High School Mission: Preparing Students

A growing amount of research indicates that high skill levels are required to succeed in today's economy and that schools are having difficulty fulfilling their obligation to prepare students for their future in college or the workplace.

- "In many states today, students can graduate from high school without having what it takes to continue learning or to earn a living wage." (Achieve.org)
- Today's globally competitive economy has heightened the demand for a skilled workforce. (Employment and Training Administration, US Department of Labor)
- "Those who do make it to graduation are often left unprepared for life in an increasingly competitive global economy." (The Aspen Institute)
- "In fact, there is a growing sentiment that the American high school is 'obsolete,' as Microsoft Founder Bill Gates put it at an education summit in 2005." (The Aspen Institute)

"New research by the American Diploma Project and ACT indicates that whether students go directly to college or into the workforce after graduation they need similar knowledge and skills, particularly in English and mathematics." (Achieve.org)

One of the recommendations stemming from the Commission on No Child Left Behind, a bipartisan, independent effort dedicated to improving NCLB, involves administering an additional assessment in 12th grade to measure preparedness for college and career, including English/Language Arts and Mathematics.

Illinois has pioneered this type of assessment with their Prairie State Achievement Exam (PSAE). The PSAE includes the ACT to test college readiness and the ACT's WorkKeys assessments for Reading for Information and Applied Mathematics to assess workplace readiness. As the college entrance exam required by more four-year colleges than any other, the ACT is the leading assessment for college entrance. Additionally, WorkKeys is nationally recognized as the leading method for measuring and communicating the workplace skills required by jobs and possessed by individuals. This combination of assessments provides the assurance that Illinois schools meet their obligation of preparing students for college and work. Other states are following Illinois' lead and Michigan is testing with a similar assessment this year with their Michigan Merit Exam.

Taking this concept a step farther, schools and districts have integrated the WorkKeys system into their career clusters by evaluating the skills and skill levels required for the 16 career clusters defined by the Department of Labor and integrating WorkKeys skills into the curriculum for the pathways. The skills required for individual areas and states can be determined by using WorkKeys profiles for a representative sample of companies in each career cluster in the area/state. The curriculum for each pathway can then include the appropriate skill building curriculum to ensure students completing the cluster graduate with the requisite skill for success. Additionally, many areas are providing WorkKeys Career Readiness Certificates to graduates as a further credential of the preparedness for the workplace.

WorkKeys and KeyTrain

ACT developed the WorkKeys Employment system specifically to improve communication between industry and education; therefore, WorkKeys provides a unique tool to ensure students meet the skill requirements for careers. The WorkKeys system establishes measurable workplace skill sets and provides a common, objective language for discussing workplace skill. Using this system, teachers, and counselors can help students evaluate their priorities and their goals relative to where their current skill levels are and help them to gain the skill required for high-skilled, high-wage careers. ACT researched business needs extensively to identify the skill sets required for the workplace; therefore, WorkKeys helps businesses and educators understand each other's needs. The goal is to ensure that students enter the work world with the foundation they need to do well in any field they choose.

KeyTrain was designed from the beginning for the WorkKeys employment system. Therefore, KeyTrain users benefit from ACT's extensive research into the most critical skills needed for today's workforce. KeyTrain is an effective, easy-to-implement, and low-cost solution to improve the workplace skills of students. This system can be used a number of different ways:

- As part of high school and middle school curriculum to integrate work-place skills into courses.
- As a tool in counseling and job search opportunities to discover fields of interest and motivate students for further achievement.
- As a method to target training in school to potential job openings in the community.

Often schools need to employ additional teaching methods where traditional practices may not be working. Students need to have the knowledge and skill to be successful on state achievement tests and attention needs to be focused on disadvantaged, at risk, and special needs students. In order to improve student achievement, student motivation needs to be addressed. Students need to understand why learning is important. Drop out and attendance problems must be addressed and students need information to help set and achieve goals, along with meaningful curriculum to help them reach their goals.

KeyTrain provides an interactive, computer-based curriculum proven to help students build their skills and find meaning in their education. Motivation is key to improving student achievement. Students must see relevance to their education and have the determination to succeed. KeyTrain can help provide this relevance and motivate students to achieve. With WorkKeys profiles, students can see skill requirements for jobs and set goals. KeyTrain enables them to meet those goals.

Additionally, the KeyTrain curriculum applies what the student is learning in school to the workplace and to their life. Students see *why* they need to know the material, encouraging them to learn. KeyTrain courses apply a practical, problem-solving approach to all subjects with useful real-life examples. Additionally, KeyTrain builds the critical thinking skills required for success on standardized tests and in life. The additional contextualization of KeyTrain/WorkKeys profiles with Career Clusters provides a direct correlation for students to connect their education to their futures.

Special needs and at-risk youth need additional tools to help them succeed. KeyTrain's self-paced format helps teachers reach students at their individual level, allowing them to build on their talents and strengthen deficiencies. KeyTrain provides a non-threatening environment in which they can succeed; each success builds confidence and motivates student to achieve further successes. This format has been especially effective with special needs and disadvantaged students that may have difficulty in traditional classrooms. Often, at-risk youth do not respond well to authority figures; using the computer to guide the students through the

material removes the potential for a combative environment. Additionally, the interactivity with the computer-based curriculum makes learning fun and improves students' attention span. Further, the soundtrack improves focus, aids auditory learners, and helps low-level readers.

KeyTrain also allows for career exploration including non-traditional careers. Using WorkKeys occupational profiles, student can explore skill requirements for careers and minorities and women can explore skill requirements for non-traditional careers, making these professions seem possible, not unreachable. For example, opportunities to develop skill in the Applied Technology area are often unavailable to these groups. The KeyTrain Applied Technology curriculum provides a clear, understandable discussion of how systems work, developing the practical skill needed for more technical careers and allowing minorities and women to build self confidence and succeed.

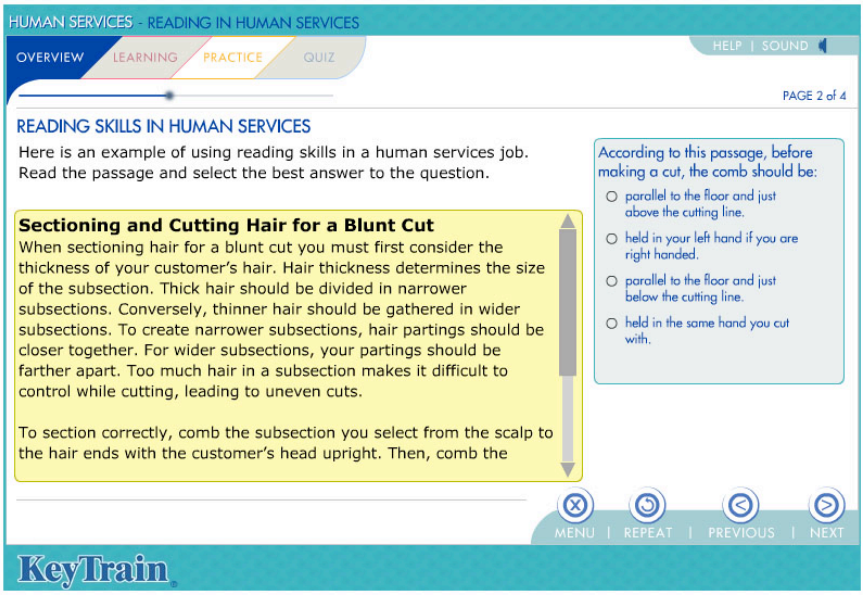
The Career Clusters curriculum further allows students to explore roles in various careers while learning the requisite skills for all careers. The KeyTrain system includes both assessment and instructional material that is contextualized for all career clusters as defined by the U.S. Department of Labor, which include:

