

West Virginia Department of Education GED Office

Report on Senate Bill 646

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ENROLLED

Senate Bill No. 646

(BY SENATORS LAIRD, PLYMALE, FOSTER, MILLER AND STOLLINGS)

[Passed March 9, 2012; in effect from passage.]

AN ACT to amend the Code of West Virginia, 1931, as amended, by adding thereto a new section, designated §18-2-6b, relating to the General Educational Development Diploma (GED[®]); making legislative findings; setting forth legislative intent; and requiring the State Board of Education to study GED[®] issues and make a report with recommendations by a certain date.

(c) The State Board shall perform an exhaustive study of the issues surrounding administration of the GED[®] examination in the state including, but not limited to, the following:

(1) Analysis of research, pilot testing, or both, that was done in West Virginia by the American Council on Education prior to its decision to eliminate pen and paper examinations, along with the justifications offered for eliminating this type of examination as a possible option;

(2) Determination of the current and future costs to the state to provide GED[®] examinations free of charge to eligible individuals; and

(3) Recommendations for statutory or rule changes to achieve the following goals:

(A) Reducing or controlling escalating costs of administering the GED[®] examinations; and

(B) Retaining paper and pen testing for those individuals who request or require it; or

(C) Eliminating or reducing significantly the difficulty for individuals who are not comfortable or proficient in taking online examinations.

(d) The State Board shall complete its work and report its findings, conclusions and recommendations, together with drafts of any legislation or rule changes necessary to effectuate the recommendations, to the Legislative Oversight Commission on Education Accountability no later than July 1, 2012.

Introduction

The next few years will bring major changes to GED® testing, not only in West Virginia but throughout the nation. For years GED Testing Service™ has been contemplating changing the GED® paper-pencil-based test (PBT) to a computer based test (CBT). Recently, GED Testing Service™ merged with Pearson VUE, the largest CBT agency in the US. Pearson VUE has made CBT a reality for GED Testing Service™ and has resulted in a non-profit/for-profit organization.

Nevertheless, the transition from a PBT to a CBT is only a stepping stone to the upcoming changes to the GED® test.

In 2014, GED Testing Service™ will unveil a new assessment that ensures the GED® testing program is no longer an endpoint for adults, but rather a springboard for further education, training, and better paying jobs. Four content-area assessments—Literacy, Mathematics, Science, and Social Studies—will measure a foundational core of knowledge and skills, and an additional performance level will certify that adults are ready for college and careers.

Continuing the Tradition of Opportunity

The new assessment system will continue to provide adults the opportunity to earn a high school credential, as it's done since 1942. It will measure career- and college-readiness skills that are not only the focus of today's curriculum, but are also needed for success in both workforce and college programs. National labor data anticipates that more than 63% of jobs in 2015 will require at least some level of postsecondary education (includes certificate programs, associate degrees and beyond).

But it doesn't stop there. GED Testing Service™ is taking a significant leap forward in score reporting. The enhanced score report will provide a profile of scores that gives information about test-taker strengths and areas of developmental need with each test content area. This more detailed scoring will benefit test-takers, instructors, colleges, and employers.

In addition, GED Testing Service™ has added the opportunity for adults to demonstrate their readiness for workplace and college programs through a new, additional endorsement that can be added to a test-taker's high school credential.

Today's world is dramatically different than when GED Testing Service™ introduced the 2002 test. Adults want opportunities for better paying jobs, and ways to support their families. The new assessment, and its associated parts, will help adults better demonstrate those skills and abilities sought by both employers and colleges. (CT Turner, personal communication, June 7, 2012)

Free GED® Testing in West Virginia

The implementation of CBT will raise the test fees to \$24 per content area test, which results in a \$120 test fee for the entire GED® test.

Since 2008, House Bill 4477, which provided Free GED® Testing in West Virginia, has made it affordable for more than 23,000 to test during the past three (3) years, with approximately 17,000 of those tested achieving the GED® diploma. West Virginia is very fortunate that the Honorable Governor Earl Ray Tomblin and the 2012 Legislators continued funding for Free GED® Testing for FY 2012-2013.

Collection of Data and Information for Senate Bill 646

To address the concerns noted in this Bill and the impact the changes to the GED® test will have on prospective GED® test takers, the West Virginia Department of Education (WVDE) GED Administrator™ met with the WVDE State Staff, GED® Task Force, GED® Peer Trainers, GED Examiners™, Regional Educational Service Agencies (RESA) Staff, Adult Basic Education (ABE) Instructors, and collaborated very closely with CT Turner, Director, