appreciate help in creating—and following—an academic plan: defining a pathway,

monitoring their progress and accomplishments, and keeping them on the path, despite competing priorities and obligations.

Ongoing and increased efforts to align K-12 curricula and standards with the knowledge and skills required for college and career success have also characterized recent community college efforts to improve student success. The report, *2008 Closing the Expectations Gap*, by Achieve, Inc., provides an update on state-by-state progress to align standards, graduation requirements, student assessments, and accountability systems to facilitate successful transitions from high school to college. On a national basis, there has been a considerable increase in the number of states that are making progress on all fronts, with the most significant progress in the alignment of high school standards with college and workplace expectations. The states that appear from survey results to have accomplished the most with regard to the alignment processes noted above are New York and Texas. Massachusetts is among approximately 20 states with very little reported progress on formal statewide initiatives to align high school and community college standards, requirements, assessments and accountability systems. The Commonwealth is, however, one of nine states that has reported the development of a P-20 longitudinal data system to enable the tracking of individual students' progress from kindergarten through college graduation. Community colleges within Massachusetts currently report, on an annual basis, the placement of incoming students from identified secondary schools with respect to developmental courses; ongoing college enrollment status; and the number who remain in higher education, whether through continued enrollment at a single college or transfer to another higher education institution.<sup>7</sup> Specific curricular alignment efforts are, for the most part, left to individual colleges and their local high school partners. It is interesting to note that colleges that have been recognized by the MetLife Foundation Community College Excellence Awards and recent monographs highlighting specific colleges for achieving impressive gains in the retention and attainment of underprepared learners are, for the most part, institutions that have collaborated with local secondary schools to arrive at and operationalize common expectations and standards. (Walking the Talk, 2005; Choitz, 2006; McClenney, 2009) With the goal of completing college courses, programs, certificates and degrees; the more college-ready entering students are, the higher the probability of their success. A national network, The College and Career Transitions Initiative (CCTI), is utilized by some institutions to access and share information about individual colleges' efforts to help

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<sup>7</sup> Institutional and system wide reports are posted to the Department of Higher Education website: [www.mass.edu/library/Reports](http://www.mass.edu/library/Reports)

students make a successful transition from high school to college, to reduce remediation for incoming students, and to increase student success rates.

Finally, the emphasis on the collection and utilization of evidence to measure performance, progress, success and improvement—modeled by *Achieving the Dream*, The Bill and Melinda Gates Foundation, the National Center for Postsecondary Research and other national and statewide efforts—is having a significant influence on colleges to engage in more rigorous and systematic evaluation of interventions intended to foster student achievement and success. (Bailey 2009; Allen and Kazis, 2007). The Lumina Foundation, through its ongoing *Lessons* series that highlights best practices in postsecondary education, has recently published the report, *Students Aren't Just Data Point, but Numbers do Count* (Connell, 2008), illustrating the power of systematic utilization of gathered evidence at Tallahassee Community College to overhaul student advisement and early warning procedures, to institute a required college success class for developmental learners, and to implement an online data tracking system to monitor critical success indicators. Similarly, *Building a Culture of Evidence in Community Colleges: Lessons from Exemplary Institutions* (Allen & Kazis, 2007) accomplishes a similar task, highlighting the ways in which City College of San Francisco, Community College of Baltimore, LaGuardia Community College, and Indian River Community College have “made routine use of student data to identify strengths and weaknesses, pinpoint areas for improvement, and assess the impact on students of new programs and innovations.” Both publications speak to the same work emphasized by *Achieving the Dream : Community Colleges Count*: to improve outcomes for at-risk students by building a culture of evidence through which inquiry is encouraged and student outcomes serve as primary indicators of success. With the increased emphasis on improving not only the access—but the outcomes—of populations of students who have not traditionally succeeded within community colleges, a growing number of colleges are implementing student tracking tools and models to gauge progress. There is also an increased level of assistance and support for community colleges endeavoring to establish data systems and procedures that support an evidenced-based culture of inquiry. A plethora of workshops, articles, and websites are available to walk readers/participants through the steps necessary to achieve a system that serves new institutional benchmarking and improvement goals.

### **Part III: Methodology**

By design, the Massachusetts Community College Developmental Education Best Policy and Practice Audit had several phases. They included:

1. Conducting a literature review of best practices and policies;
2. Building inventories based upon best policy and practice research for chief academic officers; developmental math, reading, and writing department chairs; and coordinators of identified stand-alone campus programs that promote success for academically-underprepared learners;
3. Administering the Inventories online;
4. Collating and conducting a preliminary analysis of the inventory data;
5. Conducting campus interviews as a follow-up to the Inventories;
6. Analyzing and integrating findings from both the inventories and campus interviews;
7. Presenting the literature review, overall findings, and recommendations and issues for further study in report form.

#### **Literature Review Process and Organization**

A preliminary literature review was conducted, out of which came a detailed chart of developmental education best practices, *Four Primary Sources: Best Practice Findings and Recommendations* (May 2008), based upon four major studies, already discussed within Part II of this report. Additional studies and monographs, focusing on newer research and initiatives, including those promulgated through the national *Achieving the Dream initiative*, were utilized as well and documented within an additional section of the Literature Review. Together, these additional sources and the four referenced studies served as a foundation for the lines of inquiry pursued through the Inventories.

#### **Development of an Appropriate Audit Instrument**

The audit instrument, which subsequently became three separate Inventories, was shaped both by the research referenced above, as well as by categories that seemed most useful for both institutional and departmental consideration within the colleges. Once questions were developed, they were assigned to one of the following categories: Institutional Policies and Practices; Organization and Structure; Student

Assessment and Placement; Faculty Selection, Assignment, Preparation and Development; Program Assessment; Counseling and Student Advisement; Faculty and Staff Development and Collaboration; Curriculum and Instruction; and Relevant External Relationships. Additional mathematics questions, to be completed by developmental Math department chairs, cut across three of the above categories.

Because it was recognized that different departments offering developmental courses and services within an institution might employ different practices and policies, it seemed most useful to allow for unique Reading, Math, and Writing departmental responses. Questions that pertained to institution-wide policies and practices were directed to Chief Academic Officers; eleven of those questions, along with an additional 22 that were worded similarly, but not exactly the same, were also directed to the other completers of Inventories to enable comparisons between and among developmental education academic leaders.

In recognition that most of the Massachusetts Community Colleges operate some number of self-contained programs specifically intended for sub-populations of developmental students, a process was created to allow for equivalent input to come from one or two “Special Programs” within each college; this component was optional, but most colleges took advantage of it.

After initial development of the audit instrument (referred to as the Inventory in this report), the process benefited from input from many key individuals. Among them were Dr. Jonathan Keller, Massachusetts Department of Higher Education Associate Commissioner for Research, Planning and Information Systems; Dr. Mario Delci, Massachusetts Department of Higher Education Senior Policy Analyst; Dr. Francesca Purcell, Massachusetts Department of Higher Education Associate Commissioner for Academic and P-16 Policy; Dr. Eileen Lee, Massachusetts Department of Higher Education Director for Educator Policy; Dr. Kay McClenney, Director of the Community College Survey of Student Engagement and Faculty Member in the Community College Leadership Program of the University of Texas at Austin; Drs. Lois Alves and Elaine Smith, Chief Institutional Research officers at Middlesex and Mount Wachusett Community Colleges; Professor Linda Murphy, *100% Math Initiative* Project Manager and Northern Essex Community College Developmental Mathematics Curriculum Coordinator; and the Council of Massachusetts Community College Chief Academic Officers.

As a result of discussions with Chief Academic Officers, the MCCEO Executive Director, the *100% Math Initiative* Project Manager, and Department of Higher Education staff; an additional set of mathematics questions were added to the Math departmental Inventory. The added questions are meant to follow-up on the *100% Math Initiative* study and recommendations in determining the current math placement protocols and developmental Math course sequences at each college. Because the Department of Education was planning a related assessment across all segments of Massachusetts higher education, potential overlaps were eliminated, with an understanding that results would be shared.

### **Definitions**

The definitions developed and/or adapted for purposes of the Massachusetts Community College Best Policy and Practice Audit were:

**Developmental Education courses:** courses provided for the purpose of helping underprepared college students attain their academic goals. This inquiry focuses on Reading, Writing and Mathematics courses that are intended to prepare students to succeed in related college-level courses.

**Underprepared students** refers to students who need to develop their cognitive or affective abilities in order to succeed in a postsecondary educational experience. For purposes of this Inventory, such students will have been placed in developmental courses and/or programs based upon relevant academic skills assessments.

**Developmental Program:** any organized collection of courses and services designed to help underprepared students succeed.

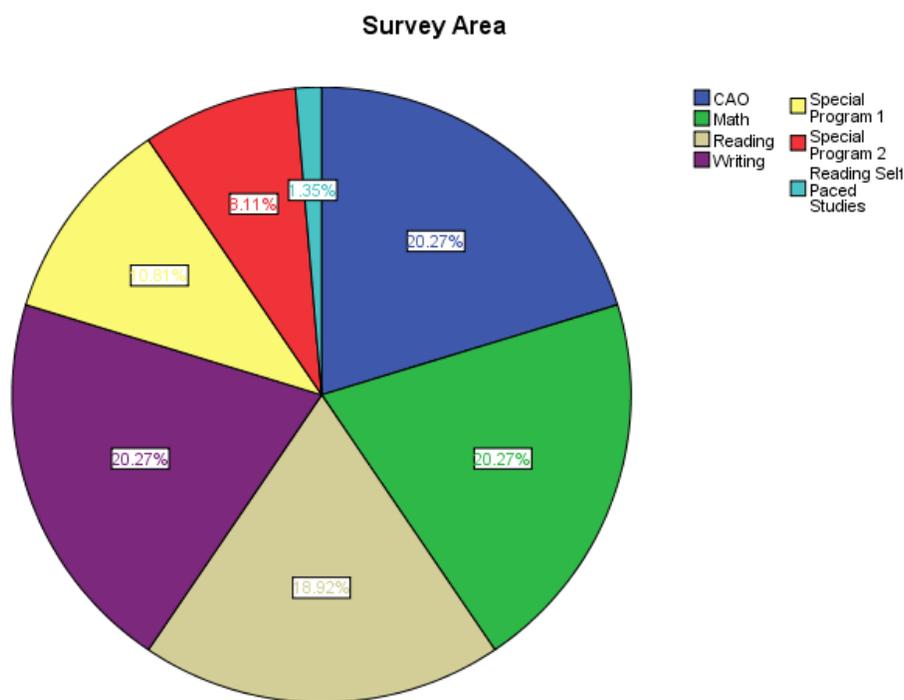
### **Inventory Administration**

Prior to the early-July electronic distribution of the Inventories, a set of instructions was developed to provide guidance to Chief Academic Officers in ensuring consistent administration of the Inventories. Copies of a project overview, an instructional memo to Chief Academic Officers, and Inventories for completion by developmental Math, Writing, Reading, and a maximum of two “Special Project” departments, were sent out. (Copies of the instructional memo and the Inventories are included as Appendices D and E.)

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All together, seventy-four individuals completed the Inventories. The distribution of the respondent groups is reflected through the graphic below. For all intents and purposes, the two Special Program groupings may be treated as one, since the separate designations simply identify programs that colleges identified as Special Project #1 or Special Project #2 for distribution and submission purposes. The Self-Paced Studies category refers to a Self-paced Studies department within Middlesex Community College that offers developmental courses through an individualized format. The distribution among Chief Academic Officers, Writing department chairs, Reading department chairs, and Math department chairs is fairly even; the combined grouping of Special Programs and Self-paced Studies creates another equivalent segment, with approximately 20% of respondents in each category.



Most of the Inventories were returned within a few weeks of the October 10, 2008 deadline. They went both to the Principal Investigator and to the Middlesex Community College Vice President for Enrollment Management, Institutional Research and Planning, whose office entered and compiled the data. The data was reviewed by the three individuals identified to conduct campus interviews to share preliminary impressions and identify areas for further follow-up.

### **Campus Interviews**

Campus interviews were subsequently conducted in November and December of 2008 and January 2009, using a common interview protocol (included as Appendix F). The purposes of the interviews were to clarify Inventory responses and to gain additional insights regarding college efforts to promote achievement and success of developmental learners.

Drs. Lois Alves, from Middlesex Community College, and Charles Kaminski, Assistant Dean of Academic Affairs for Business, Science Mathematics and Technology at Berkshire Community College, assisted the Principal Investigator in the planning and implementation of the interviews. Each of the two volunteer interviewers conducted and chronicled four interviews; as noted below:

- Lois Alves- Bunker Hill, Quinsigamond, Bristol and Massasoit Community Colleges
- Charles Kaminski- Greenfield, Holyoke, Mount Wachusett and Springfield Community Colleges

The remaining seven were conducted and annotated by Charmian Sperling, the Principal Investigator. They included: Roxbury, Berkshire, Mass Bay, Northern Essex, Middlesex, North Shore and Cape Cod Community Colleges .

Interviews were scheduled for two and one-half hours, and most interviews included between ten and fifteen individuals, including those who had previously completed the electronic Inventories. In all, more than 130 individuals, with responsibilities that include various aspects of instruction and/or service for developmental learners, participated in campus interviews . While a broad interview protocol (Appendix F) was, in general, followed, the allotted time accounted for variances in the number of questions to which each campus cohort was able to offer responses. In cases where there were a great many Inventory responses to clarify, less time was given over to the open-ended questions that comprised much of the interview outline.

After Interview summaries were generated by each interviewer, they were shared with the other two, to allow for multiple perspectives and, in some cases, the generation of further questions. The Principal Investigator continued to contact both interviewers, as well as campus personnel, to further clarify information that accrued through both the Interview and Inventory processes.

### **Data Analysis**

The following guiding questions served as frames of reference for reviewing the accumulated data from both the Inventories and the Campus Interviews:

- What practices and/or policies have been most successful, and what documentation supports their success?
- Are responses from *Achieving the Dream* college (BHCC, RCC, NECC, STCC) and/or colleges with Developmental Education Title III projects ( QCC, Bristol CC, Berkshire CC, BHCC) different from those from other colleges without these targeted projects? If so, in what ways?
- How different—and if different, in what ways—are responses of CAO’s and D.E. Department Chairs relative to developmental education practices, policies and documented outcomes?
- In what ways, if any, do responses from college-identified Special Projects differ from the institution’s developmental education departments?
- Which D.E. policies and practices are in most/least widespread use across colleges?
- Which policies and practices are in greatest/least use within discrete developmental education departments/disciplines?
- Which practices and services are most often bundled, and to what ends?
- What link exists between professional development and successful practice?
- What links exist between assessment and effective policies and practices: on the institutional level? at the department level?
- To what extent do colleges/departments incorporate study skills, learning communities, supplemental instruction/support labs, and advising into developmental education instruction? To what ends?

- How similar/dissimilar are D.E. course placement procedures and policies from college to college? Beyond *Accuplacer*, what other standardized instruments or protocols are being used? To what end? What measures of effectiveness have been/are being developed?
- How do the developmental math sequence and successful completion practices/policies differ from college to college? If colleges have changed their practice, why? What are they learning?
- How successful are the fast-track developmental education programs that exist?
- How does the percentage of developmental courses taught by full- and part-time faculty compare with the same measures for non-developmental courses? Does professional development support differ for these groups? If so, how?
- What are the strongest correlations between what the D.E. literature encourages for effective D.E. programming and what community colleges in Massachusetts do?

Inventory items and interview responses were analyzed to determine patterns that emerged for each question, as well as to answer the guiding questions above. As a result of extraordinary interest on the part of college personnel at each campus to learn about successful and emerging practices and policies at other Massachusetts community colleges, a decision was made to include a great many examples of current and planned practices from individual campuses, as well as a listing of practices and policies that each campus cohort identified as some of their most successful. (As they are listed in the report, an asterisk denotes those that have documented results.)

### **Limitations**

A great many factors limit the validity and/or reliability of the Audit's findings and conclusions. They include the following:

1. All of the responses are self-reports on the part of participants.

2. While there are notations regarding outcomes achieved and the availability of documentation, only some of the surveyed institutions actually made the referenced documentation available.
3. Much of the time, information submitted through the Inventories was clarified or corrected during the Campus Interview process. The Inventory data was not adjusted or recalculated to reflect those changes.
4. The sample sizes, particularly with respect to individual departments or other separate reporting cohorts, were small. The reliability of information must, therefore, be viewed in that light.
5. Only individuals with institutional, departmental or programmatic leadership responsibility for developmental education were queried through the Audit inventories and interviews. While they were considered the best sources for information relative to practices and policies that foster attainment and success of underprepared learners, they represent only a subset of those whose responsibilities bear on the success of the target population.
6. At least three individuals who completed Inventories were new to the institution or the leadership role for the area they represented. While their responses were accurate to the best of their knowledge, they were more reliant on others within their institutions for relevant and accurate information.
7. The campus interview groups were comprised differently at each institution. In addition, three different interviewers conducted the interviews. Inevitably, the amount and type of information interviewees volunteered was likely flavored by those differences.

## **Part IV: Summary of Findings**

The practices that form the basis for MCCEO/ATD audit surveys are those noted as most significant to developmental education success within recent literature on best practices for Developmental Education. Each has been noted and/or discussed within the literature review that appears as Part II of this study.

### **College wide Practices and Policies Considered by Chief Academic Officers, Department Chairs and Special Project Coordinators**

The first eleven questions of the MCCEO/ATD study were the only ones to which every survey participant responded.<sup>8</sup> These particular questions asked respondents to focus on college wide practices and policies in terms of the extent to which each statement fit their institution's practice:

- 1.1 At your college, references to developmental education as a priority are public, prominent and clear.
- 1.2 Student success data is widely disseminated and analyzed to foster problem-solving with regard to improving student outcomes, delivery, and professional development.
- 1.3 There is collaboration between developmental education faculty and faculty and staff from other departments/disciplines.
- 1.4 There is strong integration of developmental education faculty within college governance and activities.
- 1.5 There is consistency between developmental education goals and institutional goals.
- 1.6 Developmental education is part of long-range planning at the College.
- 1.7 The campus community outside of the developmental education department(s) consider developmental education important.

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<sup>8</sup> There are 22 additional questions to which CAO's responded for the College and Department Chairs responded for their own departments. They will be discussed later, under the categorical headings that are most pertinent to each.

1.8 There is a mission statement or statement of philosophy/principles/values that guides developmental education at the college.

1.9 A developmental education mission statement and/or DE goals and objectives are communicated throughout the college.

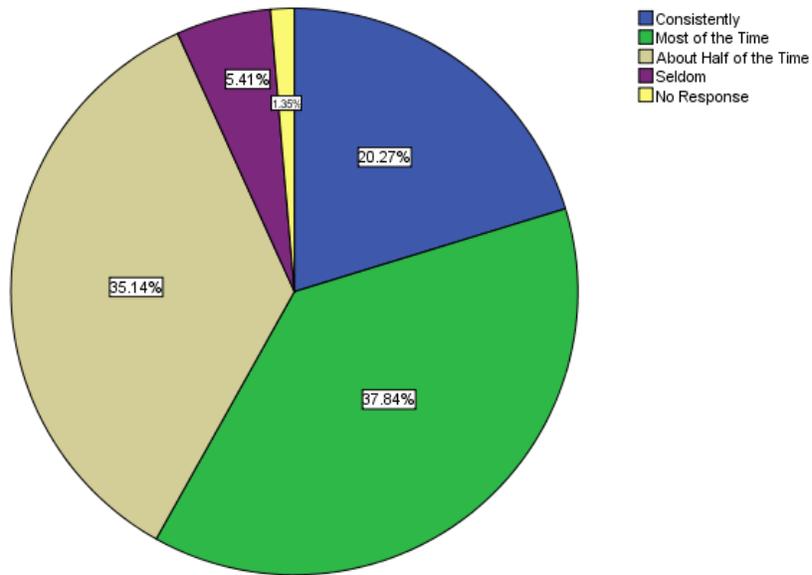
1.10 The campus community is advised on the extent to which developmental education courses/programs are accomplishing their stated goals and objectives.

1.11 The campus community is apprised of what developmental education instructors are learning about effective interventions/instructional practices for developmental students.

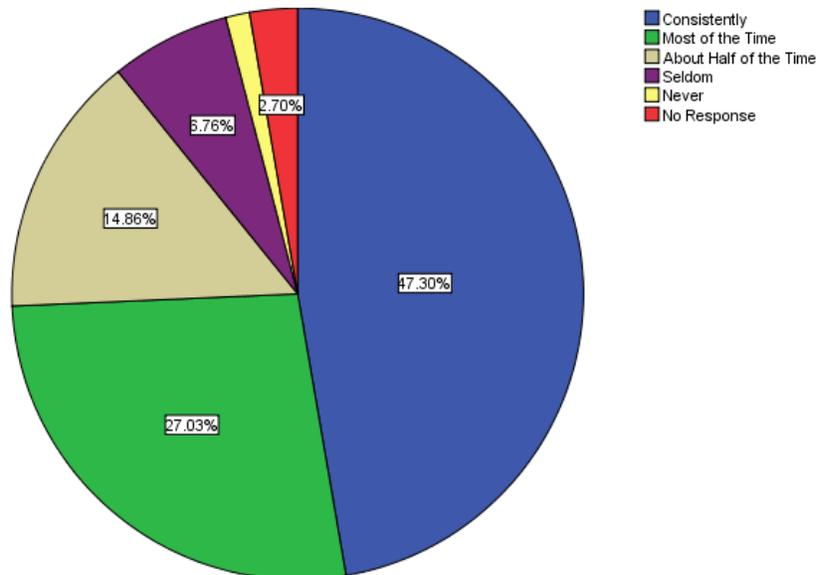
Responses to these items came from 74 CAO's, Department Chairs and Coordinators of Special Programs designated as participants in the study by their CAO.

The patterns that emerge from responses to these first eleven questions are instructive, in that they establish some important themes that come into play on a fairly consistent basis throughout the findings of this study. Pie charts reflecting the overall responses to each of the eleven questions above are arrayed in an order that makes apparent the differences between the policies and practices that a large percent of the survey participants agreed were much in evidence in their colleges and those practices and policies that seldom, if ever, were apparent.

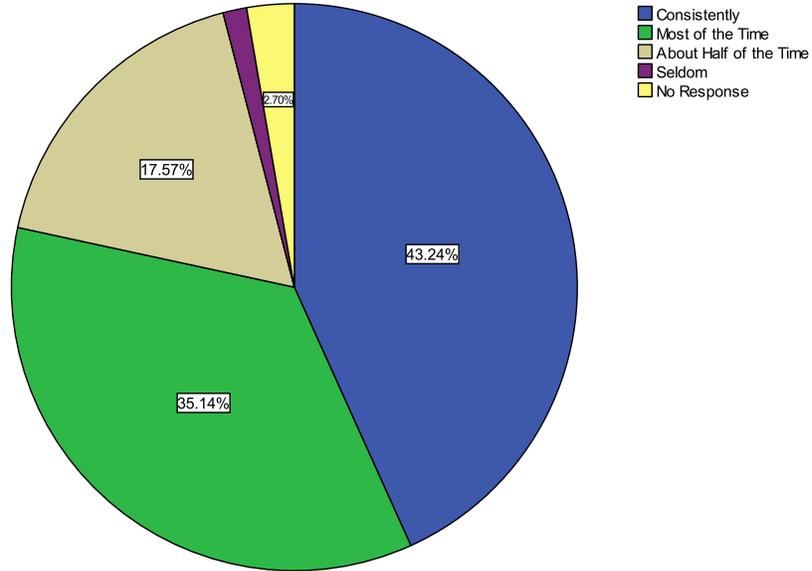
At your college, references to developmental education as a priority are public, prominent and clear



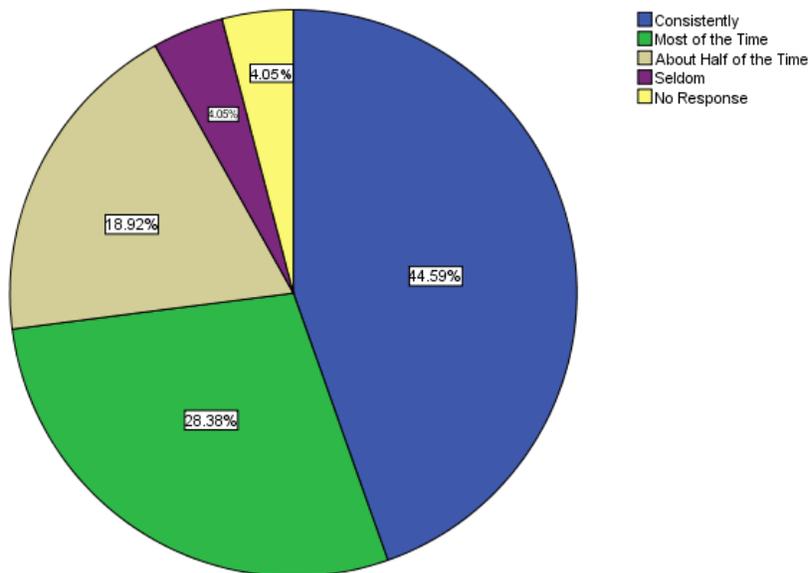
There is strong integration of developmental education faculty within college governance and campus-wide activities.



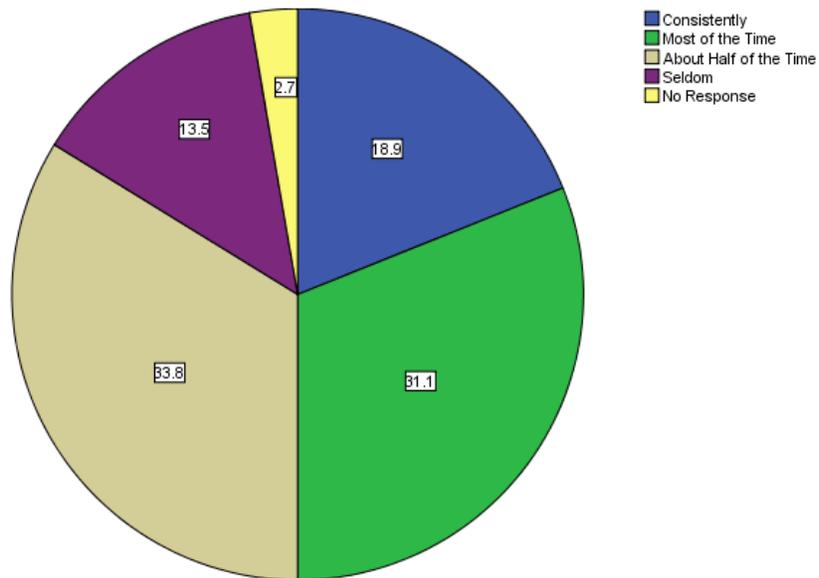
There is consistency between developmental education goals and institutional goals.



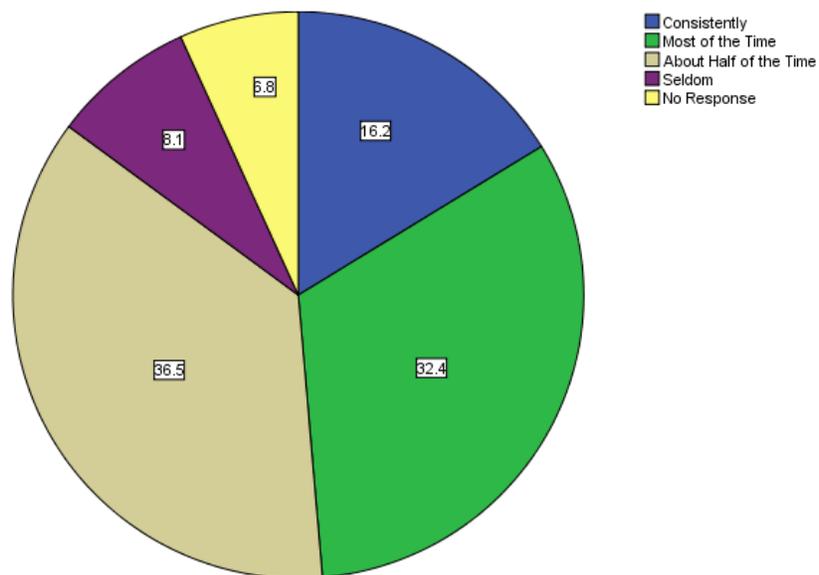
Developmental education is part of long-range planning at the college.



