

Oak Ridge Institute for Science and Education

## A Cooperative Approach to Work-based Learning and College Transitions: University, College, and High School Partnerships



**OAK RIDGE INSTITUTE  
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Key Strategies, Challenges, and Lessons Learned from the  
Implementation of the Higher Education Partnerships to  
Enhance Work-based Learning Grants

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## Appendix IV

### Programs and Initiatives Collaborating with Sites

*A key strategy used by most sites was alignment or collaboration with other, related initiatives or programs. This helped to build support among constituents, maximized resources, established new partnerships, and promoted sustainability by embedding some elements of the grant activities into other, on-going programs. Most colleges also tapped into community service groups and programs on campus to assist with outreach and mentoring. A sample of the groups involved includes:*

*AVID (Advancement Via Individual Determination):* a college preparatory program. (CSUS)

*Boys and Girls Club:* a community organization providing a range of services for youth. (Bates)

*CHOICES:* business community involvement to expand education and career choices (VSU)

*Dr. Seuss's Birthday:* an event encouraging reading for students in K-12 schools. (UTC)

*Future Teachers of America, Future Educators of America* (UTC)

*GEAR UP:* partnerships encouraging college preparation, transitions, and success. (UTC)

*Grrlz to Womyn:* a program with mentoring by college students and job-shadow or internship. (Antioch)

*Governor's School for Prospective Teachers:* a state program to attract more students to teaching. (UTC)

*Jobs for KY Graduates:* a program promoting graduation and career and/or postsecondary. (WKU)

*LEED (Linking Education and Economic Development):* an organization for educators and employers.(CSUS)

*MESA (Math, Engineering, Science Achievement):* an outreach program for disadvantaged students. (CSUS)

*National College Week:* an event designed to promote college awareness and preparation. (UTC)

*Program Right Track:* a postsecondary readiness enrichment program in GA. (VSU)

*School-to-Career:* initiatives promoting school-based and work-based learning. (all, especially VSU)

*SIFE (Students in Free Enterprise):* encouraging entrepreneurial and business skills. (VSU)

*Teachers in Industry:* Internship experiences for K-12 teachers at worksites. (Antioch, VSU)

*Tech Prep:* (Bergen, CSUS, MSU, VSU)

*Upward Bound:* promoting college preparation and success for underserved students. (UTC)

*Urban Impact:* a Tennessee teacher quality partnership. (UTC)

*Urban League Academy:* a comprehensive/voc-tech alternative high school with work experience. (Bates)

### Selection of State and National Presentations on Projects

*Although all sites presented their strategies and programs locally to school, college, and business representatives, wider dissemination came through sessions at meetings or conferences for broader organizations.*

Association for Career and Technical Education Conference

California Cooperative Education and Internship Association

Cooperative Education Association National Conference

Education Edge Conference

Georgia Partners in Education Conference

National Tech Prep Network

National Society for Experiential Education

School-to-Work 2000

Tennessee Education Association

# **A Cooperative Approach to Work-based Learning and College Transitions: University, College, and High School Partnerships**

*Key Strategies, Challenges, and Lessons Learned from the Higher Education  
Partnerships to Enhance Work-based Learning Grants*

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The Higher Education Partnerships to Expand Work-based Learning projects were designed to promote: 1) curricula that integrate classroom studies with school-approved work experience in a field related to a student's academic and career goals, and 2) transitions from high school to college. Awards were funded by the U.S. Department of Education and the U.S. Department of Labor. The authors would like to acknowledge the vital contributions of those who made these grants possible. From the U.S. Departments of Education and Labor, Stephanie Powers strongly promoted linkages between secondary and postsecondary education. Melissa Apostolides was instrumental in oversight of the projects, Richard Larsen directed the funding process, and Sharon Belli refined the research design. Maureen Bozell from DTI guided the completion and final reporting.

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Finally, the most important goal of these projects was, and continues to be, the improvement of education and career opportunities for students. The project directors and coordinators listed below were instrumental in building effective strategies that provided those opportunities. In addition, we recognize the countless education and business leaders and administrators who have long promoted the integration of learning and work within colleges and universities—forging a high-academic example of work-based learning, as well as an avenue for attracting secondary school students into a broad array of education and career options.

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## College and University Project Leaders

*The Higher Education Partnership projects were developed within a quick timeframe, requiring the ability to establish college and high school personnel and activities within a few months. These projects were based on the expertise of colleges and universities with significant experience in the integration of learning and work. In most cases, a college administrator with a longstanding background in cooperative education, internships, or other work-based learning headed the project. The ability to build on that background was often instrumental in moving forward effectively and rapidly. Site leaders included:*

*Antioch College:* Cheryl Keen, Patricia Linn, Lori Warfield, Matt Fogarty

*Bates Technical College:* Jacqui Banks, John Grant, Sally Irish, Lisa Edwards Pelcher, Gloria Grant

*Bergen Community College:* Karen Liskow, Robert Kahn

*C.W. Post Campus, Long Island University:* Jeanette Grill, Jeff Lennox

*California State University – Sacramento:* Larry Hill, Deborah Case, Sally Leake

*Montana State University – Northern:* Gail Reynolds, Terry Lilletvedt, Lori Nault, LaCrissa St.Pierre

*University of Tennessee - Chattanooga:* Margha Davis, Sandra Longer

*Valdosta State University:* Don Parks, Bill Tillman, Terry Porter, Ann Stone

*Western Kentucky University:* Becky Bennett, Barbara Hanson, Barbara Johnston



## Glossary

*The following terms, strategies or initiatives are cited in this report. The list of collaborating programs and initiatives in Appendix IV also describes other programs that may be mentioned in the body of the report or in the profiles of individual sites.*

**Articulation** is a process for coordinating the linkage of two or more educational systems within a community to help students make a smooth transition from one level to another, without experiencing delays, duplication of courses, or loss of credit.

**Career Academy** is typically a “school-within-a-school” organized around a career theme.

**Community Service** is a school-approved activity that is conducted in and meets the needs of a community.

**Cooperative Education (co-op)** is a structured educational strategy integrating classroom studies with learning through paid, productive work experiences related to a student’s academic or career goals. College co-op is offered at the associate, baccalaureate, and graduate levels, and available in a wide range of fields of study. This report distinguishes between college and high school co-op.

**Job Shadow** is an experience where students follow and observe an employee at a workplace to learn about a specific occupation or industry.

**School-Sponsored Internships** are school-approved experiences in the workplace or the community that are connected to a student’s academic program.

**School-Sponsored Enterprise** is a program in which students produce goods or services as part of their school programs. School-sponsored enterprises typically involve students in the management of a project that may entail the sale of goods for use by others. Enterprises may be undertaken on or away from school property but are always part of the school’s programs.

**Service Learning** is an instructional method that combines community service with a structured school-based opportunity for reflection about that service, emphasizing the connections between service experiences and academic learning.

**Tech Prep** is a planned program of sequential coursework with a technical career focus that links high school and college.

**Work-based Learning (WBL)** is a school or college curriculum that integrates learning from experience in a worksite or work environment into the academic program.

**Youth Apprenticeship** is typically a multi-year program combining school- and work-based learning in a specific occupational area. The apprenticeship leads to a related postsecondary program and/or an entry level job.





## Introduction

In the twenty-first century, the economic competitiveness of the United States will be more dependent than ever on the ability of our youth to develop and apply high-level technical and critical thinking skills. Educators and policymakers have increasingly sought strategies to improve academic achievement and preparation for college and career success. At the same time, most of higher education—particularly at the baccalaureate level—has not been actively involved in many of the education and career-related initiatives being implemented in schools.

