Think about the first time someone asked you “What do you want to be when you grow up?” This may have been around the time you were age 4 or 5, just prior to or near the beginning of your formal education, and your response may have been teacher, astronaut, or even Tyrannosaurus Rex. Your hopes and dreams may not have been tied to reality. Now think about the last time you were asked that question. This was probably prior to graduation or the end of your formal education. Was your answer similar to the one you gave when you were a preschooler? Were your hopes and dreams still a little disconnected to the real world? What happened between ages 4 and 5 and the last time you were asked what you wanted to be? Was there anything in your formal schooling to help you know your options; to help you be an informed consumer as a student; to tie your dreams, as well as innate and learned skills, to reality?

The concept of career pathways is being discussed across the U.S. In some places, it is a workforce development strategy, and applies to education, training, and learning opportunities for the current and future workforce. In some places, the career pathways strategy is more of a means to help youth realize skills and interests and to connect those to careers that might be available and would best match those skills and interests. In other places, career pathways are being implemented as dropout prevention strategies with the hope that linking education to careers early will increase student engagement in education.

In some cases, the structures of supports for pathways development encourage or allow for countless pathways, based on individual career goals. In other cases, the structure of supports for pathways development focuses on a few targeted high demand, high opportunity career fields and work to make the support and transitions across levels of education for those fields strong, clear, smooth, and efficient. In every case, career pathways are seen as providing steps along pathways explicitly designed to prepare participants to progress to the next level of employment and/or education related to a future career.

In nearly every instance, career pathways initiatives involve partnerships among community colleges, technical colleges, primary and secondary schools, workforce and economic development agencies, employers, and local education and labor agencies. Where career pathways are being implemented as a statewide initiative, those partnerships also include four-year institutions of higher learning and state agencies. Pathways are also endorsed at the federal level, and efforts are being made to support pathways development.

In this issue of the NDPC/N Newsletter, we present several articles related to pathways initiatives as they are playing out across the nation. First is an example of a statewide career pathways initiative: Personal Pathways to Success. Next, there is a book review specifically focused on career pathways, outlining among other things key concepts and components of career pathways. Next, we include an article highlighting how career awareness and exploration are important elements of pathways in elementary and middle school. Then, there is an article related to strengthening and improving career pathways in several identified emerging career fields, focused at the high school level, but articulated with postsecondary options as well. Following that, we highlight some recent efforts to improve data collection related to accountability and the transmission of information to various stakeholders. The final article in this newsletter is an opinion piece written by the new director of the NDPC/N.

We appreciate the knowledge and expertise of all who contributed to this issue of the newsletter. Career and Technical Education is one of the 15 Effective Strategies for dropout prevention identified by the NDPC. Well-developed career pathways not only benefit the economy through direct workforce development, but also can help reduce school dropout through students’ increased engagement in their course taking and education, and knowledge that very few of today’s or tomorrow’s jobs will require less than a high school degree.

—Cairen Withington
Guest Editor
Personal Pathways to Success in South Carolina: Bridging the Academic and Career Readiness Gap

by Sabrina Moore

In 2005, South Carolina enacted the Education and Economic Development Act (EEDA), also known as Personal Pathways to Success. This comprehensive K-12 legislation requires all public schools to more purposefully integrate career readiness, exploration, and preparation activities throughout curricula. As a result of the legislation, all students now have many opportunities to learn the demands of their personal career paths and, subsequently, improve their skills to meet those demands post-high school.

The hallmark of the legislation is the integration of academic and career information at all grade levels. The Personal Pathways to Success initiative ties education and economic development by bridging the gap between academic and career readiness for all students. No longer are students solely prepared for either college or a career. Personal Pathways to Success prepares them for both.

Since 2005, South Carolina has committed, on average, $28 million annually to support the program. Most of the funds, more than $25 million, go directly to school districts for implementation and/or maintaining the key principles:

- curricula organized around career clusters;
- student-to-guidance personnel ratios of 300:1;
- individual graduation plan conferences—led by a certified school counselor—for all students in grades 8-12;
- evidence-based programs to meet the needs of students at risk of dropping out; and
- opportunities for students to participate in experience-based, career-oriented learning activities.