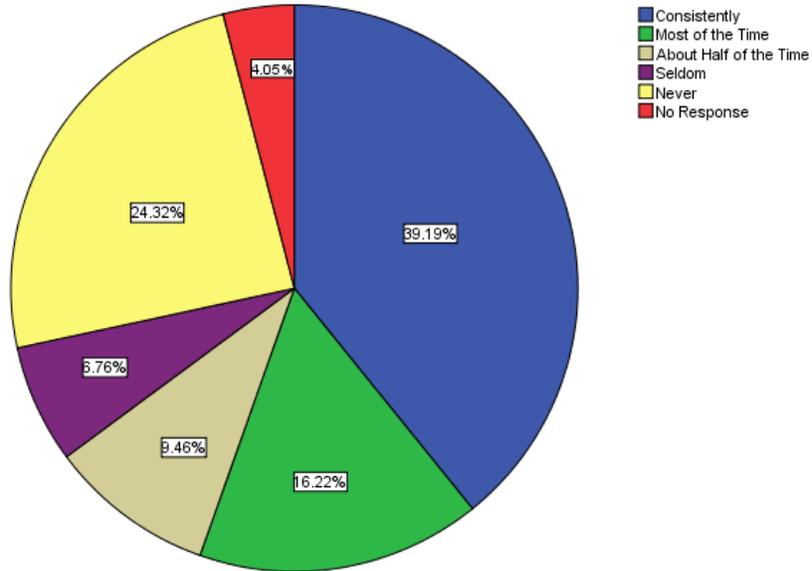
There is collaboration between developmental education faculty and faculty and staff from other departments/disciplines



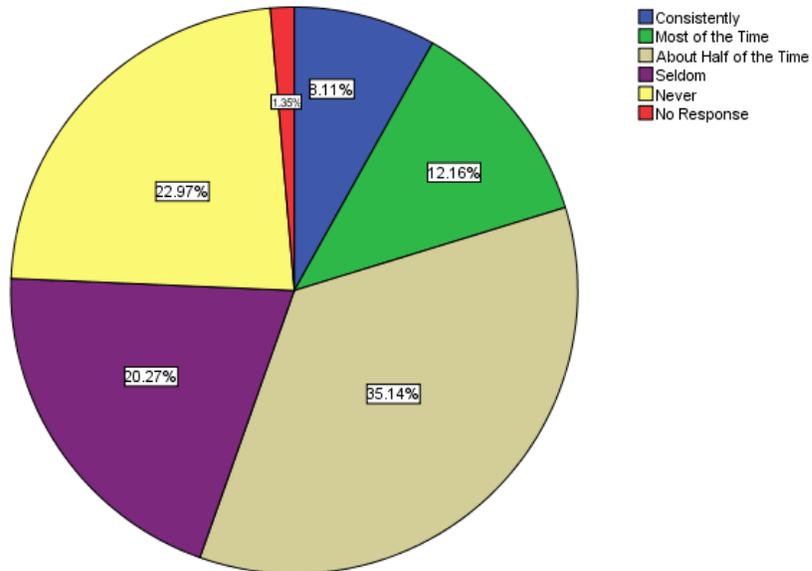
The campus community, outside of the developmental education department (s), considers developmental education important.



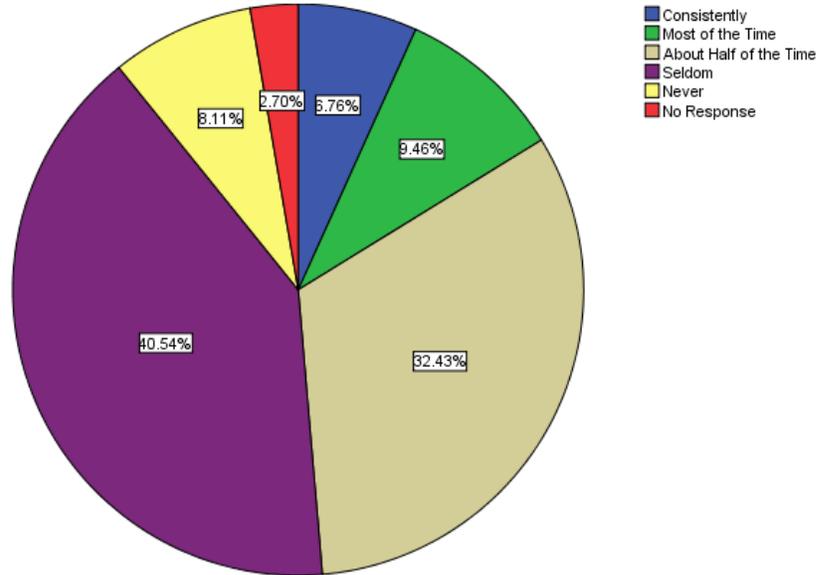
There is a mission statement, or statement of philosophy/principles/values, that guides developmental education at the college.



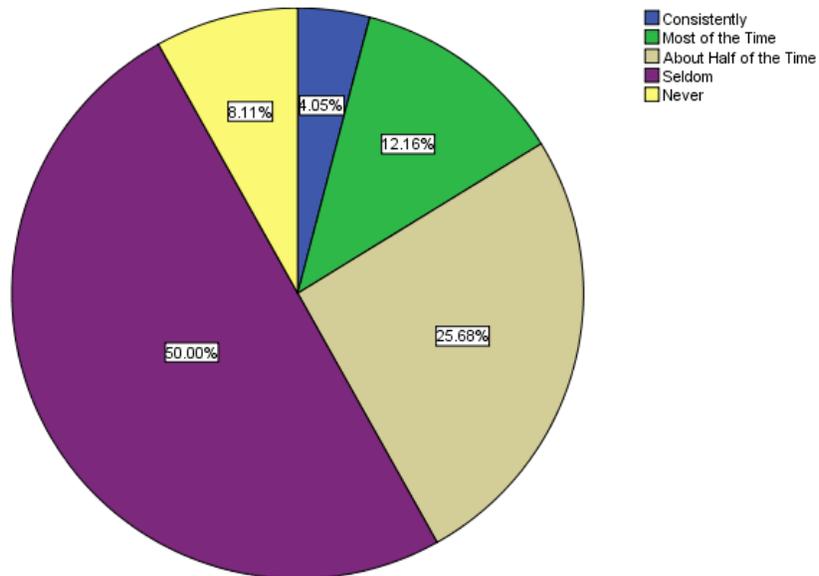
A developmental education mission statement and/or DE goals and objectives are communicated throughout the college.



The campus community is advised on the extent to which developmental education courses/programs are accomplishing their stated goals and objectives.



The campus community is apprised of what developmental education instructors are learning about effective interventions/instructional practices for developmental students.



There seems to be a great deal of consensus with regard to practices that speak to institutional commitment to Developmental Education and its goals, its place within the planning process, and the full integration of its faculty within governance and other activities. A sizable majority of respondents saw related practices as very much in evidence within their institutions. With regard to the relationship between developmental education and the rest of the college, there is somewhat less agreement. The questions pertaining to whether the college community considers developmental education important and the extent of collaboration between developmental faculty and faculty from other college areas yield more diversity of opinion, though the percentages who say “consistently” or “most of the time” are close to 50%.

There is much less agreement on whether developmental education mission statements exist, and a fairly clear indication that, for the most part, those that do are not communicated throughout the institution.<sup>9</sup> The final three graphs relate to the communication and, most especially, the application of information that informs the broader community about student success at the college, developmental education outcomes, and what is being learned from within the developmental education community about instructional effectiveness. It is apparent that, in the eyes of these CAO’s and developmental education faculty and staff, assessment and/or student outcome information seldom informs ongoing or new practice with regard to developmental learners.

While it clear that, with several of these questions, it depends on whom you ask (and such variation in response patterns will be discussed later), the general themes generated from these beginning questions emerge repeatedly throughout responses to other questions, within specific cohorts of respondents as well as across colleges. Where there are noticeable differences, there are usually interesting stories and/or findings, many of which will be discussed.

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<sup>9</sup> During campus interviews, it became apparent that several respondents who indicated that a developmental mission statement existed were in error. In the few instances where mission statements did exist, they were generally departmental and generated as part of a Program Review process (examples are at North Shore Community College and Middlesex Community College). More often, respondents were referring to the specific identification of Developmental Education within strategic planning priorities and goals, rather than to the articulation of a Developmental Education Mission Statement.

***Differences Between CAO's and Department Chairs***

Chief Academic Officers' responses to the initial eleven questions of the survey were in general agreement with trends noted above. However, CAO responses on several questions indicated a more sanguine perspective than that conveyed by Math, Reading and Writing department chairs and Special Program coordinators. Most notable were higher consistency ratings in response to the following Statements:

1.1 At your college, references to developmental education as a priority are public, prominent and clear.

1-2 Student success data is widely disseminated and analyzed to foster problem-solving with regard to improving student outcomes, delivery, and professional development: Of 15 CAO's, six (40%) responded "most of the time", and another 5 (33%) responded "about half the time." Other survey groups split most of their responses between "seldom" and "about half the time".

1-3 There is collaboration between developmental education faculty and faculty and staff from other departments/disciplines: 60% of CAO's chose "consistently, with 26% indicating "most of the time". Other respondent groups reported a good deal less frequent collaboration.

1-4 Developmental Education is part of long-range planning at the college: While this question elicited a high proportion of "Yes" responses, CAO's and Math department chairs, both indicated a much higher level of agreement than did Writing, Reading and Special Program chairs.<sup>10</sup>

1-7 The campus community outside of the developmental education department(s) consider developmental education important: Two thirds of CAO's (and two thirds of Math department chairs) responded "consistently" or "most of the time", as compared to about half of all respondents.

1.11 The campus community is apprised of what developmental education instructors are learning about effective interventions/instructional practices for developmental students: While CAO's agreed, in general, that this did not happen with great frequency, four of 15 (27%) responded "most of the time", as compared to 14% of other respondents— including only 6% of Math, Reading and Writing department chairs— who indicated "consistently" or "most of the time".

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<sup>10</sup> Factors contributing to this may be the recent establishment, on at least three campuses, of college wide task forces to explore improving the effectiveness of campus programs and services for underprepared students, as well as the *100% Math* best practice strategies that have guided developmental Math improvement efforts on several campuses.

There were no questions among these eleven where opposite perspectives were noted: just a more optimistic outlook on several questions from Chief Academic Officers.

An additional set of questions (2-1 through 2-47) was put to Chief Academic Officers about overall college practices and policies that have implications for success among developmental learners. Two of the sections below— *College wide Organization of Developmental Education Courses and Services* and *College wide Placement Policies and Procedures*—discuss questions that were not addressed by other Audit respondent groups. Those responses are summarized below. Responses to questions that were also asked of department chairs (though often in a slightly different way) are included under the major categories that follow these sections, to avoid repetition and facilitate comparisons among various respondent groups to related questions.

### **College wide Organization of Developmental Education Courses and Services**

More than half of the colleges locate developmental courses within broad subject area or discipline-specific divisions, coordinated by a dedicated faculty member. Another quarter of the courses reside in subject or discipline-specific divisions without a designated coordinator; and one institution places developmental Reading and Writing courses under a single department, within a division, under the leadership of a coordinator.

In addition, two colleges<sup>11</sup> group learning support services and developmental courses within a dedicated division, headed by a division dean. In one instance, developmental courses have area-specific coordinators; in the other, the developmental courses are grouped within the division's General Studies Preparatory Program, coordinated by the division's dean.

With most of the colleges including developmental courses within related disciplinary divisions, and most student support services coordinated through a separate organizational structure within the colleges,

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<sup>11</sup> Northern Essex Community College and Bristol Community College

questions about coordination are pertinent. Four colleges indicated that an administrator has been designated—or, in one instance, newly hired— to coordinate planning for developmental education college wide<sup>12</sup>, and five of the 15 CAO's indicated that formal mechanisms exist to meet with developmental education course and service providers to articulate common goals and/or integrate offerings, as appropriate.<sup>13</sup>

The actual integration of support services, as reported by CAO's, is fairly low. 60% say that support services are available to—by not mandated for— students, who generally make use of them as a result of faculty referral; 20% say some support services are integrated into the instructional program, with the remaining 20% indicating that comprehensive and coordinated support services are well-integrated into developmental education courses. (The latter finding is somewhat different than what department chair and special program coordinator respondents suggest; their responses to a similar question convey the impression that it is primarily within the Special Programs and grant-funded targeted initiatives that such comprehensive coordination and integration is operative.)

### **Incoming Student Assessment and Course Placement**

Placement testing in Math, Writing and Reading is reported as mandatory by all of the CAO's. Additional screening instruments that were reported were Learning Styles Assessments, administered by Bristol Community College and Mass Bay Community College; a Springfield Technical Community College keyboarding test, compatible with STCC's computer literacy policy; a Support Services Inventory, administered by Holyoke

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<sup>12</sup> Two colleges have implemented this model in concert with grant-funded developmental education initiatives; Roxbury Community College has created such a position with support from *Achieving the Dream*; Berkshire Community College has achieved similar coordination through its Title III initiative.

<sup>13</sup> Some examples: At Springfield Technical Community College a newly-formed Developmental Forum will serve in this capacity. Mount Wachusett Community College has formed a Developmental Education Committee to facilitate greater communication among developmental educators and to develop a coherent set of D.E. objectives. At Cape Cod Community College, a Developmental Education Committee, within the college governance structure provides an ancillary support function, is now working with IR to track longitudinal data to ascertain the impact of developmental education services. In past years, the committee developed a Mission Statement, established placement cut scores, developed a course prerequisite system, and studied course completion rates for developmental students.

Community College; and a series of questions pertinent to students' first language and educational experiences at Middlesex Community College.

Several colleges reported explorations into basic skills assessments that are more diagnostic than the *Accuplacer* exam, now used by all of the colleges for mandatory—or, in two cases, advisory—course placement purposes. A few of the institutions are piloting *ALEKS* and *Advancer*<sup>14</sup>, both instruments that have been developed with cross-walks to *Accuplacer*. In addition, at least one institution is piloting *MyMathTest*, to interface with individualized instruction using *MyMathLab*. Colleges that are considering these exams are interested in identifying and providing more focused instruction on specific skill gaps as well as strengths that students display in order to better individualize developmental curricula and instruction.

Five of the colleges report that all incoming students are required to complete incoming student assessments. The other ten report exemptions for designated populations, the most common of which is transfer students with college-level coursework (almost half the colleges implement this exemption). CAO's from two colleges indicated that they do not test Undeclared Majors, and one indicated that his institution does not test evening students taking courses other than Math or English.

While most schools require placement into developmental courses in Math, Reading and Writing for students who test below determined cut scores, not all of the colleges require placement in all subjects. One institution that does not have a stand-alone Reading program or course places students only in Math and Writing. Reading and/or study skills instruction is provided either through companion courses or through integration into Writing courses.<sup>15</sup> In recent years, several colleges have integrated Reading and Writing instruction into a single course or have required the pairing of separate Reading and Writing courses for students who test at low levels in both areas.<sup>16</sup> At two colleges<sup>17</sup> there is currently no requirement to enroll in developmental

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<sup>14</sup> Berkshire Community College and North Shore Community College.

<sup>15</sup> Mass Bay Community College handle Reading in this way.

<sup>16</sup> Middlesex and Northern Essex Community Colleges are examples of colleges that implement these protocols.

<sup>17</sup> Mass Bay and Mount Wachusett Community Colleges

Math, regardless of Math *Accuplacer* results. A policy to implement mandatory Math placement, perhaps through co-requisites or paired offerings, is currently under consideration at one of them.

### **Organization of Course Offerings**

In almost all of the colleges, students may take first or second semester developmental courses alongside selected college-level courses. Comments that accompanied responses to relevant queries indicated that students are required to meet the prerequisites for all courses they take, and a fair number of courses have Reading, Writing and/or Math prerequisite levels. One CAO reported that students must finish all developmental courses before taking any college-level course.

Approximately a third of CAO's (and a consistent proportion of department chairs) indicated that their colleges and/or specific departments offer developmental education Fast-Track options to accelerate students' progress through their required sequence. Many are summer bridge programs, but department chairs, in particular, noted other variations, primarily during campus interviews. Most of these options involve using interim performance assessments and as-needed instruction to move students forward more quickly. They are described under the *Curriculum and Instruction* section of this report.

### **Faculty**

Overwhelmingly, Chief Academic Officers indicated that faculty who have had the most success with developmental students are assigned to developmental education courses and that commitment to and knowledge of developmental education are essential in the recruitment and hiring processes for developmental educators. There is agreement among department chairs that faculty who are assigned to teach developmental learners are, for the most part, those who are committed to the goals of developmental education and are successful with developmental students. Only in the area of Math was there a little less agreement than among the other cohorts. While none answered "seldom" or "never", a third of department chairs chose each of the "Yes" categories: "consistently", "most of the time" and "about half of the time". Similarly, to the question that probed the best practice of not assigning faculty who don't want to teach

developmental education to developmental courses, two of 15 Math department chairs indicated that that such assignments occur “about half the time”. With that noted, most department chairs in all three discipline areas indicated that faculty who do not want to teach developmental classes are not scheduled for them “consistently” or “most of the time”. Consistent with these findings, most department chairs agree that assignment of faculty to developmental education courses is based upon faculty choice, with two Math chairs selecting “about half of the time” in answer to this inquiry.

When recruiting new faculty to teach developmental students, there is substantial agreement among the departments about the extent to which knowledgeable, enthusiastic and committed developmental educators are hired. Two thirds the department chairs within two of the three disciplinary developmental departments agree with the same proportion of CAO’s that this happens “consistently” or “most of the time”. Responses from Math department chairs had a slightly different profile, with a third responding either “ about half of the time” or “seldom”.

Inventory respondents and campus interviewees were eager to share examples of the methods through which they recruit and hire well-prepared applicants, whether or not the positions are dedicated exclusively to developmental level courses. At one college, interviewees described teaching demonstrations that require candidates to teach a developmental-level class, even when being interviewed for a position in which teaching responsibilities are split between developmental and college-level courses. At another, the position postings for faculty who will teach both developmental and college-level courses emphasize developmental course assignments to recruit interested, knowledgeable candidates for developmental course assignments. And at a third institution, a cadre of adjunct Writing instructors are hired specifically for developmental Writing courses; they teach no upper-level courses and work closely with full-time developmental Writing instructors on curriculum and teaching methodology.

A decided majority of department chairs (60%) report that there is a higher proportion of part-time faculty teaching developmental education courses than other courses in their departments. Of 43 responding departments, only three (about 7%) indicate that they have a higher proportion of full-time faculty teaching

developmental courses than other courses.<sup>18</sup> A third of departments described a similar part-time/full-time ratio as for other courses in the department. There were no colleges in which a similar part-time/full-time ratio held for all three developmental education subjects; at three colleges, leaders of two of the three developmental disciplines reported similar part-time/full-time ratios as the ratios that obtain for other courses at the college.

On a separate query, approximately 60% of Math, Reading and Writing department chairs indicated that 60% or more of their courses are taught by part-time faculty; 20% say that 51-59% of departmental developmental courses are taught by part-time faculty; and 11% estimate that 31-50% of DE courses are taught by part-time faculty. Four departments (9%) report that 30% or less of their courses are taught by part-time faculty. Of those four, three are Reading departments, and one is a Math department. By discipline area, Writing chairs report the highest proportion of part-time faculty (67%), followed by Math (60%). Reading departments report that 50% of their courses are taught by part-time faculty.

There is no doubt that the colleges rely heavily on part-time faculty to staff courses at all levels, but this data underscores the reliance of part-time faculty to teach the majority of developmental courses, often in disproportion to the percentage teaching college-level courses within the same department. It is interesting to note that there were strong opinions regarding the issue of whether full-time faculty should have dedicated developmental-level course loads. While the question was not posed through Inventory or interview questions, several department heads raised it to affirm their commitment to the principle that subject area course loads should be split between developmental and college-level courses. They believe that such a practice facilitates a continuum of skills development and supports and encourages continuous coordination between college-level curricula and related developmental course curricula. Some institutions—and indeed some departments within institutions where the predominant feeling is that just described—take the opposite position. They believe that hiring dedicated developmental education subject area specialists gives them strong curriculum and teaching/learning expertise in promoting achievement and success among underprepared students, and provides leadership for those who are assigned to teach developmental learners without the same level of preparation and/or expertise. This debate has relevance for the ongoing

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<sup>18</sup> Two are Writing departments and one is a Reading department.

conversation about full-time/part-time ratios with regard to teaching developmental learners. While it is often assumed that the assignment of full-time faculty to developmental courses connotes a high level of commitment to learners with significant barriers to success, there is the question of specific training and expertise that, for some, bears more compelling consideration. As has been noted, in addition to screening for experience and expertise among candidates with mixed assignments, some colleges have hired developmental education specialists in both full-time and part-time ranks to propel their efforts to improve achievement among underprepared student cohorts.<sup>19</sup>

### **Curriculum and Instruction**

The developmental education department chairs expressed a good deal of confidence in the extent to which course offerings are clearly defined and aligned with the skills required in related next-level courses. The highest consistency ratings for all questions asked of department chairs emerged regarding:

1. the extent to which departments have clearly stated goals and objectives for developmental courses;
2. the extent to which developmental courses are aligned with college-level requirements in sequential and/or related courses; and
3. the extent to which thinking skills taught in developmental courses are aligned with those required in sequential or designated next level courses.

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<sup>19</sup> Examples are Middlesex Community College, which, some years back, set a priority on hiring full-time developmental education subject-area specialists; Berkshire Community College, which employs a dedicated cadre of part-time developmental Writing instructors; Massasoit Community College, and Northern Essex Community College, which, through its Developmental Studies Division, has cultivated a part-time cadre of developmental educators in Reading, Writing and Math. In addition, many colleges hire developmental education Reading specialists, both full and part-time, to staff Reading, Study Skills, and College Success courses.

While these items evidenced a high level of consistency throughout the fifteen colleges, a few department chairs described complete “overhauls” of their curriculum to achieve stronger clarity of learning goals, alignment of sequential skills, and articulation between and among related courses.<sup>20</sup>

There were several Inventory questions relating to articulated student learning outcomes to which department chairs responded with much less consistent results. One queried how much collaboration exists between faculty who teach college-level courses and developmental education faculty toward desired learning outcomes. While 87% of Math department chairs indicated that such collaboration happens “consistently” or “most of the time”, Writing department chairs answered “never” 40% of the time, with “consistently” or “most of the time” chosen by fewer than a third of respondents.<sup>21</sup> (In contrast, three quarters of Chief Academic Officers expressed the view that such coordination occurs most of the time or more, with only one CAO responding “seldom” and none selecting “never”.) Department chairs in schools in which developmental faculty are organizationally separate from peers teaching same-discipline college-level courses were more likely than others to rate collaboration in working toward desired outcomes low on the Inventory. In addition, campus interviews surfaced several instances where extremely productive forms of collaboration toward student learning outcomes emerged that had not necessarily entered into the thinking of the individuals responding to the relevant query while completing the Inventory.<sup>22</sup>

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<sup>20</sup> By way of example, Quinsigamond Community College has undergone an extensive realignment of its Math curriculum that has significantly raised student achievement; it is described later in this report. Another Q.C.C. effort entailed developing a consistent Writing curriculum, with clear expectations for faculty and students and common exit exams. Within Self-Paced Studies at Middlesex Community College, the developmental Reading curriculum was overhauled based on a review that revealed poor student completion and success rates. The department researched best practices, and settled on an a Differentiated Instruction approach calling for a series of prescribed assessments, a tiered curriculum, student-led small group “mini-lessons”, hands-on projects and a variety of other instructional and assessment strategies. Marked improvements in completion rates and test results have accrued, and greater numbers of students now skip next-level Reading courses.

<sup>21</sup> Reading department chairs reported the least amount of collaboration with college-level faculty, possibly because there are few, if any, colleges where college-level Reading courses, where they exist, are not taught by the same faculty who teach developmental Reading courses. This finding may also suggest that Reading faculty are less likely to meet with faculty who teach gateway courses that depend upon college-level Reading skills than those where the specific discipline is a shared one.

<sup>22</sup> One example is Mass Bay Community College’s holistic scoring of Writing Portfolios through which full and part-time faculty who teach various levels of writing implement a blind scoring system (they do not know the identities of students, courses in which they were enrolled, or instructors) to determine students’ Writing course placements for the following semester. All work from an agreed upon set of outcomes and expectations, and their judgments can and often do result in placement well beyond the next sequential course. Another form of collaboration occurs at Cape Cod Community College, where two sequential courses—at least one of them developmental--- are offered back-to-back in a single semester (each meets 6 hours per week for half a semester) for able and motivated developmental students. Close coordination relative to outcomes is a necessary ingredient in this model.

Another question probed a more specific form of collaboration toward desired outcomes: the extent to which faculty teaching related college-level courses review syllabi and exit exams for the developmental course(s) that prepare students for their courses. Almost half of the respondents chose “seldom” or “never”, with only a third indicating “consistently” or “most of the time”. With more than half of the community college developmental education department chairs reporting the use common exit exams to assess required competencies, this response seems surprising. It may be that because of the overlap between developmental and college-level faculty, the exams receive more regular scrutiny by college-level departmental faculty than these responses convey. However, the responses may inspire questions about an assumed—rather than continually verified— degree of skills alignment between developmental and college-level courses.

To extend the alignment issue further back into the students’ educational experiences, two questions probed the extent of high school/community college curriculum coordination. One asked whether developmental education faculty meet with high school personnel to insure student preparation for the incoming student assessment/placement process. More than half of the developmental Math and Writing chairs and a third of the Reading chairs reported that they do so. In response to a query about department faculty meeting with high school teachers to facilitate curriculum coordination, “Yes” responses hovered around 50% for all three discipline areas. An interesting aside is that developmental departments with *Achieving the Dream* projects were *less* likely to engage in such coordination activities. In several campus interviews, questions about whether more effort in this direction would facilitate increased preparation among incoming high school students were raised.

Personnel on many campuses specified, either during interviews or through Inventory comments, that they administer *Accuplacer* within area high schools. Very little was said (or asked, for that matter) about specific follow-up related to curriculum coordination. Given the number of high schools in some of the colleges’ catchment area, the effort required to coordinate on this level presents great challenges. But it appears from some of the campus interview comments that the lack of “agreement” or articulation between MCAS and *Accuplacer* results is inspiring a greater sense of urgency to articulate goals and student learning outcomes that will provide a more certain path from high school to college success.<sup>23</sup>

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<sup>23</sup> Through a one-year grant awarded to the Boston Adult Technical Academy, Roxbury Community College is engaged in Math and English curriculum alignment and related professional development. An additional effort is ongoing at Berkshire Community College,

A series of questions relating to curriculum/instructional format were instructive in providing information about current modalities for developmental education. The highlights are summarized below:

1. The Inventories revealed considerable variability in the kinds of developmental courses that are included in Learning Communities or paired offerings. Writing is the most likely course to be included, and Math is the least likely. But the percentages are not high for any of the developmental areas, and 44% of respondents, overall, indicated that developmental education courses from their departments were seldom, if ever, included in Learning Communities. The greatest reported utilization of Learning Communities occurs within the Special Programs included this Audit and other targeted—and usually grant-funded-- initiatives addressing student success.

Campus interviews provided much more detail regarding existing Learning Communities as well as those in development. While most that include developmental courses include Writing, Roxbury Community College's five new Learning Communities use developmental Math as a common core subject. Berkshire Community College is linking a new Basic Writing course to a Western Civilization course specifically for students who register late and place into developmental Writing. And North Shore Community College has found that second-level developmental students aspiring to Health and Human Services professions are benefitting from a thematic Learning Community focusing on health issues. At Bunker Hill Community College, Learning Community Clusters and Learning Community Seminars are linking student success skills and common learning outcomes to discipline-specific courses. In some colleges, faculty attend one another's classes; in others, the course goals and content are linked, but faculty do not participate in one another's classes.

Interviews confirmed the assessment noted above that the most aggressive Learning Community efforts are being undertaken through externally-funded initiatives that focus on raising achievement levels of underprepared students.<sup>24</sup>

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where the college is currently working with eleven area high schools to align high school and community college Math curricula and outcomes.

<sup>24</sup> This includes all four of the four *Achieving the Dream* Colleges (Bunker Hill, Roxbury, STCC, and NECC), as well as Middlesex Community College and Berkshire Community College, through their implementation of Title III Strengthening Institutions Projects. Increasingly, colleges are offering developmental education courses within Developmental Learning Communities as well as alongside college-level courses. Bunker Hill's sustained seven-year effort (through both Title III and *Achieving the Dream* projects) has led to their Learning Community Cluster model, through which students take developmental and college level courses simultaneously. Both completion rates and retention rates for students in such clusters in Fall 2008 were considerably higher than their respective comparison groups (73% completion vs. 63% completion in comparable courses; 78% Fall to Spring retention vs. 66% retention for the College in general).

2. About half of the time, the Learning Communities that include developmental courses also integrate some support services. *Achieving the Dream* colleges are more likely than others to do so.<sup>25</sup>
3. Math departments are the only ones that report extensive use of online developmental courses. 75% of Math department chairs indicated that this practice is in use “consistently” or “most of the time”. Approximately 80% of Writing and Reading department chairs selected “seldom” or “never” to describe the extent of online courses in their developmental disciplines.<sup>26</sup>
4. Most developmental face-to-face classes include web-based activities “consistently”, “most of the time” or “about half of the time”, *except* in Math, where a third respond “seldom” or “never” to the inclusion of web-based activities.<sup>27</sup>
5. 60% of Math departments indicate that they offer instruction in a separate self-paced format.<sup>28</sup> In Writing and Reading, almost 70% of respondents said they “never” offer self-paced course.<sup>29</sup>

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<sup>25</sup> The most common way to do this is by incorporating a College Success or Study Skills course into the Learning Community. But other variations are in evidence in the system: Bunker Hill Community College pairs developmental Math with a “*Math-Fear=Success*” course for entering students who regard themselves as intimidated by mathematics, and links advising, through “success coaches” to Learning Community clusters. Mass Bay Community College includes mandatory Supplemental Instruction in Math, a mandatory Writing Lab, a College Success course, and advising into its Summer Scholars Program (more information may be found under *Fast Track Programs*). And most of the Special Programs include consistent and highly individualized advising throughout the student’s period of involvement in the program. Through its Title-III supported initiative, Bristol Community College has connected student support services and gateway courses, utilizing Twigg’s model (Twigg, C. 2005) of Course Redesign.