As educators have sought effective strategies to engage students in high academic achievement and make successful transitions into and through higher education, one educational strategy that gained interest during the 1990s was work-based learning (WBL). This was based on the belief that students' further education and career goals and skills benefited from learning about the world of work and how to apply classroom concepts in real-world situations. In addition, these strategies were thought to enhance student motivation and aspirations.

At the postsecondary level, there has been a long, though often not recognized, history of integrating experiential education into the academic program. Several hundred colleges and universities offer cooperative education (co-op) to students, providing successive work experiences related to their academic or career goals. These programs are designed to enhance knowledge of the field as well as ability to apply classroom learning in the workplace. They also focus on developing a professional work ethic, work-place skills, resumés, and employer contacts. In addition, almost all colleges and universities offer internships in at least some fields, and most encourage community service.

In 1999, the U.S. Departments of Education and Labor jointly provided funding to nine colleges or universities with significant experience in work-based learning (such as cooperative education, structured internship programs, or service learning). *The goals of the grants were to build partnerships with high schools, expand work-based learning for secondary school students, and promote transitions from high school to college for students with work-based learning experiences.* These awards of up to \$75,000 per year were for a one-year duration, with a potential additional year. Eight of the nine projects received funding for two years.

In awarding the grants, the Departments built on the institutions' years of expertise in providing experiential and work-based learning for college students. Colleges and universities varied in terms of geographic location, highest degree awarded, surrounding community (urban, suburban, or rural), designation as public or private, size, and their approach to these partnerships. Among these institutions, one was a small liberal arts college, one focused their project on teacher education, and one started with a large county consortium that was already working on career education. Two projects were led by community or technical colleges. Some colleges or universities worked with high schools located close by, while others included more distant locations as well. The individual site profiles that are included in this report contain a project description, successful strategies, challenges, and recommendations for future partnerships between high schools and institutions of higher education. (See Appendix 1.)

## Grant Project Activities

The nine projects developed different strategies for addressing the project goals. While all incorporated some of the same activities, each site designed and adapted a set of strategies to best serve their particular partnering high schools, their institution's strengths, and their surrounding employment community.

### *Build Partnerships with High Schools*

All project proposals had to demonstrate a partnership with one or more high schools before funding. Some were based on new collaborations, and others built on existing relationships. Two of the projects included only one high school partner, while the others involved as many as 11 schools.

The nature of the partnerships also varied among the projects. One site expanded an emerging Tech Prep consortium to include more schools, add a work-based learning component, and build articulations into a baccalaureate degree-granting institution. Four sites used high school clubs or special programs as their best way to reach and attract students without imposing on teachers' schedules or classroom time for recruitment. One rurally-located project combined outreach to a local high school with the expansion of an articulation agreement and activities with a school district and technical college located hundreds of miles away. Two of the rural sites combined activities held at the high schools with web-based services to provide information, allow electronic career development activities, post potential work experiences, and connect multiple secondary and postsecondary partners. Another project combined a summer academic and work-based learning activity with other programs and resources involved in a county-wide consortium of school systems, community and technical colleges, and a state university.

All sites either had a college representative at the high school regularly during the school session, or developed a few key teachers or counselors as their primary on-site personnel to interact with students and teachers. Projects with multiple high schools scheduled periodic meetings for representatives from the various high schools to exchange strategies. Finally, several colleges arranged for teacher experiences in the workplace, followed by curriculum development, for their partnering schools.

While these partnerships were primarily among secondary and postsecondary institutions, employers were key participants because of the focus on work-based learning. Since the lead colleges had well-established work-based learning programs themselves, they had strong relationships with employers. Most sites included them in partnership meetings and encouraged other ways for the schools and the business sector to collaborate.

### *Expand Work-based Learning and Career Development*

All nine projects developed career exploration, career development, and work-based learning activities. Career-related presentations—whether in class or outside of it—were easier to schedule and garner high school support than were the work-based learning experiences. Three sites planned from the beginning for summer scheduling of the primary work-based learning. Recruitment and preparation sessions were held at the high school during the academic year, and the summer work experience was combined with taking a credit-bearing college class at a higher education institution. Another project, centered around teacher preparation, continued to provide a range of activities

during the school year, and then focused on encouraging summer internships and adding a work-based component to a state-promoted summer academy for future teachers.

Two rurally-located projects developed school-based enterprises to expand the opportunities available to students. The student-run, school-sponsored enterprises included construction projects, career and employment centers, an investment group, and a radio station. One of the sites also paid stipends to high school teachers to expand cooperative education opportunities and better link projects to the classroom.

All sites included other work-related activities that brought students into contact with employers. These included job shadowing, informational interviews, classroom talks, and presentations at career fairs. In many cases, career fairs were held at the college campus, allowing high school students not only to hear about the range of job opportunities open to them and to college students, but also to interact with college faculty, staff, and students.

### ***Promote Transitions into Postsecondary Education***

Promoting and facilitating transitions into higher education were central goals of the projects, and a key reason why colleges and universities were the lead partners. Projects included both associate and baccalaureate degree-granting institutions, providing a full range of the educational continuum leading to careers. Transitions were promoted not only through activities that connected students to potential enrollment in college, but also in presentations about career paths. Those discussions involved both the range of employment that might be of interest, and the sequence of education (both secondary and postsecondary) that would prepare students for those careers.

All projects included elements that provided students, and often parents, with information about college, the admissions process, and academic programs available in postsecondary education. Most included sessions on financial aid and how to complete the admissions application and process. All sites provided visits to the college or university, and four of them incorporated classes on the college campus for participating high school students into their central plan. Another project expanded a curriculum linking a high school district, a technical college, a state university, and a local employment sector. This provided education and career-building opportunities to a distant, rural location, and brought those students onto the state university campus.

Admissions-related approaches varied among projects and ranged from a scholarship award for incoming students, to admission points for high school work experience, to the creation of a simulation game focusing on admissions decisions that consider work-based learning experience, to early entry into university cooperative education programs. Most sites did not significantly alter the admissions process to provide a specific consideration of school-approved work-based learning, but several identified ways to either note high school work experience or to incorporate those activities into the special considerations or extra-curricular activities sections of their application. In the case of the community colleges, with their open admissions process, this was not considered a necessary goal.

Finally, to develop preliminary data about the enrollment and success of students with secondary career and work-based learning experiences in postsecondary education, all of the lead colleges or universities were required to study a sample of current college students. The study focused on college students' descriptions of their high school experiences with career and work-related educa-

tion and their desire for those educational programs in college. Additional data collected on these students included grade point average, persistence in higher education, and remedial course taking. Comparisons were made of students reporting varying levels (from none to high) of high school experience in career and work-related education. The results of this study are attached. (See Appendices II and III.)

## Results

The Higher Education Partnership projects were designed to quickly establish programs and activities for high school students during the first year. Activities summarized in this report cover the one, two, or (with a no-cost extension) two and one-half year duration of these grants. In sum, 22 colleges, 55 high schools, and 2,627 employers participated in project partnership activities. Activities engaged 19,645 students in career and work-related activities and 2,837 in work-based learning experiences. An additional 4,000 students participated in work-based learning that was partially supported by the projects through direct funding or through partial support of consortium activities and resources.

In addition, analysis of the studies that each site did of a sample of current college students found that 72% of students indicated they had participated in at least one career education or work-based learning activity during high school and 79% intended to engage in internships or cooperative education during college.

Although funding ended in late 2001, all nine sites have on-going activities, a continuing partnership with one or more high schools, and activities that link their expertise in college work-based learning to other initiatives. In addition, several have altered their own college programs to move students more rapidly into work-based learning during their college curricula.

This section outlines successful strategies, challenges that arose, and recommendations from the project leaders and technical assistance providers. This information is offered to assist those seeking to support similar partnerships.

## Successful Strategies

Obtaining initial support for the concept of an active, working partnership between colleges and high schools is sometimes easier than ensuring that all parties are committed to full implementation of the work-based learning and college transition activities. The Higher Education Partnership sites found the following strategies helpful:

### ***Build Partnerships with High Schools***

- Pre-plan activities and ensure that there is an established relationship with the high school(s) that supports the range of activities desired.
- Understand and plan for the differences between high schools and colleges in terms of scheduling, support for activities off-campus, competing priorities, and student recruitment and support.
- Promote active participation by at least a core group of high school teachers or counselors.

- Link career and work-based learning activities to existing school and teacher goals.
- Consider stipends or mini-grants for high school staff in order to jump-start programs.
- Arrange for college faculty or staff to participate on-site in high schools.
- Hold periodic meetings of representatives from all participating high schools, colleges, and the employment community to share successes and challenges. Work together to support other initiatives, promote transitions into postsecondary education, seek additional funding, and establish ongoing collaborations.

### ***Expand Work-based Learning***

- Collaborate with existing high school clubs or programs to recruit students and add a work-based learning component to other academic activities.
- Use other high school and college students who have participated in work-based learning to recruit new participants.
- Encourage parental or guardian involvement and ensure they understand the program.
- Clearly outline the commitment required of students, and the consequences of not meeting all of the requirements.
- Consider summer programs if scheduling is difficult during the academic year.
- Offer school-sponsored enterprises as an option for students in rural locations or schools with concerns about off-campus employment.
- Support teacher externships or experiences at local employment sites, and encourage the development of curricula that incorporate examples from the world of work or the community.
- Have experienced college or university practitioners of work-based learning actively involved with students, adding expertise in employer expectations of the knowledge and skills required for a range of careers.

### ***Support Transitions to Postsecondary Education***

- Provide informational sessions for students and parents about the education required for different careers, the college selection and admissions processes, course offerings available at colleges, and financial aid.
- Arrange campus visits for high school students and include participation in one or more college activities.
- Offer enrollment in college courses for high school students. Special sections for high school students, carrying college credit for those who subsequently enroll, provide tailored support to secondary students while also familiarizing them with the college campus and experience.
- Explore admissions strategies that consider prior participation in school-approved career or work-based learning experiences.
- Provide the opportunity for participating high school students who subsequently enroll in the college to benefit from articulation agreements or early entry into postsecondary work-based learning programs.

## Project Challenges

*The following challenges were encountered by one or more of the project sites. In many cases, the partnerships found ways to successfully address barriers, but others who seek to establish these programs should be aware of these possible difficulties. In addition, all sites found that the brief span of the grants (one to two years) and the limited amount of funding (up to \$75,000 per year) presented challenges to building sustainability.*

### ***Build Partnerships with High Schools***

- High school teachers or staff may have concerns about the college role at the school—in terms of possibly increasing their workload or trying to replace some of their functions.
- Colleges need to understand high school teachers' constraints of time and required priorities, which may differ significantly from those in higher education.
- High schools have less flexibility in adjusting established schedules or incorporating new activities during the academic year. Arranging curricula and activities well in advance of September greatly eases the ability to implement the program.
- Primary staff hired jointly by the high school and the college may have difficulties in serving or addressing multiple supervisors and educational institutions.
- The emphasis on high-stakes testing in many states may lead to resistance to activities that take students away from the classroom or are not perceived to directly support improvement on scores.

### ***Expand Work-based Learning***

- The time and off-site commitments of many work-based learning experiences are not always understood by high school teachers and staff.
- Planning for transportation for high school students to work sites or to college activities is often key to enabling students to participate.
- High schools have less flexibility than colleges in adjusting existing schedules to incorporate work-based learning or career activities when school is in session.
- State budget cuts and constraints may adversely affect support for newer programs.
- Early designation of career and/or postsecondary plans (in 8<sup>th</sup> grade), as implemented in one state, can limit the ability to offer a range of work-based learning experiences and higher education options to all students.

### ***Support Transitions to Postsecondary Education***

- Admissions office procedures typically do not look for or reward work-based learning in high school.
- Having students come onto campus may require arranged transportation.
- It may require extra effort to ensure that the college faculty involved link the courses they offer to high school students to work-based learning or career applications.
- College credit for courses taken by high school students is not always transferable to other postsecondary institutions.
- Arranging how to cover the tuition costs of college courses offered to high school students is sometimes difficult and may vary among states, colleges, or school districts. And, there are additional expenses for books, fees, and other activities that burden students.

## Recommendations

*Recommendations were offered by higher education project leaders from the nine sites. These leaders engaged as a group in quarterly conference calls and several meetings over the course of the grants. Based on their quarterly reports of challenges and activities, they exchanged strategies to engage students, schools, and their own institutions in understanding and supporting these partnership and the programs for students.*

### ***Build Partnerships with High Schools***

- Understand the needs of high school students, parents, and staff.
- Have college faculty, staff, and students come to the high schools.
- Use experienced key personnel rather than just relying on new hires.
- Focus on developing a few strong supporters within the high school rather than trying to persuade all.
- Establish regular and frequent communication among all partners.
- Be flexible in implementation and seek ways to align new programs or curricula with existing initiatives or priorities.

### ***Expand Work-based Learning***

- Explore summer timing for work-based learning experiences.
- Recruit students through high school activity clubs or other special programs.
- Use other students (both high school and college) and employers to talk with high school students about a range of careers and the education required for them.
- Involve parents or guardians in the orientation and informational sessions.
- Include middle schools in partnerships to begin outreach earlier. High school is late for beginning the discussion and information about college and careers.

### ***Support Transitions to Postsecondary Education***

- Expose students and parents to the college, the application process, and the resources that assist in funding or academic support for students. Bring students on campus and arrange for tickets to special events, as well as opportunities to meet with faculty and other students.
- Expand articulation agreements and memoranda of understanding among partnering educational institutions. The business community can also be a valuable partner in educational collaborations.
- Offer college courses for high school students. If holding classes at the college isn't feasible, offer one or more classes at the high school.
- Consider prior school-approved work-based learning experiences during the admissions process. Studies in this project showed that 72% of current college students indicated they had participated in at least one career and work-based activity during high school. One college chose to include a scholarship in their project activities.
- Offer work-based learning to college students earlier in their academic program. The studies in this project found that 79% of students planned to participate in co-op or an internship during college. Since most attrition occurs in the first and second years of postsecondary education, waiting to allow students to participate may be limiting access to a preferred curriculum.

