

EDUCATION TRENDS

2007 Environmental Scan Committee

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EDUCATION TRENDS COMMITTEE

Final Report

Introduction: MTC must recognize and address those educational trends that have the potential to impact student learning. These include student preparedness; academic integrity; student population diversity; workforce readiness; faculty diversity; faculty and staff retirements and recruiting; and dependence on adjunct faculty. Technology changes will impact both the techniques and tools used to deliver the curriculum to students. Educational institutions must keep pace with the need to provide timely professional development to faculty regarding their use, must offer technical assistance to faculty in the selection of the most appropriate tool or software, must find the resources needed to fund these necessities and must meet the ever increasing expectations of its student population to have these options available.

TREND 1: Meeting the educational needs of academically underprepared students will increasingly burden the college's financial and human resources.

FINDINGS:

- 1) The Alliance for Excellent Education reports that the nation's colleges spend \$1.4 billion annually on remedial courses for recent high-school graduates. According to an August 2006 Alliance issue brief, 42% of two-year college freshmen require at least some remediation in the subject areas of math, writing, and/or reading, as well as in study skills and critical thinking. "Community colleges already bear the greatest share of the remediation burden, and trends indicate that their responsibilities in this arena are likely to grow" ("Paying Double").
- 2) Two new studies suggest that underprepared and minority students are more likely to succeed in college when they are engaged in their learning. Thus, more instructors are needed who have been trained to design "educationally purposeful activities" for this student population (Lederman).
- 3) The Community College Research Center reports that, while the need for remediation in the two-year college is increasing, "optimal models of developmental education remain to be identified." Further, while most colleges have developed some sort of placement procedure, few have effective remedial exit policies.
- 4) According to Inside Higher Ed, recent high-school graduates and older returning students would benefit by separate and different remedial programs. Younger students, who often lack the motivation of returning students, typically need semester-long courses, as well as frequent contact with advisors and counselors. Older students, on the other hand, would benefit more from flexible scheduling and short brush-up courses.
- 5) The use of a "supplemental instructor," a second teacher in the classroom, is being adopted at schools like Tidewater Community College to promote learning and retention in remedial courses.
- 6) As enrollment numbers increase, so do the number of students who are academically "at-risk." It is imperative that techniques for advising underprepared students be refined. Advisors must outline both the institution's expectations of students and what students can expect from advisors throughout their academic careers. These expectations should be made available in a clear and concise way.

- 7) First-generation students, with their unique needs and expectations, make up a growing population of students on today's campuses. The three most prominent programs on campuses today are *Upward Bound*, *Talent Search*, and *Student Support Services*. Not all first-generation students have TRIO-sponsored services available to them. Therefore; it is imperative that academic advisors be prepared to support and guide first-generation students, encouraging them to use available resources and to establish not just academic goals but the personal goals needed to support their academic objectives.
- 8) According to the Five-Year Trend Study – National Student Satisfaction Report from Noel-Levitz, “it is imperative that colleges do more to raise students’ (and the public’s), perceptions of quality [in advising]. . . . Research has shown that specific elements of a high quality advising system improve retention rates, such as the establishment of a student’s relationship with a faculty or staff member and helping students to clarify academic and career goals.”

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TREND 2: Developing the diverse curriculum needed for workforce training, transfer, career and personal development programs will demand new approaches.

FINDINGS:

- 1) More four year colleges are expecting students to conduct undergraduate research as a way of teaching both basic skills and creative critical thinking. The University of South Carolina has

embarked on a long-range plan to promote undergraduate research as have other colleges in MTC's service area. Additionally, the Lawrence Berkeley National Laboratory in California has created a special partnership with California community colleges to encourage undergraduate research—especially in the sciences.