<sup>26</sup> NECC is an example of a college that is planning for a teacher-developed online Reading class, to be offered in Spring 09. The course will carry four credits: three, plus a one-credit lab ( using Blackboard’s Course Compass program). Next semester they intend to offer College Reading in a way that prepares student for other online offerings; the course will introduce more sophisticated use of online posting, discussion board, online assignments and other Blackboard tools.

<sup>27</sup> In campus interviews, it became clear that some who indicated that they were offering self-paced Math courses were referring to their use of *MyMathLab*, an online instructional system with both courses and a variety of instructional and skills reinforcement activities, as an online course when, in fact they were using its activities in concert with classroom-based Math courses.

<sup>28</sup> Some colleges are, however, considering or using *MyMathLab* to deliver stand-alone self-paced classes. Through its Distance learning program, Holyoke Community College offers an online developmental *MyMathLab* course and expects to expand its effort to include higher-level developmental Math courses. Berkshire Community College is pursuing a similar approach, coupled with a pilot of *MyMathTest* as a diagnostic instrument. In Spring 2009, North Shore Community College will offer a one-credit, pass/fail, self-paced Math course, using *ALEKS* for specific skills diagnosis and instruction. Students who pass the course will move forward to the next-level Math course.

<sup>29</sup> Bristol Community College’s QUEST (TRIO) program offers self-paced learning lab courses in developmental Reading, Writing and Math. Students may accelerate through or take up to two semesters to complete. Each course is taught by a full-time instructor, a full-time skills specialist, and tutors. Middlesex Community College offers self-paced instruction in all three developmental areas as well, through its Self-Paced Studies Program.

### **Fast Track Programs**

More than a third of developmental departments offer formal fast-track programs or activities intended to accelerate selected students' progress through the developmental sequence. Various models are used to facilitate such progress.

A common approach is the availability of a summer developmental studies program, usually offered through a cohort model, along with strong encouragement to prospective students to take advantage of a "head start" on their studies. Institutions using this model are trying to minimize students' developmental course load during their first full semester and, when possible, eliminate it all together.<sup>30</sup>

An interesting iteration of this is to provide two sequential courses in a single semester for students who consider themselves capable and motivated enough to handle a more intense, accelerated pace of learning.<sup>31</sup>

An additional approach is to encourage re-testing (or initial testing) after a brief review and/or intervention to close specific gaps in students' basic skills proficiencies. Almost all of the colleges refer students to the *Accuplacer* preparation materials and encourage them to spend time preparing for the test and brushing up on "rusty" skills. There are several iterations, however, that go beyond such referrals. They offer more extensive and intensive review and instruction. Many students who take advantage of these programs are able to test into the next-level course without spending a full semester on a course covering more basic material than their skill sets require.<sup>32</sup>

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<sup>30</sup> Middlesex Community College offers a Summer Sprint Program, providing pre-college-level Reading, Writing, Math, Algebra and ELL courses in an eight-week time block. Mass Bay Community College piloted and assessed a Summer Scholars Program last summer, providing a cohort experience for students who tested into their second levels of developmental writing and math. The program provides free tuition and books and totals seven credits, including a Freshman Experience course, supplemental instruction in math, and writing lab support. Given much higher pass rates and test scores than seen in traditionally-offered sections of these courses, the College hopes to expand to additional 20-student student cohorts. Bristol Community College offers a no-cost Summer Bridge Program, through which students may earn up to eight developmental credits. Tuition and book stipends are supported by a private foundation.

<sup>31</sup> Cape Cod Community College has initiated this model in both math and writing for students who near the cutoff scores and are motivated to accomplish their required coursework through this model. Each course meets for six hours a week for half a semester. In English, the college pairs a developmental course with a college-level one by offering developmental writing and college-level writing in a single semester. North Shore Community College offers their developmental algebra sequence in this mode (for a total of four credits), as an alternative to two semester-long sequential courses.

<sup>32</sup> Some examples: In January, Berkshire Community College offers one day-time and one evening section of a week-long 12-hour Math course to allow motivated students to move forward in their placement. In addition, it offers students an opportunity to work in

Another avenue available on some campuses is to handle whatever additional instruction students require through a different instructional format that, once completed in a satisfactory way, qualifies participating students to move forward in their programs.<sup>33</sup>

Finally, some colleges simply use results on initial and retaken placement or exit exams to move students to a different level. Classroom teachers do this regularly within the colleges, based upon home-grown assessments that they administer early in the semester. But a few of the colleges have formal mechanisms to re-assess skills, regardless of grades earned, and provide additional acceleration opportunities for those ready to move forward.<sup>34</sup>

### ***Teaching and Learning Practices***

In an attempt to determine the extent of “best instructional practice” occurring within the colleges, respondents were asked to indicate how extensive faculty use of best teaching practices is among full and part-time faculty. Participants also responded to questions about their department’s level of experience and intent in the future relative to these practices. In addition, they were asked about documented assessment of

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self-paced math “mods” for math instruction and/or to re-test on the *Accuplacer* Math exam. There is, in addition, a BCC faculty member who offers a summer math skills refresher by way of test and course preparation. North Shore Community College encourages students who receive a B+ or higher in Fundamental of Math to retake *Accuplacer* to facilitate movement into a college-level course; in addition, students in Level 1 of Writing, Reading and a Student Success Course may skip Level 2 if they earn a B+ or higher in those three courses. At Cape Cod Community College, intensive three-hour “refresher workshops” are available in Math and Writing during the summer and over the January break for students who scored low on *Accuplacer* as well as for students who are anxious about their initial testing. The College reports that 80% of Math students who take advantage of the preparation/re-testing option move up a level, with good completion rates.

<sup>33</sup> As previously indicated, North Shore CC is currently piloting a one-credit self-paced Math course, using *ALEKS*, to diagnosis specific skills deficiencies to help students focus in concentrated ways on skills that most need attention and to move forward into areas of new learning for which they are ready. Berkshire Community College will be implementing a similar pilot using *Advancer* or *MyMathLab*, to allow for advancement of students through an outcomes-based skills development sequence, without regard to existing course structures. At Middlesex Community College, Reading students who do not pass the *Accuplacer* exit exam or the course written exam are offered an opportunity to complete the course in January, or the summer immediately following the semester in which the course was taken, through a specially-designed curriculum offered through the College’s Academic Support Lab.

<sup>34</sup> As a result of the Writing Portfolio Assessment process at Mass Bay Community College, students who complete any level of a Writing course may, through a blind reading of their portfolios, be placed in any level Writing course, regardless of the normal sequence. At Berkshire Community College, students exiting the first level reading course may skip the second level course by passing the exit exam (Nelson Denny Reading Test) at an 11<sup>th</sup> grade level; ESL testing is similar in nature, allowing students to benefit from achieving learning from two or three courses in their first course. (At both colleges, exit exam/portfolio assessments can keep students back as well.) Students at North Shore may also skip levels in Writing as a result of course exit exams, and within Middlesex Community College’s Self-Paced Studies Program, students are regularly moved up a level when their *Accuplacer* results place them close to the next level. (See Footnote #74 for a summary of Calcagno and Long’s 2008 conclusions about attainment of students who test close to placement cutoff scores.)

the efficacy of practices they reported using. The practices that were reported as most in use within developmental education departments are:

1. Active learning (e.g. hands-on work, problem-solving groups, peer review, on-line interaction). Consistency ratings were high for both full and part-time faculty;
2. The use of course texts that incorporate numerous applications and hands-on problem solving across all disciplines. Math gave this practice the highest consistency rating among both full and part-time faculty;<sup>35</sup>
3. The intentional integration of higher order thinking tasks, analytic reasoning and problem-solving. The confidence level was somewhat higher for full-time faculty than for part-time faculty; and
4. Study skills (e.g. textbook Reading, note taking, test taking, time management) taught within DE courses or through required companion courses. The use of this practice was reported as particularly high among Reading department chairs. In addition, increasing numbers of institutions are including study skills instruction in college success or college experience courses that are linked to at least one other discipline-based course.<sup>36</sup>

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<sup>35</sup> The *100% Math Initiative* Report emphasized this dimension of a sound developmental Math program. Several Math department chairs referred to the report and cited texts that they felt were accomplishing this in particularly effective ways. Two who did so were from Northern Essex and North Shore Community Colleges.

<sup>36</sup> Ways of achieving greater student success through stand-alone or embedded courses were in evidence at all of the community colleges. The organization of these activities, however, differed considerably. At Greenfield Community College, study skills focusing on particular academic strategies are integrated into academic coursework. There is consideration now of study skills modules that will be operative across the curriculum—not just within developmental courses. The modules will also be integrated into the Math studio (common disciplinary space, with peer and faculty support), which is considering related learning vignettes as an additional strategy. Middlesex Community College currently offers “skills-enhanced courses” and will use some of the same principles in implementing its new Title III Project: their plan calls for embedding core student success skills into developmental courses. At Bristol Community College, the same Skills Specialists who teach college success seminars assist classroom instructors and provide individualized support in open labs. Roxbury Community College has designed its Learning Communities such that the faculty member who teaches the College Experience course (required as part of the Learning Community) also serves as the academic advisor to students in the Learning Community. At Quinsigamond Community Colleges, where General Studies students must take one of two college success/study skills courses in their first semester, there is an emphasis on advisor mentoring as well, along with the cultivation of academic success behaviors. Student success rates are impressive when compared with rates of students who enrolled in the same developmental courses without the accompanying college success course. Roxbury, Northern Essex and Bunker Hill Community Colleges (all *Achieving the Dream* schools) are structuring or enhancing Learning Communities that include student success courses and/or embedded strategies and activities that effectively promote habits and skills that enhance learning and achievement. Bunker Hill’s efforts have shown stronger achievement among students who receive integrated support through Learning Community “seminars”; Roxbury Community College’s successful completion and retention rates for students who have taken their College Experience course has been considerably higher than for those who have not taken it.

The practices that department chairs indicated are least utilized are:

1. Engaging students in interviewing local experts/workplace representatives;
2. Supplemental Instruction or coaching as required elements of departmental DE courses;<sup>37</sup>
3. Learning Labs as essential components of departmental DE courses;<sup>38</sup>
4. Integration between developmental education subject and another content area within one or more developmental course;<sup>39</sup>
5. Intentional use of methods that acknowledge cultural differences /ways in which communication and learning take place in students' cultures. Reading departments had fairly high consistency rankings for this, but Math and Writing reported very low utilization.

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<sup>37</sup> Given the research on demonstrated effectiveness of Supplemental Instruction, it seems surprising that it is a seldom-used practice within Massachusetts community colleges. It is a required component within Mass Bay Community College's Summer Scholars program. While the initial year's student numbers were small (17), results were extremely strong for Math and Writing students, compared to grades of traditional sections in both subjects and re-testing scores in Algebra. Participating students receive advising, a freshman seminar, support through the Writing lab and financial assistance. Bunker Hill Community College has also piloted a version of Supplemental Instruction. Their College Connections program links coaches (literacy tutors) to sections of developmental Reading and Writing, helping students academically, supporting their progress, and linking them to colleges resources. It now serves 300-400 students. In addition, Greenfield Community College trains and utilizes trained peer tutors in some developmental education classrooms; and Bristol Community College, as noted earlier, utilizes full-time Skills Specialists to assist classroom instructors and provide one-on-one instruction in open labs.

<sup>38</sup> More than half of the department chairs indicated that they do not have mandatory labs linked to their divisions' developmental courses. Such labs are most often found in the Special Programs or initiatives targeted to special populations within the developmental student cohort. Several department chairs report that mandatory labs are under consideration, with some of those including consideration of *MyMathLab* and/or *MyWritingLab* as essential supplementary activities. While the use of mandatory labs is not a widespread practice within the colleges, there are a number of robust models, including the following: Roxbury Community College's six-credit developmental Writing course integrates a mandatory writing lab that includes skill-building activities and writing practice (accounting for 2 of the 6 credits) into their developmental Writing course. In addition, a separate Writing Center provides specific writing workshops and peer review. Mass Bay's Introduction to Language seven-credit course includes a faculty-taught three-credit class and a four-credit lab taught by a Reading/Writing learning specialist. Students receive Pass or Fail grades, based on a portfolio assessment. Approximately half of the full-time Mass Bay Math faculty assign time in the Math Lab within the Academic Achievement Center. Students spend a minimum of four hrs per week in lab, where they do assigned work under supervision (their presence is verified by a Math Specialist's signature). In addition, a Math Homework Club operates as a drop in center that houses all Math assignments within designated course folders. Students do homework together, with a volunteer instructor there as a resource. At Northern Essex Community College, Reading instruction and the lab are fully integrated with a three-credit course linked to a two-hour (one-credit) lab, where class assignments are completed; similarly, the Writing lab is linked to the developmental Writing courses (students do assignments in lab and have their assignments checked), and *MyMathLab* is linked to developmental Math courses.

<sup>39</sup> The most common linking is between Reading and Writing at the lowest developmental level. The linking of other courses with specific developmental courses appears to be voluntary and faculty-arranged on several campuses; as a result, when interest wanes or course assignments change, the linked courses often go their separate ways. Examples of courses that are linked include Psychology and College Reading, College Reading and Comp. I, Basic Writing and Western Civilization, and College Reading and Criminal Justice. Learning Communities demonstrate more linkages between, but not among, courses than most other initiatives.

The other instructional practices that emerge through the best practice literature as particularly effective with underprepared learners are:

1. Utilization of learning theory to inform the design of developmental education courses;<sup>40</sup>
2. The use of inquiry methods, problem-based learning, and/or engagement of students in simulations involving real-life experiences related to course content;
3. Learning-to-learn skills (e.g. students learning to assess and monitor their motivation and learning, understanding learning strengths and weaknesses, using available resources to enhance students' own learning) taught within developmental courses or companion courses.<sup>41</sup>
4. The utilization of Learning Communities that serve students through a cohort model.<sup>42</sup>
5. The integration of support services within a Learning Communities model.<sup>43</sup>

These practices, included in the surveys, received moderate ratings for consistency of use, often being utilized with some frequency by a specific program or discipline, rather than across developmental discipline areas.

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<sup>40</sup> While most departments indicate that learning theory does not undergird developmental course design, a few colleges cited instances where specific theories have been applied. Berkshire and Springfield Technical Community Colleges have used Universal Design principles to design learning and support activities; Berkshire Community College has based curriculum redesign efforts on the Program in Course Design (Twigg, 2005), promulgated by the National Center for Academic Transformation (NCAT); Middlesex Community College applies principles of constructivism to the creation and delivery of online instruction; and the Self Paced Learning program at Middlesex has redesigned its Reading curriculum using a Differentiated Instruction (Tomlinson, 2005) model. In addition, at least two colleges are heavily involved in the Scholarship of Teaching and Learning, through which theory informs instructional practice, and assessment guides efforts toward greater effectiveness.

<sup>41</sup> Two colleges administer Learning Styles Inventories as part of the placement testing process. It is possible that that there is follow-up in some format that operationalizes this practice, but no information about the utilization of results was solicited or received.

<sup>42</sup> Based upon research that supports claims of significant achievement gains among students who participate in Learning Communities, many of the community colleges currently have efforts underway to organize developmental instruction through cohort-based Learning Communities. Some colleges that allow for student choice find that Learning Communities are under-enrolled and vulnerable to cancellation. Several grant-funded initiatives are piloting Learning Communities that include, but are not restricted to, developmental-level courses organized around themes or specific population groups. Examples are at Bunker Hill and Middlesex Community Colleges. As a result of positive student success outcomes of students enrolled in Learning Communities at Bunker Hill, the college is scaling up its Learning Community offerings with the goal of offering Learning Communities for incoming students in all majors..

<sup>43</sup> The most typical way to accomplish this is through a linked college/student success course. In addition, at least two colleges are piloting models that include a Learning Community course instructor serving as that cohort's academic advisor. Continuing the advising relationship beyond the semester, however, presents logistical problems related to the traditional advising assignment process. In a few cases, Supplemental Instruction is included in developmental-level Learning Communities. See Footnote #35 for additional examples.

The literature review that precedes this section of the report highlights recent research relative to the efficacy of the practices listed above. All were included in this inquiry because they have been identified as significant contributors to student success for developmental learners. The literature, however, is less clear on how effective different methods of “bundling” these services are in fostering student learning. Yet experience with combinations of strategies is ubiquitous, and some impressive individually-reported results have emerged. Within this study, documentation of assessment results relative to the best practices listed above was extremely sparse. It is primarily among the Special Programs (for the most part, grant-funded student support projects for which specific goals and benchmarks have been established and monitored) that documentation of outcomes relative to several of these practices is reported as present and available. Among the three disciplinary developmental departments surveyed, “Yes” answers to documentation were generally under 25%, with a great many departments not responding. Campus interviews teased out more information about practices that were yielding positive results at several colleges; those findings are described in footnotes as well as in the listing of successful practices within Massachusetts community colleges that appears *Campus Interviews Unpacked* section of this report.

In addition, an analysis of the utilization of practices that manifested statistically significant differences between colleges with *Achieving the Dream* and/or relevant Title III-funded initiatives, found later in the *Summary of Findings* section of the report, provides an indication that several practices not in widespread use among the entire population that completed the survey are, in fact, in greater use among colleges involved in *Achieving the Dream* and/or Title III-funded projects. Similarly, many of the practices implemented by the Special Projects that were included in the Audit are in significantly greater use than they were in other, more discrete, college offerings for educationally disadvantaged students. Those results are reported as well in the final section of the *Summary of Findings*.

### **Instructional Support Services**

Support services, exclusive of labs, were, to a very great extent, reported as being available to students— but integrated into programming for students in developmental courses on a less consistent basis. Of the

relatively small proportion (20%) of department chairs indicating that some support services were well-integrated, most were in Reading and, to a lesser extent, Writing.<sup>44</sup>

More than 60% of Special Project coordinators indicated that there are “comprehensive” or “some” support services integrated into developmental instruction. Given the nature of many of the reporting Special Programs, this response could be interpreted in a few different ways: it might be the case that the services are integrated into *programming* for the developmental students they serve, or that, in fact, the services are integrated into actual sections of developmental courses that students in their programs take. Campus interviews suggested that both are accurate, for different programs and within different institutions; but for the most part, the services are more likely to be delivered through the Program rather than through individual courses.

Regardless of the level of integration of academic support services— or from which organizational structure they emanate— tutoring is central to instructional support at all of the colleges. There appears to be an emphasis on some campuses on training tutors in a fairly deliberate way. At least three colleges<sup>45</sup> follow a prescribed tutor training curriculum, developed and offered through the College Reading and Learning Association (CRLA), which provides standards and certification at three different levels (each level requires ten hours of training and 25 hours of experience).<sup>46</sup> Several other institutions provide and require more informal training.<sup>47</sup>

Beyond one-on-one tutoring, a handful of college programs are piloting versions of Supplemental Instruction, an effective and well-documented strategy for increasing achievement among developmental learners. The

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<sup>44</sup> “Tutoring” and “labs” can be difficult to differentiate. Much tutoring takes place within what some college personnel refer to as “labs”, while at other colleges, sharp distinctions are drawn between labs and the tutoring that takes place in some form of an academic support center. In addition, colleges that report integration of support likely include those that use forms of Supplemental Instruction.

<sup>45</sup> Springfield Technical, Mass Bay, and Greenfield Community Colleges all use and require CRL certification for peer tutors.

<sup>46</sup> The program is endorsed by the National Association of Developmental Education, which was noted as an important source of information for developmental educators who participated in this study.

<sup>47</sup> At Holyoke Community College, adjunct faculty are hired to serve as learning coaches. They work one-on-one with students, some of whom are developmental. The impact of this model has not been confirmed through research, but anecdotal observations suggest positive results.

previous section of this report (*Teaching and Learning Practices*) describes the initiatives under way. It appears that, to date, the specific impact of most of these efforts has not been assessed.

An additional inquiry probed the extent of study skills integration. Here, a greater proportion of department chairs<sup>48</sup> reported a higher level of integration. Again, Special Programs and Reading claimed the most integration of study skills, with Math department chairs indicating, to a much greater extent, that some Math instructors choose to integrate study skills, but that such integration is, in general, not required.<sup>49</sup>

Mathematics followed a similar pattern with regard to academic support lab requirements. For the most part, students are referred to the labs on an as-needed basis, with no requirement to participate. That was less often the case in Reading, where more than a third of chairs report that students are required to participate and that their participation counts toward their grade. While half of the Writing department chairs report that referred students have no requirement to participate in labs, the remainder require participation of students who are referred.<sup>50</sup> In three colleges, students' participation in a Writing lab counts in their grade calculation. Approximately half of the Special Program coordinators indicated that either all or individually-referred students are required to participate, but that participation is not factored into their grades.

Given the relatively low proportion of required developmental laboratory experiences, it is perhaps surprising that within Reading and Writing, there is a fairly high consistency indication of the extent to which developmental instructors receive feedback on their students' participation and/or performance in instructional support labs. Reading instructors are, consistent with other findings, most likely to receive such feedback (many of their labs are either integrated into the course or required companion components); in

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<sup>48</sup> While some models were referenced earlier, additional examples include slightly different elements: Cape Cod Community College's GED Transition Program has changed the focus of its Writing class to include study skills instruction. Additional information and examples are included in Footnote #36.

<sup>49</sup> The extensive use of *MyMathLab*, although not thought of as a form of study skills integration by most respondents, may in fact contribute to understandings about effective studying practices by modeling many of them for students who utilize the program regularly.

<sup>50</sup> Mount Wachusett Community College's new Developmental Education Committee is working toward greater communication between faculty and academic support personnel. As of now, referred Writing students must have their essays stamped by someone in the support lab. At Quinsigamond Community College, faculty make electronic referrals to tutoring through notices that go to students and tutors; tutors subsequently let faculty know whether referred students participate. At Holyoke Community College, communication between faculty and tutors about student attendance and achievement is regarded as a breach of confidentiality; therefore, verification of participation must come directly from the student.

Writing, 40% of chairs report that this happens “consistently” or “most of the time” , with an additional 47% indicating “sometimes”. Math instructors are least likely to receive feedback, with six of fourteen respondents choosing “rarely” or “never” and an equal number choosing “sometimes” in response to this query.

### **Counseling, Advising, and Use of Specialists**

Counseling is rarely reported as being integrated into developmental education department offerings and/or programs, with the exception of the reporting Special Programs. About half of the disciplinary developmental departments answered “seldom” or “never” to the inquiry about the integration “in some way” of counseling into coursework. Reading was most likely of the three discipline areas to report such integration at “about half the time” or more.

With the exception of the inventoried Special Programs, the practice of assigning specific advisors to students within developmental courses is seldom utilized. When it is reported, however, Reading department chairs are the most likely to rate the practice as implemented “consistently” or “most of the time”. Speaking for the college as a whole, two thirds of Chief Academic Officers chose “seldom” or “never” to describe the utilization of specific advisors for developmental learners. Three colleges, however, report that this does happen most of the time.<sup>51</sup>

A related inquiry leads to the observation that collaboration between faculty and advisors regarding students’ progress in developmental courses rarely occurs, except within the Special Programs, where two thirds of respondents select “consistently” or “most of the time”. Among the three disciplinary areas, Writing instructors seem to be in collaborative monitoring relationships more often than Reading and Math faculty members.

CAO’s were also asked whether developmental students typically remain with the same academic advisor throughout their college career. According to their responses, two thirds of the colleges seldom, if ever,

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<sup>51</sup> At Roxbury Community College, the faculty member who teaches the College Experience Course in a particular Learning Community serves as the academic advisor for those students; at North Shore Community College, full-time professional staff who work within the Student Support Center are assigned as advisors to students in developmental courses, undeclared majors, and learning disabled students. Bunker Hill Community College will be piloting the use of “coaches” in Learning Communities.

implement this practice, with one college reporting that it consistently does so, and another responding that it does so “most of the time”. Interviews with and survey comments from *Achieving the Dream* colleges, in particular, have drawn attention to efforts to link advising “specialists” or Learning Community faculty advisors to a community of students and to orchestrate a sustained and committed relationship for longer than the semester in which students remain together within the Learning Community. To date, it does not appear that, beyond student support Special Programs, a model of this type is operative within the system.

Advising is a topic that is under discussion at most of the community colleges in Massachusetts. The literature is replete with research on the positive impact of intrusive advising on student achievement, and it has been anecdotally observed for many years that students in smaller programs with strong connections to a college mentor or advisor fare better than those who are more loosely connected to the college. At Northern Essex Community College, CCSSE results indicated that only 45% of students are in touch with their advisors during their first semester at the college, a critical time for academically-vulnerable students new to a collegiate environment. Other colleges report that guidance to students needs to be strengthened and are pursuing a variety of approaches to accomplish more proactive and intrusive advising. Some are implementing interactive online advising tools that provide guidance to both students and advisors<sup>52</sup>; others are redesigning the advisor-advisee assignment process, along with stronger support and training for advisors<sup>53</sup>; and some have altered policies and practices to facilitate more frequent contact at critical junctures between advisees and advisors.<sup>54</sup> Combinations of these strategies and/or an extensive redesign of advising structures and services characterize several colleges’ recent efforts.<sup>55</sup>

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<sup>52</sup> Examples are at Bristol Community College, Berkshire Community College, and Greenfield Community College.

<sup>53</sup> Examples include those colleges that have assigned developmental students at particular levels or within specific course clusters to advisors who are committed to intrusive advising and will meet with students frequently. Most of the participating Special Programs implement this approach, as well as colleges that are linking advising and Learning Communities. Through their *Achieving the Dream* and Title III projects, Springfield Technical and Northern Essex Community Colleges will be developing more intrusive advising systems, with Northern Essex striving for implementation of a case management approach. Springfield is assigning developmental students to professional staff advisors, who will be meeting with each student regularly; students’ behaviors as a result of advisors prompts (e.g. seek tutoring, attend study sessions) will be tracked, with data analyzed to determine the extent to which this approach contributes to student success for DE students. Middlesex’s Title III project calls for comprehensive advising, including educational planning, tracking and intervention; and Bunker Hill Community College is linking intrusive advising, through coaches, to Learning Communities.

<sup>54</sup> Cape Cod Community College has taken steps to move to a more intrusive system by requiring that all students meet with assigned advisors before registering for classes, using “early intervention forms” and mid-term grades to trigger advisor intervention, and providing training on effective advising. At Quinsigamond Community College, developmental students enroll in ORT110 (Strategies

In close relationship with Advising, early warning systems that trigger closer monitoring and/or specific interventions are reported to be in consistent or regular use within approximately half of the colleges. Another quarter report that such systems are operative “about half the time” (In this instance, it’s hard to say whether their responses mean *with half of the students* or *it is only used half of the time*.) Conversations at campus interviews suggested that there are several additional colleges that are in the process of creating or strengthening early warning systems.<sup>56</sup>

The Audit did not include questions about student mentoring, per se, but clearly advising and mentoring are closely linked as critical factors in achieving student success. A few of the colleges did report mentoring programs (as distinct from advising) during campus interviews, and some additional institutions indicated that they are exploring mentoring approaches.<sup>57</sup>

Collaboration between faculty and support personnel is viewed as extremely important within the best practice literature; its importance is enhanced when one recognizes the extent to which reporting structures within many— if not most—colleges separate academic and student support areas physically and organizationally . In response to a query about the extent to which faculty and support personnel meet to coordinate or collaborate on relevant strategies or interventions, approximately half of the department chairs indicated that developmental faculty do so “about half the time” or more. Among those departments that reported such collaborations as “consistently” or “most of the time” (about a third of the group), Reading departments saw themselves as most active in this arena.

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for College and Career), a first-year experience course that fosters a mentoring relationship between advisors and advisees as well as among faculty and students in developmental courses.

<sup>55</sup> Quinsigamond Community College educators report being influenced by Valencia Community College, The Community College of Denver and the National Academic Advising Association in redesigning academic advising and career counseling. Three career and academic planning courses provide opportunities for students to create a career, academic and personal success plan.

<sup>56</sup> Among them are Cape Cod Community College and Bunker Hill Community College.

<sup>57</sup> Middlesex Community College’s *Advance to Go* is an example of a program that pairs vulnerable students with volunteer college staff members, who serve as mentors. At STCC, a new support program for African-American and Latino males will include the utilization of community mentors.

With regard to faculty support for students with specialized needs, the utilization by developmental education instructors of Learning Disabilities experts is quite high; almost 80% of department chair respondents indicated that their faculty collaborate with LD staff between “half of the time” and “consistently”. Such collaboration appears to happen fairly regularly, but less often with ESL experts, who can provide strategic advice to faculty teaching second-language learners. Almost half of department chairs responded that this occurs “consistently” or “most of the time”, but 40% indicated that it “seldom” or “never” occurs.<sup>58</sup> It seems reasonable to wonder whether the difference between faculty motivation to seek more consultation and expertise from learning disabilities specialists than from second-language learning experts is related to compliance issues relative to providing appropriate learning disabilities services and supports. LD specialists may also be viewed as both student and faculty resources, while ESL specialists are more often seen as teachers and student resources.<sup>59</sup>

### **Professional Development**

By and large, it appears that the Massachusetts community college faculty and administrators believe in and take seriously a commitment to professional development. Most departments report that there is an institutional budget for Professional Development, and that it, quite consistently, supports the development of full-time faculty at the colleges through support of conference attendance and on-campus workshops<sup>60</sup>. While department chairs did not report the same degree of support for part-time faculty professional development, 57% indicate that adjunct faculty receive support “consistently” or “most of the time” (These categories were used to describe support of full-time faculty 80% of the time). There were slightly different perceptions among Chief Academic Officers, more than half of whom chose “consistently” to describe the extent to which adjunct faculty are supported.

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<sup>58</sup> Special Programs report the most consistent collaboration with ESL/International Student experts.

<sup>59</sup> A new program at Holyoke Community College provides support from ESL faculty to instructors who feel the need for more information regarding second language learners.

<sup>60</sup> It should be noted that Inventories were completed before state budget cuts were announced. Campus interviews revealed that professional development travel budgets on many campuses had been significantly reduced or eliminated.

Most of the chairs indicate that, at their institutions, professional development for developmental education faculty is tied to institutional goals; however, in the aggregate, they see professional development for DE faculty less consistently tied to *departmental* goals.<sup>61</sup>

When asked about the implementation of specific professional development practices that support effective education for developmental learners, at least half of the department chairs indicated that the specific practices listed below apply to their institutions “consistently” or “most of the time”:

1. DE faculty play a significant role in assessing needs for professional development and in planning and implementing relevant programs and activities;
2. Staff development opportunities are flexible, varied and responsive to the needs of individual developmental education faculty and diverse student populations.<sup>62</sup>
3. Structured opportunities for collaboration/sharing of pedagogy, conference and seminar findings, coordination and alignment of other courses, syllabi and/or effective teaching strategies.
4. Peer mentoring supports new/inexperienced faculty in the department.<sup>63</sup>
5. The involvement of departmental DE faculty in professional development is recognized through acknowledgement (e.g. praise, support, recognition, advancement, time, funding).

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<sup>61</sup> It also appears that department-sponsored professional development occurs less often than college-wide professional development activities.

<sup>62</sup> Among the kinds of programs described in campus interviews were brown bag lunches, Scholarship of Teaching and Learning clusters, the scheduling of convenient adjunct faculty programs, online pedagogical gatherings, sabbatical leaves, semester-long faculty orientation programs, and Teaching, Learning, and Technology Center programs.

<sup>63</sup> Department chairs describe many different forms of peer mentoring, including formal mentoring for all new faculty at Bristol Community College and for all new personnel at Cape Cod Community College. At Springfield Technical Community College, part-time faculty often team teach with full-time faculty during initial semesters. Other forms of peer mentoring are more informal, including department meetings, workshops and quasi-social gatherings that bring new/inexperienced and experienced faculty together.

Those practices that received lower consistency ratings or were described as “seldom” or never by more than 30% of respondents include:

1. There is professional development for new DE faculty that includes such topics as instructional strategies to accommodate various learning needs and styles, engaging developmental learners, integrating study skills, etc.<sup>64</sup>
2. On-campus professional development focuses on teaching, learning, and support for underprepared learners.
3. Ongoing long term professional development programs for developmental education faculty include both pedagogy and content.<sup>65</sup>
4. There is electronic sharing and discussion of ideas and practices.

Among best practice *resources* to support new developmental education faculty, fewer than half of the department chairs surveyed indicated the provision of these particular resources on their campuses:

1. A description of the characteristics of successful developmental education programs/courses;
2. A handbook or other tool describing effective strategies for teaching developmental education students;<sup>66</sup>
3. An initial workshop session focusing on student success strategies.

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<sup>64</sup> Bristol Community College has recently enhanced its New Faculty Orientation Program, providing a semester-long experience that includes instructional support in syllabus development, pedagogical methods to address varying learning styles and needs, technological enhancement of instruction, and writing-across-the curriculum. Some other colleges use a variation of this model, extending the orientation period in a manner that supports new faculty for a more sustained period of time.

<sup>65</sup> While a number of colleges offer professional days and short-term workshops, only a small number offer programs that guide faculty through an implementation and assessment process for new methodologies.

<sup>66</sup> More than half of Math chairs indicated that they do provide such a handbook, as did department chairs from all three disciplines in *Achieving the Dream* schools. In addition, half of all respondents did indicate the provision of an orientation or handbook that includes goals, expectations, philosophy or values relating to developmental students. What was not included were effective instructional strategies for developmental learners.

The resource that was reported as the most consistently provided (by all three developmental education disciplines), was: a clear set of expectations of student performance outcomes for new, full-time department faculty.

There is widespread agreement that both college wide and departmental professional development are quite consistently evaluated by participants. Department chairs and CAO's have different perceptions, however, of the extent to which evaluation results are used by departments for improvement and forward planning. Two thirds of the Chief Academic Officers believe this occurs "consistently" or "most of the time", with the remaining third reporting "about half of the time". The responding department chairs reported much less frequent use of this practice, and 36% indicate that it seldom, if ever, happens.

Questions about the extent to which professional development informs teaching/learning practice as well as the extent to which it impacts student learning were included in the inventory to determine whether colleges assess professional development for its intended impact on teaching, learning and student performance. Most respondents (66% for each question) indicated that such assessment seldom, if ever, occur.<sup>67</sup> Professional development is more commonly evaluated in terms of its perceived importance and/or helpfulness to faculty and staff rather than its effectiveness in improving teaching or enhancing learning.

### **Tracking and Assessment of Developmental Students' Performance, Progress and Success**

Chief Academic Officers responded to questions relating to collection and utilization of data pertaining to the progress and success of students enrolled in developmental courses that is collected college wide, while department chairs responded to questions about collection of departmental developmental education data and utilization of information from all data sources for assessment and improvement purposes.

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<sup>67</sup> Bunker Hill Community College will be examining the outcomes of professional development in these ways through its *Engaged Campus* and *Achieving the Dream* initiatives. In addition, the Scholarship of Teaching and Learning (SoTL) encourages follow-up to implementation of new pedagogies by assessing student learning that accrues. Berkshire Community College is applying protocols to assess these dimensions in its Title-III funded instructional development projects.

Course completion and graduation rates for all students within college programs and courses seem to be the most often-tracked information, with the majority of the ten who responded “consistently” or “most of the time” indicating that this data is collected “consistently”.<sup>68</sup> Course completion and graduation rates for developmental subject areas appear less consistently collected, but seven of the 15 CAO’s report that this is done “consistently” or “most of the time”, with five saying “seldom” or “never”.

Most Chief Academic Officers report that their colleges track student progress through sequential developmental courses at least half of the time, with 60% believing this to happen on a fairly consistent basis. Approximately half of the departments appear to do such tracking as well, with students in their disciplinary DE courses; and Special Programs and Reading departments report more consistent data gathering of this sort than do other departments.

Successful course completion of “gateway” courses (e.g. those discipline or skill-related college-level courses that follow developmental courses) appears to be tracked less often; a third of CAO’s report that it occurs “most of the time”. A few departments report implementing such tracking (it happens more routinely among the Special Programs); but for the most part, departments do not conduct this sort of research. In fact, among respondents for Reading, Writing and Math departments, 70% indicated that they seldom, if ever, track students’ performance in the relevant next level, “gateway” courses.<sup>69</sup>

Transfer rates for developmental students are the least-often tracked benchmark of success. Five CAO’s say transfer rates are tracked “consistently” or “most of the time”; and five say “seldom” or “never”. One offered no response, with the remaining four choosing “about half the time.”<sup>70</sup>

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<sup>68</sup> This data is routinely submitted to the Department of Higher Education as part of the Performance Measurement System.

<sup>69</sup> Recent studies emerging from *Achieving the Dream: Community Colleges Count* suggest that this benchmark is arguably the most critical one for determining developmental education effectiveness.

<sup>70</sup> The Department of Higher Education has added transfer information to its Performance Measurement System. Transfer outcomes for students who began their studies in developmental courses, however, is a different issue—and one that colleges, themselves, would need to pursue if they considered the information important or useful in advancing achievement among underprepared students.

Eight colleges indicated that they have (“most of the time” or “consistently”) established goals and benchmarks for improved retention and success of developmental students, while five CAO’s answered that they “seldom” or “never” do so.

Tracking and communicating data are often assumed to go hand-in-hand, but a variety of factors may drive decisions as to where data goes, and for what purposes. Within Massachusetts, much of what is collected is reported to the Department of Higher Education and/or the Massachusetts Executive Office of Community Colleges. The questions on the Inventory that inquired about the extent to which student success data (as well as what developmental educators are learning about effective practices) are utilized yielded low consistency ratings; both inquiries evoked “consistently” or “most of the time” ratings among only 16% of all (74)respondents , while half of respondents indicated that such communication seldom, if ever, occurs. On a more individual level, more than half of the department chairs indicate that developmental education faculty “seldom” or “never” know how many/which students pass the next level/sequential course.<sup>71</sup>

When comparing responses of the four *Achieving the Dream* Colleges with those of the other 11 colleges relative to cohort tracking, there are some differences, but not in all categories. Tracking that is reported to occur more consistently in *Achieving the Dream* colleges relates to:

- tracking progress through sequential developmental education courses;
- tracking retention of developmental education students, in the aggregate, from semester to semester;
- tracking retention by basic skill area in which students began developmental coursework;
- tracking DE course completion and graduation rates, by specific basic skills area;
- tracking transfer rates of students who began their college experience in developmental education courses.<sup>72</sup>

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<sup>71</sup> It should be pointed out that while department chairs were asked if they track this data, they were not asked if they receive such information for the department. The answer to this item seems to suggest that many faculty do not solicit and/or receive such performance information. Program Reviews on some campuses include an examination of aggregate data, but it is usually transmitted for entire cohorts of students in the relevant program or set of courses, rather than on a course-by-course or section-by-section basis.

<sup>72</sup> Even among *Achieving the Dream* colleges, tracking of transfer rates for students who begin their studies in developmental courses is the least-often reported tracking practice.

The majority of department chairs and CAO's indicate that neither they nor others conduct a systematic review of the relationship between basic skills assessment results and student performance in related departmental courses. (Participating Special Programs indicate that they conduct this type of analysis twice as often as reported by disciplinary DE departments.) Some who have done such analyses report useful outcomes.<sup>73</sup> Interestingly enough, campus interviews revealed that this sort of analysis does take place both formally and informally on several campuses and that, as a result, developmental course placements are often altered for students whose placement scores fit into profiles that suggest potential for success in the next level course (e.g. within a set number of points of the designated cut score) or students who demonstrate, through other means (i.e. beginning of class re-assessments), their preparedness for a higher level placement. While some of the informal practices in use appear to second-guess college-sanctioned placement procedures, recent research suggests that they may make good sense, particularly for students on the cusp of college-level course placement.<sup>74</sup>

### **Assessment of Programs, Courses and Services**

There are a variety of practices that contribute to understanding the impact of currently-offered instruction and support for developmental learners as a precursor to setting a course toward improved practice and

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<sup>73</sup>A few examples of such analyses came from campus interviews. In response to disappointing completion rates in Middlesex Community College Reading courses, the Reading department tracked a student cohort, determining that students who scored below 28 on the CPT reading section were not successful. As a result, they altered the curriculum to include a third Reading course. (The effectiveness of the revised curriculum has not been formally re-assessed.) In response to similar student completion and success rates, the Self-Paced Studies program changed its delivery methods. Research into best practices suggested a Differentiated Instruction approach. Using a learning styles inventory, interest inventory and other assessment tools for student readiness, a tiered curriculum was designed, delivering materials to students in variety of ways (e.g. student-led small group mini-lessons, hands on projects, multimedia demonstration of knowledge/learning.) There have been marked improvements in completion rates and test results, with students consistently showing gains of more than 10 pts, and some demonstrating 15-20 point increases.

Cape Cod Community College has examined the relationship between students' grades and scores on post-tests in developmental courses; they have found a strong correlation between grades and test performance. Northern Essex Community College will be conducting research on the correlation between placement test scores and course performance as part of their *Achieving the Dream* initiative.

<sup>74</sup> Calcagno and Long (2008) researched the effect of remediation on Florida community college students who scored just above and just below the placement cutoff scores. They concluded that while students near the margin who were required to take developmental courses earned more credits than non-remedial students, there was no effect on college-level credits completed or on certificate or associate degree completion or transfer to a public four-year college. They suggest that the cost of remediation for the student, the institution and the state may not be justified, given that little or no effect has been found in terms of generally-utilized measures of attainment.

greater effectiveness. These practices relate less to data gathering than to utilization of information to modify/improve activities and to reassess for effectiveness in attaining student success.

In general, department chairs do not indicate widespread or consistent use of assessment data for decision-making, curriculum modification, or reassessment of efforts to improve programs, courses or services. The practices for which more than 50% of respondents selected “seldom” or “never” are:

1. Formal formative evaluation of the department’s DE programs and courses is conducted by DE faculty and staff within their course or service area. (This finding does not hold for Special Programs and Self-Paced Studies, where formative evaluations are more routine. And while more than 50% of department responded “seldom” or “never”, almost a third said “consistently” or “most of the time”.)<sup>75</sup>
2. The department assesses the impact of tutoring on student performance in developmental courses. (*Achieving the Dream* college department chairs report a higher rate than departments in other colleges; Special Program responses suggest that they too are more likely to assess the impact of tutoring.)<sup>76</sup>
3. Faculty work with IR staff to assess the effectiveness of recent modifications and new interventions. (While more than half of department chairs from *Achieving the Dream* colleges reported infrequent use of this resource—58% responded “seldom” or “never”— they were more likely than other department chairs to indicate some faculty collaboration with IR staff.)
4. Formally-collected student success rates are referenced by the department’s faculty/staff in developing and implementing improvement efforts. (There were differences here among departments.)

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<sup>75</sup> This finding seems inconsistent with CAO responses to a question about developmental education Program Reviews, to which more than half indicated that reviews are conducted at their colleges on a regular cycle “consistently” or “most of the time”. Greenfield Community College’s Program Reviews include examining data for course completion rates and grades for each course. The English department tracks student progress through developmental coursework and into first and second level English courses. At many of the colleges, detailed data of this sort is not examined as a part of Program Review. Mass Bay Community College’s Writing portfolio assessment process, conducted over a two-three day period every semester by 20 faculty members, serves as a formative assessment of Writing program curricula and outcomes.

<sup>76</sup> Cape Cod Community College has assessed tutoring effectiveness through its McNair grant. They found that 80% of students successfully completed courses in which they were being tutored with an average of five visits per student. Both Mass Bay and Northern Essex Community College will be utilizing tutor tracking software to assess the impact of tutoring on student performance.

Math departments were most likely to reference such data, while Writing department chairs reported the least frequent use of student success data for this purpose.)<sup>77</sup>

5. There is regular monitoring of intended improvements to determine the efficacy of instructional practices with particular student cohorts. (Despite the high proportion of those who responded “seldom” or “never”, almost a third of chairs indicated that this occurs “consistently” or “most of the time”. Affirmative responses were more likely to come from *Achieving the Dream* college departments, where attainment of projected outcomes serve as goals, and data related to the impact of each intervention is closely monitored.)<sup>78</sup>
6. There are departmental efforts to evaluate the impact of professional development on *instructional practice* in DE courses. (The same question relative to college wide efforts to assess impact received a similarly low positive indication from Chief Academic Officers.)
7. There are departmental efforts to evaluate the impact of professional development on *student learning* in DE courses. (This question, put to Chief Academic Officers in respect to college wide efforts, yielded similar responses.)

A majority of department chairs expressed the opinion that faculty-collected formative data is used at least half of the time to plan program improvements. The percentages were even higher for Special Programs and Self-Paced Studies, both areas where department chairs indicate that they implement formal formative evaluations. It seems likely that the disciplinary department chairs who indicated that faculty use formative data to plan program improvements are including the use of informal feedback in their definition of faculty-collected formative data.

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<sup>77</sup> In an assessment effort that is still unusual within the system, Springfield Technical Community College is engaged in a long-term study investigating Reading students’ achievement and outcomes in psychology, sociology and composition “gateway” courses.

<sup>78</sup> In a more general effort, three faculty co-chairs are leading a Bunker Hill Community College effort to assess the impact of various interventions and pedagogies, with an eye toward circulating the resultant data and using it to strengthen student learning and achievement. As part of the College’s Student Learning Outcomes Assessment Plan (SLOAP), they are sharing the data through the BHCC intranet. Through its Title III grant, Berkshire Community College is awarding Student Success Research Grants, with the explicit expectation that recipients will assess the impact of redesigned curricula and/or pedagogical interventions on student achievement.

### **The *Special Program* Difference**

Throughout the Inventory responses and campus interviews, policies and practices within Special Programs—usually grant-funded and/or directed to particular restricted populations within the college community—were cited most often as best practice models. Their departments or organizational units were more likely than other college units to establish goals and expected outcomes, to collect data on a regular basis, and to measure outcomes, both for reporting purposes as well as to fashion ongoing improvements. Many of them boast much higher course and program completion rates than those that result from stand-alone developmental courses; and almost all utilize a cohort model, with close performance tracking, advising, mentoring, and targeted tutoring support. They range in size from 18 students to more than 400 students. The following programs, designated by their Presidents and/or Chief Academic Officers, participated in the Audit Inventory process<sup>79</sup>:

- QUEST (TRIO) Program, Bristol Community College
- Project LINK: ABE Transitions, Bristol Community College:
- Center for Developmental Education, Bristol Community College
- SUCCESS GED-to-College Transition, Cape Cod Community College
- Advantage (TRIO) Program, Cape Cod Community College:
- The Learning Center, Greenfield Community College
- Summer Scholars Program, Mass Bay Community College
- LINKS Adult Transition Program, Middlesex Community College
- English Language Cluster for Deaf and Hard of Hearing, Northern Essex Community College
- Transition to College Program, Northern Essex Community College
- Project ENABLE, North Shore Community College
- Student Support Services (TRIO) Program, North Shore Community College

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<sup>79</sup> Each college was invited to provide Inventories for up to two programs that encompass two or more developmental courses and provide related wrap-around services for underprepared students. While the results reported here reflect the responses from the designated programs, additional notations throughout the report reflect references to additional programs that emerged during campus interviews as well as information that was supplied through the “yellow box” comment sections of the Inventory. (Some additional information about these programs appears within *Campus Interview Unpacked*.)

- Strategies for College and Career, ORT 110, Quinsigamond Community College
- College Success Seminar, Springfield Technical Community College

Relative to the Audit Inventory items, these programs proved to have substantially higher consistency ratings on the specific items listed below. While there were many additional practices that characterize Special Programs (most are already noted within commentary relating to individual practices and policies), the practices listed below are ones that evidenced significant differences between the Special Program coordinator responses and those offered by participating Math, Reading and Writing department chairs.

Listed below are descriptors that were statistically significant at the .05 level:

- Comprehensive and coordinated support services are well-integrated into developmental education courses. (A-9)
- Students are required to participate in specific labs as part of the course. This requirement is reflected in the syllabus. (A-10)
- Study/learning skills are integrated into the curriculum and course activities of developmental education courses and activities. (A-12)
- Department DE courses are included in Learning Communities or paired course offerings. (A-21)
- Counseling is integrated into the developmental education program or specific DE courses in the department. (A-48)
- There are specific advisors assigned to students enrolled in developmental courses offered by the department. (A-49)
- There is collaboration between faculty and advisors in monitoring the progress of students in the department's developmental courses. (A-51)
- DE faculty use common exit exams to assess required competencies. (A-30)
- Faculty engage students in interviewing local experts/workplace representatives. (A-75)
- Ongoing, long term professional development programs for DE faculty include pedagogy and content.(A-1)
- Departmental professional development is evaluated by those who participate. (A-66)

- There are departmental efforts to evaluate the impact of professional development on instructional practice in DE courses. (A-45)
- Developmental education faculty know how many/which students pass the sequential course in the same or most relevant subject. (A-28)
- The department tracks students' progress through sequential developmental education courses to determine patterns of advancement from one level to the next. (A-35)
- The department tracks grades/student performance in the most relevant college-level course after completion of developmental courses. (A-36)
- The department tracks student satisfaction with developmental courses and services. (A-37)
- Formal formative evaluation of the department's developmental education programs and courses is conducted by DE faculty and staff members within their course or service area. (A-38)
- The department assesses the impact of tutoring on student performance in developmental courses. (A-40)
- Formative data collected by DE faculty and staff is used to plan for program/course improvement. (A-42)
- Formally-collected student success rates are referenced by the department's faculty/staff in developing and implementing improvement efforts. (A-43)
- There is regular monitoring of intended improvements to determine the efficacy of instructional practices with particular student cohorts. (A-44)
- The department has documentation of assessment results regarding the efficacy of study skills (e.g. Textbook Reading, note taking, test taking, time management) being taught within DE courses or through required companion courses. (A-60)

Those that were statistically significant at the .10 level are:

- Basic skills test preparation is offered to incoming students. (A-13)
- Learning communities that include departmental DE courses integrate at least one support service into the learning community structure/experience. (A-22)
- Developmental education face-to-face classes include required web-based activities. (A-25)

- Part-time faculty use of inquiry methods, problem-based learning and /or engagement of students in simulations involving real-life experiences related to course content “shows promise or is increasing in use”. (A-73)
- Faculty work with IR staff to assess the effectiveness of recent modifications and new interventions. (A-41)
- There is a systematic review of the relationship between basic skills assessment results and student performance in related courses to discover significant relationships. (A-14)
- There is consultation and problem-solving between departmental DE faculty and faculty in other academic areas. (A-56)
- Part-time developmental faculty in the department receive financial support for participation in relevant professional development.(A-62)
- Involvement of developmental education faculty in professional development is acknowledged. (A-63)

A review of these differences between the category of programs designated as “Special Programs”<sup>80</sup> within this study and college wide departments offering developmental courses reveals a significantly higher degree of integrated support services (including advising, counseling, tutoring, test preparation, learning labs, and collaborative advisor/faculty monitoring of student progress); great attention to tracking, documenting, and utilizing results to improve outcomes; the provision of ongoing professional development for part-time faculty and staff and attention to its impact on instructional practice; and feedback to DE instructors regarding how their students fare in the next sequential course.

#### **Differences for Colleges Pursuing *Achieving the Dream* and Title III Developmental Education Initiatives**

Approximately half of the survey respondents representing Reading, Writing, and Math departments work within colleges that are currently involved in the national *Achieving the Dream* Initiative or colleges that have, within the past two to five years, embarked upon initiatives to increase persistence and success rates of

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<sup>80</sup> Most, but not all, of these programs are supported through external funds.

underprepared learners through Title III funding.<sup>81</sup> Responses from those department chairs were compared to the responses of department chairs whose colleges had not undertaken either of these initiatives. There were fewer differences to note in this comparison between the one between the Special Programs and “regular” developmental courses and programs; but some differences were statistically significant. Most were significant at the .10 level.

Those that were significant at the .05 level include:

- There is a mission statement, or statement of philosophy/principles/values, that guides developmental education at the college (1-8).
- The department has clearly stated goals and objectives for developmental education courses (A-19).
- Relevant conference attendance is supported by this institution (A-5).
- Professional development for developmental education faculty is tied to institutional goals (A-8).
- College wide professional development is evaluated by those who participate (A-67).

The features that were significant at the .10 level are:

- The campus community is advised on the extent to which developmental education courses/programs are accomplishing their stated goals and objectives (1-10).
- DE faculty use common exit exams to assess required competencies (A-30).
- Formally-collected student success rates are referenced by the department’s faculty/staff in developing and implementing improvement efforts (A-43).
- Faculty who are committed to the goals of developmental education and successful with developmental students are assigned to developmental education courses (A-32).
- Developmental education faculty play a significant role in assessing needs for professional development and in planning and implementing relevant programs and activities (A-2).
- There is professional development for new developmental education faculty across the college that includes such topics as instructional strategies to accommodate various learning needs and styles,

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<sup>81</sup> Bunker Hill, Northern Essex, Roxbury and Springfield Technical Community Colleges were included as *Achieving the Dream* institutions; Berkshire, Bunker Hill, Greenfield, North Shore and Quinsigamond Community Colleges were included as Title III institutions. Although Middlesex Community College has been awarded a Title III grant, it was in its first semester, with no intervention strategies yet in place, at the time that data was collected for this study.

engaging developmental learners, integrating study skills into instruction, relevant technology tools, and student advising and support (A-3).

- An orientation or handbook that includes goals, expectations, philosophy or values relating to developmental education is provided to support new, full time developmental education faculty in the developmental subject area (A-17d).
- Ongoing workshops focusing on student success strategies for academically-underprepared students is provided to support new, full-time developmental education faculty in the developmental subject area (A-17f).
- Professional development for developmental education faculty is tied to institutional goals (A-65).
- Professional development is evaluated by those who participate (A-6).

Survey results also indicated statistically significant differences in the use of the following teaching practices by faculty within the department. Those that were significant at the .05 level are asterisked:

- \*Selection of course texts that incorporate numerous applications of the material and hands-on problem-solving activities (A-77). Documentation of the efficacy of this practice exists.<sup>82</sup>
- \*Study skills (e.g. textbook Reading, note taking, test taking, time management) taught within DE courses or through required companion courses. Documentation of the efficacy of this practice exists. (A80)<sup>83</sup>
- \*Documentation of the efficacy of implementing learning labs as an essential component of departmental developmental education courses exists (A-81).
- Utilization of learning theory to inform the design of developmental education courses among full-time faculty. Documentation of the efficacy of this practice exists. (A-70).
- Engaging students in interviewing local experts/workplace representatives (A-75).<sup>84</sup>
- Learning-to-learn skills (e.g. students learning to assess and monitor their motivation and learning, understanding learning strengths and weaknesses, using available resources to enhance students' own

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<sup>82</sup> Statistically significant at the .05 level for full-time faculty; at the .10 level for part-time faculty.

<sup>83</sup> Statistically significant for both part and full-time faculty, but at the .05 level for part-time faculty. Again, it is presumed that higher percentages of part-time faculty teach student success and/or study skills courses.

<sup>84</sup> While the difference here is statistically significant, the percentage of faculty who employ this practice is low for the ATD/Title III cohort and only applicable to part-time faculty. It is being compared to an absence of any reported utilization of the practice among English, Math and Reading departments in colleges without Title III or *Achieving the Dream*.

learning) taught within department's DE courses or in other courses/experiences linked to DE courses (A-79).<sup>85</sup>

A review of the descriptors for which there were significant differences between colleges with and without recent mutiyear grant-funded initiatives to increase student persistence and achievement brings to the forefront the role of guiding principles and clearly-stated goals within the funded projects group, data collection and intra-institutional communication, the extensive and ongoing role of teaching support through professional development, practices that incorporate structured integration and application of learning skills; and the evaluation and documentation of the efficacy of specific interventions and practices.

### **Campus Interviews Unpacked: A Campus-by-Campus View of Successful Practices, Anticipated Next Steps, Sources of Information and Inspiration**

Campus interviews, intended to clarify Inventory responses and to solicit additional information through more general, open-ended questions, proved to be rich sources of developmental educators' perceptions of their own and others' efforts to foster student success and achievement. The sections below summarize those perceptions and plans. Appendix B summarizes their hopes for specific outcomes of this study.

#### ***Most Successful Practices and Programs; Next Steps and New Ventures***

Faculty and staff at each participating college shared programs and practices that they considered most successful on their campuses. What follows is a complete listing of what they offered. In instances where interviewees indicated that the college had documentation of the program/practice's outcomes, an asterisk has been used to designate as much. If data was provided or described, it is included.<sup>86</sup>

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<sup>85</sup> Statistically significant only for part-time faculty. Given the extent to which the colleges indicated that they rely on part-time faculty to deliver student success and study skills courses, this finding makes more sense than it otherwise would.

<sup>86</sup> The lists sometimes include and sometimes exclude programs and initiatives that were referenced as examples of current Massachusetts practices and policies in earlier sections of this report. They are, as noted, a compilation of responses about successful practices and future efforts that emerged through campus interviews. The interviews typically included many more people than those responsible for completing the Inventories.

In addition, where college staff identified intentions to move forward in extending work already accomplished or in launching new developmental education initiatives, those intentions are listed under *Next Steps*.

**Berkshire Community College:**

- Placement testing for local 11<sup>th</sup> and 12<sup>th</sup> graders.
- Efforts to align Math curriculum with eleven area high schools.
- January week-long 12-hour Math course, offered in the day and evening, that facilitates some students' progress into higher level Math courses.

