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ABSTRACT

This document presents guidelines and resource materials to assist individuals in planning career academies. Chapter 1 defines career academies as programs designed around the following key elements: (1) development and cultivation of a small learning community; (2) a college preparatory curriculum with a career theme; and (3) partnerships with employers, communities, and higher education. Chapter 2 examines reasons to start a career academy and challenges associated with career academies. Chapter 2, which examines the process of planning a career academy, presents a proposed taxonomy of industries and schedule of planning tasks and discusses the issues of related costs and sources of support. Chapter 4 details the roles and responsibilities of the following stakeholders: board of education, district superintendent, high school principal, other administrators, lead teachers and other teachers, counselors, employers, community representatives, higher education representatives, parents, and students. Chapter 5 outlines a process for evaluating career academies through the start-up, implementation and refinement, and full operation stages. Chapter 6 lists sources of additional help, including the following organizations and materials: the Career Academy Support Network's World Wide Web site and publications; 10 national and state career academy support organizations; 8 sources of career academy materials; and 9 relevant conferences. (Contains 14 references.) (MN)

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Planning Guide

for Career Academies

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CAREER ACADEMY SUPPORT NETWORK

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Planning Guide
for
Career Academies

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Chapter I

What is a career academy?

The first career academy began in 1969 at Edison High School in Philadelphia. It enrolled 30 students, was called the "Academy of Applied Electrical Science," and was supported in part by the Philadelphia Electric Company. From that small beginning has grown an estimated 2,000 – 3,000 academies today, with more starting each year, all across the country. Several states have academy networks, among them California, Florida, and Illinois. Many individual districts have networks in their various public high schools. And there are now several agencies working at the national level to support career academies.

While the U.S. Departments of Education, Labor, Justice, and Health and Human Services have all shown interest in career academies, there is no federal agency that officially oversees them. This means there is no agency with a precise definition for them, or even a complete list of them. In addition, as academies have moved from one location to another they have often taken on new variations. While such innovation can be healthy, this has created some confusion about exactly what constitutes a career academy.

In 1999 the Career Academy Support Network (CASN) at U.C. Berkeley gathered the various definitions of career academies from the states and organizations supporting them and merged these into a "common definition." CASN then sent this back to each of the contributors for refinement. Eventually we all agreed on the definition below. This definition has three features:

- a small learning community within the larger high school
- a curriculum that combines a career focus with meeting college entrance requirements
- partnerships with supporting employers, community members, and institutions of higher education.

A Small Learning Community

A career academy is a small learning community within a high school, which selects a subset of students and teachers for a two-, three-, or four-year period. Students enter through a voluntary process; they must apply and be accepted, with parental knowledge and support. While academies vary in size, they usually have from one to three sections of students at each grade level, or 100-300 students in all. Academy classes are usually blocked back-to-back in the daily schedule, and students attend as a group, what is often referred to as "cohort" scheduling. Students are able to complete academy requirements within the regular school day, with the exception of work internships and possible college classes.

A career academy involves teachers from different subjects working together as a team. This team manages the program, with one member usually serving as the coordinator or lead teacher. Teams usually participate in professional development, particularly in implementing the key features of the model and gaining exposure to the career field. Team members have shared planning time, usually a daily common planning period, and often release time. The joining of a group of students for several periods each day with teachers who they come to know well provides a family-like atmosphere, nurturing close student-teacher ties. An academy functions as a small learning community within the larger high school and requires administrator and counselor support. Academy students may also participate in required and elective classes outside the academy, as well as other activities such as clubs and sports.

College preparatory curriculum with a career theme

Students in a career academy have a mixture of career (usually one) and academic (usually three or four) classes at a time. These classes meet entrance requirements for four-year colleges and universities. They are linked to academic and industry standards, encourage high achievement, and show students how their subjects relate to each other and the career field.

The career classes develop knowledge in a broad field. They are designed to expose students to the full range of careers in that field. Special projects require students to bring together academic skills across their subjects and apply these to community and work settings outside the school. Usually the junior year includes a mentor from a supporting employer, and the summer following the junior year and/or senior year includes work experience, a paid or unpaid work internship or community service assignment. During the senior year students are provided with college and career counseling, forming a post-graduate plan which may include college, a mixture of work and college, or full-time work.