July 1, 2012, marked one year since full implementation of Personal Pathways to Success was required in all South Carolina schools. Highlights from most recent data include:

- Every state high school offers at least 3 of the 16 career clusters to facilitate the requirements that all students select clusters and majors prior to their junior year.
- Over 540 career specialist FTEs (or guidance personnel FTEs) have been funded to assist middle and high schools in efforts to meet a student-to-guidance-personnel ratio of 300:1. Although all schools have not met the ratio requirement, progress continues to be made.
- During annual individual graduation plan conferences, counselors discuss the relationship between students’ academic plans/progress and their career aspirations. In 2011-12, plans were developed and/or revised for more than 543,000 students (99%) in grades 8-12.
- All state high schools have implemented evidence-based programs to meet the needs of students at risk of dropping out and/or not graduating on time. Over 33,700 (98.7%) of the students identified in 2010-11 as at risk of dropping out and who participated in a program that was financially supported and/or endorsed by the EEDA At-Risk Student Committee were still enrolled in school or had graduated from high school in 2011-12.
- Over 257,000 middle and high school students participated in at least one career awareness activity during 2010-11.
- Since 2007-08, the state’s total annual high school dropouts have declined from 8,032 to 5,900—a 26% reduction.

Successfully implementing legislation of this magnitude requires adequate state funding. Support from and collaboration among representatives from state and local government, the business community, and secondary and postsecondary institutions is also essential. Towards that end, the EEDA Coordinating Council (EEDACC) was created to advise the South Carolina Department of Education on the implementation of the Act. The Council, comprised of representatives from each sector listed above, met regularly for 6 years developing strategies to create new resources and maximize existing ones necessary for the implementation.

As a result, many potential obstacles, including the lack of funding equity across school districts and a uniform compliance assessment, were addressed.

The full impact of Personal Pathways to Success will not be known for several years. Survey results indicate South Carolina is making gains toward economic prosperity by bridging the gap between academic and career readiness for all students.

—Sabrina Moore, Ph.D. Director, Student Intervention Services SC State Department of Education
Meet the New Director of NDPC

Dr. Beth P. Reynolds became the new Executive Director of the National Dropout Prevention Center at Clemson University this summer, and the Newsletter is pleased to introduce her to our readers. Dr. Reynolds has 37 years of experience at all levels of education with positions including teacher, high school principal, district assistant superintendent, state level consultant, adjunct professor, and author. She comes to the NDPC from Pioneer Regional Education Service Agency, an office of the Georgia Department of Education.

“Dr. Reynolds brings an extensive background in public education leadership and program management that is ideally suited to advance the goals of the National Dropout Prevention Center,” said Dr. Larry Allen, dean of the College of Health, Education and Human Development. “We are lucky to find a person with the experience and passion for addressing a very serious issue facing all communities and the public education system across the country.”

Thanks to Dr. Drew

Dr. Sam F. Drew, Jr., Interim Executive Director of the NDPC, retired July 31, 2012, after more than 40 years in education and ten years at the NDPC, formerly as Associate Director for Research and Evaluation. Dr. Drew led the Center this past year during a major transition, moving the NDPC into its new era. Under his leadership, the Network/Center roles were redefined. He created the NDPC Fellows program, as well as established several strategic partnerships, and he will indeed be missed!

Meet Our Guest Editor

Cairen Withington is a Research Associate at the National Dropout Prevention Center. Her most recent project investigated the impact of a state reform policy on the development of Career and Technical Education Programs of Study. Information on that study can be found at www.nrccte.org. The next engagement for Ms. Withington to speak on this research will be September 28 at the 2012 Region II ACTE conference.

Introducing the NDPC Fellows!