*Identified Next Steps: BCC plans to move forward with its Title III project in the following ways: Develop a math lab to incorporate more time on task and additional learning skills; develop learning communities that include developmental courses; integrate targeted instructional strategies for into developmental Math and Writing (including incorporation of the college's new writing lab); implement and assess redesigned Writing courses; implement specific DataTel electronic advising components; pilot Advancer as a specific skill diagnostic tool to enable an environment for students to work intensively on needed skills and then to move on.*

**Bristol Community College:**

- \*QUEST Program.
- \*Learning Communities: 15 offered in fall 2008; 10 in spring 2009, with promising outcomes, but low registration numbers.
- A Learning Community that includes a student success seminar and Composition, with the instructor as advisor to the Learning Community students.
- \*A Summer Bridge Program, which includes up to eight developmental credits, is available at no cost to students and provides a \$100. stipend for books. It is funded by the Jaffee Foundation.
- Use of Skills Specialists in developmental and gateway courses.

*Identified Next Steps: Consider a way to address Reading proficiency (the college currently requires placement testing only for students taking Writing or Math courses); increase the number of Learning*

*Communities; improve the integration of support services, pursuant to Task Force recommendations; consider an early warning system.*

**Bunker Hill Community College:**

- \*Learning Community Clusters, centered around themes, designed to help students become active and engaged learners.. All have common learning outcomes related to critical thinking, applying learning beyond the classroom, identifying and accessing sources of support, and collaborating with peers. The college has extensive data to support the efficacy of this practice, as it has been implemented over the past several years, under a Title III initiative.
- \*Developmental Learning Community Clusters, including a highly successful one that pairs Math 091 with a seminar course entitled *Math-Fear=Success*. Results show a 78% success rate for students who took the Math 091 course coupled with the seminar, compared to a 50-60% success rate for students who took Math 091 by itself.
- Developmental Clusters that link developmental courses with college level courses, including a successful one linking developmental reading with Introduction to Business.
- \*A Learning Community Seminar (a three-credit thematic/programmatic student success course), recently approved as a requirement for first-time full-time students. All have common learning outcomes relating to Reading and Writing, Critical Thinking, Reflection, Problem Solving, Information Literacy, Career Exploration, Community Engagement and Diversity. Faculty in Learning Community Seminars serve as students' advisors.
- \*College Connections coaching program, linking coaches to sections of developmental Reading and Writing courses. Coaches help students with academics and well as introducing them to relevant college resources and offering peer support. The program now serves between 300 and 400 students.
- Integration of career planning into some developmental courses and the use of the library into developmental math classes. Incorporation of service learning into subject-specific courses has also strengthened learning.
- TRIO program, which has a close connection with student activities.<sup>87</sup>
- Allied Health Certificate Program for ELL students: a one-year, open admission program with a strong advisor-cohort model, including a lot of individualized attention and team work. It has been running for more than ten years.

*Identified Next Steps: Continue to refine a holistic approach to serving at-risk students by further integrating academic support, student support, and instruction; consider ways to maintain the connection between Learning Community faculty/advisor and students after the first semester; renew a*

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<sup>87</sup> TRIO programs normally have documented outcomes, but that was not noted in the interview.

*commitment to professional development that will facilitate sharing of best practices among faculty and staff; implement a MetLife grant to help BHCC understand the student realities that impact their success, and determine how the college can strengthen partnerships with external agencies to support these students.*

**Cape Cod Community College:**

- Math Anxiety Workshop as a component of developmental Math. Faculty believe it has an impact on retention.
- Writing/Reading Learning Community, providing a small faculty stipend for common meeting time.
- \* Pre-algebra/Reading and Study Skills paired class. The courses integrate budgeting, life skills and study skills. Math students evidence an 80% successful completion rate as compared to a 60% successful completion rate for students in the non-paired pre-algebra class.
- A formal faculty mentoring program, through which experienced full-time developmental education instructors serve as consultants to others.
- \* SUCCESS GED-to-College Transition Program, now in its 14<sup>th</sup> semester. It is for GED learners, age 16-60+, most of whom are high-school “stop-outs”. It offers a college skills course, two developmental levels of Math (non-credit) and a three-credit computer course. The overall retention rate is 87%, with 85% of students enrolling in further course work.

*Identified Next Steps: Through collaboration between the Developmental Education Committee and the college’s IR Director, determine data elements to track longitudinal data to assess developmental education impact; develop and begin Developmental Education Program Reviews that will utilize data for tracking purposes; improve professional development; assess the effectiveness of offering two sequential courses with increased time on task in a single semester for motivated developmental students; pilot and assess the new three-credit Student Success course and consider it as a requirement; move toward a more intrusive advising system; continue development of Learning Communities, pairing pre-algebra with Reading/Writing; Foundations in Writing with CCCC’s second-level Reading course; college-level Reading with Psychology and other reading-intensive courses.*

**Greenfield Community College:**

- Use of disciplinary studios (common space with peer and faculty support) in Math, Science and Psychology, with plans to expand to Art and, possibly English. Through the studios, students have an opportunity to meet with multiple faculty in the discipline. Faculty believe students’ use of the studios has an impact on student engagement.
- Learning Center, providing integrated advising and counseling.

- Trained peer tutors in developmental classrooms.
- Integration of particular academic strategies into academic coursework. It is thought to have improved achievement.

*Identified Next Steps: Identify the impact of integrating academic strategies into subject-specific courses; consider study skills modules across the college curriculum and within the Math studio; explore general online components on topics (e.g. grammar, writing mechanics, etc) for developmental Writing and learning vignettes for use within the Math studio; consider a more flexible, self-paced model of instruction for students who struggle to complete developmental math coursework in a semester.*

#### **Holyoke Community College:**

- \* Writing and Reading Learning Communities, taught by one English faculty member and one other-content area faculty member. The department's analysis indicates an impact on student retention.
- Learning coaches hired to work on-on-one with students, some (but not all) of whom are developmental. The practice began this summer; anecdotally, the results seem positive, but the impact on students is not yet confirmed. Adjunct faculty who serve as coaches appear to have gained additional expertise in pedagogy and instructional strategies as a result of their participation.
- \*Summer developmental courses that have demonstrated retention and achievement gains among students. These courses are taught by specially-trained faculty members.

*Identified Next Steps: Consideration by the Math department of using shared final exam items linked to course-level outcomes that have been identified within the college's general education requirements for assessment of those skills/abilities; consideration of increasing computational literacy outcomes to require two semesters of mathematics rather than the current one-semester arithmetic requirement; consider a one-credit add-on to content area courses for completion of SSN 100 (a college preparatory course) to entire enrollment in SSN 100; expand MyMathLab utilization as a mediated basic math course to higher-level developmental math courses; strategize about ways to recruit developmental students into programs and services that would benefit them (e.g. Learning Communities, summer transition, supplemental instruction, Math mini-prep sessions).*

#### **Mass Bay Community College:**

- \*Summer Scholars Program, piloted in the summer of 2008, provided 7 credits, including a second-level developmental Writing, a second-level developmental Math, a freshman seminar course, supplemental instruction in Math, and Writing lab support. Free tuition and books are provided. 80% of Writing students earned a C or better, as compared with 50% in other second-level Writing courses.

The mean score on the initial algebra assessment was 44.65; the mean score on the re-test at the conclusion of the program was 65.64%. There were 17 students in the pilot; faculty hope to expand this model, limiting cohorts to 20 students.

- “Blind” Writing Portfolio assessments, through which students can accelerate through Writing levels and faculty can communicate about consistent standards, expectations and course outcomes. 20 full and part-time faculty implement the holistic scoring process over 2-3 days. Faculty readers are not informed of the students’ names, recently-completed Writing course, or the identity of the instructor of the recently-completed Writing course.
- Learning Community in Math, that includes linking Math with Reading/Writing/Study Skills, for a total of five credits. Two sections were piloted in Fall 2008.
- A supervised Math lab and Math Homework Club, staffed by faculty.
- \* A seven-credit language skills Learning Community, including a three-credit, faculty-taught Introduction to Language (ENG 090) course and a four-credit lab, taught by a Reading/Writing learning specialist. The courses uses a portfolio assessment process, and students receive grades of Satisfactory or Unsatisfactory; the credit does not count toward the degree. The course, offered since 1991, has a 77% retention rate.

*Identified Next Steps: Use college data to plan useful directions; explore ways to allow Math students to bring up skills in specific areas that do not necessarily require completing entire courses; explore mechanisms that provide qualified students the ability to skip courses that include competencies they have already mastered (as is done in for Writing students) ; explore appropriate diagnostic instruments/procedures to accomplish the above; seek external and/or internal funding to expand Summer Scholars Program to other cohorts (e.g. LN 090 and MA 90, ESL cohort, Older Students); assess the impact of tutoring on student achievement, utilizing newly-purchased tutor tracking software.*

#### **Massasoit Community College:**

- In a Writing and World Language Center, professors, professional tutors and some peer tutors provide one-on-one assistance in a respectful environment.
- \*A three-credit developmental Math course meets five days a week for 50 minutes, giving students a more intense experience. Space and a shortage of willing faculty serve as limitations to growth.
- Professional development department meetings on particular developmental education topics, through which faculty pool experiences and learn from one another’s successes and missteps.
- Early *Accuplacer* testing in local high schools.
- Integration of study skills in the College Experience DE course.

- \* The LATCH program provides intensive one-on-one outreach, tutoring, advising and support to students who feel they need it. The program is promoted through high school guidance counselors and at orientation to students who place into two or three developmental courses; many are second-language and adult learners. Students may stay in the program longer than one year if still pursuing developmental coursework. Some stay more than two years. The 22% graduation rate matches the institution's overall rate, while retention rates exceed the college's overall retention rate.

*Identified Next Steps: Add more weekly contact hours to developmental Reading, Writing and Math courses; add self-paced modules for developmental courses; move toward outcome-based, rather than semester-based, courses, providing flexible beginnings and endings; work toward an environment that sends a "can do it" message to developmental students; consider ways to acknowledge and reward the completion of a developmental sequence; take steps to formalize assessment.*

### **Middlesex Community College:**

- Developmental courses, while not counting toward degree requirements, may provide Intensive Value credit that counts toward fulfillment of core curriculum requirements. This feature identified developmental courses "currency" toward completion of college graduation requirements. Courses that have been approved for Intensive Values credit include: English Fundamentals (values: computer literacy, ethics and values) and College Reading III (value: multicultural). Academic Reading for Science and Health earns college credit, and may be used as a free elective.
- A Fundamentals of English faculty member services as the designated advisor for her students during the semester in which she teaches them. Anecdotal results are positive.
- Cohort models in: LINKS, for students who test into Basic Writing or Algebra 1; in the Summer Sprint Program; and in a Basic Writing/Law and Order Learning Community.
- \*Cohort model and formal mentoring program in *Advance to Go*, a college-funded program into which at-risk students are invited.
- Teamwork, in classes and in cohorts.
- *MyMathLab*, to provide time on task and to reinforce learning through extensive practice.
- A policy and program that allows students who receive Incomplete grades in Reading as a function of not having passed an *Accuplacer* or faculty-generated exit exam to complete their Reading course beyond the semester time frame. They do so through a specially-designed curriculum offered through the Academic Support Center in January or the summer following the spring semester course.
- \*A Self-Paced Studies program linking low-level developmental Reading and Writing with occasional small group mini-lessons. The successful completion rate is approximately 65%.

- \* A new developmental Reading curriculum within Self-Paced Studies, utilizing a student-centered Differentiated Instruction (Tomlinson, 2005) approach has yielded marked improvements in completion rates and test results. Students are consistently gaining more than 10 points on assessments; some achieve 15-20 increases. The program employs learning styles, interest and other inventories to assess student readiness; a tiered curriculum allowing student choice regarding a number of different instructional methods, and a variety of ways to demonstrate skills attainment.

*Identified Next Steps: Integrate developmental Math into other courses through NSF Math-Across-the-Curriculum Grant; pilot a Math lab as a mandatory component of developmental Math; strategize to address low Math skills and low student persistence and success rates; Pursuant to Title III, Year 2 activities, offer 12 new Learning Communities (including the linking of Basic Writing to other courses), embed designated developmental courses with core student success skills, initiate steps toward comprehensive advising that includes educational planning, tracking and intervention.*

**Mount Wachusett Community College:**

- A First-Year Experience course, taught by faculty from a variety of disciplines, includes topics related to study/metacognitive skills, campus resources, and college survival strategies.
- \*VISIONS (TRIO) program, including specialized advising and tutoring. Retention rates are reported to be strong.

*Identified Next Steps: Through the Developmental Education Committee, consider establishing a developmental department, integrating services and supports for developmental learners; research the development of cohort groups of developmental students that would remain together over multiple semesters (perhaps a Freshman Academy model); consider a summer bridge program for developmental learners; assess the new developmental Reading/Writing Learning Community; implement a requirement to take developmental Math when placement testing recommends it; identify appropriate co-requisites for developmental math to move students along based on achievement and potential to succeed; through the Developmental Education Committee, develop an effective faculty/academic support services communication process; consider advisement, marketing and web-based teaching/learning strategies to build Learning Community enrollments.*

**North Shore Community College:**

- Implementation of *MyReadingLab* and *MyMathLab*, which utilize many best practices to engage students and reinforce learning.
- A coordinated approach to Math, through which Math faculty teach the whole range of courses, from developmental through college-level viewing the curriculum as a continuum which emphasizes different levels of mathematical reasoning at each level, rather than as discrete, disconnected skills.

- Having five full-time developmental Writing and Reading faculty members provides strong leadership, facilitating coherence in the Reading/Writing curriculum and strong integration of adjunct faculty.
- \*Project ENABLE, an ABE-Transition Program provides 18 students each semester (half of whom are developmental) with a strong transition from GED to collegiate coursework. It operates as an evening program, with three linked courses: Reading, Writing and Student Success. Courses within the Learning Community emphasize resiliency, communication skills and managing stress.
- \*The TRIO program, which utilizes a Learning Community approach, offering Level II Reading, Writing and College Success as linked courses. While students subsequently take college-level classes along with non-TRIO students, some courses, including Math, are segregated TRIO sections, with dedicated TRIO tutors.
- A strong and pervasive commitment to developmental advising that includes advisor training and close involvement of program faculty with students.

*Identified Next Steps: Consider a prep program for low-level pre-developmental students; consider Learning Communities that combine study/learning skills beyond the developmental level, pilot and assess a one-credit math course, using ALEKS for diagnosis and self-pacing, to be offered on a pass/fail basis. Students who pass will move on more quickly than those who require a full course.*

#### **Northern Essex Community College:**

- Use of *MyMathLab*, linked to developmental Math courses. Through it, students can gain intensive practice on skills. Faculty can concentrate on concepts and working through difficulties students are encountering.
- *Course Compass* (a component of Blackboard) has *MyCompLab* as well. Using the same principles as *MyMathLab*, it provides practice in composing, reading, and editing.
- \*PACE, NECC's TRIO program, serving 250 students through a case management model and activities that build confidence and competence. The program provides individual attention (including phone calls and "ambushing students"), mentoring, advising, weekly college success seminars, field trips to baccalaureate institutions, and student scholarships (a total of \$42,000 in cash grants). 99% of students are successfully retained.
- \* Transition, a first-semester academic support program that serves students who hold a GED or have been out of high school five years or more. Students meet nine hours a week, including 2 nights and Saturday morning. The program includes refresher instruction in Reading, Writing and Math, supplemented by a three-credit Introduction to Computers course. Completing students enter regular college coursework at at least the second developmental education level. The program is funded by World Education and the Nellie Mae Foundation.

*Identified Next Steps: Develop additional Learning Communities; pilot diagnostic Math test to better create and cluster learning experiences to close gaps in skills development and achievement; consider how to best measure the impact of tutoring on student learning, and pilot a tutor tracking and assessment process; consider student success seminars and/or ways to integrate study skills into many courses; develop a strategy to work intensively with area high schools to better prepare students for college; implement a holistic, developmental case management model for student advisement*

**Quinsigamond Community College:**

- The English department’s utilization of reflective practice coaches, who facilitate two structured conversations on a variety of different topics each month with full and part-time faculty. Typically, discussions include best practices, challenges and results of work. The practice encourages collaborative problem-solving and responsibility for problems and solutions. It was inspired by a University of New Hampshire Program. Outcomes have included a stronger link between full and part-time faculty teaching developmental and college-level courses as well as the creation of a Reading-Across-the-Curriculum initiative.
- A consistent English curriculum and common exit exam; clear expectations for faculty members and for students.
- \*The standardization of QCC’s Math curriculum, syllabi, and exit exams through the use of Developmental Math Coaches. Through a Title III-funded initiative, common course outlines, instructional materials, exit exams for all day, evening, weekend and on-line sections of each Math course have been developed and implemented. In addition, detailed departmental expectations for faculty and students have been developed, and an Instructor Resource Manual guides instructors through the course with standardized pacing, sample group activities addressing different learning styles, and forms of formal and informal assessments. The use of *MyMathLab* supplements classroom instruction, addressing different learning styles and levels of preparation. All students participate in a cumulative, departmental final exam that must be passed at the 73% level or higher to qualify for the next level Math course. A Math Center provides computer- and textbook-based individual and group learning resources and support. Led by a full-time manager, it employs 22 tutors over the course of extended day, evening, and Saturday hours. Math coaches play a vital role in supporting instructors in emphasizing, requiring and assessing homework; establishing productive collaborations between and among full and part-time faculty and Math Center support personnel; planning and implementing professional development, improving handbooks for developmental Math instructors; and working with Institutional Research to monitor student achievement in the developmental Math sequence. Successful course completion rates have increased significantly.
- \* Developmental students’ enrollment in ORT 110 (Strategies for College and Career), a first-year experience course, primarily taught by adjuncts, that fosters development of a mentoring relation between students and advisors and between students and faculty. 75% of students who took ORT 110 with developmental courses earned grades of C or better, as compared with 60.7% of students who

earned grades of C or better in the same courses without ORT110. General Studies students are now required to take this course, or one entitled Strategies for College and Study Skills, in their first semester.

- The availability of three career and academic planning courses: ORT 110 (Strategies for College and Career), PHY115 (Self Assessment and Career Planning), and ORT 109 (Career and Academic Planning). Students may create their own career, academic and personal success plan through any of these courses.
- Linking of career and academic advising in an intensive, individualized, developmental advising model, inspired by Valencia Community College's Life Maps Advising model. The program is augmented by a QCC-developed online career/advising planning tool called CAPS (Career, Academic, Personal Success).
- Incorporation of technology and intensive skills practice through *MyMathLab* in developmental Math courses.
- Electronic referrals of students to tutoring. Notices of faculty referrals go to students and tutors; tutors let faculty know if referred students have followed through.

*Identified Next Steps: To facilitate students' transition from one Math level to another based on achievement rather than time, explore a modular approach to teaching Math and/or self-paced options to allow students to accelerate or slow down; pursue ways to incorporate more technological supports (e.g. MyMathLab, MySociologyLab, MyPsychLab) into courses; utilize technology to address more learning styles and to provide on-line advising and other support services.*

**Roxbury Community College:**

- Mandatory advising training, emphasizing career planning, academic issues, and working with and making appropriate referrals for students in difficulty.
- A protocol through which ESL faculty advise their own students.
- \*Early alert system and interventions at four weeks into the semester for ESL students.
- A developmental Writing course that includes four lecture hours and a two-hour lab that incorporates peer review of writing and writing workshops. The Writing Center supplements and augments the writing program, providing additional (non-mandatory) support for students.
- A newly-revised College Experience course, recently approved for three credits, that was "strongly recommended" last year and is now required for first-year students. As a one-credit-course, there was a 12% higher retention rate for students who enrolled in the course. As a three-credit course in Fall

2008, 75% of enrolled students were retained in the spring, in contrast to a 41% fall-to-spring retention rate for first-time students who did not take the course.

- A well attended and much-appreciated three-day Faculty Academy for all full and part-time faculty who wish to attend. Hosted by the President, Vice President for Academic Affairs, and a Faculty Academy Committee; the faculty-taught program highlights college success data, student achievement initiatives, and outcomes of ongoing efforts. Each participant is granted a \$50 honorarium.
- \*An increased number of Learning Communities that appear to influence strong completion rates. Learning community students completed 80% of attempted hours in Fall 2008, as compared with 67% for first-time students who did not enroll in Learning Communities. 76% re-enrolled for the spring semester vs. 67% for the comparison group.

*Identified Next Steps: Through Achieving the Dream, develop additional Learning Communities with developmental Math as a core course; provide for a college experience course for all students, with the instructor serving as academic advisor to enrolled students; continue vigorous faculty development to foster increased student achievement and success; link a broader array of student success measures the Strategic Plan and annual budgets; implement a second-year early alert system; resolve issues surrounding a \$35 math lab software license fee that presents a financial barrier for many students; explore the use of Supplemental Instruction in developmental courses.*

#### **Springfield Technical Community College:**

- Students enrolling in summer developmental education courses as well as those in which developmental courses can serve as co-requisites to college-level disciplinary courses.
- \*College Success Seminars that have been successful in engaging students and preparing them for college-level work. Retention rates for College Success Seminar participants have been higher in all semesters subsequent to completing the seminar than for non-participants.
- A College Writing Review course that serves as preparation for the first college-level Writing course. (This is not the College's Basic Writing course.)
- \*Reading courses as a valuable retention strategy. Students who take it are twice as likely to persevere with their studies than students who do not enroll in Reading.
- \*Linked sections of COLL 160 (College Success Seminar) with various academic courses, including Introduction to Biology, Introduction to Psychology, Pre-Engineering, and Developmental Writing. There is greater retention and achievement among COLL 160 students than for students in the same

academic courses who have not taken the content course through a linked (Learning Community) model.

*Identified Next Steps: To advance Achieving the Dream outcomes, implement an intrusive advising model to address poor retention and achievement; engage in a study to investigate Reading students' achievement and outcomes in gateway courses, including Psychology, Sociology and Composition I; promote Learning Communities to attain greater student persistence and success; increase faculty participation in workshops on utilizing effective academic strategies within subject area courses; develop a plan to orient students to college life, nomenclature, and culture.*

### **Where Do Good Ideas Come From?**

Sources of information play a key role in the specific ways in which institutions move forward to conceptualize, develop, implement, assess and improve practice to achieve stronger persistence and increased success among at-risk students. Participants in campus interviews outlined those sources upon which they rely for ideas for greater effectiveness in teaching, learning and student support.

Their primary sources of up-to-date information and state-of-the-art practice come from conference attendance and organizational affiliations. The conferences most referenced were those sponsored by : NADE (National Association of Developmental Education), LAANE (Learning Assistance Association of New England), and AMATYC (American Mathematical Association for Two-Year Colleges)— all conferences with a special focus on research and best practices for developmental learners. Many department chairs also indicate that their faculty colleagues profit from The Massachusetts Community College Teaching, Learning and Student Development Conference and biannual NEFDC (New England Faculty Development Consortium) conference, both of which place an emphasis on best practices. Other, more specialized conferences mentioned were sponsored by CRLA (College Reading and Learning Association)<sup>88</sup>, The League for Innovation in the Community College, NACADA (National Academic Advising Association), TESOL (Teachers of English to Speakers of Other Languages) and MATSOL( (Massachusetts Association of Teachers of Speakers of Other Languages ), as well as the Conference on College Composition and Communication (CCCC) and the International Conference for Technology and Collegiate Mathematics.

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<sup>88</sup> This organization provides a training curriculum and certification process for campus-based tutors.

By and large, conference sponsors are the same organizations to which participants look for information, models and support for their work with at-risk students. Those institutions that certify tutors have a more ongoing and interactive relationship with CRLA than do institutions that rely on organizations (and conferences) primarily for networking and current information. The primary organizations identified publish journals and host websites that are rich repositories of information and research about student characteristics and effective teaching and student support. Several individuals noted that they regularly seek information through those sources.

The other primary resource that department chairs and program coordinators identified were other community colleges. Among those mentioned were Valencia Community College, LaGuardia Community College, Cuyahoga Community College, Brevard Community College, the Community College of Denver, and the University of South Carolina.

Additional sources of inspiration and good ideas identified were: Hunter Boylan's research, *Achieving the Dream: Community Colleges Count* reports and publications, intra-college professional development publications, collegial conversations, brown bag lunches, learning from individuals with specific expertise within the college, and internet searches.

**Part V: Conclusions, Recommendations and Areas for Further Study**

***Conclusions***

1. The colleges' stated commitments to developmental education as a priority are widespread and strongly-communicated.
2. The commitment to developmental education does not necessarily translate into wide circulation of information about the colleges' progress in or achievement of student success goals. Analysis and utilization of student success data and/or developmental education outcomes as a basis for goal setting or ongoing improvement is limited.
3. Most faculty teaching developmental courses are highly committed professionals who choose to teach developmental learners. In the aggregate, there is a higher proportion of part-time faculty teaching developmental education courses than other courses at the colleges.
4. Placement testing utilizing the CPT (College Placement Test) *Accuplacer* exam is a common thread that runs through all of the institutions. While placement policies are quite similar, practices do differ in both formal and informal ways from college to college. In addition, there is great interest within academic departments in exploring assessments (e.g. *Advancer*, *ALEKS*, *CourseCompass*) that can supplement CPT Assessment results by offering diagnostic information for targeted and individualized skills enhancement and instructional modes that match students' specific needs.
5. College staff see curriculum articulation with area high schools as a critical step in reducing the number of students who begin community college at Math, Writing and Reading proficiency levels that do not qualify them for college-level courses. Given the persistence and achievement gaps between college-ready students and those who must complete developmental coursework as a pre-requisite to college-level study, reducing the number and array of pre-college courses students take is an important goal. The majority of colleges currently administer the *Accuplacer* exam in area high schools. Many have utilized testing as a precursor to advising, financial aid counseling, and/or aggressive basic skills initiatives for high school students aspiring to college. A small number are engaged, as well, in formal basic skills curriculum articulation efforts to align basic skills objectives and outcomes at the secondary school level with those needed to pursue and succeed in college-level study at the community college. A number of others have expressed the need to move forward with similar efforts.
6. Each of the community colleges has a plethora of support services available to underprepared learners. While some are mandated for specific student cohorts, most are voluntary, requiring student initiative to partake. Most do not call for or require documentation of participation.

7. There are large numbers—and a broad array—of best practices in place, most fueled by relevant research and proven models. This report references many as exemplars of current directions and approaches within specific Massachusetts community colleges.
8. Among Massachusetts community college developmental education faculty, staff and administrators, the primary source of relevant research and best practices and policies information is conference attendance. Colleges have, over the past several years, committed to a high level of support for conference participation; and faculty and staff indicate that they are acknowledged and supported in their efforts to learn more about methodologies that promote student success. The most often-referenced conferences and journals are those promulgated by a small number of key national and regional organizations that have as their mission the advancement of student success in community colleges. They are identified in the section of the this report entitled *Where do Good Ideas Come From?*
9. There is a high level of agreement among developmental educators regarding some of the structural elements of developmental courses: they have clearly stated goals; they are aligned with requirements in sequential courses; and they teach thinking skills that align with the skills required in next-level courses. This is considerably less agreement about the utilization of specific instructional and organizational elements of best practice pedagogy. Practices considered most often-employed within the colleges are: active learning; the utilization of texts that exploit active learning techniques and provide for hands-on problem solving; and the integration of higher order thinking tasks, analytic reasoning and problem solving. Among those less often utilized are some that research shows to have great effectiveness in promoting student success among at-risk students. They include: incorporating supplemental instruction or coaching as required elements of DE courses; the integration of learning labs as an essential course element; and the use of inquiry methods, problem-based learning, and involving students in subject-relevant simulated or real-life experiences.
10. Student success/ college experience courses and content, demonstrated within many community college studies to have a positive impact on student persistence and success, have achieved a high level of acceptance among Massachusetts community college educators. Fourteen of the fifteen community colleges currently have versions of them in place, some as integrated elements of specific content-area courses. The lion's share of the current debate centers around whether such courses ought to be implemented as a first-year requirement—and, if so, for which students.
11. Developmental education faculty work closely with Learning Disabilities experts to provide appropriate support and intervention, as needed, for learning disabled students.
12. There is a great deal of interest throughout the system in the Learning Community model, so often employed by programs that have well-documented, strong student persistence results. Several colleges are currently piloting student success initiatives that rely heavily on a Learning Community model, which, by design, exploits the student-to-student and student-to-faculty connections that are known to support persistence. In a number of instances, Learning Communities structured for developmental learners embed or incorporate college success skills, specific forms of tutoring, and intrusive advising. A few colleges are seeking ways to bring about a sustained commitment between

dedicated Learning Community advisors and developmental students over a time period that exceeds the semester in which they initially come together as a Learning Community.