1. Agriculture, Food, & Natural Resources
2. Architecture & Construction Arts
3. A/V Technology & Communications
4. Business, Management & Administration
5. Education & Training
6. Finance
7. Government & Public Administration
8. Health Science
9. Hospitality & Tourism
10. Human Services
11. Information Technology
12. Law, Public Safety & Security
13. Manufacturing
14. Marketing, Sales & Service
15. Science, Technology, Engineering & Mathematics
16. Transportation, Distribution & Logistics

The contextual modules provide a means for motivating students to study and improve their basic workplace skills. This method provides an ideal path for helping clients to see the linkage between the workplace literacy skills represented by the Read to Work Credential and their desired occupation. This path includes:

- Exploring the occupations in each career cluster,
- Examining the specific skills required in each cluster,
- Reviewing specific examples of the application of these skills in each cluster,
- Instructional assessments specific to each cluster,
- Selection of curriculum for individually-selected occupations, and
- Curriculum presented in workplace contexts.

A separate introductory module for each career cluster introduces the cluster, provides examples of common jobs in that cluster, discusses basic workplace skills typically required in that cluster, lists examples of situations where these skills are applied in these jobs and provides example skill levels corresponding to the skill levels in WorkKeys and KeyTrain using national occupational skill profile results.



Before a student enters the pre-instructional assessment, the user can select their desired career cluster from the list of 16 clusters. If a cluster is selected, then the pre-test for the fundamental skill areas is presented with questions that are all in the context of jobs in the specific selected cluster. After the pre-test, users will receive appropriately prescribed curriculum based on their pre-test performance and desired goals. All curriculum in the tutorial lessons are presented in the context of a variety of workplace situations selected from the career clusters.

Note that curriculum assignments in the KeyTrain system can be made directly by selecting the corresponding career in the job profiles database and clicking on the "Assign Lessons" button.

These new, additional contextual courseware modules are separate from and in addition to the standard KeyTrain curriculum.

For students in lower grades or students having particular difficulty, students can start with KeyTrain's Beginning Skills Diagnostic. This diagnostic will identify individual objectives where a student needs to improve. The student can then use the KeyTrain Beginning Skills curriculum corresponding to the objectives that need improvement to master the prerequisite skills before beginning the traditional KeyTrain curriculum.

As a computer-based curriculum, KeyTrain provides an excellent tool to integrate technology into the classroom. WorkKeys and KeyTrain provide the foundation for innovative programs that effectively improve student achievement. Therefore, WorkKeys and KeyTrain can help schools regardless of how they choose to budget their funding. For example, in Colorado, a school district determined that the WorkKeys skills aligned well with their standards and adopted an alternative path to earn a standard diploma based on WorkKeys and using KeyTrain to achieve the goal.

With NCLB, accountability for student achievement has never been in greater focus or with more severe consequences. Schools must ensure that all children meet standards of learning and document that achievement through standardized tests and reporting. The consequences of not meeting goals include loosing students, and therefore funding, through school choice; providing additional services including tutoring and extra help; and undergoing increased scrutiny and even

possible take over by the state. KeyTrain and WorkKeys provide powerful tools to help students graduate prepared for their future.

Additionally, independent studies have documented the effectiveness of KeyTrain for improving student achievement throughout the country and on many different standardized tests. Summaries of selected studies are below.

1. KeyTrain added to remedial English courses improved course retention and scores on the community college *Accuplacer* assessment.
2. First attempt success rate on the GED for KeyTrain users of 89-94%.
3. KeyTrain was almost twice as effective as other WorkKeys curricula in raising WorkKeys Scores and attainment of Career Readiness Certificates.
4. KeyTrain for High School Testing Preparation in Illinois.
5. KeyTrain prepares students for the Compass and Asset exams at GA College.
6. KeyTrain Improves Skills of At-Risk Students.