The National Dropout Prevention Center has inaugurated a new initiative, known as the NDPC Fellows. These educators are committed to enhancing the Center’s research agenda. You can meet our NDPC Fellows by going to our home page, www.dropoutprevention.org. Two major research projects are underway: an updated meta-analysis of Dropout Risk Factors and Exemplary Programs, which will come out every five years; and secondly, a yearly annual report on what is working, best practices, and effective solutions based upon the NDPC’s 15 Effective Strategies.

The Fellows will be meeting at the 2012 National Dropout Prevention Network Conference, and several are also making workshop presentations.

Solutions Begins a New Year!

Another year for Solutions to the Dropout Crisis has begun! Our September program, which is archived, with Dr. Tammy Pawloski of the Center for Excellence to Prepare Teachers of Children of Poverty, focused on that compelling issue. Our October 18th program will be “Expected Success from Pregnant and Parenting Students: The Law and Promising Practices.” Lara Kaufmann, Senior Counsel and Director of Education Policy for At-Risk Students at the National Women’s Law Center and co-author of the recent report, A Pregnancy Test for Schools, will discuss policies and practices that affect the graduation rate of nearly 50% of female dropouts. This is an important program, so join us at 3:30 p.m., October 18th, at www.dropoutprevention.org/webcast.

Connect, Inspire, Graduate!

The 2012 National Dropout Prevention Network Conference, Ignite the Potential Within, is just around the corner. On Sunday, October 14th, conference participants will be gathering in Orlando, Florida, for this most important event. There are six outstanding preconference workshops on Sunday, followed by three days of exceptional speakers and workshops. You don’t want to miss it, so go to www.dropoutprevention.org and register today!
As we approach the upcoming Presidential election, the U.S. continues to struggle with an increasing underemployment rate among young Americans. With recent college graduates and other youthful job seekers struggling to find security and additional responsibility, many realize that more emphasis needs to be put on how students transition into their careers.

This places a significant burden on our education system to better equip our students with the skills they need to think critically, communicate effectively, and be successful in the marketplace. Employer needs have evolved over the last 10 years and the difficulty that students—and teachers—face is knowing how to identify which direction and career path to take.

In a recent report conducted by Hanover Research, a DC-based information services firm, researchers identified several key findings associated with “Effective Career Awareness and Development Programs” targeting K-8 students.

- Elementary school career development programs often focus on career awareness, presenting students with experiences to learn about careers, to visit career sites, and to meet workers and professionals in a variety of settings. An essential component of the career awareness phase often taught in elementary schools is the development of self-awareness.

- Researchers have found that middle school students benefit, both academically and vocationally, from career development programs that promote career exploration skills and increase knowledge of career options and career paths.

- Middle school programs often focus on the identification and articulation of interests and skills, as well as a clear understanding of career paths.

- There are many sets of national standards that have been developed to describe the skills that students should learn in career development programs before high school. Many state and local school districts cite these national standards when developing their own programs.

- The list below summarizes common concepts found in research and among national standards that address the field of career development. The following six concepts can serve as guiding principles for K-8 career programs:
  - Lifelong Learning
  - Understanding of Careers and Information on Careers
  - Understanding of Self, Interests, and Skills
  - Developmental Steps
  - Connections Between Career Development and Academics
  - Value of Integrated Classroom Learning

Specifically, one district in Texas has also started to make its career development and awareness programs a critical aspect to the strategic plan for its elementary and middle school students. Round Rock Independent School District in northwest Travis County has approximately 45,000 students and it “strives to present its students with the skills and resources needed to make informed career decisions upon graduation.” Its comprehensive career guidance system segments elementary as “awareness” and middle school as “exploration.” Thus, at K-5, students begin to understand the role of work and one’s own uniqueness. Then, students in grades 6 through 8 gain more specific career insights through library resources and visits to businesses.

Ben Casselman of the Wall Street Journal recently wrote, “Young people are facing far higher levels of unemployment and underemployment. The official jobless rate for 18-24-year-olds is more than double that for those between 35 and 54, and the rate of underemployment is even higher. By some estimates, more than half of all college grads under age 25 are either looking for work or stuck in jobs that don’t require a bachelor’s degree.”