## Profiles of Individual Higher Education Partnership Sites

*The individual profiles that follow provide additional information on the specific partners and strategies used in the nine projects. While there were many activities that were common to all or most sites, other aspects were tailored to the particular focus of the project, needs of the high schools, or expertise of the college or university. Institutions varied in terms of geographic location, highest degree awarded, surrounding community (urban, suburban, or rural), designation as public or private, and size. One project was led by a small liberal arts college and two were led by community or technical colleges. The profiles include a project description, successful strategies, challenges, and recommendations for future partnerships between high schools and institutions of higher education.*

### ***Lead Institutions***

**Antioch College (OH)**

**Bates Technical College (WA)**

**Bergen Community College (NJ)**

**California State University – Sacramento (CA)**

**CW Post Campus, Long Island University (NY)**

**Montana State University – Northern (MT)**

**University of Tennessee – Chattanooga (TN)**

**Valdosta State University (GA)**

**Western Kentucky University (KY)**

## Terms used in Site Profiles

***Institutional WBL experience:*** the numbers of years of experience the lead college or university had in providing work-based learning to college students.

***Project students in WBL:*** the number of students engaged in work-based learning experiences under the activities of the Higher Education Partnership projects.

***Project students in work-related:*** the number of students participating in “work-related” activities designed to enhance career exploration, career development, knowledge of the workplace, and related skills.

***Employers, intensive:*** the number of public, private, and non-profit entities providing work-based learning experiences for students.

***Employers, less intensive:*** the number of public, private, and non-profit entities participating in other activities such as job shadowing, informational interviews, classroom presentations, informational sessions at career fairs, advisory committees, etc.



## ANTIOCH COLLEGE – Yellow Springs, OH

<i>Institutional WBL Experience:</i>	78 years of co-op	<i>Project students in WBL:</i>	176
<i>Institution:</i>	Rural, private, baccalaureate level college	<i>Project students in work-related:</i>	2841
<i>Partnering schools:</i>	5 high schools, 2 comm. colleges	<i>Employers: intensive 104; less intensive 245</i>	

**Project:** This partnership with five high schools (Springfield North, Springfield South, Shaw, Cleveland Heights, Linworth Alternative) and Clark State and Sinclair Community College was designed to expand the work-based learning programs and to encourage students to consider attending a cooperative education college in general and Antioch College in particular. Activities centered on career and placement skills; mentoring by college students; exposing students to college admissions, academic classes, and co-op opportunities; and dissemination of WBL and college materials to students, schools and parents.

### Successful Strategies:

- **Significant admissions incentives for work-based learning** attracted students. These included \$5000 scholarships for a student from each partnered school to attend Antioch, consideration of WBL on the college application, and an articulation allowing up to 12 credits for pre-Antioch work experience for some students. An admissions simulation game emphasizing WBL was developed and presented at schools and national conferences.
- **College students as mentors** were on site at high schools through a graduate course and through Campus Compact. Antioch also created an annotated bibliography of research on adolescence and work. High school students came on campus for meetings with faculty and staff, and for work experiences.
- **Career exploration built on other initiatives**, such as expanding the (high school) senior year project, Grrlz-to-Womyn, career academies, and a career discovery camp matching students with college mentors. Other activities included resumé writing, interviewing skills, and externship manuals.
- **Informing students, parents, and educators** about WBL and co-op colleges included financial aid sessions, research and a brochure on Ohio co-op colleges, local press articles, and community forums.
- **Internships and job shadows** were promoted by developing a list of internship sites, creating an employer group, and facilitating experiences at Antioch and in the Yellow Springs community.
- **Teacher externships** and in-service sessions exposed them to integrating work and learning.
- **Research on the prior WBL experiences** of Antioch students and their academic outcomes was established as an on-going college research project.

### Challenges:

- **WBL programs were often little known or misunderstood** by parents, teachers, and students. Schools also felt torn between an interest in WBL and the many other priorities and activities in high school.
- **Attracting students** to co-op colleges and Antioch's scholarship was hard without a recruiting stream.
- **Staff turnover** during the grant affected the continuity of the activities.

### Further Recommendations:

- **Scholarships based on work-based learning experiences** are an attractive incentive.
- **Admissions consideration of WBL** encourages students, parents, high schools and colleges to connect these strategies with college transitions and success.
- **College co-op/internship students** working with high school students provide effective mentoring. College community service programs and education courses can be linked to work with high schools.
- **Faculty work in service-learning or action research projects** can be linked to work with high schools.
- **High schools considering career academies** are natural allies in promoting WBL and college paths.

## BATES TECHNICAL COLLEGE – Tacoma, WA

<i>institutional WBL Experience:</i>	>10 years of WBL	<i>Project students in WBL:</i>	4633
<i>Institution:</i>	suburban, public associates level	<i>Project students in work-related:</i>	4492
<i>Partnering schools:</i>	14 school districts, 5 colleges	<i>Employers: intensive 952; less intensive</i>	619

**Project:** In the first year, Bates Technical College participated as part of a consortium centered around career and work-related education that included Clover Park Technical College, Pierce College, Tacoma Community College, the University of Washington, and 14 school districts encompassing 31 high schools. The second year grant project focused on Bates and partnering high schools, primarily centered on a summer academy combining a college class and a work experience. Evergreen State College was the baccalaureate partner after the first year. Numbers of students reported above encompass not only project students, but also those in other consortium activities. Bates Technical College worked with 11 high schools, providing 233 students with WBL programs, presenting sessions and work-related activities to additional hundreds, and engaging more than 180 employers.

### Successful Strategies:

- ***Bates' Summer Academy*** allowed approximately 100 high school students each summer to select career disciplines of interest, attend a two-week summer session with college students, and engage in a subsequent two-week work experience placement. Other college programs include a technical high school and career training on campus. Students can enter with up to two credits in WBL.
- ***Collaboration with other initiatives*** included the Boys and Girls Club, Building Opportunities Through Technology (BOTT), and the Urban League's Academy on the Bates campus.
- ***A Writing Development course*** was designed for high school students to take at the college, centered on business communications, report writing, and giving presentations. Students visit Human Resource Departments and make presentations to industry partners.
- ***Consortium and Bates activities and materials*** included learning guides, mentor handbook, career guide, and career fair.
- ***The consortium's Pierce County College Outreach Night*** provided high school educators with exposure to the Summer Academy, as well as Dual-Credit and other programs.
- ***A strong policy against tardiness and non-attendance*** assisted in a 95% completion of students in the program.
- ***Articulation agreements among consortium partners*** grew to more than 53, a 15% increase over the preceding year. Bates developed an agreement with Evergreen State College, providing a 2+2+2 path.

### Challenges:

- ***Consortium activities did not always dovetail with the grant project***, resulting in a decision to not join Bates in the second year of the project. Some of the other college partners did not want to focus as heavily on WBL. Collaboration among partners continued, but was not as directly connected.
- ***Staff turnover*** resulted in confusion of project purpose.
- ***Original baccalaureate partner withdrew*** after difficulties with the research portion. Fortunately, a new baccalaureate partner actively worked on articulation paths for Bates students.

### Further Recommendations:

- ***Informed supportive high school teachers and counselors*** will help facilitate summer enrollment.
- ***Summer scheduling*** of programs is often more accepted by schools and students.
- ***County-wide consortia*** can be effective in focusing multiple levels of educational institutions on integrated marketing and programming. Combining resources and developing materials that can be used by multiple institutions saves time and funds.

## BERGEN COMMUNITY COLLEGE - Paramus, NJ

<i>Institutional WBL Experience:</i>	25 years of co-op	<i>Project students in WBL:</i>	443
<i>Institution:</i>	Urban, public community college	<i>Project students in work-related:</i>	20
<i>Partnering schools:</i>	8 high schools; 1 bacc. college	<i>Employers:</i>	233

**Project:** Bergen originally partnered with five high schools (Paramus, Bogota, Hackensack, Westwood and Fairlawn), and added three more during the second year (Teaneck, Englewood, and Bergen Tech). The partnership also included a baccalaureate level institution, building a 2+2+2 path from high school into postsecondary education. The project built upon a local Tech Prep initiative, thus expanding work-based learning and postsecondary transitions for high school students. Activities focused on recruitment during the high school academic year and a summer experience on the college campus encompassing a credit-bearing college course, a separate co-op course, and a related work experience.