- 2) More honors programs at community colleges will be established. One study indicates two-year college honors programs are receiving increased emphasis since they promote accountability, image, and ease of transfer. Northshore Community College in Massachusetts has a state-certified honors program; its graduates are guaranteed acceptance to the honors program at the senior institution to which they transfer.
- 3) The liberal arts will gain growing importance in the technical global economy. Thomas Friedman's book The World Is Flat makes a strong case that more engineering, science and technical workers are needed, but he also makes an excellent case for the liberal arts—courses teaching creativity, imagination, problem solving and critical thinking. On page 431 he suggests we hire “more thinkers . . . with artistic flair.” On the same page he writes “it used to be about what you could do, now it's about imagination.” And, on page 303, Friedman agrees with most educators when he says “jobs of the new middle will require you to learn how to learn.” Friedman also forecasts on page 301 that “a whole slew of new jobs [will appear] that require personalized high touch interaction with other individuals.” The Society for College and University Planning points out that in a world dominated by computers and gadgets that provide digital numbers, the genuine future need is for right brain functions like insight, awareness, and imagination. Daniel Pink's A Whole New Mind provides evidence that we are moving away from the information age into what Pink calls the “conceptual age” where holistic problem solving is the best future career path—a future well suited for liberal arts and general education. He argues for “R-Directed Thinking” (right brain conceptual thought), and suggests that India can have the L-Directed thought; the best money is on “meaning,” not mechanics.
- 4) Service learning will continue to grow. A national organization dedicated to service learning has tracked enrollments for several years and sees growing numbers of colleges, faculty and students involved in various service learning projects. Benefits are improved college-community relationships, student commitments, and retention.
- 5) Education and skills are seen as important determinants of the employability and income potential of workers. The aging workforce will require that younger workers quickly get up-to-speed. “As the baby boom generation slowly exits the U.S. workplace, a new survey of leaders from a consortium of business research organizations finds the incoming generation sorely lacking in much needed workplace skills --- both basic academic and more advanced “applied” skills. “Workforce planning will always remain a challenging endeavor. There is an ever present need to match the workforce with agencies' missions. For college and university continuing education units, therefore, helping the public sector with workforce planning and development offers potentially significant opportunities.”

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TREND 3: Meeting the needs of students who are increasingly underprepared to make appropriate social, ethical and behavioral decisions will demand a renewed college commitment.

FINDINGS:

- 1) In a College Planning & Management article, Michael S. Dorn, a campus safety expert, argues that colleges must take steps to ensure a safe environment. He writes, “Like the ostrich with its head buried in the sand while the lion lurks nearby, too many campus administrators have, for various reasons, failed to see the dangers that exist and periodically experienced tragic consequences. Unfortunately, innocent students, staff and faculty members are the ones who most often suffer the consequences of this lack of due diligence. . . . Just how much handwriting must be on the wall before everyone opts to read it?”
- 2) Brett A. Sokolow, in a whitepaper for the National Center for Higher Education Risk Management, urges colleges to “meet the duty of care,” to be proactive in educating students about “high-risk health and safety issues.” He writes, “If you truly desire to change your campus culture around any issue, whether it is diversity, drug abuse, eating disorders, sexual assault, problem drinking, etc., education is the core of that effort.” He recommends a program strategy

that includes mandatory attendance, a comprehensive curriculum, faculty/staff support, centralized coordination, assessment, and enforcement/consequences.

- 3) In an Inside Higher Ed article, Terry Ceasar describes various incidents he has experienced with his college students, from “a student who argued so vociferously about a grade after class he all but cocked his fist,” to another who “heaved her book against the wall outside after she stormed from my office during a conference.” He writes, “The other week I heard of a professor on leave, who has been teaching an online course for his university. A student plagiarized a paper. So informed, the student . . . added documentation to all his sources, claiming that the paper was now no longer plagiarized. Then he promised legal action if this judgment continued. Finally, he added something like, I know where you live, I know your family. . . . The professor was shocked. His chair was no help: ‘It’s between you and the student.’”
- 4) MTC’s Faculty Council minutes reflect that the negative student behaviors instructors cite most often are being tardy, sleeping in class, taking or making cell phone calls during class, playing games on cell phones, being overtly defiant, using inappropriate language to or about instructors and classmates, and complaining about assignments and/or grades.
- 5) Plagiarism and other forms of academic dishonesty among college students will continue to increase. In order to maintain academic integrity with employers and senior institutions, the College will be called upon to increase awareness of and efforts to prevent academic dishonesty. Studies of traditional cheating and plagiarism as well as electronic plagiarism show both are significantly rising and that nearly 50 percent of college students and faculty report knowing of plagiarism. Traditional plagiarism, “paper-mills” and the ease of web searches have all contributed to this rapid growth. Honor codes, educational programs, and detection software have all failed to impact the moral decision-making process to cheat, and students have access to the ready tools to do so.
- 6) Students in courses such as COL 105 that focus on the college, frequently refer to the presence of drugs and weapons on campus. Female students report being verbally harassed as they walk from one building to another. One student wrote in a paper that the Beltline Campus is a “ghetto,” while another wrote that “This isn’t like a college; it’s more like a street school.”

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TREND 4: Meeting the needs of an ethnically diverse student population will demand more educational resources.

FINDINGS:

- 1) According to the College Board, high school graduates in the South will increase from 660,000 in 2008 to well over 800,000 by 2018. Hispanic graduates comprise a major growth sector in this cohort. Spanish speaking youth going to postsecondary institutions increased 14 percent from 1996 to 2001 according to the Pew Hispanic Center. Senior institutions as well as employers will increasingly look to the community and technical colleges as a significant source of Latino students.
- 2) The SREB predicts that in 2018, 50 percent of high school graduates will be Black (30%) or Hispanic (20%). Trends also show that more global and international students will be attracted to low-cost institutions of higher education. Senior institutions as well as employers will increasingly look to the community colleges as future sources of minority students.
- 3) Reports continue to forecast rapid growth in Hispanic and Asian students; they point to specific concerns among some Hispanic leaders; and identify new and emerging funding sources to assist Hispanic students in particular. The July 2003 White House Initiative on Educational Excellence for Hispanic Americans (WHI) proposes a private and public partnership to educate Hispanics.
- 4) Latino leaders are beginning to recognize special problems such as high dropout rates for Hispanic students. Yet, another source, an edited collection of educational studies, indicates many opportunities for Hispanic educational programs, but little real substance yet.
- 5) There is a reversing trend in enrollment declines for foreign undergraduate students. After 9/11, enrollments declined annually or remained flat until this year. Enrollments nationally have risen 12% this year with an implied expectation to continue to do so. This will create cultural and linguistic pressures for change on course content.

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TREND 5: Creating educational partnerships and meeting community needs for workforce development will present a significant challenge to the college.

FINDINGS:

- 1) Studies show that 65% of workers need something less than a baccalaureate degree. Two-year institutions are uniquely suited, and in South Carolina, charged with workforce development.
- 2) New legislation called Personal Pathways, demands that higher education and K-12 institutions partner better to provide career goals for students. Educational courses and programs that feature mentoring, internships, career counseling, and introductory elective career courses will be best received by the local high schools. These high schools cannot and will not alter their required curricula which is tied to achievement tests; but most South Carolina high school students have a significant number of electives they can take—and it is in this elective area where creative career courses, internships and the like offer opportunity.
- 3) To 2014, service related industries (health and education services) will be the most significant labor growth area—and job declines will include many traditional manufacturing slots. Training for the future must also include EEDA where an emphasis on partnerships between SC two-year colleges and high schools can include elective courses in the EEDA career clusters areas; mentoring, shadowing, and internships. While health career needs skyrocket, MTC Health Sciences and Nursing enrollments have remained relatively unchanged (2001-2005). Can MTC provide new capacity or increased retention in this area?
- 4) MTC will need to continue growing enrollment by creating sustainable partnerships. The president and board of trustees at Kaskaskia College felt strongly that a comprehensive community college should maintain its identity through offering only associate degrees and certificate programs. The Kaskaskia College University Alliance was created to bridge the comprehensive community college concept with the needs of the district residents for baccalaureate programs. Responsibilities included creating partnerships, establishing guidelines for those partnerships, coordinating facilities, establishing evaluation and assessment of programs, and advising students.
- 5) Everyone seems to be calling for more partnerships with feeder schools and institutions and receiving employers and senior colleges. Recently the Chancellor of the California State University called for more formal partnerships with K-14 institutions. As one response, UCLA has a “Center for Community College Partnerships” calling for specific goals such as improving the academic preparation of transfer students and increasing the diversity pool of qualified UCLA admits. In a just published article, a national community college leader points out that true integrated and sustainable partnerships are difficult to create and maintain.
- 6) International providers of students of nursing and health care workers will continue to grow. Many European and Asian sources of nurse training are now reporting surpluses of graduates, and enterprising U.S. Colleges are inventing ways to socialize, train and license these nurses for work in the U.S. Problems are significant—verification of learning; language and cultural differences; licensing and immigration issues are just a few. Yet, the results are dramatic.
- 7) Articulated transfer agreements are becoming more critical and more complex. According to one study, two-year colleges can play a more important role in Engineering and Science education—but will not graduate such students—rapid transfer is the goal. Enrollment in these fields