It’s up to us to help our kids find the right paths.

—Sid Phillips
Senior Vice President
Hanover Research
Program Profile

Preparation for Tomorrow (PFT): Creating Career Pathways for Success

by Gene Bottoms

Preparation for Tomorrow (PFT) is an initiative of the Southern Regional Education Board (SREB) and a consortium of states to create career pathway programs of study to provide high school students a way to pursue a career and a meaningful postsecondary degree or credential. Achieving a 90% graduation rate—with 80% of ninth graders leaving high school college and career ready, and with 60% earning a postsecondary degree or credential—requires recognition that college preparation is not the same as career preparation.

The PFT initiative creates curricula by blending learning experiences that advance students’ literacy, math, science, and technical knowledge and skills, along with their habits of behaviors and mindsets for success. Understanding students’ interests, abilities, potential career goals, and possible educational and training paths involves a deeper understanding of postsecondary education and the workplace.

Career pathways for success will be implemented as a coherent, articulated sequence of four intellectually demanding courses leading to certification or an associate or bachelor’s degree. Specifically, SREB and member states have agreed that each career pathway will be aligned to Common Core State Standards (CCSS) for success in entry-level positions and in postsecondary entry-level, credit-yielding courses. These would be joined with a college-ready academic core based on authentic, hands-on projects requiring application of CCSS in reading, writing, mathematics, and national science standards designed to connect high school and postsecondary studies, based on formative and summative assessments and academic and technical achievement.

The consortium has agreed to curricula, assessment, and staff development components to ensure fidelity of implementation at various school sites. Each course has a syllabus that includes instructional philosophy, course standards, instructional delivery and support systems, assessment, and a recommended grading system. Each will be designed around six project-based units including essential questions, project scenarios, academic standards, and daily instructional plans. There will be an end-of-course assessment that determines students’ understanding of college- and career-readiness standards.

Finally, staff development is a key element and includes an intensive two-week summer institute. Teachers will perform students’ reading and math assignments using miniature devices and tools developed by national industry partners. These institutes will be full-day sessions. Daily, teachers will employ the “teach back” method to set the context for project scenarios complete with assessments and rubric scoring. They will learn special tools to help students read complex technical texts, practice counseling techniques for struggling students, and work with formative assessment math lessons. Teachers will learn how to manage and teach in a standards-focused, project-based classroom using technology as a learning tool. A two-day support seminar for principals; math, science, and English teachers; and counselors will be provided during the initial implementation.

SREB and several states have identified emerging career areas for which curricula are being developed. They are: Alabama—Aerospace Engineering; Arkansas—Futures in Science and Technology; Georgia—Advanced Manufacturing; Kansas—STEM Education and Training; Kentucky—Informatics; Nebraska—Food and Nutritional Science; New Jersey—Global Logistics and Entrepreneurial Leadership; North Carolina—Project Management; Ohio—Automated Materials Joining Technologies and Health Informatics; South Carolina—Renewable Energy Technologies; and West Virginia—Energy and Power.

As a result of this initiative, we expect to see significant increases in schools that adapt PFT courses or redesign current career/technical (CT) courses in high-demand fields to fit the PFT model. We expect significant increases in students: becoming interested in and pursuing a career pathway; graduating with a career credential ready for a college program or advanced career training without remediation; leaving high school with a stated college major and a career goal; and receiving a dual credit program for postsecondary studies.

—Gene Bottoms, Ed.D.
Senior Vice President
Southern Regional Education Board
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Book Review


As we approach the 30th anniversary of the report “A Nation at Risk,” we might ask how much progress has been made to increase student engagement in school and reduce high school dropout rates. Myriad educational reforms have attempted to remediate these concerns and establish a foundation for student success. In particular, comprehensive reform efforts through career and technical education and career pathways have become increasingly popular in school districts across the nation.