### Successful Strategies:

- **Tuition-free, three-credit college course** brought high school students to the college campus, and gave them opportunities to earn early credit. Classes ran for five weeks during the summer, four days a week.
- **One-credit college co-op course and work experience**, which ran simultaneously with summer general education course, helped students to explore WBL and understand college WBL programs.
- **Summer scheduling** for classes circumvented the difficulties of high school schedules in providing work-based learning during the academic year.
- **High school work experience teachers** were hired at each site, providing a valuable understanding of the high school culture and processes, as well as an on-site presence for students.
- **Requiring meetings of students, parents, and counselors** significantly increased the percentage of students initially registering that followed through with the summer classes. Holding the student/parent meeting on the college campus gave both an additional exposure to college.
- **Requiring a refundable check for books** (which were paid for by the college as long as students completed the summer session) resulted in a higher percentage of students completing the program.

### Challenges:

- **Initial rate of those signing up compared to those completing** was lower than hoped. This led to rethinking the design of credit, course selection, and the orientation process.
- **General education course choices** turned out to heavily favor sociology and psychology over history. Faculty for expected courses had already been hired during the first year. In subsequent years, sessions were designed for the most requested courses, and a section of Computerized Accounting was added.
- **Initial reluctance by college faculty to integrate work experience** into their classes hindered the project goal of linking learning and work. This was resolved and integrated into curriculum.
- **Funding tuition** for the summer courses was difficult. The project moved to include matching college funds to cover tuition, but students or parents did not pay for the courses. A final year survey indicated high interest even if students had to pay. Future plans include having articulated courses taught at the high school by approved high school faculty, with tuition waived and students covering fees.
- **Baccalaureate partner had to be replaced** during the second year. Fortunately, there were several other universities with existing or expanding relationships with the community college.

### Further Recommendations:

- **Summer scheduling** of classes and work experiences is well-received by students, parents and schools.
- **Ensuring that faculty members integrate work experience activities into classes** can enhance classroom presentations.
- **High school staff members are valuable resources** for running a summer program, understanding the high school environment and informing students about summer opportunities during the school year.
- **Integrating with Tech Prep** or other initiatives can help combine resources and support sustainability.

## CALIFORNIA STATE UNIVERSITY -SACRAMENTO (CSUS) - Sacramento, CA

<i>Institutional WBL Experience:</i>	10 years of co-op	<i>Project students in WBL:</i>	58
<i>Institution:</i>	Urban, public university	<i>Project students in work-related:</i>	345
<i>Partnering schools:</i>	1 high school, 1 comm. college	<i>Employers: intensive 35; less intensive</i>	14

**Project:** CSUS partnered with Cosumnes River College (CRC) (the local community college), the Elk Grove Unified School District, and Valley High School to provide a unique program of career awareness and work-based learning opportunities for high school students. Activities were specifically geared to stimulate an interest in pursuing postsecondary education by recruiting, screening, and admitting students from the career academies at the high school and helping them identify individual career goals and participate in hands-on work experiences during a six-week summer term of academic and work experience.

### Successful Strategies:

- **Use of experienced university co-op staff** (rather than new personnel) to interact with high schools and to present sessions provided depth of knowledge of WBL and college transitions. Staff helped students identify career goals, develop job search and performance skills, and identify appropriate work sites.
- **Orientation sessions** for students included two after-school workshops to prepare them for the summer program. A large Parent/Student Orientation was also conducted to answer parents' questions and to get students enrolled in the community college summer course. Project leaders found that sending home the workshop and orientation announcements with a post-it reminder worked well.
- **Credit-bearing course at the community college** gave high school students a sense of the college experience and reinforced the importance of pursuing an internship or co-op at the college level. The community college already had experience with setting up a college course for high school students. An articulation agreement between CRC and the California State University system ensured transferability.
- **Informational interviews** by students with professionals in their career fields of interest, with reports back to other students in the class, worked well as a career exploration activity. This strategy was important when real WBL experiences were limited during the first year, but also remained a vital tool.
- **Linkages with other initiatives** expanded participation, including: Tech Prep at CRC for joint activities; LEED (connecting employers and educators) for resources and securing internships; and AVID/MESA for the integration of a career development component into this outreach to underserved students. After the grant period, the partnership is launching a related AVID/MESA pilot in an additional high school.
- **Memorandum of Understanding (MOU)** delineating the budget and roles of the partners assisted in both implementing and sustaining the program. The project built on an earlier MOU and expanded ties.

### Challenges:

- **Initial dropout rate** of students from recruitment to completion of summer WBL arose from the resignation of the job developer during first year. The partnership devised a special studies section to allow those participating earlier, but not completing credit requirements, to fulfill required activities.
- **Transportation difficulties** prevented some students from accepting available assignments at a good, but distant, company. The following year, the partnership held an early meeting and facilitated carpools.
- **Office disruption** of the project staff due to building health issues slowed implementation.
- **Staff turnover** in the first year of the project particularly complicated employer recruitment.

### Further Recommendations:

- **Needs of high school students** should be recognized by college personnel as very different from the needs of college students.
- **Tapping the expertise** of high school faculty and administrators who understand the needs of high school students will assist implementation.
- **Scheduling students for workshops** more efficiently is handled better by letters sent home assigning students to a workshop date/time than by calling students out of class for that purpose.
- **Tying activities** to other programs, (e.g. MESA, AVID) assists in obtaining and maintaining support.

## C.W. POST CAMPUS, LONG ISLAND UNIVERSITY – Brookville, NY

<i>Institutional WBL Experience:</i>	20 years of co-op	<i>Project students in WBL:</i>	N/A
<i>Institution:</i>	suburban, private university	<i>Project students in work-related:</i>	595
<i>Partnering schools:</i>	1 high school	<i>Employers:</i>	20

**Project:** C.W. Post partnered with one high school (Westbury) with a significant minority and low-income population. The college built on a long history of cooperative education and the Long Island University Plan that results in work-based learning experiences for 75% of its students. Activities centered on career and placement skills; on-campus workshops; professional development for high school staff; an employer breakfast; and work with student clubs.

### Successful Strategies:

- **Career development activities** included a career interest inventory for 9<sup>th</sup> graders, career assessment workshops, Real World 101 workshops on career and employability skills, and a career day on the college campus. The project also provided resources for the school career library and a WBL video.
- **Outreach to existing student clubs** was the most successful way to reach students. Teachers did not have time during classes, so many sessions were offered through student activity clubs.
- **Sessions for special education students** gave them exposure to career opportunities and job shadowing.
- **A business etiquette dinner** provided students with social and behavioral skills for business settings.
- **Financial aid workshops** were held for students and parents at the college campus.
- **Providing transportation to project activities** was essential for getting students to the college.
- **University Admissions Office rewrote its catalog** to promote the value and acceptance of work-based learning.

### Challenges:

- **School emphasis on addressing low scores on state-wide tests** limited the time and interest in WBL activities. In addition, only those with the best academic records were allowed to leave school early for internship or co-op experiences.
- **Dependence on one key instructor** meant that the amount of WBL activity would suffer without that person's participation during the summer.
- **Developing a rapport with the high school** was a challenge, particularly since the project was not built upon a prior partnership between the college and the school.
- **Parents** did not recognize the value of work experience as part of the school program.