(including of minority students) is increasing. Statistics also reveal an increasing number of “Non-Degree Completers.” The Society for College and University Planning reports that only 55 percent of American students complete a college degree within six years and that only 41 percent of Black and Hispanic students complete. Trends also show that admission standards at USC, Clemson and other colleges are increasing. This creates opportunities for community colleges (often referred to as “Back Door Admissions,” or bridge admissions) where universities formally admit a student but delay enrollment while referring the student to the local community college. Colleges also report an increase in reverse transfer as adults at universities return to career-oriented two-year colleges; or as some enrolled in university courses also enroll in two-year college courses.

- 8) Studies also reveal increasing numbers of Community Colleges offering baccalaureates. This may create a complete realignment of research universities, technical colleges, K-12 and cluster based industries.

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TREND 6: A growing number of faculty retirements and increased dependence on adjunct faculty will challenge the college.

FINDINGS:

- 1) Two-year colleges will have to recruit and train a diverse faculty to replace an increasing number of retiring faculty members. MTC currently has 135 faculty members who will be eligible for retirement over the next 10 years.
- 2) Feeling the pressures of retiring faculty and student growth, Maricopa Community College developed a successful “grow your own” faculty program taking adjuncts and staff and certifying them to teach. Other colleges are providing internships to diversify their faculties.
- 3) As enrollments grow, campuses expand, and staffing needs increase, two-year colleges will have to deal with a variety of issues related to long-term employment of part-time faculty. Adjunct dependence has grown so much that Maricopa Community College has started professional growth funds just for adjunct. MCC also has an active adjunct faculty association that provides input. Florida Community College at Jacksonville sees so many adjuncts in online courses that they developed a model program for adjunct faculty development supported by the Sloan Foundation. Tallahassee Community College also has a program for adjuncts. As a testament to the growing trend, the world wide web is now home to two global web sites dedicated to connecting adjuncts and institutions—“Adjunct Nation” and “Adjunctopia.”
- 4) No trend has changed the face of higher education more than the shift away from a corps of full-time, tenure-track faculty to a contingent instructional workforce. That workforce includes part-time/adjunct faculty, full-time, nontenure track faculty, and graduate employees. Together these employees now make up an amazing 70 percent of the 1.3 million employee instructional workforce in higher education. Fall 2006 data for MTC indicates that adjunct instructors comprise approximately 69% of the total instructors. (MTC HRM Office)

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TREND 7: The college will face significant challenges in selection and application of instructional technology and its delivery to students.

FINDINGS:

- 1) Two-year colleges will have a growing number of technology-related issues that will be difficult to address without significant increases in funding:
 - a. computer training for older students
 - b. access for those students who do not have computers at home
 - c. retraining for those students whose technology expertise is limited to communication and entertainment
 - d. replacing outdated, slow computer systems with those capable of handling the increasing demands of faculty, staff, and students

- 2) Instructional Technology will become more media-rich, mobile, wireless, and personal. The adoption of the newest and latest technological products for use among K-12 students including cell phones, blogs, My Space, and the Internet among many others will lead to pressure in the future to incorporate many of these formats into the higher education process as these students reach college campuses. The Apple iPod is now dramatically influencing education and training.

Stanford University has become a partner with iPod through Apple's free "iTunes University"—making lectures, announcements and more available to students who download a podcast and listen to it anywhere anytime (Midlands Technical College is currently studying this option). Businesses like Siemens Medical and Capital One Finance are giving employees free iPods as a perk with a condition—pre-programmed training modules loaded into the device—a cost effective way of employee training. The School of Nuclear Medicine at the University of Geneva views patient images on iPods.