Partnerships with employers, communities, and higher education

The academy career theme is selected locally, based on an industry that is healthy and can provide a cadre of partners interested in supporting the program. Employers from a group of companies in the selected field work as partners in the academy, serving on a steering committee (along with teachers, administrators, and often parents and students) that governs the program's development and operation. This committee helps to plan the various activities in which employee volunteers participate: as speakers at the school, informing students of the industry and career options; as field trip and job shadowing hosts at their companies; as individual mentors, career-related "big brothers and sisters"; as work internship supervisors during the summer or part-time during the school year; and as community service coordinators. The employer partners may also hire graduates. Postsecondary educational institutions are often included as well, providing course articulation and concurrent enrollment options.

This three-part definition can be viewed in either chart or graphic form by visiting CASN's website: casn.berkeley.edu. While there are still variations and gaps in the way this approach is implemented in various places around the country, this is an agreed upon definition of what a successful career academy should include.

Who says?

Following are the organizations that have agreed on this definition.

- The California network of academies, called the California Partnership Academies, in the California Department of Education
- The Career Academy Support Network (CASN), based in the Graduate School of Education, University of California, Berkeley
- The Center for Research on the Education of Students Placed at Risk (CRESPAR), sponsors of *Talent Development High Schools*, a schoolwide application of academies, based at Johns Hopkins University, Baltimore
- The Illinois network of academies, called the Illinois Partnership Academies, in the Illinois State Board of Education
- Manpower Demonstration Research Corporation (MDRC), a leading national evaluator of academies, based in New York City
- The National Academy Foundation (NAF), with the largest network of academies nationally (over 500), focused in finance, travel & tourism, and information technology, based in New York City
- The National Career Academy Coalition (NCAC), associated with the Philadelphia Academies, a membership organization that sponsors an annual national academy conference
- The Philadelphia Academies, Inc., now with 29 academies in 12 career fields in 19 high schools, and nearly 7,000 students
- The Southern Regional Education Board (SREB), sponsor of *High Schools That Work*, the largest high school reform effort in the country, with over 1,000 high schools, based in Atlanta, Georgia

Chapter II

Why start an academy?

One reason why growing numbers of states, districts, and schools have decided to start career academies is that they have been found to be effective in improving students' performance. Studies of several different types have been done. What follows is a brief recap. This information is taken from a longer summary of the research findings entitled Career Academies: Building Blocks for Reconstructing American High Schools (Stern, Dayton, & Raby, 2000), and available to view and print from the CASN website (casn.berkeley.edu).

Several studies in California have found that academy students perform better than similar students in the same high schools who are individually matched with academy students on demographic characteristics and ninth grade records of grades, absenteeism, and disciplinary problems. An evaluation of the first two academies in California in the early 1980s found that academy students in grades ten through twelve had better attendance, earned more credits, obtained higher grades, and were more likely to graduate than their comparison groups (Reller 1984; additional citations in Stern, Raby, and Dayton 1992; see also Raby 1995). From 1985 through 1988 a similar evaluation of the ten initial state-funded academies in California showed substantial and statistically significant advantages for academy students in attendance, credits earned toward graduation, grade point averages, and retention through high school (Dayton et al. 1989; Stern et al. 1989).

Annual data collected from state-funded academies in California continue to show improvement after students enter an academy and while they are enrolled in it (Dayton 1997; Warren 1998). High school dropout rates in academies average about seven or eight percent over three years — about half the rate in the general population of California students, despite the fact that state-funded academies are required to recruit a majority of students who are economically or educationally disadvantaged. Although these data describe only the performance of academy students, without comparison groups, they are consistent with the comparison-group evaluations.

More recently, Maxwell and Rubin (1997) surveyed former high school students from a large California school district one or two years after their graduating year. They found that students who had attended career academies were at least as likely to be enrolled in four-year colleges as students who identified themselves as having been in the academic track in high school. Both the career academy and academic track graduates had significantly greater likelihood of enrolling in four-year college than graduates who classified themselves as having been in the high school general track. Yet academy students had lower average scores on sophomore reading tests in high school, and they were less likely to be native English speakers, compared to students in the general track.

Maxwell and Rubin (2000) also analyzed school district records on academy and non-academy students. They found that students in career academies obtained significantly better grades. This was not due to easier grading standards within the academies: Maxwell and Rubin found that courses within most of the academies actually awarded *lower* grades than non-academy courses in the same subjects. Furthermore, when Maxwell and Rubin divided students into high, middle, and low groups according to tenth grade math and English test scores, they found in each group that academy students obtained higher grades than non-academy students. The higher grades of academy students appear to be the main reason for their higher rate of college attendance, compared to non-academy students.