### Further Recommendations:

- **Having multiple partners** provides more options if one of the schools changes interest or availability.
- **Summer availability of key staff** is important since that offers a programming time that does not interfere with high school academic activities.
- **Flexibility in design** allows for adjustments during implementation. When students could not do WBL during the school day, the project shifted towards younger students and career exploration. While that did not fulfill the WBL elements of this project, it did build a successful partnership with the school and exposed many students to careers and higher education. Although the grant lasted only for one year, the project continues two years later, with established Career Day activities for 9<sup>th</sup> graders, a College Day for 10<sup>th</sup> graders, and other activities.

## MONTANA STATE UNIVERSITY-NORTHERN (MSUN) - Havre, MT

<i>Institutional WBL Experience:</i>	22 years of co-op	<i>Project students in WBL:</i>	1277
<i>Institution:</i>	Rural, public university	<i>Project students in work-related:</i>	2255
<i>Partnering schools:</i>	5 high schools, 1 comm. college	<i>Employers: intensive 408; less intensive 482</i>	

**Project:** MSUN partnered with a local high school (Havre) and a school district located across the state (four high schools in Flathead Valley County). The project at Havre expanded credit for work-based learning and built a partnership with the University. The project at Flathead expanded and strengthened the credit-for-work program within the Flathead Valley High Schools and expanded the articulation agreements between Flathead Valley High School, Flathead Valley Community College, and MSUN.

### Successful Strategies:

- ***Building on a promising high school model***, then expanding participation and academic areas, helped to jump-start and sustain activities. The Flathead project included co-op experiences, some classes at Flathead Community College, and articulation to MSUN. Students can earn 1-3 credits in co-op, and 2-4 credits in several mechanics or welding courses, saving university tuition in the Diesel Tech Program.
- ***Focusing on a regional industry***, in the diesel program, helped to solidify student and industry interest.
- ***School-based enterprises*** (Wall Street Club and utility shed-building business) offered school-approved WBL when the school schedule or local business opportunities were limited. High school WBL included established learning objectives and a formal evaluation conference at the end.
- ***On-campus visits*** allowed students to experience the university, meet with faculty, and learn how their high school program prepares them for college and jobs. Students came to the university career fairs, employer recruiting presentations, and a campus visit day combining academic and sports opportunities.
- ***Other activities*** included job shadowing with a reflective paper, a mentor day, Medical Health Care Career Fair, a fair for summer jobs, presentations on grant funds for college, an employer clearinghouse of job opportunities, an Advanced Biology students' project building and stocking a pond, work in a Head Start classroom, and presentations to middle school classes.
- ***Activities have led to other opportunities*** in teacher certification, nursing education, and partnerships.

### Challenges:

- ***Rural locations cause difficulties***, such as limited opportunities to have college representatives on campus; transportation; and inability to have students easily visit the university campus.
- ***High school reticence about WBL*** at one school arose from concerns about competing with business.
- ***Resistance to having university faculty*** working within the high school slowed implementation in one of the schools. Project staff had to gain acceptance and trust prior to working on the project. Timing issues also complicated acceptance—from the brevity of planning allowed in the grant process and the initial one-year length of the grant pushing programs to begin work (rather than planning) immediately.

### Further Recommendations:

- ***A longer grant period*** is important for projects establishing new partnerships among educational institutions. This allows better planning and opportunity to build support.
- ***High schools vary*** in their administrative and faculty philosophy. Flexibility is important in addressing the needs of different schools, often requiring different strategies, activities or structure.
- ***Difficulties may arise when a dedicated, on-site person is jointly funded*** by the school system and the university unless there is a clear agreement on goals, priorities, and activities.
- ***Building on an established partnership*** can help jump-start an articulation program, even when the schools and the university are located at a great distance from each other.

## UNIVERSITY OF TENNESSEE (UTC) - Chattanooga, TN

<i>Institutional WBL Experience:</i>	14 yrs of co-op	<i>Project students in WBL:</i>	163
<i>Institution:</i>	Urban, public	<i>Project students in work-related:</i>	1,914
<i>Partnering schools:</i>	8 high schools in TN, 1 in GA	<i>Employers:</i>	13

**Project:** This partnership with eight Hamilton County high schools in Chattanooga and the Dalton Independent School District, focused on teacher preparation, recruitment of minorities into teaching, and work-based learning experiences in the teaching profession for interested high school students. Other partners included GEAR UP, Urban IMPACT, Upward Bound, local and state Education Associations, Barnes and Noble Booksellers, Creative Discovery Museum, Tennessee Aquarium, Chickamauga and Chattanooga National Military Park, Arts and Education Council, and READ of Chattanooga.

### Successful Strategies:

- **University's existing strong presence** in the area schools assured easy acceptance by principals, teachers, and club sponsors of the UTC professors, student teachers, and project leaders.
- **Student clubs** offered an effective vehicle. Establishing and expanding Future Teachers of America (FTA) and Future Educators of America (FEA) clubs in the high schools promoted interest in teaching by providing tutoring activities, joint meetings with clubs at other high schools, and visits to UTC.
- **Tutoring** preparation through workshops and a brochure prepared FTA/FEA members to hone their skills as tutors and role models. UTC prepared lists of available positions for tutoring volunteers.
- **Stipends or grants** for high school teachers helped build support and ensure program fits the school.
- **Teacher Education Academy College Headstart (TEACH)**—an intensive, 4-week, live-in summer program—provided education courses, exploration of non-traditional approaches to teaching, and field placements in elementary schools. Students received three hours of college credit.
- **Multiple on-campus visits by students** assisted recruitment and transitions to college. FTA/FEA members visited the Admissions Office and attended special workshops. UTC provided tickets to homecoming or other popular sports events on campus for FTA/FEA members.
- **Links to broader events** such as National College Week or Dr. Seuss' Birthday provided additional opportunities for students to come on campus or to engage in teaching-related activities.
- **Fund raising** efforts with other community programs help to secure additional funding.

### Challenges:

- **Scheduling** far ahead was essential for accommodating or fitting into school schedules.
- **Summer** programs worked well for student participation, but it was difficult to engage in planning with principals and teachers due to their limited availability during that time.
- **Flexibility** was critical in planning activities to meet the needs and concerns of the schools.
- **State funding crisis**, with major budget cuts across the state, negatively affected the implementation of some of the grant's objectives when expected support failed to materialize.
- **State performance testing** made school personnel reluctant to release students from class.

### Further Recommendations:

- **Seeking out students who are sincerely interested** in teaching will result in quality, not quantity, when starting FTA/FEA chapters.
- **Limiting activities of FTA/FEA clubs** to a few is more effective than undertaking too much.
- **Linking up with other community efforts** in local schools is key to building long-lasting partnerships.
- **Periodic communication** among partners prevents duplication of effort and allows limited funds to go further in helping students and their families.
- **Assumptions by colleges and universities** about the population they are trying to serve should be revised since they sometimes differ from the needs expressed by teachers, students, and parents.
- **Teaching-focused career academies or dual enrollment** could help address the teacher shortage.