13. Online developmental courses are relatively rare and offered primarily in Math. There is significant interest among those not teaching developmental courses online about the effectiveness of online developmental courses in the system.
14. There is much interest and activity relative to Fast-Track Programs that allow underprepared students to move through and out of their developmental coursework as expeditiously as possible. Supported by data that indicates that the longer a student remains in developmental education courses, the less likely s/he is to complete a degree or certificate, several colleges are piloting ways of engaging students in developmental instruction that do not depend upon a fixed semester-by-semester pathway. All of the existing programs or pilot ventures are limited in scope and/or size. Some colleges have altered policies to facilitate further development of such initiatives.
15. The practice of utilizing skills labs within or alongside developmental courses has grown and is represented within at least one basic skill discipline in each college. While mandatory integrated labs are still in the minority, they are currently under consideration at several colleges. A majority of campuses report having incorporated *Course Compass* programs such as *MyMathLab*, *MyCompLab*, etc. into developmental courses or academic labs. *MyMathLab* appears to have gained the widest acceptance and utilization in a variety of instructional formats.
16. A great many of the *100% Math Initiative* recommendations for instructional, structural and student support strategies have been implemented—or are under serious consideration—in colleges throughout the system. One recommendation that seems at odds with a recent trend, however, calls for a three-course developmental Math sequence. The number of colleges that has adopted a four-course sequence has actually increased. While configured slightly differently at each institution, the added course focuses on arithmetic and other very basic skills and concepts needed as preparation for pre-algebra coursework.
17. All of the community colleges use *Accuplacer* for course placement guidance, with relatively few providing for supplementary or alternative measures and protocols relative to Mathematics course placement. A small number of colleges are currently exploring alternative forms of Math instruction that will ensure mastery of core skills without following a prescribed developmental course sequence.
18. Colleges that are structuring efforts to achieve stronger student success are finding that some of their greatest challenges relate to quality advising, the element considered the linchpin of the success of many of the Massachusetts programs with the strongest student attainment outcomes. College staff wrestle with ways to reconcile faculty advising provisions of the MCCC/MTA Collective Bargaining Agreement with highly-effective intrusive advising practices and procedures. In addition, none of the colleges has determined, thus far, how to preserve an official advisor-advisee relationship throughout a student's tenure at the institution, unless the student is part of an externally-funded project that is designed to provide for a more sustained relationship. Bringing productive advising models to scale

will, to a great extent, depend upon re-considering the role and expectations for advisors, be they faculty, staff, or a combination thereof.

19. Comprehensive and coherent approaches for improving achievement among at-risk students are still relatively rare. Colleges that have outlined integrated approaches through grant-funded projects appear to be making stronger progress than those that depend on divisions and departments, working separately, to shape approaches that complement and supplement one another in productive ways. A few colleges are attempting to accomplish such coherence through strategic planning and the establishment of developmental education steering committees and/or coordinators with broad oversight and monitoring responsibilities.
20. Peer mentoring and opportunities for collaboration and sharing of effective teaching strategies are considered valuable and much in evidence within the colleges. On-campus professional development programs that orient new faculty to teaching issues for developmental learners, as well as those that provide ongoing pedagogical support for fostering success among academically-underprepared students, are viewed as relatively atypical.
21. The link between professional development and student success has not been made in any substantial way. While professional development is quite consistently evaluated by participants, it is rarely assessed in terms of its impact on teaching practice or its impact on student learning and achievement.
22. There are significant differences between the practices utilized consistently within Special Programs/*Achieving the Dream* colleges/ Colleges with relevant Title III grants, and those in most consistent use within college departments and support areas that are not involved in and responsible to these projects and programs. For the most part, programs grouped together as “Special Programs” require more time-on-task and interpersonal involvement for at-risk students. They also emphasize and blend a number of student support (advising, mentoring, counseling, tutoring) best practices and provide for continual monitoring and feedback to students, faculty and staff regarding student achievement and progression within the college. Other significant differences are noted in *The Special Project Difference* section of this report. Those differences that are significant for colleges that have pursued increased student success goals through *Achieving the Dream* and Title III initiatives may be found in the section entitled, *Findings for Colleges Pursuing Achieving the Dream and Title III Developmental Education Initiatives*.
23. There are a several different organizational structures within Massachusetts community colleges that are intended to bring about greater effectiveness in facilitating student success. While most colleges offer DE courses within traditional disciplinary divisions, two have created separate divisions for developmental studies. And while the majority of developmental education faculty appear to teach both college-level and developmental courses through disciplinary division structures, some colleges have created full or almost full-time developmental education positions/teaching assignments. In addition, some colleges have decided to integrate academic and student development efforts in a structural configuration that mirrors integrated best practices for facilitating student attainment by establishing vice presidencies for academic and student affairs, developmental education committees with coordinating responsibilities, and positions to coordinate all efforts on behalf of at-risk students.

Despite strong opinions among many college personnel regarding the efficacy of one model over another, these organizational structures appear to be largely unexamined with regard to their actual impact on achieving student persistence and/or success.

24. Formative assessment of the performance of students who begin college in one or more developmental course is uneven. More than half of the community colleges appear to track developmental students' progress through the developmental course sequence that students follow en route to college-level coursework. Tracking which includes the students' performance in their first college-level ("gateway") course occurs less frequently. As a result, many colleges/departments/individual faculty do not know the extent to which those who successfully completed developmental courses are succeeding at significant academic junctures prior to graduation or separation from the college. Semester retention rates rarely follow specific developmental student cohorts, except in Special Programs for designated student groups and grant-funded initiatives with externally-mandated reporting. With support from data coaches, *Achieving the Dream* colleges establish and implement processes that track the progress of specifically targeted student cohorts for improved retention, course completion, success in next-level courses, transfer to a senior institution and graduation. Their semester-by-semester tracking is intended to monitor results closely enough to validate successful practices, and to intervene, as possible and appropriate, when short-term outcomes fall short of pre-determined benchmarks for success. At least one of the Title III projects has established a similar process to gauge progress and success through ongoing formative assessment.
25. Only on occasion do Academic Program Reviews include information about the success of students who began college in developmental courses required for entry into core program courses. A few of colleges conduct discipline-specific Developmental Education Program Reviews that include a systematic analysis of course completion rates and/or success in the next sequential course. Some colleges are now considering modifications of their Program Review process to include student achievement and/or improvement goals and performance indicators. There is also interest on several campuses in assessing the effectiveness of tutoring provided to developmental-level students. At least two colleges have purchased tutoring tracking software to support such efforts.
26. Within the Massachusetts community colleges, the strongest documentation of student success outcomes is found within externally-funded initiatives and programs that began with grant funds, where implementers are held –or hold themselves—accountable for attaining specific performance goals. While most college wide practices and initiatives currently lack specific goals and/or benchmarks for success (making their impact difficult to judge), there are several well-planned and evaluated interventions within the system that have generated strong evidence of success. Some are noted in footnotes within this report; others appear in the section on *Most Successful Practices*.
27. Where best practices exist, they often operate in the margins—along side, but not a significant influence on—historically-offered (and sometimes unexamined) services and strategies. Funding to bring proven best practices to scale is a major issue in the context of shrinking resources and an allocation process that favors currently-operating programs and services. There are only a couple of instances where approaches that have demonstrated greater effectiveness have supplanted

historically-offered offerings and services. At the present time, two institutions are in the process of bringing proven practices to scale on a college wide basis.

28. On each community college campus, there are substantive plans for moving forward with initiatives that are modeled on many of the best practices discussed and highlighted within this report. There is a thirst for more information that will inform practice and facilitate progress on initiatives that really do make a difference for students most vulnerable to failure. There is also growing receptivity to assessment that helps educators to help students. Many campus interviewees asked for specific information on assessment processes and successful initiatives on other campuses. A listing of their expressed interests may be found in Appendix B of this report.

### ***Recommendations***

To bake a delicious cake requires not only the necessary ingredients, but the right mix and proportion of those ingredients— assembled in the right order, blended in the appropriate way, and baked for the correct duration of time in a reasonably reliable oven. Even then, there are no guarantees; but with experience over time, the chance of a predictable result increases, as does the cook’s confidence that s/he has found the right “recipe”.

What we seek for developmental students—those most likely to leave or fail before earning a credential or, for far too many, even a course grade in our colleges—is the winning formula: the configuration of what we have to offer that gives them the greatest likelihood of success. There are a great many best practices and policies that are known to have a positive impact on student success. And, as this report documents, many are to be found within the Massachusetts community colleges. Bringing the right combination of them together in a coherent and consistent way, and holding the results up to the “taste test” of effectiveness, is perhaps the greatest challenge community colleges face at this point in their history. Given the high percentage of students who are assessed at pre-college levels and the likelihood that only a small number of them will become graduates able to compete favorably in a 21<sup>st</sup> century economy, it is critical to utilize what we know to the greatest benefit of students most at risk.

The following recommendations draw upon the results of this Study:

#### **1. Match commitment with intentionality and accountability.**

Needed changes in the way our colleges promote student attainment for underprepared learners require sustained focus and persistent and determined effort over time. As a precursor to setting a coherent course of

action, institutions should collect, analyze and disseminate data relative to student attainment at critical junctures; determine critical domains for improvement; and set clear goals and incremental benchmarks by which progress can be measured.

In the Aviation community, there is a precept that suggests a best practice planning model: *Plan your Flight, and Fly your Plan*. Unless intentions take shape through plans that are carried out, they are—and will remain— unfulfilled wishes.

## **2. Bring many stakeholders under the tent.**

Promoting greater student success and achievement is a college wide issue. All of the institution’s resources should be brought to bear on student learning and persistence. The college community should be informed of both good news and continuing challenges on an ongoing basis; and each campus office and individual should be encouraged to make a significant difference. To reinforce a campus-wide commitment, all college employees ought to be expected to make well-informed contributions toward a cohesive and coherent effort to improve student persistence and achievement.

Toward this end, developmental education faculty and staff must be armed with useful information if they are to participate intelligently and productively in efforts to improve student entry into and successful completion of college-level courses. At the least, departments that offer developmental courses should routinely receive information relative to the progress of students who were previously enrolled in their developmental classes.

## **3. Orchestrate instructional programs and services around students’ academic needs.**

The distinctions between developmental and non-developmental students are indistinct at best. Some students will test into one developmental course; others into three—and still others whose placement scores are just over the cut-off will be categorized as college-ready. Students who retest after brief-but-intensive preparation will often better their scores and become eligible for college-level study, and some students who begin at very basic levels are able to test beyond of the next sequential developmental course if given the opportunity to demonstrate mastery at significant junctures. Colleges should pay particular attention to what individual or cohorts of students need to advance through and beyond developmental-level instruction. More nuanced approaches to developmental education should be explored, including the pairing of diagnostic assessment with matching instructional content and delivery modes; and “fast-track” options, including bridge programs, single-semester offerings that include two intensive sequential courses, developmental or mixed-level learning communities that provide greater opportunities for college-level course enrollment, and mid-year and summer instructional opportunities.

## **4. Push the fragments together.**

There is overwhelming evidence that the marriage of strong academic instruction and intrusive student support is key to the effectiveness of programs that have had the greatest impact on student persistence and attainment. When advising, tutoring, counseling, discipline-specific instruction and student success strategies

are not working together to present students with a holistic vision of what it takes to move forward with increased competency and confidence, there is less chance that they will do so. The more connected all these elements are, the more connected the student will be to his or her goals, trajectory in the learning process, and achievements. Such ongoing “checking in” and coordinated support is critical to the success of students for whom stepping up to college is an enormous step up.

**5. Require what is necessary for success.**

A commitment to effective practice for developmental students means applying what works unapologetically and enthusiastically. There are practices that, to date, have proven their efficacy with underprepared learners. Among them are Learning Communities where there is close coordination between and among faculty, students and content; Student Success courses, many of which are now linked to single content courses or Learning Community courses; Supplemental Instruction, which builds a clear bridge between class work and academic tutoring and support; integrated labs that provide needed practice, time on task, reinforcement and feedback; and proactive and intrusive guidance, advisement and mentoring delivered by a committed professional in close proximity to or connection with the student on an ongoing basis. Given options, many at-risk students will opt out of some or all of the many services available to them. Knowing how critical the identified interventions are to their progress and achievement, there should be careful consideration of how best to build these support strategies into the core of their college experience.

**6. Capitalize on socialization and strong connections to other students, faculty and staff wherever possible.**

Personal relationships, group memberships, and inter-group connections play a critical role in student persistence. For incoming developmental students, creating such connections early and sustaining them through their period of greatest academic challenge is key. Linkages between academic courses, student success strategies, supplemental instruction/tutoring/support labs, and proactive advising and mentoring create a propitious environment for student development and ongoing persistence. Entering developmental students may be thought of as those who have been granted a learner’s permit, but not a license. Faculty and staff should work together to reduce the chaos of learning to “drive” within the Academy, intentionally mapping students’ initial journeys to maximize their opportunities for success.

**7. Align professional development goals and strategies with student development and achievement goals.**

Given the fact that at least two thirds of incoming students at each community college test into pre-college coursework, it is incumbent upon college staff and faculty to fashion professional development opportunities and resources that enhance the skills, knowledge and effectiveness of faculty and staff who work on a day-to-day basis to advance the attainment of underprepared students. An emphasis should be placed on orienting new faculty and staff to developmental education issues and best practices and on providing ongoing support for their development as effective teachers, tutors, and mentors. Pairing theoretical inquiry with practical application and follow-up assessment is strongly recommended. In addition, handbooks that summarize and reinforce best practice research and strategies should be considered, particularly for part-time faculty, tutors and lab personnel, who typically have less exposure to on- or off-campus workshops and seminars.

Since so much is currently being learned about effective practice and propitious combinations of practices and services, faculty and staff should be encouraged and supported in efforts to remain current in the developmental education field and to put new learning into practice. Professional development programs and Institutional Research professionals should play a role in helping faculty and staff to structure meaningful assessments that will assist in gauging the effectiveness of newly-applied student success strategies and interventions and point the way toward areas for improvement.

To assure that professional development serves the college's student success agenda, performance measures for professional development should go beyond user satisfaction; they should also be used to assess the impact of professional developmental experiences on faculty and staff practice and on student progress as a result of new or revised strategies. Without such inquiry, it is impossible to determine the extent to which professional development contributes to more-informed practice and stronger student learning and achievement. Such assessment makes it possible to understand ongoing needs and to contemplate increasingly effective student development strategies.

#### **8. Promote and support effective advising.**

There is no doubt that having not only a *go-to*—but a *want-to-go-to*—person is critical to the persistence of at-risk learners. Establishing goals and pathways, noting and supporting progress, and helping to negotiate obstacles and challenges are key to success for underprepared learners. Whether advisors are instructor-advisors, skills specialists, coaches, mentors, or other staff with specific advising responsibilities; such key players require ongoing support to maintain and add to their skill sets. They need information, skills development, and opportunities for productive conversations about successful practices. A coherent program of advising mini-courses (or similar) on a variety of topics, skills, and best practices is recommended. Further, new faculty recruitment should include a clear message about the importance of the faculty advisor role, and faculty and staff orientation programs should include ongoing training on best practice advising. Involvement of faculty with backgrounds in developmental psychology and those whose use of best practices have garnered positive results relative to persistence and achievement can play an important role in engaging with colleagues on effective developmental advising. In addition, advisors should be individually-supported in their efforts to assess the impact of specific advising methodologies they employ.

Separating the goals and practices that characterize effective intrusive advising from the documentation of advising contact required through the MCCC/MTA Collective Bargaining Agreement is an important aspect of maximizing the potential of the advising process. The Agreement speaks only to what faculty advisors must do to satisfy contractual requirements ; it concerns itself primarily with loads and advisor availability. Effective practice for developmental learners includes viewing advising needs from the student perspective, creating conversations, strategies and models that have a strong impact on student success. Given the dramatic difference in persistence and completion rates for students who do—and do not—complete pre-collegiate courses, every advisor of the colleges' most vulnerable students should take responsibility for engaging in practices that have the greatest potential for promoting achievement through and beyond developmental course work.

**9. Pay attention to misaligned incentives.**

It is often the case that people with good intentions fail to notice structures and processes within their environments that send an incompatible—and often, contradictory— message. There are “silent” incentives at work at many of the colleges that serve to undermine a college wide focus on student achievement and success. Institutional budgets typically favor college departments and service areas that serve large numbers of students, with little or no obvious reward for departments or service areas that demonstrate achievement of ambitious student success goals. Strong advising is rewarded primarily through a check-off on faculty evaluations, conducted on an infrequent basis, while incentives and recognition for advising that has a significant impact on student persistence and achievement goes largely unrecognized. There is widespread encouragement and acknowledgement associated with participation in professional development, but rarely equal or more reward for implementing learned strategies that result in stronger student achievement. And while colleges applaud stand-alone grant-funded initiatives that are successful in retaining and promoting achievement among at-risk students, there has been little encouragement or incentive for college staff to collaborate in bringing successful practices from those programs to scale within mainstream institutional programs and services. With the spotlight on the necessity for improved educational achievement among students who require— but fall short of attaining— a college credential to participate productively in a 21<sup>st</sup> century economy, form and function, intentions and outcomes, and declared priorities and funding allocations need to come into closer alignment.

**10. Bridge the chasms between and among adult basic education, high school, and college.**

Because beginning college at a developmental course level disadvantages students in terms of persistence toward and attainment of a college credential, it is important to create linkages that increase the preparedness of incoming students. Administering *Accuplacer* exams within high schools and adult education settings is only a first step toward this end. Aligning reading, writing and mathematics objectives and student outcomes in pre-college settings with college-level expectations is critical. Providing students and teachers with clear roadmaps of a continuous and successful educational pathway is a significant step in the process. A successful transition, however, depends upon the extent to which students are actually prepared. Shared goals and objectives, college courses in high school and adult education settings, bridge programs, dual enrollment, early college high schools and middle colleges, high school/college team teaching and joint professional development all show promise in advancing this goal. This field is, at present, wide open, with a great deal of experimentation in evidence. It is often the “space between” that gets neglected; and in this regard, students on the preparedness margin need a stronger leg up. Productive collaboration between secondary and post-secondary education has the potential to have an enormous impact on the success of community college students in attaining a college education and increased upward mobility.

**11. Draw lessons from the best.**

There are colleges with astounding achievements relative to student success, and much to be learned from their “stories”. A starting place for information on colleges that have distinguished themselves by making a significant impact on the success of first-time college-goers, new immigrants, high school drop-outs, and others with factors that put their academic achievement in a collegiate setting at high risk is the *MetLife*

*Foundation Community College Excellence Award.* The awards have been presented to two community colleges every second year since 2002, with approximately ten additional institutions recognized in each cycle as Finalists. There is a great deal of descriptive information in print and on the Web about the strategies, outcomes, and improvements realized by these colleges.

The same type of information is available for individual programs—and some of those might be in one’s own—or a neighboring— institution, as is demonstrated by some well-documented effective programs cited in this report. The *Achieving the Dream* initiative is beginning to yield significant information on effective strategies—and bundling of strategies—within colleges that have identified and applied promising practices to meet specific student success challenges. Documentation of some of these initiatives is available through *Achieving the Dream: Community Colleges Count* ([www.achievingthedream.org](http://www.achievingthedream.org)) as well as through many of the participating colleges’ websites, presentations, and publications. In addition, the Community College Research Center (CCRC), Jobs for the Future, The Lumina Foundation, the Bill and Melinda Gates Foundation, the National Association of Developmental Education, LAANE, AMATYC, and The League for Innovation in the Community Colleges all provide rich repositories of information on best practice research and successful outcomes- driven initiatives. To capitalize on and gain insight from what is already known, it is important for college leaders at all levels, as well those most directly connected with at-risk students, to acquaint themselves with practice-based research and results.

## **12. Encourage innovation and experimentation.**

Best practices have emerged from experimentation with ideas that seemed to lead in the right direction. Based on what is known about cognition, learning, motivation, confidence and success, practitioners have always had new angles on how to reach student learning and development goals. Often, teachers or counselors will approach or configure things in new ways—and that will make all the difference. Or, more often, it won’t make *all* the difference, but enough to encourage refinement and modifications that will make *more* of a difference. An environment in which taking risks is not risky is critical to the stimulation of creativity and a new generation of successful practice. Professional development grants, sabbatical leaves, involvement in experimental projects, and encouragement to plan and thoughtfully assess innovative practices are ways to create and sustain a fertile environment for new ideas and trial implementations.

## **13. Build a culture that values and relies upon inquiry and evidence.**

It takes an entire college to be successful in making a measurable difference for students who have not traditionally fared well within community college courses and programs. The beginning of making a difference is finding and telling the truth about student achievement, including what happens at the junctures that Davis Jenkins calls “leakage points”, where successful completion rates drop and attrition rates increase. There are a great many ways in which data collection and analysis can and should be folded into campus processes. Program and Curriculum Reviews, Support Service Reviews, Annual Reports, mini-grant assessments, performance reviews, and curriculum proposal and approval processes are all natural “homes” for examination and analysis of relevant data. With solid information in hand, institutions, departments, and

individual faculty and staff can focus their efforts on challenges that seem most important— and can track those measures that are most significant in determining progress .

Clear goals and specific performance indicators of progress toward the goals are needed to provide all stakeholders with a way to assess accomplishment and to determine next steps. Evidence should be relied upon to inform decisions, and habits of evidence gathering and reflection are best reinforced by decision-making processes that respect and depend upon well-informed proposals and judgments.

The goal of student success needs to take center stage in an intentional and clearly focused way to “move the needle” toward stronger completion and attainment outcomes. In order to improve institutional capacity to take on what may be the community college’s greatest 21<sup>st</sup> century challenge, the college community must be united in a commitment to do what will make the greatest difference for students who are at greatest risk of disappearing or failing. We should be beyond dead reckoning. Deciding upon productive approaches, allocating resources, assessing the efficacy and improvement of campus practices and services, and providing for appropriate staffing to align priorities with essential human resources are among the processes that must now, more than ever, rely upon solid information and realistic projections. A commitment to evidence-based inquiry and candid assessment can unify the institution toward the pursuit of practices, policies and initiatives that show the greatest promise of strengthening student achievement and success.

#### **14. Grow successful practices.**

Bringing best practices to scale is a major challenge in an environment in which resources are scarce, and cut-backs—rather than build-outs—are on the minds of those responsible for institutional fiscal management. Yet if the goals of student persistence and attainment are to prevail, fiscal decisions will have to align with the priority the college ascribes to that aspect of its mission. Often, practices that have had the greatest impact on student success use methodologies that are at variance with the ways in which similar services are made available to large numbers of students within the institution. Placed on a level playing field where success through and beyond developmental education is the goal, competing ways of achieving that goal will likely have to be judged against one another. And for institutions to shape themselves in ways that support a greater measure of success for underprepared learners, strategies that demonstrate efficacy will have to replace or reshape traditional practices that do not yield equivalent results.

Given the implications of such transformation, it is advisable for colleges to grow their best practices gradually, methodically, and under close observation. What has created remarkable results among thirty self-selected students may not do the same for three hundred randomly-assigned students. An expanded role for Institutional Research offices may support such efforts by lending expertise to departments in designing and implementing assessments to track pilot students’ progress and the effectiveness of various aspects of planned interventions.

**15. Create collaborations to conduct further practice-based research and share results.**

One of the outcomes of this study has been the researcher's understanding of the extent to which practitioners with the Massachusetts community colleges wish to learn from one another and collaborate on solutions to difficult challenges. This seems a propitious time to create forums for shared research; development, implementation, and assessment of pilot initiatives; data collection and analysis; and models for institutionalizing effective practice.

It is also an opportune moment for Academic and Student Affairs divisions to come together on initiatives that support and reinforce student competence, confidence, and achievement. There is little doubt that the sum of the academic and student support parts equals far more student achievement and success than either can accomplish alone. Yet bringing them together in coherent, well-thought-through programming targeted toward overcoming known obstacles and barriers means breaking down traditional roles and divides. It also means sharing responsibility for making progress toward desired student outcomes. For many institutions, achieving truly blended approaches on behalf of student attainment and success will constitute a significant transformation in the way business is conducted.

This juncture also provides a timely moment for the Developmental Mathematics Institute—or a version thereof—to reconvene for the purpose of moving the system further along in its pursuit of greater success for students who begin mathematics enrollment at a developmental level. The Math departmental results of this study, found within the body of the report as well as within the compilation of Math responses to a series of add-on questions (Appendix A), provide updated information that can serve as a basis for further collaboration on a number of key issues. Follow-up on the widespread use of *CourseCompass* products seem timely as well, given their utilization within the system for both diagnosis and instruction. *Achieving the Dream* initiatives targeted toward increased success within developmental Math instructional offerings will also add to the information available regarding the results of targeted interventions and practices within Massachusetts community colleges and others throughout the country.

Taking a page from that same book, English, Communications and Reading departments clearly have a great deal to learn from one another and a shared challenge of determining which practices, among many in use, are most efficacious in developing college-level literacy skills that serve students well in collegiate-level courses. Working collaboratively, those who have responsibility for providing, assessing and analyzing the outcomes of various approaches can begin to make meaning of the practices and policies most directly connected with student progress and attainment. They, as others, can share the elements and results of pilot ventures and work together in implementing broader meaningful change.

In all of these potential collaborations, an emphasis on evidence-based inquiry and judgment will be critical in assessing various approaches and determining next best steps, whether on an individual or collective basis.

***Areas for Further Inquiry***

The Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit has yielded a great many potential areas for further study. Among those that promise the most utility at this juncture are:

1. Identification of effective models for assessing the efficacy of tutoring programs;
2. Further research into the usefulness and efficacy of *ALEKS*, *Advancer*, *MyMathTest*, and other instruments that provide significant diagnostic information as well as guidance toward individually-appropriate student instruction.
3. Research into effective developmental education online courses and collaborative offerings.
4. Research into the efficacy of a variety of Math placement and instructional approaches currently in use within the system, including mandatory vs. advisory placement; a four-course developmental sequence vs. a three-course sequence; semester-long sequential courses vs. compressed sequential courses for selected student cohorts; and adherence to the traditional sequence vs. enrollment in “the next course up” , accompanied by integrated supplementary services.
5. Discovery of professional developmental programs that have a demonstrable impact on increased student success.
6. A closer look at programs within the Massachusetts community college system that are achieving strong student attainment outcomes for increasingly larger cohorts of students.
7. Research into best practice models for institutionalizing and bringing to scale practices and policies that effectively promote student success.

## Part VI: References

- Achieve, Inc. (2008). *Closing the Expectations Gap: An Annual 50-State Progress Report on the Alignment of High School Policies with the Demands of College and Career*. Washington, DC.
- Achieving the Dream. (n.d.). *Achieving the Dream: Success is What Counts*. Retrieved May 9, 2008, from Achieving the Dream: <http://www.achievingthedream.org>
- Allen, L., & Kazis, R. (2007). *Building a Culture of Evidence in Community Colleges: Lessons from Exemplary Institutions*. Boston: Jobs for the Future
- Bailey, T. (2009). *Rethinking Developmental Education in Community College (CCRC Brief)*. Columbia University, Teachers College. New York: Community College Research Center.
- Bailey, T., & Alfonso, M. (2005). *Paths to Persistence: An Analysis of Research on Program Effectiveness at Community Colleges*. Columbia University, Teachers College, Community College Research Center, New York.
- The Center for Student Success. (2007). *Basic Skills as a Foundation for Student Success in California Community Colleges: A Review of Literature and Effective Practices*.
- Bill and Melinda Gates Foundation. (n.d.). *Postsecondary Success*. Retrieved June 15 2009, from Bill and Melinda Gates Foundation: [www.gatesfoundation.org](http://www.gatesfoundation.org)
- Boylan, H. R. (2002). *What Works: Research-Based Best Practices in Developmental Education*. Appalachian State University. Boone: Continuous Quality Improvement Network, with the National Center for Developmental Education.
- Brancard, R., DeLott Baker, E., & Jensen, L. (2006). *Accelerated Developmental Education Project Research Report*. Denver: Community College of Denver.
- Brock, T., Jenkins, D., Ellwein, T., Miller, J., Gooden, S., Markin, K., et al. (2007). *Building a Culture of Evidence for Community College Student Success: Early Progress in the Achieving the Dream Initiative*. New York: MDRC and CCRC.
- Calcagno, J. C., Crosta, P. M., Bailey, T., & Jenkins, D. (2007, November). Stepping Stones to a Degree: The Impact of Enrollment Pathways and Milestones on Community College Student Outcomes. *Research in Higher Education*, 48 (n7), pp. 775-801.
- Calcagno, J., & Long, B. (2008). *The Impact of Postsecondary Remediation Using a Regression Discontinuity Approach: Addressing Endogenous Sorting and Noncompliance*. National Center for Postsecondary Research.
- Catalozzi, L. (2008). *Achieving the Dream Together*. Bunker Hill Community College, Learning Communities Director, Danvers.
- Catalozzi, L. (2009). *Building a Culture of Evidence to Ensure Student Success: A Community College Leadership Academy Presentation*. Haverhill.

## Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit

- CCSSE.(2007). *Committing to Student Engagement: Reflections on CCSSE's First Five Years, 2007 Findings*. Austin: The University of Texas at Austin.
- Choitz, V. (2006). *Strategies for Success: Promising Practices from the 2004 Winners of the MetLife Foundation Community College Excellence Award*. MetLife Foundation and Jobs for the Future, Boston.
- Clery, S., & Solorzano, B. (September/October 2006). *Data Notes: Keeping Informed about Achieving the Dream Data*. Achieving the Dream: Community Colleges Count.
- Commonwealth of Massachusetts Community College Developmental Education Committee. (1997). *Access and Quality: Improving the Performance of Massachusetts Community College Developmental Education Programs*. Boston: Massachusetts Community College Executive Office.
- Connell, C. (Winter 2008). *Students Aren't Just Data Points, but Numbers Do Count*. Indianapolis: Lumina Foundation for Education.
- Education Commission of the States. (March 2008). Developmental Education: Can It Improve College Attainment Rates? *The Progress of Education Reform, Vol.9, No.2* . Denver.
- Goldberger, S. (2007, October). Designing State Community College Data and Performance Measurement Systems to Increase Student Success. *Achieving the Dream: Community Colleges Count, An Achieving the Dream Policy Brief* . Boston: Jobs for the Future.
- Goldrick-Rab, S., Harris, D., Mazzeo, C., & Kienzl, G. (May 2009). *Transforming America's Community Colleges: A Federal Policy Proposal to Expand Opportunity and Promote Economic Prosperity*. Brookings, Metropolitan Policy Program.
- Jenkins, D. (2006). *Institutional Effectiveness and Student Success: A Study of High- and Low-Impact Community Colleges*. New York: Community College Research Center, Teachers College, Columbia University.
- Jenkins, D., Ziedenberg, M., & Kienzl, G. (2009). *Building Bridges to Postsecondary Training for Low-Skill Adults: Outcomes of Washington State's I-BEST Program*. New York: Community College Research Center, Teachers College, Columbia University.
- Jobs for the Future ( 2008, April). Q and A: Bob Gabriner and Barbara Illowsky on the California Basic Skills Initiative. *Achieving Success: The State Policy Newsletter of Achieving the Dream: Community Colleges Count* .
- Karp, M. M. (2008, September 18). Institutional Policies and Student Use of Support Services: Beware Unintended Consequences. New York: Community College Research Center, Columbia University.
- Kazis, R. (2006, April 7). *Articulation, Alignment and The Challenge of College-Readiness*. Testimony to The Commission on the Future of Higher Education, Indianapolis, Indiana.
- Leinbach, D. T., & Jenkins, D. (2008, January). Using Longitudinal Data to Increase Community College Student Success: A Guide to Measuring Milestone and Momentum Point Attainment. *CCRC Research Tools* , 2, pp. 1-24.
- Lillibridge, F. (2008). Retention Tracking Using Institutional Data. In *New Directions for Community Colleges* (Vol. 143). Wiley Periodicals, Inc.

## Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit

- Long, J. C. (2008). *The Impact of Postsecondary Remediation Using a Regression Discontinuity Approach: Addressing Endogenous Sorting and Noncompliance*. New York: National Center for Postsecondary Research.
- Massachusetts Board of Higher Education. (February 2007). *Final Report from the Task Force on Retention and Completion Rates at the Community Colleges*. Massachusetts Board of Higher Education.
- Massachusetts Community College Developmental Education Committee. (1998). *Access and Quality: Community College Developmental Education Programs*. Boston: Massachusetts Community College Executive Office.
- Massachusetts Community College Executive Office. (2006). *100% Math Initiative: Building a Foundation for Student Success in Developmental Mathematics*. Boston.
- McClenney, K. (2009, April 24). Helping Community College Students Succeed: A Moral Imperative. *Chronicle of Higher Education* .
- McClenney, K. (2004). Keeping American's Promise: Challenges for Community Colleges. In K. Wilson, & C. Boswell (Eds.), *Keeping America's Promise*. Education Commission of the States.
- McClenney, K. (2006). Pathways to Student Success, Keynote Address, CCTI Summit.  
[www.league.org/league/projects/ccti/summit/2006/mcclenney.doc](http://www.league.org/league/projects/ccti/summit/2006/mcclenney.doc).
- McKusick, D., & Adams, P. (2009, March). *Accelerating Developmental Learning: Using Evidence to Create a Plan and Measure its Effectiveness*. Retrieved June 5, 2009, from League for Innovation in the Community College:  
[www.league.org/2/conferences/innovations/2009/powerpoints.cfm](http://www.league.org/2/conferences/innovations/2009/powerpoints.cfm)
- Northern Essex Community College Office of Institutional Research and Planning. (2007, December 14). The Effect of Taking Developmental Courses Immediately Upon Receipt of Assessment Results on Three-Year Positive Persistence Rate. *Achieving the Dream Series* . Haverhill, MA: Northern Essex Community College.
- Questioning the Value of Remedial Education. (2009, July 31). *Inside Higher Ed* .
- Rhodes College Strengthens Advising and Gives Students More Control With Implementation of DegreeWorks*. (2009). Retrieved March 22, 2009, from Sungardhe Web site: [www.sungardhe.com/products/degreeworks](http://www.sungardhe.com/products/degreeworks)
- Russell, A. (2008). *Enhancing College Success Through Developmental Education: A Higher Education Policy Brief*. Washington?: American Association of State Colleges and Universities.
- Salvador, S. M. (2009, March 16). *Learning Reconsidered- The Interconnectedness of Student Learning: How to Make a Difference*. Retrieved May 28, 2009, from [www.league.org](http://www.league.org):  
<http://www.league.org/2/conferences/innovations/2009/powerpoints.cfm>
- Schwab, E., & Walling, S. (2008, April). *League for Innovation in the Community College*. Retrieved March 2009, from Learning Abstracts, v.11, no. 4: <http://www.league.org>
- Schwartz, W., & Jenkins, D. (2007). *Promising Practices for Community College Developmental Education: A Discussion Resource for the Connecticut Community College System*.
- Sperling, C. (2008). *Four Primary Sources: Best Practice Findings and Recommendations*. Boston.

## *Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit*

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Sperling, C. (2003). How Community Colleges Understand the Scholarship of Teaching and Learning. *Community College Journal of Research and Practice* , 27, 593-601.

Springfield Technical Community College. (2007). STCC Analysis of 1st time STCC students (F04, F05 and F06) who returned for a 2nd semester in the Spring. Springfield.

(June 2005). *Strategies for Serving Underprepared Community College Students: Using Self-Evaluation to Promote Institutional Change (Draft)*. Lumina Foundation; and the Ford Foundation Bridges to Opportunity Project, Colorado Lumina Initiative for Performance.

Subban, P. *A Research Basis Supporting Efferentiated Instruction*. Monash University, Melbourne.

Task Force on Retention and Completion Rates at the Community Colleges. (2007). *Final Report from the Task Force on Retention and Completion Rates at the Community Colleges*. Boston: Massachusetts Board of Higher Education.

Tomlinson, C. A. (2005). *How to differentiate instruction in mixed-ability classrooms* (2nd Edition ed.). Upper Saddle River: Pearson Merrill Prentice Hall.

Twigg, C. A. (2005). *Increasing Success for Underserved Students: Redesigning Introductory Courses*. Saratoga Springs: National Center for Academic Transformation, supported by a grant from Lumina Foundation for Education.

(2005). *Walking the Talk: Community Colleges Where Everyone Wins*. Boston: Jobs for the Future.

Wall, C. (2001, May 11). Board of Higher Education Memo: Mathematics Assessment Cut Score and Pilot Studies. Boston, MA.

Zachary, E. (2008). *Promising Instructional Reforms in Developmental Education: A Case Study of Three Achieving the Dream Colleges*. MDRC.

**Part VII: Appendices**

- A. Additional Math Data: Follow-up on *100% Math Initiative***
- B. Specific Topics for Further Inquiry Generated from Campus Interviews: A Wish List from Massachusetts Community College Developmental Educators**
- C. Massachusetts Community Colleges Developmental Education Best Policy and Practice Audit Timeline**
- D. Instructions for Completion of Institutional Inventories**
- E. Institutional Inventories**
- F. Campus Interview Protocol**

## **Appendix A:**

### **Following Up on 100% Math: Additional Mathematics Perspectives**

Seven additional questions, complete with sub-sections, were put to Math department chairs to follow up on recommendations that emerged from the *100% Math Initiative*. While the Department Chair Inventory, completed by 44 department chairs and 20 Special Project Directors, probed practices consistent with many of the recommendations that appeared in the *100% Math Initiative* Final Report, it did not address some specific math-related issues that were raised by the Mathematics report. As a result, additional inquiries were formulated in consultation with Linda Murphy, the *100% Math Initiative* Project Manager and Developmental Mathematics Curriculum Coordinator at Northern Essex Community College.

On the first three questions, responses indicated that:

- Nine of the fifteen colleges have created Math Coordinator positions;
- Eleven of the fifteen indicate that there are consistent strategies utilized to underscore the importance of homework and/or incentivize students to complete it; and
- Six of the fifteen consider the contact time in developmental math sufficient for instructors to integrate key aspects of effective instruction for developmental learners.

Questions 4-7 queried department chairs about the number of levels of developmental math their college offers; the titles and course numbers of developmental math offerings at each level; and the placement procedures in place, including cut-off scores and additional placement criteria relative to *Accuplacer* and/or other instruments or procedures used to place students in the identified levels.

#### *Levels*

Of the fifteen community colleges, eleven offer a total of three levels of developmental Math, while four colleges<sup>89</sup> provide for a four-course sequence. In all but two institutions, placement into Math is mandatory, based on the match between pre-established cut-off scores and students' performance on the *Accuplacer* arithmetic and/or intermediate algebra tests. In the two colleges that do not implement mandatory placement<sup>90</sup>, students, in concert with their advisors, are expected to use placement test results as advisory in selecting the appropriate level course.

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<sup>89</sup> Cape Cod, Greenfield, Mount Wachusett, and North Shore Community Colleges

<sup>90</sup> Mass Bay and Mount Wachusett Community Colleges

*First-Level Developmental Math*

Six colleges (40%) use some variation of Basic Math (i.e. *Basic College Math, Basic Math, Basic Mathematics, Basic Mathematics Skills, Basic Math with Lab*) for their first level course. An equal number have titles that begin with the word *Fundamentals* (four use *Fundamentals of Math* or *Fundamentals of Mathematics*; the other two use *Fundamentals of Arithmetic*). Two colleges call their first-level course *Prealgebra*, and one begins the developmental sequence with a course entitled *Arithmetic Review*. In all, three colleges use of the term *Arithmetic* in their course titles. As disparate as the course titles are, so too are the course numbers. Each course has a different number designation. Most are comprised of three digits, with the first one being 0; a few are two digit designations. All except one use MA, MTH or MAT; one uses ARTH (for *arithmetic*). Eleven of the 15 courses meet for three hours a week (one indicates that the three hours includes a lab); three first level courses meet for four hours a week<sup>91</sup>; and one course meets for six hours a week.<sup>92</sup> Courses that meet for more than three hours a week generally include an integrated lab.

Most of the colleges set an Accuplacer cut off score close to 50 on the Arithmetic Test, with a few institutions using a cut off score on the Elementary Algebra test as an alternative or companion measure to the Arithmetic score. The cut-off Arithmetic scores that varied from the norm were 60, 35, 32, 31, and 25. In the case of institutions that offer four, rather than three, developmental math courses, the first course generally offers a more basic level of instruction than the typical pre-algebra first-level course. Cut off scores for the most basic courses at those colleges are considerably lower than for first level courses at other institutions.

Four of the fifteen colleges report using additional criteria (i.e. challenge exam, in-class test, individual advising, and interview with math faculty) to supplement *Accuplacer* results; and three colleges report placement criteria that can “trump” *Accuplacer* results for course placement purposes. At two colleges, students may “self-advise” and choose the most appropriate class<sup>93</sup>; in the third<sup>94</sup>, a grade of 75 or better on a challenge exam can be used in lieu of test results. But, as the campus interviews revealed, there are instances on several campuses where individual exceptions to the published criteria are made for students in particular circumstances.

*Second Level Developmental Math*

In general, second-level courses focus on first-level Algebra; as with first-level courses, they are named a great many different things: *Algebra I, Basic Algebra I, Beginning Algebra, Elementary Algebra, Elementary Algebra I-III, Introduction to Algebra, Introductory Algebra, and Introductory Algebra with Lab*. In addition, three colleges call their second level course *PreAlgebra* (or *Prealgebra*); and one that has four levels titles the second one *Preparatory Course for Algebra*. They also bear course numbers that are different, but consistent

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<sup>91</sup> at Holyoke, Northern Essex, and North Shore Community Colleges

<sup>92</sup> at Roxbury Community College

<sup>93</sup> Mass Bay and Mount Wachusett Community Colleges

<sup>94</sup> Middlesex Community College

with their first-level course numbers. Contact hours range from three to six hours per week, with twelve of the 15 colleges offering these courses 3 hours per week. Two attribute four contact hours,<sup>95</sup> and one course<sup>96</sup> meets for 6 hours per week, including supervised lab time.

Cut-off scores are set quite often in terms of both the Arithmetic and Elementary Algebra tests. There appears to be more variability of the actual scores that serve as demarcation lines for placement into second level math courses than for first-level ones. While several colleges that use the second course as a first-level Algebra course set the score at below 50-57 on the Elementary Algebra test, others are using cut-off scores in the 60's, and, in one case, 82 for first-level Algebra placement.

Eight colleges do not use any other official criteria to supplement *Accuplacer* scores. Six report using one of the following: challenge exam, in-class test, individual advising, interview with or recommendation from first-level math instructor, and "sometimes, time since last math course." Placement criteria used instead of *Accuplacer* results were reported at five institutions. They report utilization of : C or better in previous course, departmental final exam, grade of 75 or better on a challenge exam, and student self-selection.

#### *Third Level Developmental Math*

As would be expected, colleges that offer the first level of Algebra as their second developmental level course, dedicate the third level course to higher level algebra concepts. Course titles for third-level courses vary— from the majority, that use *Basic, Introductory, Fundamental, or Elementary* in the title, to the minority, (5) who call the course *Intermediate Algebra, Intermediate Algebra Part I, or Intermediate Algebra and Trigonometry*. Course numbers are consistent with previous courses, but three of the courses at this level are three-digit course numbers that begin with 1 rather than 0. Thirteen of the fifteen colleges allocate three hours per week for the third-level developmental course; two use four contact hours per week<sup>97</sup>.

Again, cut-off scores vary, with the floor ranging from 42 to 70 (the norm was in the 50's) on the Elementary Algebra test, and the ceiling —when one was set— ranging from 72 to 85. Criteria used in addition to *Accuplacer* results, as well as that used instead of *Accuplacer* results, included the same additional measures detailed in the *Second Level Developmental Math* section, above.

#### *Fourth Level Developmental Math*

There is an interesting mix of courses and choices that characterized the developmental math sequences of colleges that reported four levels of developmental math. At one college<sup>98</sup>, the second level course (entitled

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<sup>95</sup> Holyoke and Northern Essex Community Colleges

<sup>96</sup> at Roxbury Community College

<sup>97</sup> Holyoke and Northern Essex Community Colleges.

<sup>98</sup> Greenfield Community College

*Preparatory Course for Algebra*) is optional, recommended by either the student's advisor or the *Basic Mathematics Skills* instructor. Therefore, students who begin in the basic math course and are then referred to the preparatory course don't reach the second-level algebra course until their fourth term. Another college has added a pre-algebra course as the second-level developmental course, but offers the third and fourth level courses in two formats: one through a traditional sequence of three-credit Elementary Algebra 1 and 2, offered over a two-semester time frame; and the other, titled *Intermediate Algebra*, a compressed version that addresses the same content in a single semester, for four credits<sup>99</sup>. In a third institution,<sup>100</sup> *Fundamentals of Arithmetic* and *Prealgebra*, the first two courses in the sequence, were created out of what was once a pre-algebra course. An *Accuplacer* score at the low end of the Arithmetic range now places students in the first-level course, which prepares them for the second one, *Prealgebra*. In addition, another course—*Algebra for Precalculus*— was created on the upper end of developmental algebra sequence for students who finish *Intermediate Algebra* and want to go on to *Precalculus I*. The fourth institution<sup>101</sup> with a four-course sequence also appears to split what would have been the lowest level course between an arithmetic course and a next-level pre-algebra course.

All four of the one-semester fourth level courses meet for three hours a week; the course that compresses the coursework for the third and fourth level courses in a single-semester offering meets for four hours per week. All of them use an Elementary Algebra test range that begins somewhere between 52 and 54 and extends to a score of 81 to 90.

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<sup>99</sup> This practice is in use at North Shore Community College

<sup>100</sup> Cape Cod Community College

<sup>101</sup> Mount Wachusett Community College

## **Appendix B:**

### **Specific Topics for Further Inquiry Generated from Campus Interviews: A Wish List from Massachusetts Community College Developmental Educators**

The following list was generated from responses to a Campus Interview question about what interviewees would hope to get from the Developmental Education Best Policy and Practice study:

#### **Placement Testing:**

- Alternatives to the CPT Placement Exam, which has become a high-stakes test. What else is being used? How?
- Use of assessments and diagnostics beyond *Accuplacer*.
- Would like to be able to use something more diagnostic with high school students that the college is testing early.
- What other processes and procedures are being used for Math placement?
- How various colleges use *Accuplacer* test results. Does anyone use a diagnostic approach for specific skill areas? Does anyone offer less-than-full courses to address specific gaps in learning?

#### **Curriculum and Pedagogy:**

- Online delivery of DE courses, including security issues.
- Which colleges are implementing online developmental Writing courses with success?
- Identification of colleges that have had success with distance learning DE courses.
- Models of DE courses that offer different contact hours/credit hours/lab integration.
- Information about integrating Math labs into Math instruction.
- Formal study skills components of developmental Math courses.
- Models for bringing to scale initiatives like Learning Communities without additional funding.
- What programs exist for students whose academic limit is reached by passing developmental courses? Models for transition programs with low academic potential that combine co-op job training and classes: something that recognizes achievement, but offers other success options besides a degree or certificate. (Interested in exploring CCCC's Project 40 program.)

- Given limitations of college administrative computing systems, how have other colleges implemented flexible pedagogies that depend upon such computing systems? Interested in contact people at other institutions that have solved this problem.
- What accelerated programs exist, and what methodologies do they use?
- How do other colleges align Writing curriculum outcomes, from Basic Writing up through Composition?
- How do other colleges handle issues related to general instruction and support for DE students?
- Information about student success courses for DE students: are they mandatory? how effective are they? what evidence of effectiveness has been gathered?
- How have other colleges worked toward changing culture and attitudes from ones that consider DE as something students have to “get out of the way” to something valued—an integral step toward academic success?

### **Advising**

- Are there colleges that train advisors to advise DE students?

### **Administrative Structures**

- Interested in learning more about BHCC’s rolling start date model.
- What do developmental education advisory committees do on other campuses?

### **Tracking and Assessment**

- What are other colleges using assessment to document curricular improvements and success in developmental education?
- What are methods for assessing the effectiveness of Professional Development?
- Interested in other colleges’ models for data gathering and using it to determine next steps.

### **Communication and Linkages**

- Would like campus contact people for each DE and support service area, with special areas of expertise noted.
- Would like a Massachusetts developmental education ListServ.
- Dissemination of information about best practices collected through this survey in a public forum: perhaps the LAANE fall conference.

- How do other colleges communicate to the entire college what DE departments are achieving?
- A system to connect people involved with DE to streamline developmental curricula.
- A system wide effort to work with K-12 and public transfer institutions toward streamlining efforts.
- A program through which developmental education best practices are shared system wide, including a formal network of key personnel at each campus.
- More information about what other colleges are doing and how well their efforts are working; a list of promising/successful strategies, with names of colleges and specific contact people.
- A one-day event linking developmental educators with their counterparts across the system, including: full and part-time faculty, administrators, student support staff, registrars, administrative computing staff. Pass out the results of this survey, providing opportunities for discussion by interest area. Seek funding through publishers such as Pearson Publishers (publishes *MyMathLab*).

**Appendix C:**

**MASSACHUSETTS COMMUNITY COLLEGES  
DEVELOPMENTAL EDUCATION POLICY AND PRACTICE AUDIT TIMELINE\*  
CHARMIAN SPERLING, ED.D., PRINCIPAL INVESTIGATOR**

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<b>Developmental Policy and Practice Audit Phases and Tasks</b>	<b>Project Dates</b>	<b>Deliverables</b>
<p>Meet with BHE Research Analyst</p> <p>Review relevant Massachusetts research</p> <p>Conduct literature review, including recent literature on best practices as well as relevant information generated through the MCCEO, the Massachusetts Board of Higher Education, and other relevant Massachusetts sources.</p>	<p>April-mid May 2008</p>	<p>Description of history and context</p> <p>Literature Review and relevant conclusions regarding a Massachusetts Community College best practice audit</p>
<p>Develop an appropriate audit instrument, with design input from BHE, Massachusetts IR Directors, and other partners</p> <p>Update Presidents at June meeting</p>	<p>May 16-June 18, 2008</p>	<p>Draft audit instrument</p> <p>Final audit instrument</p>
<p>Develop introductory text and directions for content completion of the audit</p> <p>Administer audit: to be accomplished by Dr. Lois Alves, Middlesex Community College</p>	<p>June 18- June 30, 2008</p>	<p>Audit, with introductory material, definitions, and directions and recommendations for completing the instruments for each relevant department/discipline</p>
<p>Colleges complete the audit with developmental math, writing, reading departments and, on a voluntary basis, other relevant departments that provide developmental courses in math, writing and reading</p>	<p>June 30-October 9</p>	<p>All individual audits completed and submitted by October 10</p>
<p>Conduct preliminary analysis of audit instrument results</p> <p>Involve IR Partners</p>	<p>As instruments are completed and submitted</p>	

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15 Conduct campus interviews with relevant administrators, division heads, department chairs/faculty, program directors  PI conducts 10 interviews; identified staff member conducts 5 campus interviews, using the same interview protocol*	mid-September- mid-November, 2008	Interview notes
Assemble individual college composites  PI prepares 10 composites; identified partner(s) prepares 5 composites, using a standardized organizational format	By December 19, 2008	Individual college audit composites
Prepare Progress Report  Update College Presidents on progress to date	By January 9, 2009	Progress Report  Discussion about progress and input from CC CEOs
Compile and analyze preliminary audit findings	By March 16, 2009	Preliminary findings
Develop overall system audit conclusions, working with IR partners	March 16-May 7 2009	Draft Report, providing system wide conclusions relative to developmental education best practices.
***Host Audit Analysis Discussion	By May 29, 2009	Summary of Discussion
Report out and discuss conclusions with College Presidents and Chief Academic Officers	By June 19, 2009	Meeting Notes
Develop and distribute Final Report	By June 30, 2009	Final Report

Notes:

\*Timeframes and deadlines have been set to correspond with the availability of the Principal Investigator over the 15-month period.

\*\* The Principal Investigator conducted and documented 7 campus interviews; the remaining 8 were split between Drs. Charles Kaminski and Lois Alves.

\*\* An audit analysis discussion was not held prior to discussions with Presidents and Chief Academic Officers. Instead, draft copies were circulated via Chief Academic Officers to participating campus stakeholders, and their corrections were incorporated in the Report. Follow-up discussion forums are anticipated.

## **Appendix D: Instructions for Completion of Institutional Inventories**

To: Massachusetts Community College Chief Academic Officers

From: Charmi Sperling, Principal Investigator, MCCEO Developmental Education Best Policy and Practice Audit

CC: Massachusetts Community College Presidents, MCCEO Director Janice Motta, Middlesex Community College VP of Institutional Research and Enrollment Management Lois Alves.

Date: July 15, 2008

Dear Colleagues,

Attached to this letter, you will find a packet of materials that will both inform colleagues on your campus about the *Massachusetts Community College Developmental Education Best Policy and Practice Audit* and provide the specific inventories for completion by your institution by October 7, 2008.

By way of general information, I have included an updated draft of the Overview sent to you earlier this year, so that it can be distributed to individual contributors and others who have an interest in knowing more about the background and goals of the project. In addition, the Packet contains your institution's actual audit instrument: an Excel Workbook, containing the discrete Inventories to be completed and returned electronically.

### **Inventory Organization and Administration**

The Inventory Workbook is organized by six (6) discreet tabs at the bottom, representing six separate Community College Developmental Education Inventories, each of which is to be completed by different on-campus individuals and/or groups.

**CAOs will complete Inventory A.** While most questions within the Inventory are not asked of others on campus, the Inventory does include 15 items that also appear on **Inventory B**, a separate one to be completed by college departments that provide developmental reading, writing and/or math courses. It is not intended that these responses be coordinated. Feel free to respond from your own perspective on all items that ask for your perception. Throughout the Inventory, you will note sections that ask or allow for fuller explanation; please feel free to attach additional pages to accommodate responses that do not fit within the allotted yellow blocks.

**Separate forms of Inventory B**, delineated by tabs which indicate the departments that will be involved, should be completed by each department that offers developmental courses in reading, writing and/or math. Your organizational structure for developmental education programs and courses will dictate how many departments that involves; **BUT** regardless of your specific structure, a separate inventory should be completed for each of the three basic skills areas noted. There are separate Workbook tabs for each of those Inventories.

The inventories for developmental writing and developmental reading contain the same items; the one to be completed by your institution's department that offers developmental math contains some additional items that follow-up on the 2006 *100%Math Initiative* report in domains that go beyond the scope of the general *Developmental Education Best Policy and Practice Audit*. Up-to-date answers to these questions will assist colleges in taking stock of impact of the *100%Math Initiative* and lay the groundwork for continued system wide efforts to improve mathematics education for developmental learners.

Again, as with **Inventory A**, there are sections of **Inventory B** that ask or allow for fuller explanation; department personnel who complete the Inventory should feel free to attach additional pages to accommodate responses that do not fit within the allotted yellow blocks.

### **Optional Special Developmental Education Programs**

In addition to the college departments that offer developmental reading, writing and math courses for your general student population, we are aware that many of the colleges have separate programs—often grant funded—that encompass two or more developmental courses and provide related wrap-around services for underprepared students. Your college may, on an optional basis, submit a maximum of two (2) additional Inventories, completed by program staff of such initiatives. Inventories for these programs are designated *Optional Special Program 1* and *Optional Special Program 2* on the Workbook tabs. Designated staff of each *Special Program* the college chooses to include will complete **Inventory B**.

### **Identification of Inventory Contact People**

The name and title of each individual responsible for completing and submitting Inventory B on behalf of his/her department(s) should be noted on the first page of the relevant Inventory. We anticipate that the person completing the inventory will, in most cases, be a department chair or program coordinator; however, it can be another appropriate designee.

### **Definitions**

To ensure that we are on similar pages when we talk about—and report on—developmental education at fifteen unique institutions, I ask that you and college staff who will be completing the inventories on behalf of college developmental education programs and departments utilize the following definitions:

*Developmental Education courses:* courses provided for the purpose of helping underprepared college students attain their academic goals. This inquiry focuses on reading, writing and mathematics courses that are intended to prepare students to succeed in related college-level courses.

*Underprepared students:* students who need to develop their cognitive or affective abilities in order to succeed in a postsecondary educational experience. For purposes of this inventory, such students will have been placed in developmental courses and/or programs based upon relevant academic skills assessments.

*Developmental Program:* any organized collection of courses and services designed to help underprepared students succeed.

### **The Process**

Many of the questions asked within the Inventories will likely require consultation with colleagues— either to provide information that the completer does not currently have, or because the answer for a group requires input from members of the group. I would encourage an early distribution the materials to the departmental contact people to allow ample time for information and/or opinion gathering. The entire Workbook may be forwarded along to any college employee for internal review and/or participation. The submissions, however, should come **only** from your office or the office of the designated completer of each Inventory. They should be returned electronically to Dr. Lois Alves, Middlesex Community College Vice President of Institutional Research and Enrollment Management. Her email address is: [alvesl@middlesex.mass.edu](mailto:alvesl@middlesex.mass.edu).

Once your institution's inventories have been received, we can proceed with follow-up Campus Interviews. The interviews will involve a "team" of people that you designate, including those who completed the submitted inventories, some departmental faculty and at least one Student Affairs professional whose department provides support to developmental learners. You may, if you wish, include students. A group of 10-15 is ideal; 20 is the maximum for a productive follow-up discussion. We can have more specific conversations about whom you might want to include once your Inventories are completed.

Again, my sincere thanks for your interest and engagement in an internal inquiry process that will update all of us on the specific practices in place to achieve greater student success among academically underprepared students at our colleges. While no data collection process is perfect, we hope that you will strive for the greatest degree of accuracy possible at all levels within your institution. It is a goal of this undertaking to make this a study upon which each college can rely in gaining an updated understanding of both the current developmental education best practice literature and those practices currently in use or experimentation within our system. We anticipate that findings from this effort can be utilized to lay a foundation for propitious next steps, be they collaborative or college-specific.

Please feel free to email or call me (cell phone, 617-872-5511) or Lois Alves (@MCC: 978-656-3281) if you have questions. I suggest calling Lois directly about technical issues related to completing and/or submitting the Inventories.

I remain grateful for your support, advice and participation, and thank you in advance for your work on this important system wide effort,

Charmi Sperling

**Appendix E: Institutional Inventories**

Two Inventories follow. The first is the one completed by each Chief Academic Officer on behalf of his/her institution. The second is the Developmental Math Inventory, which includes all common questions answered by Writing, Reading, Math, and participating Special Project departments *as well as* questions M1-M-7, posed only to Math departments as a follow-up to the *100% Math Initiative*.