Maxwell (1999) extended the Maxwell-Rubin study to follow graduates of career academies and other graduates from the same school district who enrolled at a nearby campus of the state university. She found that the academy graduates were more likely to come from high schools with large proportions of low-income minority students. After taking this into account, the academy graduates were less likely to need remedial coursework at the university, and they were more likely to receive their bachelor's degrees, compared to the other graduates from the same district. These findings suggest that academies help low-income students finish not only high school, but also college. They imply that the improvement in high school graduation rates was not accomplished by lowering academic standards in the career academies.

MDRC began a 10-site study of career academies in 1993 by creating a list of students who applied to the career academy at each site, and choosing at random those who would be admitted to the academy and those who would not. The latter constituted the control group. Unlike the matched comparison groups in earlier studies, all students

in the MDRC control group had taken the initiative to apply to the career academy. They therefore shared the same unmeasured motivation, ambition, or other traits that might characterize the academy student.

The results of the MDRC evaluation confirmed earlier findings from the matched-comparison studies of career academies. MDRC found that academy students overall earned a larger number of course credits needed for graduation, and were more likely to have positive developmental experiences such as working on a volunteer project. The strongest and most pervasive differences were found among students at highest risk of school failure. Among this subgroup, the academy students attended school more regularly, earned more course credits, were more likely to participate in extracurricular activities and volunteer projects, and were less likely to be arrested. Most consequentially, the dropout rate for the high-risk subgroup was reduced from 32 percent in the control group to 21 percent among the career academy students (Kemple and Snipes 2000).

While this body of research (and other studies not cited here) provides good evidence of the effectiveness of career academies, there are certain results they have *not* been shown to accomplish. For example, no study has yet shown an academy effect on standardized test scores. A follow-up study of academy graduates showed reduced differences over time between academy and non-academy comparison students (Kemple, MDRC, 2001). Most of the differences found in high school have reflected motivational and academic differences (attendance, credits earned, GPAs, graduation rates), with few differences found in levels of employment or earnings. Thus while there is much supportive evidence for academies, it is not universally positive.

Reasons *not* to start an academy

With the evidence in support of career academies, and their rapid growth, this may seem like a strange question. Yet there are good reasons not to start an academy. In fact, one path to avoid is to get caught up in the enthusiasm of this approach thinking it will solve every problem in high school, without looking at the difficulties involved in launching academies or what they probably won't accomplish. Here's a brief summary of what to be cautious about.

Academies are a great deal of work. They require substantial changes in the way high schools operate internally. Administrators, counselors, and teachers all have to be ready to change their practices. Scheduling has to be done differently. Curriculum needs to change. Employers, parents, and other community members need to be involved, and have a stronger role in the way the school functions. All this requires substantial work and involves going through a difficult and sometimes contentious change process.

Not all academies succeed. On average, academies cause improvements in student performance. Within these averages are academies that were failures. It is a complex approach, and if poorly implemented, may cause more problems than it solves. Academies that are well implemented account for the positive results that have been found, but the quality of implementation and the results for students are correlated. Simply deciding to go this route, without doing the hard developmental work and carefully monitoring results, probably won't help.

Academies can cause new problems. While academies have positive effects on student performance, and most students and teachers like them better than more traditional high school structures (Kemple 1997), they often cause new problems. Scheduling becomes more difficult, due to the need to group students together across several classes. Including AP, honors, and special education classes in the schedule is more difficult. Teachers who teach upper level classes and don't want to relate their subject to other subjects or a career field may not like academies. Teachers who like being a "sage on the stage" rather than a "guide on the side" may not like academies, which tend to be student centered. Parents are likely to become more involved, bringing pressure on teachers for high quality instruction. Employers are likely to become more involved, bringing pressure on administrators for better prepared graduates.

Academies probably won't change standardized test scores. If you're under pressure to improve such test scores, academies may not help. Evidence to date suggests they have little impact on such scores, although many believe they have this potential if

teaching and learning methods truly change within their small learning communities. Academies can improve motivation, and the indicators that reflect that, such as attendance, retention, and grades, but there is little evidence that they will improve test scores. Their effects also seem to fade over time, after students leave high school, which while understandable, may lessen their appeal.

There are lots of good reasons to start career academies, but they are not a panacea for all the problems of high school. They should be approached cautiously, and if attempted, implemented carefully and thoroughly. There is guidance and help available in this process, some of it covered in the next three chapters, but don't begin an academy expecting quick, easy, sure-proof results.

Chapter III

How do you begin?

Academies usually start with one or a few teachers or administrators learning about this approach and deciding it would be a good idea for their high school. This leads inevitably to the question: what next? How do we get from thinking this is a good idea to actually starting one?