Dan Hull’s book, Career Pathways, is a resource for those who are interested in learning more about these efforts. Consisting of 11 chapters and three technical appendices, the book includes essays on various dimensions of career pathways and career and technical education in particular. The variety of topics discussed makes this book of interest to policymakers, school district personnel, principals, teachers, guidance counselors, and even parents and students.

At the beginning, Hull establishes the broader context for career pathways. For example, after defining the career pathways approach in Chapter 1, Chapter 2, “Where Are the Good Jobs?” provides compelling information about the context for the pathways initiative. Chapter 3, “Curriculum Frameworks: What, How, and When We Teach,” illustrates the practicality of this important book. After defining some key concepts, Hull and his chapter co-author Kim Green, provide a step-by-step guide for designing curriculum frameworks. Chapter 4 then follows with a discussion of the alignment between career pathways and federal and state policies. Here, we learn more about the importance of “scaffolding” and the important role that teachers play in aligning the curriculum both horizontally (across different courses) and vertically (across grade levels). The book then focuses on how career pathways influence student performance (Chapter 5).

I was particularly intrigued by David Bond and Robert Franks’ chapter on collecting career pathway data (Chapter 6). As one can imagine, school personnel at all levels rarely have time to collect data about the value of their programs. Bond and Franks’ discussions of accountability (“Did we use the funding for what it was intended and did it make a difference?”), research (“How do we know what works?”), and program improvement (“What should we do to make it better?”) provide a starting point for initiating data collection efforts. This chapter is augmented by real-world examples of school districts that have successfully evaluated their career pathway efforts.

The remainder of the book covers other important dimensions of career pathways, including building partnerships, assisting students with career choices, dual enrollment and dual credit, community colleges, and the college tech prep program. The book includes many useful charts and tables that illustrate key career pathway concepts and processes. The technical, but user-friendly, appendices provide the reader with information about the career pathways evaluation instrument and an example of an integrated curriculum standard, or rubric, for the quality of “teamwork.”

Hull begins his book by claiming that “public secondary education in the United States has lost sight of its purpose” (p. 1, emphasis in the original). Fortunately, Hull and his co-authors establish a solid framework for understanding how one strategy, career pathways, can help educators and policymakers regain a sense of purpose to ensure that the next generation of students is fully prepared to succeed after high school. As Jack Canfield, author of “Chicken Soup” books, claims in the foreword, the implementation of career pathways will be “chicken soup for your students’ souls’ for generations to come!”

—Catherine Mobley, Ph.D.
Professor of Sociology
Clemson University, SC

Also Recommended:


Resources

Association for Career and Technical Education
www.acteonline.org

National Research Center for Career and Technical Education
www.nrcccte.org

National Association of State Directors of Career Technical Education Consortium (NASDCTEc)
www.careertech.org

Events

www.dropoutprevention.org

www.ncpnlinfo/2012-ncpnlconf-php

Nov. 28 - Dec. 1, 2012 Atlanta, GA CareerTech VISION 2012—An International Summit on Excellence in CTE
www.acteonline.org/vision.aspx
As stated in the report *Investing in America’s Future: A Blueprint for Transforming Career and Technical Education* (April 2012, USDOE, Office of Vocational and Adult Education):

Effective, high-quality CTE programs are aligned not only with college- and career-readiness standards, but also with the needs of employers, industry, and labor. They provide students with a curriculum based on integrated academic and technical content and strong employability skills. And they provide work-based learning opportunities that enable students to connect what they are learning to real-life career scenarios and choices. The students participating in effective CTE programs graduate with industry certifications or licenses and postsecondary certificates or degrees that employers use to make hiring and promotion decisions. These students are positioned to become the country’s next leaders and entrepreneurs. And they are empowered to pursue future schooling and training as their educational and career needs evolve.

These statements from the *Blueprint for Transforming Career and Technical Education* apply not only to CTE programs but to all career-focused pathways. The Blueprint goes on to discuss the need for meaningful accountability for improving academic outcomes and employability skills, and stresses that CTE data be incorporated into state longitudinal data systems and that common definitions and clear metrics be developed for accountability purposes.