**Massachusetts Community Colleges  
Developmental Education Inventory  
Chief Academic Officer**

Name of College						
Chief Academic Officer						
	Please indicate the extent to which each of the following developmental education practices occurs on your campus by entering an "X" in the appropriate box.	Consistently	Most of the Time	About Half of the Time	Seldom	Never
1-1	At your college, references to developmental education as a priority are public, prominent and clear.					
1-2	Student success data is widely disseminated throughout the college and analyzed to foster problem-solving with regard to improving student outcomes, delivery, and professional development.					
1-3	There is collaboration between developmental education faculty and faculty and staff from other departments/disciplines.					
1-4	There is strong integration of developmental education faculty within college governance and campus-wide activities.					
1-5	There is consistency between developmental education goals and institutional goals.					
1-6	Developmental education is part of long-range planning at the college.					
1-7	The campus community, outside of the developmental education department(s), considers developmental education important.					

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1-8	There is a mission statement, or statement of philosophy/principles/values, that guides developmental education at the college.					
1-9	A developmental education mission statement and/or DE goals and objectives are communicated throughout the college.					
1-10	The campus community is advised on the extent to which developmental education courses/programs are accomplishing their stated goals and objectives.					
1-11	The campus community is apprised of what developmental education instructors are learning about effective interventions/instructional practices for developmental students.					
<b>Which of the following statements best describes the way developmental educational courses are coordinated on your campus?</b>						
a. _____		Developmental education courses are situated within a single college department/unit, along with support services and labs, under the supervision of a single coordinator.				
b. _____		Developmental education courses are located within a single college department, under the supervision of a single coordinator.				
c. _____		Developmental education courses are located within subject-specific divisions/departments, coordinated by a dedicated faculty/staff member.				
d. _____		Developmental education courses are located within subject-specific divisions/departments, without a designated developmental education coordinator.				
e. _____		Other. <b>Please describe in the yellow box below.</b>				

2-2	<b>If your developmental courses are not located within a single division/department at your college, is there a formal/operational mechanism to meet with those involved in relevant courses and services to articulate common goals and objectives across courses and services and to integrate such offerings where appropriate?</b>	
	a. _____	Yes
	b. _____	No
	c. _____	Not Applicable
2-3	<b>Does your college have a designated administrator who coordinates planning for developmental education college-wide?</b>	
	a. _____	Yes
	b. _____	No
2-4	<b>Which ONE of the following statements best describes the way developmental educational courses are integrated on your campus?</b>	
	a. _____	Comprehensive and coordinated support services are well-integrated into developmental education courses.
	b. _____	Some support services are well-integrated into developmental education instruction. Please list them in the yellow box below.
	c. _____	An array of support services is available to all students. Developmental education students are referred to these services, as appropriate.
2-5	<b>Is placement into developmental math courses, based on an incoming student assessment, mandatory at your college?</b>	
	a. _____	Yes
	b. _____	No

2-6	<b>Is placement into developmental writing courses, based on an incoming student assessment, mandatory at your college?</b>	
	a. _____	Yes
	b. _____	No
2-7	<b>Is placement into developmental reading courses, based on an incoming student assessment, mandatory at your college?</b>	
	a. _____	Yes
	b. _____	No
2-8	<b>Please indicate which of the following inventories are included in your incoming student assessment:</b>	
	a. _____	Learning style inventory
	b. _____	Study or learning skills inventory
	c. _____	Other additional assessments. <b>Please describe in the yellow box below:</b>
2-9	<b>Are all incoming students required to complete a basic skills assessment?</b>	
	a. _____	Yes
	b. _____	No
	<b>If no, which of the following groups of students are not tested?</b>	
	c. _____	Transfer students who have completed college level coursework
	d. _____	Evening/Weekend students
	e. _____	Undeclared majors
	f. _____	Other student groups. <b>Please describe in the yellow box below:</b>

<b>2-10</b>	<b>Is there a systematic review of the relationship between student assessment results and student performance in related courses to discover significant relationships?</b>	
	a. _____	Yes
	b. _____	No

<b>2-11</b>	<b>Which ONE of the following statements best describes your policy or practice concerning the order in which students must complete developmental education courses?</b>	
	a. _____	Students must complete all required developmental courses before taking any college level courses.
	b. _____	Students may take first or second-semester developmental courses alongside selected college-level courses.
	c. _____	Students may delay taking certain required developmental courses until second semester of their second year.
	d. _____	Other. <b>Please describe in the yellow box below:</b>

<b>2-12</b>	<b>Which ONE of the following statements best describes the full-time/part-time faculty ratio teaching developmental courses at your college?</b>	
	a. _____	The ratio of full and part-time faculty teaching developmental education classes is similar to the ratio for other courses/disciplines at the college.
	b. _____	There is a higher proportion of full-time faculty teaching developmental education courses than other courses at the college.
	c. _____	There is a higher proportion of part-time faculty teaching developmental education courses than other courses at the college.

<b>2-13</b>	<b>Do you implement formal fast-track developmental education programs and/or courses for selected students, based on college criteria?</b>	
-------------	---	--

	a. _____	Yes					
	b. _____	No					
	<p><b>Please indicate the extent to which each of the following statements describes the selection and/or assignment of developmental education faculty by entering an "X" in the appropriate box.</b></p>		<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
<b>2-14</b>	Faculty who have the most success with developmental students are assigned to DE courses.						
<b>2-15</b>	Faculty applicants who are enthusiastic, knowledgeable, and committed to developmental education are recruited and hired to teach developmental courses.						
	<p><b>Please indicate the extent to which the following data collection processes are implemented at your college by entering an "X" in the appropriate box.</b></p>		<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
<b>2-16</b>	The college tracks students' progress through sequential developmental education courses to determine whether they advance from one level to the next.						
<b>2-17</b>	The college tracks grades/student performance in the most relevant college-level course after completion of developmental course(s).						
<b>2-18</b>	The college tracks student satisfaction with developmental education courses and services.						

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2-19	The college tracks developmental education students' retention, in the aggregate, from one semester to another.					
2-20	The college tracks developmental education students' retention, by the basic skill area in which they began developmental education courses, from one semester to another.					
2-21	The college tracks successful course completion and graduation rates for developmental students.					
2-22	The college tracks course completion and graduation rates for developmental students, by specific developmental subject area.					
2-23	The college tracks transfer rates for students who began their studies in developmental education courses.					
	<b>Please indicate the extent to which each of the following assessment practices is implemented at your college by entering an "X" in the appropriate box.</b>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
2-24	The college has goals and benchmarks for improved retention/success of developmental students.					
2-25	Developmental education program reviews are conducted as part of the college's program review cycle or on a regular cycle independently determined.					
2-26	Developmental education support service reviews are conducted on a regular cycle or as part of the college's program review cycle.					
2-27	The college assesses the impact of tutoring on student performance in developmental courses.					

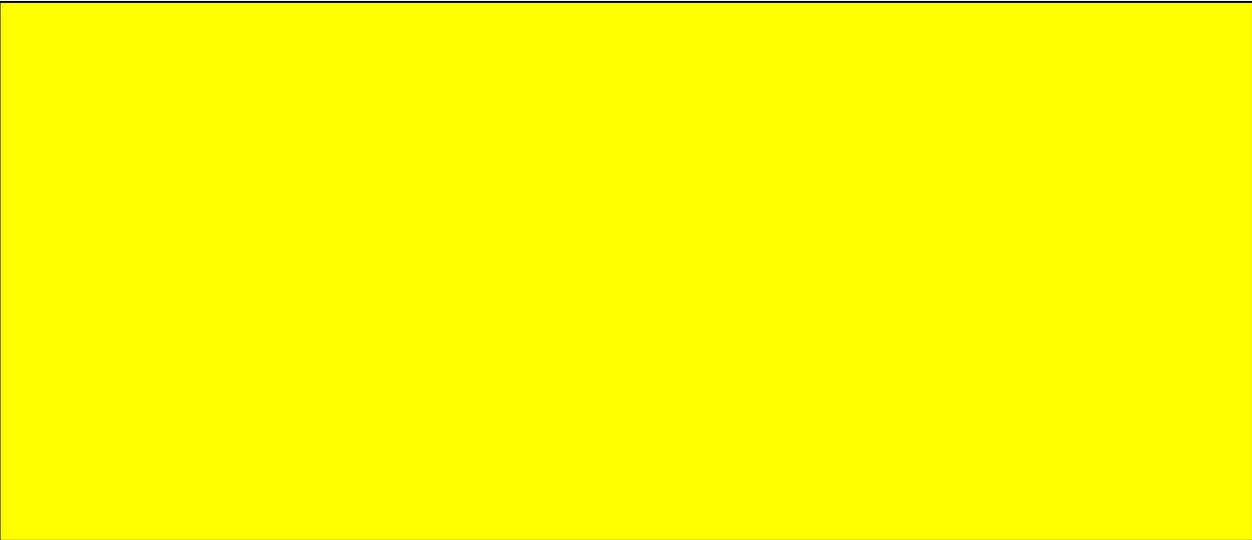
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2-28	Formative data collected by developmental education faculty and staff is used to plan for program/course improvement at this college.					
2-29	Faculty work with IR staff and/or other colleagues to assess the effectiveness of recent modifications and new interventions at this college.					
2-30	There is regular monitoring of planned improvements to determine the efficacy of instructional practices with particular student cohorts on an ongoing basis at the college.					
2-31	Formally-collected student success rates are referenced by college faculty/staff in developing and implementing improvement efforts.					
	<b>Please indicate the extent to which each of the following statements describes how advising and counseling are provided to developmental education students at your college by entering an "X" in the appropriate box.</b>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
2-32	Counseling is integrated in some way into the developmental education program or specific DE courses at the college.					
2-33	There are specific advisors assigned to developmental education students.					
2-34	Developmental education students typically remain with the same advisor throughout their college career.					
2-35	An early warning system triggers closer monitoring and/or college-determined interventions.					
2-36	Other. <b>Please describe in the yellow box below.</b>					

	Please indicate the extent to which each of the following statements describes your college practice by entering an "X" in the appropriate box below.	Consistently	Most of the Time	About Half of the Time	Seldom	Never
<b>2-37</b>	There is an institutional budget for on- and/or off-campus professional development that provides programming for or access to full-time developmental education faculty.					
<b>2-38</b>	Part-time developmental education faculty at the college receive financial support for participation in relevant professional development.					
<b>2-39</b>	DE faculty play a significant role in assessing needs for professional development and in planning and implementing relevant programs and activities.					
	Please indicate the extent to which each of the following statements describes your college practice by entering an "X" in the appropriate box below.	Consistently	Most of the Time	About Half of the Time	Seldom	Never
<b>2-40</b>	Ongoing professional development for developmental education faculty includes both pedagogy and content.					
<b>2-41</b>	There is professional development for new developmental education faculty across the college that includes such topics as instructional strategies to accommodate various learning needs and styles, engaging developmental learners, integrating study skills into instruction, relevant technology tools, and student advising and support.					
<b>2-42</b>	Staff development opportunities are flexible, varied and responsive to the needs of individual developmental education faculty and diverse student populations.					

2-43	The involvement of developmental education faculty in professional development is recognized through formal or informal acknowledgement (e.g. praise, support, recognition, advancement, time, funding) by the college .					
<p><b>Please indicate the extent to which each of the following statements describes your college practice by entering an "X" in the appropriate box below.</b></p>		<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
2-44	College-wide professional development is evaluated by those who participate.					
2-45	Professional development evaluation results are utilized for improvement and to plan next steps.					
2-46	There are college-wide efforts to evaluate the impact of professional development on instructional practice in developmental education courses.					
2-47	There are college-wide efforts to evaluate the impact of professional development on student learning in developmental education courses.					

**In the yellow box below, please briefly summarize your institution's assessment findings--and any resulting actions or modifications-- that have had the greatest impact on the college's ability to facilitate improved achievement among developmental learners. Please refer to each practice or policy assessment you cite by the number assigned to it within the Inventory.**



**Thank you for your time and effort in completing this inventory accurately and completely!**

**Developmental Education Inventory  
Developmental Math Department**

		Name and Title of Person Completing Developmental Math Inventory				
Name						
Title						
Item #	Please indicate the extent to which each of the following developmental education practices occurs on your campus by entering an "X" in the appropriate box.	Consistently	Most of the Time	About Half of the Time	Seldom	Never
1-1	At your college, references to developmental education as a priority are public, prominent and clear.					
1-2	Student success data is widely disseminated throughout the college and analyzed to foster problem-solving with regard to improving student outcomes, delivery, and professional development.					
1-3	There is collaboration between developmental education faculty and faculty and staff from other departments/disciplines.					

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1-4	There is strong integration of developmental education faculty within college governance and campus-wide activities.					
1-5	There is consistency between developmental education goals and institutional goals.					
1-6	Developmental education is part of long-range planning at the college.					
1-7	The campus community, outside of the developmental education department(s), considers developmental education important.					
1-8	There is a mission statement, or statement of philosophy/principles/values, that guides developmental education at the college.					
1-9	A developmental education mission statement and/or DE goals and objectives are communicated throughout the college.					
1-10	The campus community is advised on the extent to which developmental education courses/programs are accomplishing their stated goals and objectives.					
<b>Item #</b>	<b>Please indicate the extent to which each of the following developmental education practices occurs on your campus by entering an "X" in the appropriate box.</b>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
1-11	The campus community is apprised of what developmental education instructors are learning about effective interventions/instructional practices for developmental students.					
A-1	Ongoing, long term professional development programs for developmental education faculty include both pedagogy and content.					
A-2	DE faculty play a significant role in assessing needs for professional development and in planning and implementing relevant programs and activities.					

A-3	There is professional development for new developmental education faculty across the college that includes such topics as instructional strategies to accommodate various learning needs and styles, engaging developmental learners, integrating study skills into instruction, relevant technology tools, and student advising and support.					
A-4	Staff development opportunities are flexible, varied and responsive to the needs of individual developmental education faculty and diverse student populations.					
A-5	Relevant conference attendance is supported by this institution.					
A-6	Professional development is evaluated by those who participate.					
A-7	Professional development evaluation results are utilized for improvement and to plan next steps.					
A-8	Professional development for developmental education faculty is tied to institutional goals.					
A-9	<b>Which ONE of the following statements best describes the extent to which support services (exclusive of labs) and developmental education offerings are integrated IN YOUR DEPARTMENT?</b>					
	a. _____	Comprehensive and coordinated support services are well integrated into developmental education courses.				
	b. _____	Some support services are well integrated into developmental instruction. <b>Please list them in the yellow box below:</b>				
c. _____	An array of support services is available to all students. Developmental education students are referred to these services as appropriate.					

<b>Which of the following statements best describes the extent to which developmental education and instructional support labs are integrated within your developmental subject area?</b>	
<b>A10</b>	a. _____ Students are required to participate in specific labs as part of the course. This requirement is reflected on the syllabus.
	b. _____ Students are required to participate in specified labs. This requirement is reflected on the syllabus, and their participation counts as part of their grade.
	c. _____ Students are referred to support labs on an as-needed basis. Once referred, they must participate.
	d. _____ Students are referred to support labs on an as-needed basis. There is no requirement for participation.
<b>Do developmental education instructors in your department receive feedback on their students' participation and/or performance in instructional support labs?</b>	
<b>A-11</b>	a. _____ Consistently or Most of the Time
	b. _____ Sometimes
	c. _____ Rarely or Never
<b>Which ONE of the following statements best describes the extent to which developmental education instruction and study or learning skills instruction are integrated in your developmental subject area?</b>	
<b>A-12</b>	a. _____ Study/learning skills are integrated into the curriculum and course activities of all developmental education courses in the department.
	b. _____ Study/learning skills are integrated into the curriculum and courses activities of designated developmental education courses.
	c. _____ Some instructors choose to integrate study/learning skills, but such integration is not required by the approved course description.
	d. _____ There is a separate study/learning skills course, and mechanisms exist to link it to specific developmental education courses.
	e. _____ There is a study/learning skills course offered at the college. There is no formal connection between it and specified developmental education courses.

A-13	<b>Does your department offer basic skills test preparation (e.g. test-taking workshops, exposure to test format/sample items) to incoming students?</b>	
	a. _____	Yes
	b. _____	No
A-14	<b>Is there a systematic review of the relationship between basic skills assessment results and student performance in related courses within your department to discover significant relationships?</b>	
	a. _____	Yes
	b. _____	No
A-15	<b>Which ONE of the following statements best describes the full-time/part-time ratio of faculty teaching developmental courses in your department?</b>	
	a. _____	The ratio of full and part-time faculty teaching developmental education classes is similar to the ratio for other courses in the department.
	b. _____	There is a higher proportion of full-time faculty teaching developmental education courses than other courses in the department.
	c. _____	There is a higher proportion of part-time faculty teaching developmental education courses than other courses in the department.
A-16	<b>What percentage of the developmental education courses in your department is typically taught by part-time faculty?</b>	
	a. _____	0 to 30%
	b. _____	31 to 50%
	c. _____	51 to 59%
	d. _____	60% or more

<p><b>Please indicate which of the following resources are provided to support new, full-time developmental education faculty in your developmental subject area by entering an "X" in the appropriate box(es) below.</b></p>						
<b>A-17</b>	a. _____	A description of the characteristics of successful developmental education programs/courses				
	b. _____	A clear set of expectations of student performance outcomes				
	c. _____	A handbook or other tool describing effective strategies for teaching developmental education students				
	d. _____	An orientation or handbook that includes goals, expectations, philosophy or values relating to developmental education				
	e. _____	An initial workshop session focusing on student success strategies				
	f. _____	Ongoing workshops focusing on student success strategies for academically-underprepared students				
	g. _____	Other. <b>Please describe in the yellow box below:</b>				
	<p><b>Please indicate the extent to which each of the following practices occurs within your department by entering an "X" in the appropriate box.</b></p>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
<b>A-18</b>	Faculty who teach college-level courses collaborate with developmental education faculty toward desired learning outcomes.					
<b>A-19</b>	The department has clearly stated goals and objectives for developmental education courses.					

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A-20	Formal fast-track programs/courses in DE subject exist for selected students, based on departmental criteria.					
A-21	Departmental DE courses are included in Learning Communities or paired course offerings.					
A-22	Learning communities that include departmental DE courses integrate at least one support service into the learning community structure/experience.					
A-23	One or more of the department's developmental education course(s) are offered online.					
A-24	Department's DE course(s) are offered in a separate, self-paced format.					
A-25	Developmental education face-to-face classes include required web-based activities.					
A-26	The department's developmental course content and skills are aligned with college level requirements in sequential or designated next level courses.					
A-27	There is alignment of thinking skills taught in the department's DE courses with the thinking skills required in sequential or designated next level courses.					
A-28	Developmental education faculty know how many/which students pass the sequential course in the same or most relevant subject.					
A-29	The department's DE faculty and faculty who teach college-level courses next in the sequence review the syllabus and the exit exam for the relevant developmental education course(s).					
A-30	DE faculty use common exit exams to assess required competencies.					
	<b>Please indicate the extent to which each of the following statements describes your department's selection and/or assignment of developmental education faculty by entering an "X" in the appropriate box.</b>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
A-31	Assignment of faculty to developmental education courses is based upon faculty choice.					

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A-32	Faculty who are committed to the goals of developmental education and successful with developmental students are assigned to developmental education courses.					
A-33	Faculty who don't want to teach developmental education courses are not assigned to them.					
A-34	Faculty applicants who are enthusiastic, knowledgeable, and committed to developmental education are recruited and hired to teach developmental courses.					
	<b>Please indicate the extent to which each of the following data collection practices is used by your department by entering an "X" in the appropriate box.</b>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
A-35	The department tracks students' progress through sequential developmental education courses to determine patterns of advancement from one level to the next.					
A-36	The department tracks grades/student performance in the most relevant college-level course after completion of developmental course(s).					
A-37	The department tracks student satisfaction with developmental courses and services.					
A-38	Formal formative evaluation of the department's developmental education programs and courses is conducted by DE faculty and staff members within their course or service area.					
A-39	Other. <b>Please describe in the yellow box below:</b>					
	<b>Please indicate the extent to which each of the following assessment practices is used by your department by entering "X" in the appropriate box.</b>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>

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A-40	The department assesses the impact of tutoring on student performance in developmental courses.					
A-41	Faculty work with IR staff to assess the effectiveness of recent modifications and new interventions.					
A-42	Formative data collected by DE faculty and staff is used to plan for program/course improvement.					
A-43	Formally-collected student success rates are referenced by the department's faculty/staff in developing and implementing improvement efforts.					
A-44	There is regular monitoring of intended improvements to determine the efficacy of instructional practices with particular student cohorts.					
A-45	There are departmental efforts to evaluate the impact of professional development on <b>instructional practice</b> in DE courses.					
A-46	There are departmental efforts to evaluate the impact of professional development on <b>student learning</b> in DE courses.					
A-47	Other. <b>Please describe in the yellow box below:</b>					
<p>Please indicate the extent to which each of the following statements describes the provision of advising and counseling to developmental education students in your discipline/instructional area by entering an "X" in the appropriate box.</p>		<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>

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A-48	Counseling is integrated in some way into the developmental education program or specific DE courses in the department.					
A-49	There are specific advisors assigned to students enrolled in developmental courses offered by the department.					
A-50	An early warning system triggers monitoring or indicated interventions for students in developmental classes offered by the department.					
A-51	There is collaboration between faculty and advisors in monitoring the progress of students in the department's developmental courses.					
A-52	Other. <b>Please describe in the yellow box below:</b>					
<b>Please indicate the extent to which the following practices are utilized to support faculty development for DE faculty in your department by entering an "X" in the appropriate box.</b>		<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>
A-53	There are structured opportunities for collaboration and faculty sharing of pedagogy, conference and seminar findings, coordination and alignment of other courses, syllabi, and/or effective teaching strategies.					
A-54	There is electronic sharing and discussion of ideas or practices.					
<b>Please indicate the extent to which the following practices are in place to support faculty development for DE faculty in your department by entering an "X" in the appropriate box.</b>		<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>

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<b>A-55</b>	There are meetings between faculty and support personnel to coordinate or collaborate on relevant strategies, interventions, and/or joint student success ventures.					
<b>A-56</b>	There is consultation and problem solving between the department's DE faculty and faculty from other academic areas.					
<b>A-57</b>	There is collaboration with college experts on learning disabilities to better inform/equip faculty who teach DE courses.					
<b>A-58</b>	There is collaboration/consultation with ESL and/or international student experts to better inform/equip developmental education faculty to facilitate student success with students for whom English--or the USA-- is not a first language or country of origin.					
<b>A-59</b>	Peer mentoring supports new/inexperienced faculty in the department.					
<b>A-60</b>	On-campus professional development focuses on teaching, learning, and support for underprepared learners.					
<b>A-61</b>	There is a budget for on- and/or off-campus professional development that is available to full-time developmental education faculty within the department.					
<b>A-62</b>	Part-time developmental education faculty in the department receive financial support for participation in relevant professional development.					
	<b>Please indicate the extent to which the following practices are in place to support faculty development for DE faculty in your department by entering an "X" in the appropriate box.</b>	<b>Consistently</b>	<b>Most of the Time</b>	<b>About Half of the Time</b>	<b>Seldom</b>	<b>Never</b>

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A-63	The involvement of departmental DE faculty in professional development is recognized through acknowledgement (e.g. praise, support, recognition, advancement, time, funding).					
A-64	Professional development for developmental education faculty is tied to departmental and/or program goals.					
A-65	Professional development for developmental education faculty is tied to institutional goals.					
A-66	Departmental professional development is evaluated by those who participate.					
A-67	College-wide professional development is evaluated by those who participate.					
A-68	Professional development evaluation results are used by DE faculty within the department for improvement and to plan next steps.					
A-69	Other. <b>Please describe in the yellow box below:</b>					
	<b>Please categorize the following curricular and instructional practices that may or may not be in use within classes offered by developmental education instructors in your department. Please also indicate if you have documented assessment</b>	<b>Yes, this practice is in widespread use in the department by:</b>	<b>If this practice is not in widespread use in the department, please indicate which of the following statements best describes your department's experience with the practice:</b>	<b>Do you have documentation of assessment results re. the efficacy of this practice in your department?</b>		

	results related to the efficacy of this practice, as it is used in your department.	Full Time Faculty YES OR NO	Part Time Faculty YES OR NO	It shows promise and is increasing in use	This practice has not been addressed	Results in this area have been disappointing or mixed	Yes	No
A-70	Utilization of learning theory to inform the design of developmental education courses							
A-71	Active learning (e.g. hands-on work, problem-solving groups, peer review, on-line interaction)							
A-72	Integration between the developmental education subject area and another content area within one or more DE course(s) offered through the department							
A-73	The use of inquiry methods, problem-based learning, and/or engagement of students in simulations involving real-life experiences related to course content							
A-74	Generating sample test questions reflecting major course concepts, and/or planning and leading class discussions							
A-75	Engaging students in interviewing local experts/workplace representatives							
A-76	Varying of teaching methods and modes to accommodate a variety of learning styles							
	<b>Please categorize the following curricular and instructional practices that may or may not be in use within classes offered by developmental education instructors in your department. Please also indicate if you have documented assessment</b>	<b>Yes, this practice is in widespread use in the department by:</b>		<b>If this practice is not in widespread use in the department, please indicate which of the following statements best describes your department's experience with the practice:</b>		<b>Do you have documentation of assessment results re. the efficacy of this practice in your department?</b>		

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	results related the efficacy of each practice.	Full Time Faculty YES OR NO	Part Time Faculty YES OR NO	It shows promise and is increasing in use	This practice has not been addressed	Results in this area have been disappointing or mixed	Yes	No
A-77	Selection of course texts that incorporate numerous applications of the material and hands-on problem-solving activities							
A-78	Intentional integration of higher order thinking tasks, analytical reasoning, and problem solving							
A-79	Learning-to-learn skills (e.g. students learning to assess and monitor their motivation and learning, understanding learning strengths and weaknesses, using available resources to enhance students' own learning) taught within department's developmental education courses or in other courses/experiences that are linked to developmental education courses							
A-80	Study skills (e.g. textbook reading, note taking, test taking, time management) taught within DE courses or through required companion courses							
A-81	Learning labs as essential components of departmental developmental education courses							
	<b>Please categorize the following curricular and instructional practices that may or may not be in use within classes offered by developmental education instructors in your department. Please also indicate if you have documented assessment</b>	<b>Yes, this practice is in widespread use in the department by:</b>		<b>If this practice is not in widespread use in the department, please indicate which of the following statements best describes your department's experience with the practice:</b>		<b>Do you have documentation of assessment results re. the efficacy of this practice in your department?</b>		

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	results related the efficacy of each practice.	Full Time Faculty YES OR NO	Part Time Faculty YES OR NO	It shows promise and is increasing in use	This practice has not been addressed	Results in this area have been disappointing or mixed	Yes	No
A-82	<i>Supplemental Instruction</i> (where tutors or course assistants who are assigned to particular courses/faculty hold structured follow-up sessions) or <i>Coaching</i> tied to specific courses as required elements of departmental DE courses							
A-83	Intentional faculty use of methods that acknowledge cultural differences and/or the ways in which communication and learning take place in students' cultures							
<b>Please indicate whether or not each of the following practices related to external constituencies occurs:</b>							<b>Yes</b>	<b>No</b>
A-84	Developmental education faculty in the department seek external grant funds to support innovation and improved practice.							
A-85	The department's developmental education courses are integrated into the college's community outreach/ workforce development activities.							
A-86	DE faculty in the department meet with high school teachers in relevant subjects to facilitate curriculum coordination.							
A-87	The department's DE faculty meet with high school personnel to insure student preparation for the college's basic skills assessment/placement process.							
A-88	Other. <b>Please describe in the yellow box below:</b>							

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Additional 100% Math Follow-up Questions		Yes	No
M-1	Is there a developmental math coordinator at your college?		
M-2	Are there consistent strategies to underscore the importance of homework and/or incentivize students to complete it?		
M-3	Is the contact time in developmental math sufficient for instructors to integrate key aspects of effective instruction for developmental learners?		

M-4		Please complete the following chart, listing all of the courses that comprise your departmental developmental education offerings.			
		Developmental Course Level 1	Developmental Course Level 2	Developmental Course Level 3	Developmental Course Level 4
	Course Title				
	Course Number				
	Contact Hours, including mandatory labs				
	Accuplacer test and cut off score, if used				
	Other criteria used to supplement Accuplacer scores				

	<b>Placement criteria used instead of Accuplacer</b>				
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**We are interested in hearing from you about assessment results that have most informed your thinking and/or practice to improve achievement among developmental learners in your department's offerings. In the yellow box below, briefly summarize the assessment findings--and any resulting actions or modifications-- for those practices or policies that have had the greatest impact on your understanding of/ability to facilitate improved achievement among developmental learners. Please refer to each practice or policy you cite by the number assigned to it within the Inventory.**

**Thank you for your time and effort in completing this inventory accurately and completely!**



**8. What practices/policies/interventions are you now considering or working on? Why are you moving in that direction?**

**9. What/Who are your most often-turned to sources of information about effective developmental education policies and practices? Why do you use those sources? [Be sure to find out if these are general references, or just for specific programs]**

**10. What would you most like to get out of this Project for your institution (or the system)? [ If not answered, Are there things you would like to learn from other MA colleges re. developmental practices and policies?]**

**11. Other:**



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