While there is no pat formula for this, usually the next step is sampling interest more broadly in the school and community. Share the information that has made you interested with other teachers, the principal and other administrators, and members of the school board. Others to talk to, because they too will have a stake in an academy, are employers, institutions of higher education, parents, and students. Experience suggests that while an excited teacher or two can provide good leadership, they cannot make an academy successful by themselves. All the stakeholders listed above need to be on board.

One of the first and most important decisions in starting a new academy is the choice of career field. Academies draw on the inherent interest students have in learning about some feature of the world of work to motivate them to take seriously their core academic subjects as well. Thus the field needs to be one that holds interest for students. It also needs to be one with interested employers in the community who will provide the support needed for an academy: Steering Committee members, speakers, field trip hosts, mentors, and internships. And it needs to be an industry that is healthy and growing, so there will be jobs available when academy graduates are ready for them.

The career field also needs to be well defined in terms of breadth. Too narrow a career field will limit employers and stunt student interest. "Radiation technician" is too narrow; "health" is better. On the other hand, too broad a career field may make it

impossible to identify relevant employers or curriculum. "Computers," for example, is too broad; they have applications in all fields.

Economists usually categorize economic activity into industries. While there is no universally agreed upon taxonomy of industries, the one below works pretty well in identifying a workable career field for an academy. These are also the 16 clusters into which the U.S. Department of Education suggests organizing instruction related to careers. Standards and curriculum are being developed for each. More information can be obtained about this at www.careerclusters.org. Variations on these, such as "biotechnology," "environmental science," and "public service" are common.

A Proposed Taxonomy of Industries

Agriculture & Natural Resources	**Arts, A/V Technology & Communication**
Business and Administration	**Architecture & Construction**
Education and Training	**Finance**
Health	**Hospitality and Tourism**
Human Services	**Information Technology**
Law and Public Safety	**Manufacturing**
Government and Public Administration	**Retailing/ Wholesale Sales and Service**
Scientific Research/ Engineering	**Transportation, Distribution & Logistics**

Once the stakeholders to be affected by an academy have been involved and the career field identified, a more precise set of planning tasks can be undertaken. It usually takes from eight months to a year to effectively plan a career academy from this point. The set of planning tasks and schedule below define the key steps in this process and the time frame in which they need to be carried out. It can be elaborated and varied to fit individual circumstances.

Schedule of Planning Tasks

Tasks	Schedule
Form a Steering Committee	January-February
Identify school, business, community, and parent representatives; establish a regular schedule of meetings to provide oversight	
Identify Academy Staff	January-February
Select Director/ Lead Teacher, other teachers, both a career field teacher and several academic teachers; school administrator; counselor; and district representative	
Form Steering Committee Task Forces	January-June
Some examples: curriculum development, staff preparation, employer support, facilities preparation, and equipment needs and acquisition.	
Coordinate the Academy with the High School	March-June
Inform the entire high school staff of the plan, orient the counselors, arrange cohort scheduling/ schedule the academy classes, meet with the instructional leadership council, union leaders, reaffirm district support	
Develop Curriculum (in detail for grade 10, at outline level for grades 11 and 12)	March-August
Have the teachers lead, draw on employers for career field input, examine state standards/ map academic curriculum accordingly, conduct internet search, visit other academies, develop project based learning/ integrated curriculum ideas	

Schedule of Planning Tasks

Tasks	Schedule
Recruit and Select Students	March-May
Distribute information on the academy to all freshmen, accept and screen applications, hold interviews and parent meetings, identify and schedule students, welcome them into the academy, plan summer activity	
Identify Postsecondary Education Partners	March-August
Develop plan for articulation agreement and/or concurrent enrollment	
Prepare Facilities and Equipment	April-August
Adapt a classroom as "home base," prepare necessary space, obtain and install necessary equipment	
Plan Motivational Activities	June-August
Identify activities that will make the academy appeal, types of student monitoring and rewards to be used	
Plan Business Speaker and Field Trip Program	July-August
Explore what companies will participate, topics of most interest, schedule for the year. Develop a calendar of events for these activities.	

One of the best aids in the planning process is to visit successful operating academies. Each of these tasks has many details to consider, and discussions with those who have gone through this process can be immensely useful. There are directories of academies in various places. Membership agencies (NAF, NCAC), states, and districts with career academies each have their own directories. CASN maintains a national directory of academies on its website.

Related costs, sources of support

Career academies do require additional work, and therefore entail additional expense. The biggest expense comes from the time needed to coordinate the various elements of the program: for the team of teachers to meet regularly, develop integrated curriculum, coordinate employer involvement and the program elements they support (particularly the mentor and internship programs), and organize links to college programs.