1. Basic Language Arts and College Preparation

Albuquerque Technical Vocational Institute, NM conducted a study of the added value of KeyTrain Reading for Information curriculum on students in their English 98 remediation course. Criteria were: Retention, WorkKeys test performance and *Accuplacer* performance (a community college placement test given before and after the English 98 course)

Results

- Retention
  - English 98 + KeyTrain: **81%** course retention
  - English 98 alone: **60%** course retention
- WorkKeys Reading for Information
  - English 98 + KeyTrain: **78%** scored Level 4 or higher
  - English 98 alone: **57%** scored Level 4 or higher
- Pre vs. Post *Accuplacer* Scores
  - English 98 + KeyTrain: **46%** increased *Accuplacer* performance
  - English 98 alone: **35%** increased *Accuplacer* performance

2. GED Preparation

For the past 4 years, **Tidewater Community College and Norfolk Public Schools, VA** have collaborated in their Best Key program, designed to help students who have not attained a high school degree to complete their GED, "believe in themselves," and go on to jobs, the military or college. KeyTrain is used extensively throughout the program and *is the primary tool for preparing these students for the GED*.

Results

- First attempt success rate on the GED has been 89 – 94%.
- Nearly 400 students completed their GED and have been placed in jobs, the military or college.
- 100% success and placement rate.

3. High School Standardized Testing

Chicago Public Schools conducted a side-by-side comparison of the two ACT Level 1 WorkKeys curriculum vendors. Each vendor was required to install the web version of their product on CPS servers. KeyTrain was the only curriculum that was successfully installed in the first 24-hour period. KeyTrain was unanimously chosen after an exhaustive three-month test and comparison. The testing involved over 7000 hours of actual student use in 10 schools.

Results:

- KeyTrain was then implemented in over 100 high schools.
- To date, over 110,000 students have been enrolled in KeyTrain at CPS, and over 120,000 contact hours have been logged.
- Complete one level in KeyTrain increased their Applied Mathematics scores by one level – on average.
- Complete one level Reading for Information scores by one half level - on average
- Average of less than five contact hours in either course.
- The effect of KeyTrain is significant at a confidence level of over 99%.

4. KeyTrain Prepares Students for Compass and Asset.

Columbus Technical College, GA needed a method to help more applicants succeed on the college placement exams. KeyTrain has been used, with successful results, as the Compass and Asset test preparation strategy. Students take KeyTrain Pretests to evaluate whether or not they are ready to take Compass/Asset. Students not achieving the required level use KeyTrain to build skills and reach the level needed to be considered "program ready". WorkKeys assessments are used to award certificates as well.

Results:

- Students reaching Level 4 in KeyTrain Applied Mathematics, scored:
  - 34-38 on Compass Pre-algebra
  - 38 on Asset Numerical Skills
- Students reaching Level 3 in KeyTrain Applied Mathematics, scored:
  - 23-25 on Compass Pre-algebra
  - 34 on Asset Numerical Skills
- Students reaching Level 5 in KeyTrain Reading for Information, scored:
  - 68-71 on Compass Reading
  - 38 on Asset
- Students reaching Level 4 in KeyTrain Reading for Information, scored:
  - 59-61 on Compass Reading
  - 35 on Asset Reading

5. KeyTrain Improves Skills of At-Risk Students.

KeyTrain has been part of workshops funded by Improving Teacher Quality State Grants held at the University of Georgia for the past two years. The *Contextually Applied Mathematics (CAM)* workshop was conducted in the summer of 2005 to address acquisition of work related mathematical skills that improve educational outcomes for students who are at-risk for failing or dropping out of school. The workshop was a collaborative project and provided interrelated instruction in the KeyTrain curriculum for teams of teachers. The workshop focused on school

retention and employability by concentrating on a core of applied mathematics in real-world contextual settings.