Data across levels of education and agencies related to various career pathways are not only useful for accountability and program evaluation purposes, but also to better inform other users of such data. These other users include businesses that could not only provide input as to the needs of industry, but could also use the data themselves to better plan for their own futures, knowing the makeup and skills of those about to enter the workforce. Other users include parents and school guidance personnel who are assisting students with choices and decisions along pathways. And of course, other users include the students themselves.

Data that span educational levels and cross agencies throughout the pathway experience are most effective when terminology and metrics are common across those levels and agencies. The term “P-20W” refers to data from prekindergarten to the workforce and other outcomes. As you can imagine, definitions and terminology are not always the same across such sources. A high school major or program of study may not always be linked to one specific occupation. A general area of study could apply to numerous occupations. Even a specific area of study could apply to numerous occupations. Program titles may not be the same from high school to technical college to four-year university. Pathways can quickly become tangled highways with numerous traffic jams and accidents if care is not taken to ensure smooth linkages between data sources and databases.

A recent Institute of Education Sciences (IES) best practices brief, *P-20W Data Governance: Tips from the States* (IES, NCES, Brief 4, May 2012), lists other challenges in integrating data from various agencies including varying security requirements, data uses, reporting requirements, and timelines. IES presents some best practices in the governance of multiagency datasets, particularly related to state legislative measures. One recommendation is to create clear, distinct roles for and relationships among program areas, IT, and leadership. Another recommendation (among others) is to create a data governance policy. The last highlighted recommendation in the IES brief is to consider data governance an education policy-led, rather than IT-led, initiative. IES stresses the collaboration of many experts, including the critical expertise from IT, but points out that program personnel aware of issues directly affecting the data, should lead the initiative.

Numerous stakeholders can benefit from seamless linkages of data across levels of education and into the workplace and beyond. And, as stated in the IES brief, when these systems are effectively established, the quality of data collected, reported, and used by state and local education agencies, early childhood, postsecondary, and other agencies is enhanced. Staff workload is reduced and communication, collaboration, and relationships are improved.
A graduation epidemic continues in America and it is a Pre-K-20 issue. For the sake of this article, let’s apply the current graduation rate to recent graduation data: 4 million students entered the 9th grade in 2008, four years later, 2.9 million graduate. What hangs in the balance are the 1.1 million nongraduates in 2012. That equates to 6,000 students every school day or one student every 29 seconds disappearing from the graduation roster.

The consequences of failure to graduate remain dire, not only for the individual who does not complete schooling but for society as a whole. We know the facts. Dropouts are much more likely to be unemployed and live in poverty with all the accompanying social ills. Our community and nation suffer the loss of a productive and competitive workforce as well as the escalating costs of social support services, health care, and incarceration.

That’s what makes the work around career pathways so critically important. One of the significant risk factors identified early in the research around dropouts is that potential dropouts were found to have low occupational aspirations. Not surprisingly, another related factor putting these students at risk is their lack of engagement in school. In The Silent Epidemic: Perspectives of High School Dropouts report by Civic Enterprises, Hart Research Associates, and the Bill and Melinda Gates Foundation in March 2006, the number one response of students to the question of what might help them stay in school was reported to be to “improve teaching and curricula to make school more relevant and engaging and enhance the connection between work and school.” Eighty-one percent of the students said that there should be more opportunities for “real-world learning” and that students need to see “the connection between school and getting a good job.”

Our country has adopted a welcomed stance to graduate students who are college and career ready. To make sure that those who do graduate include students who struggle, one of the strategies that we need to implement with fidelity is career pathways. I agree with Sid Phillips, Senior Vice President at Hanover Research, “It’s up to us to help our kids find the right paths.” Clearly, career pathways is one of the keys to engagement. Oh, what a difference it could make!

—Beth P. Reynolds, Ph.D.
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