These costs can be covered by reallocating existing funds, securing additional funding, or a combination of the two. The lead teacher(s) need to be provided release time, usually somewhere between one teaching period and half-time for one or two teachers, or by paying them for additional time outside their regular schedules. Coordination can often be assisted by a high school administrator. Employers that support an academy can often help with coordination of the speaker, field trip, mentor and internship programs, by assigning a liaison to the academy. They may bring other resources that can support the cost of the academy also, such as equipment, materials, and curricular expertise. Often an intermediary can play an important role, such as a chamber of commerce or other education-business alliance.

Most high schools have funding outside their mainstream support, such as Title I funds, or those for vocational education, technology, staff development, or district initiatives. Often some part of these may be used to help support an academy. There are also state and federal grant initiatives that can sometimes be used for academies. And there are many private foundations interested in educational improvement, sometimes applicable to career academies. A listing of possible sources of funding for academies is included in CASN's *Getting Connected: A Resource Guide for Career Academies,* one of the documents at the website (casn.berkeley.edu). The academy steering committee can often be helpful in identifying and seeking outside funding for the program.

Chapter IV

Who needs to do what?

There are many stakeholders involved in establishing a successful career academy. A stakeholder is anyone with an interest in the success of the academy. Among the central ones who need to play a role are the administrators at the district and high school level, the teachers to be involved, and the employers who will provide support. There are several roles each of these groups will have. There are also other stakeholders who have a role. What follows is a summary of each and what they need to do.

Roles and responsibilities of each stakeholder

Board of Education. The Board should know of the developing academy and be in support. There will be a number of necessary changes in the way the high school functions, and implications regarding the directions the school is taking. Questions may be raised in the community. If Board members are informed and knowledgeable they can be supportive of these changes and directions and able to respond to any concerns raised. The Board can also set policies that will support student success, such as with scheduling, facilities, and graduation requirements.

District superintendent. The superintendent is the CEO of the educational "company" in which the academy will be housed. As such, he or she can play a very helpful role by making initial contact with high level representatives of the companies the academy would like involved. Such initial contacts are most successful if they are "CEO to CEO" rather than through individual teachers with counterparts at their level in these companies. Someone who can make commitments and send the message down the line that this is something the "company" is behind is far more effective than requests from below. Further, the superintendent can play a very constructive role by giving strong public support to the academy and the principles it fosters. While the superintendent

rarely has time to follow up on all the details or be a member of the academy Steering Committee, he or she may appoint another district administrator for this role.

High school principal. The high school principal needs to be the "project leader," the administrator who provides the variety of support academies needs. She or he can be a spokesperson to the entire staff; encourage support from other administrators, as well as counselors and teachers; commit funding, equipment, and materials; oversee adaptations of classroom space; help remove impediments and resolve problems; encourage teachers; and ensure that the academy has a chance to succeed.

Other administrators. Usually the principal identifies a vice principal or other administrator to handle the day-to-day matters related to implementing the academy. This person can join the academy teachers in relevant meetings; attend Steering Committee meetings when the principal can't; make sure adequate supplies are provided; help in coordinating the involvement of those from outside the school; ensure that scheduling is done properly, including cohort scheduling for students and a common prep period for teachers; and make clear to the academy teachers that the school administration is behind their efforts.

Lead teacher(s). Usually one or two teachers are identified to be the lead for the academy. This gives them the responsibility for organizing meetings of the staff; orienting new teachers; coordinating the roles other teachers will play (beyond their teaching); overseeing curriculum development; helping to manage contacts outside the school; overseeing the budget; helping with student recruitment and scheduling; sitting on the Steering Committee; serving as liaison to the school administration; and being the chief trouble shooter(s). While an academy can't be successful without support from all the positions discussed here, the lead teacher is the single most important actor in the academy drama.

Other teachers. An academy requires teachers across several academic subjects (usually English and social studies, often science, and occasionally math) and a career

field to work together as a team. They need to meet regularly to plan cross curricular projects, discuss problem students, plan special activities, and provide one another with support. Usually each teacher also takes on responsibility for certain activities beyond their teaching. Examples:

- Student recruitment and selection
- Coordination of the speaker/ field trip/ mentor/ internship program
- Parent contacts
- Student monitoring, rewards
- Special activities (e.g., social events, graduation ceremony, summer events)

Counselors. Counselors help in handling students' academic and personal problems, advising them about post-graduate options, and helping seniors apply for college and/or work. They can hold meetings with students and their parents to help in such planing. Counselors are also usually responsible for scheduling students into their classes, and have a critical role to play in a career academy in this respect. It is impossible to have an academy unless students are grouped together in their classes, and these classes are restricted to academy students. As simple as this sounds, it is a frequent problem, partly because this isn't easy to do, and partly because too often counselors are not part of the academy team and don't understand the essential role they play.