Students off-campus and outside class have much more capacity to search data and share information, than in class and on-campus—so where will the students of the future get information? Beginning in 2005, the "Classroom of the Future" project embraced LEGO Robotics sponsored by Carnegie Mellon engineers to develop robo tutors for classrooms and students—are we prepared for these students? Educational Technology that "sends" will be replaced by ET that "involves." Data-driven content on web pages will dramatically increase making personalized student web pages, diagnostics, assessments, assignments, reminders, due dates, etc. much easier. A good example is the number of web sites that produce images such as maps or charts from sophisticated sets of data—a significant trend in geographic information systems (GIS) and scientific applications. Instructional gaming is finally becoming more acceptable and holds great promise for engaging students at risk as well as others. Technology, and therefore Instructional Technology, will become more and more "demand-pull" rather than "producer-push." Students will pick "learning slices"...it is the era of "rip, re-mix, and burn" as youngsters select what they want from the World Wide Web.

Other trends include high band width via wireless connections like the proposed 802.11n standards for data transfer. Increased blending of technologies will make corresponding applications ubiquitous. And finally, many researchers report the newest instructional technologies can significantly help bilingual learners.

- 3) Both online and hybrid educational deliveries will grow dramatically. According to the SREB publication, "Growing By Degrees Online Education in the United States, 2005," indicates that online education is growing rapidly; has become mainstream; and has delivered on high standards. Online courses/programs in associate degree granting institutions is one of the most highly concentrated levels of higher education offering online education. Problems identified by academic leaders included the difficulty of teaching and taking such courses; as well as the increased support costs of such programs. This study also reported that 56 percent of colleges considered online education part of their "critical long term strategy."

Hybrid courses, according to one North Carolina study, are also growing quickly and being embraced by college officials as not only good instruction (blending online and face-to-face); but also as a clear opportunity to maximize the use of costly physical spaces dedicated to instruction. The president of Penn State University has called hybrids the greatest "unrecognized trend" in education.

- 4) MTC will need to invest in the technology infrastructure to position itself as the premier choice for students in the Midlands.

At New York Institute of Technology (NYIT), Lipsky teaches students how to master 3D animation and multimedia production tools. With 802.11n, students and professors will more easily graduate from wireless e-mail, text, and voice to full-blown videoconferencing. "You can't ignore the student trends," says Lipsky. Especially wireless systems. Students are all about

freedom and mobility." Videoconferencing, of course, requires bandwidth lots of it. And as more and more students embrace video chats and lectures, universities will be forced to regularly evaluate, adjust and enhance their wireless network designs. But for truly intense multimedia applications, universities will need to stick with high-speed wired connections (like gigabit Ethernet) or eventually switch to 802.11n wireless, according Ed Golod, president of Revenue Accelerators, a technology consulting firm in New York.

- 5) There is substantial movement toward standardization of platforms for e-course content creation and delivery among major stakeholders. Major publishers, academic institutions, and other entities with interest in this issue are creating a consortium workgroup called Common Cartridge to address this. When carried to completion, it will be easier for academics to develop and deliver digital course content to students from a broader selection of sources in a much shorter and easier time frame.
- 6) Global and non-traditional competitive drivers, (i.e. the Internet and online for profit institutions of higher learning) will force changes in instructional delivery methods and course offerings. There is a lack of leadership in ensuring continuing collective excellence in American institutions of higher ed that may create a decline in competitiveness if not addressed.
- 7) The textbook will become increasingly irrelevant over a period of years as more innovative ways of digital content instructional delivery are developed and implemented, according to a number of different sources. Studies show that as one format declines and the others increase, there will be some middle ground where they reach equilibrium in use and importance. Alternatives will provide more customized digital (native) and digitized (non-native) material options for higher learning. This development will have implications for library and bookstore structures on campuses. Both may become leaders in distribution and advocacy of e-content in academic courses. This will also cause shifts in expenditures of resources and savings in resources not yet clearly defined. Further, this will create campus reflection and debate among academics about access to these new formats by non-traditional students.

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