## VALDOSTA STATE UNIVERSITY (VSU) - Valdosta, GA

<i>Institutional WBL Experience:</i>	15 yrs of co-op	<i>Project students in WBL:</i>	263
<i>Institution:</i>	rural, public university	<i>Project students in work-related:</i>	6,604
<i>Partnering schools:</i>	7 school systems, 1 tech. college	<i>Employers:</i>	26

**Project:** This partnership included six county schools systems (Berrien, Brooks Cook, Echols, Lanier, & Lowndes) and one city system (Valdosta City Schools), as well as the Regional Education Services Agency, Valdosta Area Dept. of Labor, two Chambers of Commerce, and Valdosta Technical College. The project built upon the university's established co-op program and the emerging state business/education initiative that was seeking partnerships with postsecondary education and strong work-based learning.

### Successful Strategies:

- ***A steering committee*** of key stakeholders (including high schools, university, and others) held monthly meetings to guide the direction of the grant.
- ***Stipends*** for Team Leaders in each school provided incentives and resulted in ongoing commitment after the end of the grant.
- ***Early co-op admission option*** provided continuity between high school and the university. VSU's Accelerated Co-op Enrollment (ACE) allowed students with prior WBL to participate in co-op earlier than other university students, and to receive two hours of academic credit upon successful completion of the first university co-op (versus one hour for other students).
- ***Linkage to other initiatives*** facilitated the project. The state CHOICES education program involving business partners helped middle school students consider career possibilities and prepared them for high school work-based learning participation. The local business/education efforts were commencing and this project helped to connect education reform with college transitions and work experience.
- ***The Teachers in Industry*** program supported work-based learning by placing teachers in job shadowing experiences in industry, linked to developing curricula for their classes. This built support for the concept and value of linking work and learning for students as well.
- ***Tapping university groups on campus that are interested in community service*** provided help for activity days and for mentoring. For example, the Students in Free Enterprise (SIPE) linked high school and college students, engaging them in a Real World Job Shadowing Competition.
- ***Marketing*** to students helped spark interest. Specially designed Jimi Hendrix Experience T-shirts connected a recognized celebrity with the work experience theme, and were very popular.
- ***Web Page*** development provided information for students, parents, educators, employers, and partners.

### Challenges:

- ***Timing*** was a problem due to the difficulty of starting a new program in the middle of the school year and having to hire qualified staff, build partnerships, and gain trust during the first academic year.
- ***The rural location*** presented difficulties in student work opportunities and interaction with the university due to geographic distances between partners and travel limitations.
- ***Implementation of state education policy*** required 8<sup>th</sup> graders to select a high school curriculum track. This career-focused plan can limit exploration of other career and education possibilities.
- ***Turnover in university administration*** or staff limited continuity of support to the high school sites. Changes in university leadership adversely affected ongoing institutional financial commitment.

### Further Recommendations:

- ***Alternative admissions criteria*** are needed to address previous work-based learning.
- ***Regular communication*** among all partners helps to prevent duplication of effort, such as several individuals recruiting the same employer to work with the project.
- ***Keeping students' interests foremost*** helps prevent the distortion of goals by other initiatives, such as turf protection or individuals wishing to use funds for pet projects.



## WESTERN KENTUCKY UNIVERSITY (WKU) – Bowling Green, KY

<i>Institutional WBL Experience:</i>	20 years of co-op	<i>Project students in WBL:</i>	224
<i>Institution:</i>	Rural, public university	<i>Project students in work-related:</i>	579
<i>Partnering schools:</i>	4 high schools, 1 Community Col.	<i>Employers:</i>	95

**Project:** WKU partnered with four high schools (County high schools from Edmonson, Barren, Franklin, and Greenwood counties), as well as Bowling Green Community College. Building on the university's desire to be more involved with local high schools and to enhance work-based learning, the FOCUS project used web-based links, as well as on-site visits, to connect high schools, colleges, employers, and parents. In addition to career related and college transition workshops in schools, the project also used school-based enterprises to provide work and career experiences for students in rural locations.

### Successful Strategies:

- **Leadership staff with experience in co-op** helped to engage high schools, understood how to reach out to students, built employer relationships, and adapted to differing needs among schools.
- **Teacher stipends** helped to build support and provide an on-site advocate.
- **Mini-grants to high schools** built support and sponsored several school-based enterprises.
- **School-based enterprises** were used to provide students experience in a rural area with limited opportunities for WBL. These included a radio station and several student-operated career centers and employment services. The enterprises performed a community service, and were valued by employers.
- **Web-based or distance services** ([www.wku.edu/CareerServ/focus](http://www.wku.edu/CareerServ/focus)) formed a central method of communicating and providing on-line services such as a student career interest inventory, resumé workshop, and job postings. This increased services among diverse locations. In addition, several interactive sessions engaged students and employers via a Tele-Linking network.
- **Joint job listings** of high school and university co-op positions on the website allowed high school students to see the types of jobs and criteria open to college students.
- **Combined job fairs** for college and high school students attracted more students and employers.
- **Regional meetings** of counselors, teachers and administrators built linkages among personnel and sites.
- **Earlier admission to university co-op** for students with high school WBL experience allowed them to go into the program during their first semester at the university.

### Challenges:

- **Defining the role within the high schools** required project staff to be adaptable in implementation design. Using a retired teacher in one case and stipends in others helped build support.
- **The high school environment is different** from that of the university, sometimes calling for other strategies in outreach to students and teachers.
- **Rural schools** require more travel time to reach and typically have fewer local WBL positions.
- **Timing difficulties** arose from grant notification during the academic year and a lengthy hiring process.

### Further Recommendations:

- **Working with existing initiatives** can jump-start activities and promote sustainability. The project worked with Jobs for Kentucky Graduates (their students helped staff the employment centers at the schools). In addition, by offering services such as job fairs, job postings, and on-line programs to both high school and college students, WKU built on existing programs for university students.
- **Length of funded period** should be a minimum of three years. Having one year initial funding, with an additional year of renewal, made it difficult to make the inroads necessary to sustain the work.

## Summary of Postsecondary Outcomes Analysis

The lead college at each Higher Education Partnership conducted a small study of college students' past participation in high school career or work-based learning (WBL), followed by an examination of several postsecondary outcome measures over time. Each study included a sample (approximately 100/site)\* of current college students. The study focused on postsecondary students for two reasons. First, the brief duration and limited funding of the projects did not provide for follow-up research on the participating high school students as they moved into college. Secondly, the goal of informing colleges, high schools, and parents about how work-based learning might be an appropriate educational strategy for current and potential college students called for data that examined outcomes and participation rates of postsecondary students. This summary includes results from eight sites for the first year, and seven for the second. Students were identified in Spring 2000, and followed through December 2001.

The study was designed to indicate participation rates and compare attitudes and academic outcomes of students who engaged in career and work-related experiences while in high school with those who did not. Students self-identified their past participation in nine school-approved activities during high school. (See Appendix III for questionnaire). Questions also explored their choice of academic programs, their college and career goals, and their attitudes about and desire for work-based learning during college. Students were categorized by no, low, medium, or high levels of participation as defined below.\*\* Findings indicated that more students than expected reported they had engaged in these activities. At the end of the Fall 2000 and 2001 terms, the student records for those in the analysis were examined to determine persistence in college, grade point average, and use of remedial courses.