Employers. While all the above roles are essential and require new forms of behavior, it is where employers and others outside the high school community become involved that academies cause the biggest change in high schools. Employers play a number of essential roles:

- As members of the Steering Committee
- As speakers, teaching sophomores about their company, jobs, and training
- As hosts of field trips, and perhaps job shadowing, usually for sophomores
- As volunteer mentors, usually for juniors
- As managers of internships, usually summers after the junior year or for seniors

In addition, employers can help develop the career field curriculum, showing teachers current technology and what new employees need to know; provide "externships" for teachers, summer positions that let them learn about the field; host special events such as Steering Committee meetings, social events, and graduation ceremonies; recruit other companies; provide equipment and materials; and lend their credibility to the academy. Often an involved employer will identify one employee to be the liaison to the academy.

Community representatives. Often others from the community can support the academy as well as private employers, such as: public officials (e.g., mayors and other city officials, employees of federal and state government agencies); organizations with relevant missions (e.g., Chambers of Commerce, Rotary/ Soroptomists/ other service clubs); quasi public businesses (e.g., power/ phone/ water/ waste companies); and organizations of retirees. Sometimes leading citizens who don't fall into any of these categories get interested and lend their energy, resources and contacts to the program.

Higher education representatives. Successful academies usually develop ties to local two- and four-year colleges. This lets them develop their career related curriculum to fit with post-secondary programs, and often to offer courses for juniors or seniors that grant credit at the college as well as the high school. Such ties also provide opportunities for students to tour college campuses and learn of their entrance requirements and application procedures. College representatives usually sit on the Steering Committee.

Parents. Parents are usually more involved in a career academy than in ordinary high school structures. They need to be involved in the student's decision to apply for the academy, attending an orientation and declaring their support. They need to be available when problems occur, discussing these with academy teachers and their son or daughter, and agreeing on a course of action they will monitor along with the teachers. They are also often involved in relevant academy activities, serving as chaperones on field trips, organizers of social events, and attendees at reward and graduation ceremonies. Often one or two parents sit on the Steering Committee.

Students. Students, of course, are at the center of an academy. They should be canvassed before the career field is selected to determine their interests. They often form an academy student government to help in its functioning. Upper class members can help in the recruitment of new students and serve as "buddies" to the "newbies." Successful graduates can come back and provide inspiration to younger students who follow. And often one or two students sit on the Steering Committee to be sure their concerns and viewpoints are represented.

Chapter V

Are you making progress?

Mention program evaluation and a lot of people's eyes glaze over. Who wants to deal with questionnaires, student records, columns of data, statistical analyses? Everybody knows you can lie with statistics anyway. If the teachers and students are happy, if they're coming to school regularly and seem engaged, what more do you need to know?

In a simpler world that attitude might fly. In today's schools, given their reputation for doing more poorly than schools in other countries, the high drop out rates of many high schools, and the often poor quality of graduates (at least in the view of many colleges and employers), numbers are important. They're especially important for an approach that is new and claiming to improve student performance, and that will cost more in terms of work and energy, if not actual dollars.

But evaluation need not be hopelessly complex and onerous. The simple theory behind high school reform in general and career academies in particular is that if you change to a new approach, and implement it well, student performance will improve. So what do you need to measure? On the most basic level, you want to know whether you've implemented the academy well, and whether student performance is improving.

These two questions are fundamental to assessing your progress. And it's important to focus on both from the start. You can't measure student progress if you don't have a baseline against which to measure it. That baseline is best determined before you begin to implement the academy. And you can't expect success if you don't gauge how well the academy is implemented. That also needs to happen from the start.

These two forms of evaluation are sometimes called "process" and "outcome." Another way of stating them is as "means" and "ends." Implementing an academy is a

Stages of Evaluation

	STAGES:	Academy Start-Up	Academy Implementation and Refinement	Academy Fully Operative	
ROLES	Process	Supplying useful information to program developers to guide strengthening program: early focus on attitudes, objectives and perceptions of clients.	Shift to "harder" data about what is working for whom, ideas clients have for modifications.	Suggestions for "fine-tuning" based on all evidence.	
				Final collection, analysis, and reporting of outcome data to measure effectiveness. Monitoring system intact.	Outcome
		Determine measures that will be used, collect baseline data.	Continue collecting data while building system for ongoing monitoring of effectiveness.		
		Documentation: Record start-up efforts, concerns, obstacles, lessons learned.	Systematically document the implementation process and strategies selected.	Produce guide for managers who might want to replicate in other locations.	

process. Improved student performance is an outcome. The first is a means to the second. While it is important to assess both, the emphasis changes over time. Initially the most important matter is high quality implementation. Over time the focus becomes whether this leads to improved student outcomes. The chart on the previous page illustrates this relationship. It also shows that documenting as you move through this process is important.