Conclusions from the CAM Workshop
At Risk Students
- Pretest: M=2.48
- Postest: M=4.37

Gender: Female at-risk students showed a statistically significant increase when compared to male at-risk students in the pre-test and post-test comparison:
- Males: Pre-test scores M=2.43
- Post-test scores M=4.00
- Females: Pre-test scores M=2.53
- Post-test scores M=4.47

Teachers often report gender gap in math participation and achievement with girls performing lower. Data showed at-risk females achieved significant gains over males. Perhaps females responded well to format of computer-based program.

The following are several examples of usage of WorkKeys and KeyTrain in schools:

Illinois: WorkKeys Reading for Information and Applied Mathematics are used to measure Adequate Yearly Progress (AYP) for juniors as required by the *No Child Left Behind Act.* The Prairie State Achievement Exam (PSAE) consists of three components: (1) an ISBE-developed science assessment; (2) the ACT, which includes reading, English, mathematics, and science tests; and (3) two WorkKeys assessments (Reading for Information and Applied Mathematics). For more information on the PSAE go to http://www.isbe.net/assessment/psae.htm.

Approximately 275 high schools have KeyTrain as of March 1, 2007, including Chicago Public, District U-46 (the second largest district in IL) and the North Suburban Educational Region for Vocational Education schools.

Michigan: Michigan is following Illinois' lead and will implement a similar system of testing for juniors next year. The Michigan Merit Exam will provide the means for determining school adequacy under the *No Child Left Behind Act.* In the past MI has used WorkKeys assessments as qualification criteria for a post-secondary scholarship (the MERIT award). Kent Intermediate School District in Grand Rapids is using WorkKeys as part of their "Guaranteed Diploma". If a student with a Guaranteed Diploma is hired by a local employer and doesn't not have the basic math and reading skills required to succeed, Kent ISD will provide remedial education for free.

KeyTrain has a large presence in MI including Detroit Public Schools, Kent ISD, and Wayne Regional Educational Service Agency.

Virginia: The Virginia Department of Education first approved WorkKeys Writing as an alternative to the required End of Course English: Writing Standards of Learning (SOL) test. Subsequently, WorkKeys Reading and Math were approved as substitute reading and math tests for some special education students. These tests are used to determine school adequacy under the *No Child Left Behind Act.* Many school districts in the state have used these criteria to help those that may, under previously existing criteria, not graduate, graduate! Information about their assessments is at:
http://www.pen.k12.va.us/VDOE/Assessment/home.shtml#Standards%20of%20Learning%20Tests

KeyTrain has a very large presence in VA, with about 100 schools using KeyTrain to prepare students for these assessments.

Georgia: Although WorkKeys was not prevalent in GA high schools, KeyTrain is used in over 1/3 of the schools to help build employability skills and provide relevance and context to academic curriculum. Using KeyTrain, schools have improved performance on the Georgia High School Graduation Test, Georgia's measure of school performance under the *No Child Left Behind Act.* KeyTrain has been approved by the GA Board of Education as a curriculum for CTAE. In 2007, GA launched the *Work Ready* Initiative, issuing Work Readiness Certificates (similar to the National Career Readiness Certificates). As part of this initiative, high school seniors may be assessed with WorkKeys and schools must commit to improving the graduation rate to be considered for the Work Ready Community Certification.

West Virginia: West Virginia requires vocational/technical students to take WorkKeys tests for occupational profile requirements as they relate to their specific discipline or course of study. The individual student does not have to pass this in order to graduate, but the schools are measured for AYP under the *No Child Left Behind Act* according to the results of these. The WorkKeys tests given are Applied Math and Reading for Information. Approximately 50% of West Virginia's Vocational Centers are currently using KeyTrain.

Kentucky: Legislation was recently issued requiring juniors in KY to take the ACT and/or WorkKeys assessments.

Colorado: Several areas in CO are using WorkKeys as an alternate path to receive a standard High School Diploma.

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