### High School Career or Work-Based Learning Activities

- Job Shadowing
- Short-term Internship
- Long-term Internship
- Community Service
- Cooperative Education
- Tech Prep
- Youth Apprenticeship
- Career Academy
- School-based Enterprise

### Key Findings on College Student Participation in Prior School-Sponsored Career or Work-Based Learning Programs

- **72% participated in at least one of the identified career or work-based learning experiences\*\*** during high school and 53% had medium or high levels of experience. 65% of students in baccalaureate level institutions reported medium or high levels.
- **42% engaged in Community Service** during high school.
- **Participation in other activities included:** Job Shadowing (28%); Long-term Internships (12%); Co-op (11%); Tech Prep (10%); Short-term Internships (9%); School-based Enterprises (9%); Career Academy (5%); and Youth Apprenticeships (4%) [*Students may have engaged in multiple activities.*]
- **80% believed they learn better through projects and real-world applications** than through classroom instruction and textbooks only.
- **79% indicated that they plan to participate in college-approved work experiences** such as cooperative education or internships.

\*Samples were identified by randomly administering the self-identification check-off list and questions to classes in which most students enroll. This was not a statistically-determined random sample.

\*\***Note: Students are identified on level of participation by:** No—did not check any of the high school activities; Low—checked either or both of Job Shadow and Short-term Internship; Medium—checked either or both of Community Service and School-based Enterprise; High—checked one or more of Long-term Internship, Cooperative Education, Tech Prep, Youth Apprenticeship, and Career Academy.

### College administrators comment on the Analysis of College Students:

*“We were surprised by the number of our students who did work-based learning in high school, especially the numbers with a high level of participation.”*

*“I was heartened to note that a large percentage of the students recognized the importance of learning through hands-on, real-life applications and planned to participate in work experiences while at our university.”*

Quotes from Analysis Reports from the Higher Education Partnership Projects, 2000-2001

## Academic Performance Results

*The following compares the performance of students in the no, low, medium, and high levels of participation in high school career or work-based learning activities. The Fall 2000 results included findings from eight institutions, while the Fall 2001 results came from seven institutions.*

- **Persistence in Higher Education.** This measure examined the continued enrollment of the college students studied. Seven of the eight sites in 2000 (and six of the seven sites in Fall 2001) indicated that students with the highest level of career or WBL experience did as well or better than students with no experience. At three sites, those with the highest level of experience had the highest rates of persistence (although not significantly different in most cases). One site reported that all students studied remained enrolled, therefore having no differences among the levels of experience.
- **GPA (Grade Point Average).** Results were mixed. Students with medium levels of participation had the highest GPA in four sites in 2000 and three sites in 2001. In comparison with students with no career or work-based learning experience: those with high levels had a lower GPA at four sites in 2000 and five in 2001, the same GPA at one site, and slightly higher GPA at three sites (two in 2001). For those with no participation, three sites showed the highest GPA, and two the lowest. At the same time, using GPA as a measure can be misleading since this study could not examine comparisons of grading among institutions and did not distinguish among the levels or types of courses taken.
- **Remediation.** Researchers examined student records for enrollment in none, one, or two-or-more remedial or developmental courses (as defined by each institution). Prior participation in career or work-based learning shows some positive findings, although results among the levels of participation varied. Those in the low participation category had the lowest rates of taking remedial courses in four of the six sites reporting—better than those students with no career or WBL experience. On the other hand, the study also showed that those with a high level of participation had the highest percentage taking remedial courses. One university did not provide data on remediation.

The intent of the analysis requirement of the Higher Education Partnership Projects was to develop at least preliminary data on what percentage of current college students had engaged in school-approved career or work-based learning, how those experiences might have influenced decisions about college or career paths, and follow-up information on how those students perform in college. The primary goal was to develop data useful to project leaders within their own institutions and partnerships. The relatively small samples and inability to use a completely random sample limit generalization, although the results from a similar, larger study to be released in early 2003 will allow further comparisons. Administrators from many of the colleges or universities nonetheless found it enlightening in terms of indicating a high degree of prior experience among their own students. There are few indications that sharing the data on campus resulted in changes in admissions policies. On the other hand, several colleges or universities did move to make college work-based learning available at an earlier time in a student’s college program.

**Excerpt from a University Analysis Report for the Higher Education Partnership Projects**

- *70% of those with high school career or work-related experience enrolled in college honors courses.*
- *3.6 average GPA in college for students with some prior career or work-related experience versus 2.7 average GPA for those with none during high school.*
- *94% first-year retention of students with prior experience versus 88% for those with none.*

*Western Kentucky University, 2001*

Study Instrument

Study on Career Planning and Work-based Learning Activities in High School

Student ID number: \_\_\_\_\_ Gender: \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_  
 Age: 17; 18; 19; 20; 21; 22; 23; 24; 25 or over \_\_\_\_\_  
 Year in college: Freshman; Sophomore; Middle (in 5-year programs); Junior; Senior \_\_\_\_\_

*Directions: Please read all of the descriptions below to help you select the most appropriate responses. For each of the school-sponsored activities/programs involving career preparation and/or work experiences (numbers 1 through 9) please indicate with a check mark in the first column which you were involved with during high school. Then for each activity you checked, please indicate with a check mark the additional items that apply to that experience(s). Leave the space blank if it does not apply. (NOTE: If you did not participate in an experience then you will not respond to any of the items in that row. If you did participate in the experience but some or none of the items apply, then leave those boxes blank.)*

	I participated in this activity in high school	The school arranged my academic coursework	I had a mentor at my work site	I had a written plan of expected learning	School staff visited me at the work site	My teacher received an evaluation of my work experience	My work experience was grade
1. <b>Job Shadow</b> (an experience where students follow and observe an employee at a workplace to see specifically what that person's job is like)							
2. <b>Short-term Internship</b> (an experience where students work for a specified period of time, but for less than one month, in school-approved positions for an employer to learn about an industry or occupation)							
3. <b>Long-term Internship</b> (an experience where students work for a specified period of time, but for one month or more, in school-approved positions for an employer to learn about an industry or occupation)							
4. <b>Community Service</b> (a school-approved/required activity that is conducted in and designed to meet the needs of a community)							
5. <b>Cooperative Education (Co-op) work experience</b> (a program where students work full-time or part-time in a school-approved job in a field related to their studies)							
6. <b>Tech Prep</b> (a planned program of sequential coursework with a technical career focus that links high school and college)							
7. <b>Youth Apprenticeship</b> (usually a multi-year program combining school- and work-based learning in a specific occupational area. The apprenticeship leads to a related postsecondary program &/or an entry level job.)							
8. <b>Career Academy</b> (a "school-within-a-school" organized around a career theme)							
9. <b>School-sponsored Enterprise</b> (a 'business-like' program or project that includes student production of goods or services for sale to or use by others)							

**Study on Career Planning and Work-based Learning Activities in High School**

**Student ID number:** \_\_\_\_\_

**During high school, I.....**

- 10. Participated in school-sponsored activities that allowed me to explore careers.....
- 11. Developed a written career plan with my teacher/advisor/counselor/career specialist.....
- 12. Discussed my work experience in academic classes.....
- 13. Took classes that integrated academic and vocational/technical lessons.....

**Now that I am in college, I believe that (Please Answer Yes, No, or NA for Not Applicable for each)**

- 14. My high school career-related curriculum increased my interest in pursuing further education.....
- 15. Being able to build on the career interest I developed in high school was a factor in selecting this college.....
- 16. My major in college will be related to my career field of study in high school.....
- 17. I learn better through projects and real-world applications than through classroom instruction and textbooks only.....
- 18. My college curriculum includes enough opportunities to learn through projects or work experience.....
- 19. I do/*plan* to participate in college-approved work experience(s) (such as co-op, internship, etc.).....
- 20. My college major is/will be \_\_\_\_\_ (write your intended major or undecided)

.....***Thank you for completing this study***.....