How do you assess how well you're implementing the academy? One method is through a guide that has been developed for this purpose, called the *Self-Assessment Guide for Career Academies.* This *Guide* lists the key elements under each of the three defining structures of an academy (small learning community; college prep curriculum with a career theme; and partnerships with employers, community, and postsecondary education). There are a total of 20 such elements. A scoring guide accompanies each element, indicating what should be in place. Each can be rated along a five-point scale, with a perfect score being 100 (rarely if ever achieved). Thus teachers can go through this guide and determine where their academy is strong or weak. This can lead to a plan for improving the weak aspects. This guide is available to view and print from the CASN website (casn.berkeley.edu).

How about student data? What should you collect, and how should you analyze it? At the back of the above guide is a section on *Analyzing Student Data.* This suggests three types of student data to collect:

- Demographics
- Academy experience measures
- Outcomes

The first of these lets you assess the student makeup of the academy, and whether it reflects the profile of the host high school. The evidence suggests that academies do best when they do reflect this profile, rather than focusing exclusively on students at one or the other end of the spectrum. The second category lets you assess whether academy

classes are restricted to academy students, and whether academy students are taking the full complement of academy courses. Experience suggests that academies do better when they meet these goals. These are both measures of implementation available through use of student data.

The third category pertains to student outcomes, or using student data to measure whether the academy has had an impact on student performance. Suggested indicators, categories of such data, offered in the *Guide* include: attendance, retention in school, credits earned toward graduation, grade point averages, standardized test scores, on-time graduation rates, and college admission. This is followed by a section of ways such student outcome data can be analyzed. Three suggestions are offered:

- Compiling snapshots over time, for an individual academy. This indicates whether the *program* is improving from year-to-year.
- Comparing year-to-year changes for individual students or cohorts of students. This indicates whether *students* in the academy are improving over time.
- Relating academy program characteristics to student performance. This indicates whether variations in the program elements lead to improvement or not.

Fuller explanations of each of these are offered in the *Self-Assessment Guide*, as well as additional categories of data that might be collected.

Chapter VI

Where can you get help?

The short answer to this question is many places. The issue is sorting through all the information to find what you need. Since this *Planning Guide* was developed by CASN, we'll start with what CASN has to offer. This section then offers a list of the other state and national organizations that support career academies, a brief summary of what materials they have, and a list of the annual conferences each sponsors. *All* are linked to the CASN website (casn.berkeley.edu) if you want more information.

CASN website--a brief tour

The best place to review CASN's materials is at this website. On the home page you will see several options you can click on:

- Clearinghouse of Materials—with several sections, detailed below
- Definition of Career Academies—in three formats, including a graphic one
- National Career Academy Directory—how to find academies other places
- Project Description—who we are, what we do
- Teaching and Learning Resources Guide—direct links to the best 75 websites we've found for academy friendly curriculum, with commentary on each

Also, at the top of the home page you'll see several boxes you can click on:

- Sponsors—who pays for our work
- Partners—the other organizations with which we work
- Related Links—additional organizations with information of interest
- What's New—a guide to the latest additions to the website
- Contacts—how to reach us by phone or e-mail if you have questions

Most of this is self explanatory. The one section that needs some elaboration is the *Clearinghouse*. There is a *lot* of stuff here, much of it directly viewable and printable, some of it downloadable, the rest obtainable through an on-line order form, at what it costs us to duplicate and mail it. We're not a for profit organization, which will be clear. One of our central missions is to collect materials of use to career academies and make them available to anyone interested. There are several Clearinghouse sections:

- General Documents—handbooks, guides, papers we've written
- Research Documents—academy research reports
- College-Prep, Career-Related Curriculum—help with academy curriculum
- Partnerships with Employers, Community—information to help with this aspect
- Forms Bank—over 100 commonly used forms for operating an academy that can be downloaded, adapted, and stolen outright

Here's a list of some of our most popular documents (almost all viewable and printable from the website):

- *Career Academies: Building Blocks for Reconstructing American High Schools* (their history, growth, a summary of research findings, current issues)
- *Self-Assessment Guide for Career Academies* (discussed in Chapter V)
- *Scheduling Guide for Career Academies*
- *Mentor Handbook for Career Academies*
- *Internship Handbook for Career Academies*
- *Teaching and Learning Resources: Curriculum Guide for Career Academies* (internet guide to academy friendly curriculum)
- *Getting Connected: A Resource Guide for Career Academies* (internet guide for everything but curriculum)

CASN also has a series of professional development workshops for academy teachers. Unfortunately, we cannot send someone to your site free. But we can talk with you, send you materials, and direct you to others who may be able to help.

What other help is there? There are *many* organizations devoted to supporting the development of career academies. CASN has been working to bring together information on all these organizations. The list below is at least a good start. All are linked to the CASN website if you want more information.

National and State Career Academy Support Organizations

- The National Academy Foundation (NAF), New York City
- The Southern Regional Education Board (SREB), Atlanta, GA
- The National Career Academy Coalition (NCAC), Philadelphia, PA
- The Center for Research on the Education of Students Placed At-Risk (CRESPAR), Johns Hopkins University, Baltimore, MD
- The National Center on Education and the Economy (NCEE), Washington, D.C.
- The National Network of Health and Human Services Career Academies, U. S. Department of Health and Human Services, Washington, D.C.
- The Technical Assistance Group for Law, Public Safety, and Security Academies, National Association of Partners in Education (NAPE), Alexandria, VA
- GMS Partners, Inc., Silver Spring, MD
- The California Department of Education, Sacramento, CA
- The Illinois State Board of Education, Springfield, IL

Many of these organizations have materials of use to career academies also. Here's a quick overview.

Career Academy Materials

NAF—Full technical curriculum/ lesson plans in its three career fields—finance, travel & tourism, and information technology. Director's handbook, internship guide, promotional materials.

SREB—Materials to support its ten key practices, plus standardized tests in math, science, and communication, and student and teacher survey forms, which it scores for its sites.

NCEE—A full set of performance standards, K-12, in four fields, plus approximately 100 days of "core assignment" curriculum in English, language arts, and math, benchmarked to these standards.

CRESPAR—A series of materials related to its "Talent Development High School with Career Academies" model, including for its Ninth Grade Success Academy, with curriculum for its Freshman Seminar and double dosing in math and English.

GMS Partners—Materials related to workshops on academy development, plus a guide, *Creating and Sustaining Small Learning Communities: A Practitioner's Guide to Career Academies and Small Learning Communities.*

CDE/ISBE—Partnership Academy Handbooks for their states, materials related to their staff development workshops, evaluation forms and systems.

NCAC—*Career Academy Toolkit: Planning Guide for Career Academies and Other Types of High School Small Learning Communities* (Sandy Mittelsteadt).

MDRC—Survey forms for students and staff; a series of reports on their national, longitudinal, random selection evaluation of career academies.

The NCAC (Sandy Mittelsteadt) and GMS Partners documents listed are longer and more detailed career academy/ small learning community planning guides. The California Department of Education and Illinois State Board of Education also have planning guides for their academies, available at their websites.

There are also many academy relevant conferences. Most of the national and state organizations that support academies have conferences at some point in the year, and some have several. Here's a quick summary of these.

Career Academy Conferences

NAF—Works with over 500 academies in 40 states, sponsors two major conferences each year, one for all NAF representatives in July and smaller "Directors Conferences" at other times for lead teachers.

SREB—Works with over 1,000 high schools in a majority of states, a subset of which have academies. Sponsors a conference open to all in early July each year, plus a series of smaller regional and state workshops.

CDE-CASN--Sponsor an annual conference in March for California's academies, open to representatives from other regions of the country.

NCAC—A membership organization, sponsors a national career academy conference each fall.

NCEE—Works with several dozen high schools implementing career academies. Sponsors an annual winter conference and smaller regional workshops.

CRESPAR—Sponsors a conference each August for representatives from its Talent Development High Schools that are implementing career academies schoolwide.

DHHS—Sponsors a summer conference for representatives from six pilot sites supporting the development of academies.

NAPE—A developing network of law, public safety, and security academies, sponsors an annual fall conference.

ISBE—Holds several staff development institutes per year for its Illinois Partnership Academies.

While this may seem overwhelming if you're coming to it for the first time, the key is to seek out what you need now and file the other information for future use. Career academies take time to plan, and to implement. You can't learn it all at once, or do it all at once. But you can find help for almost any aspect of an academy and almost any problem, from others who have preceded you down this path. Often the best source of information is another academy in a nearby high school and/or similar career field. The real experts are the teachers, administrators, and employers working every day to deliver an improved high school education through their academies.

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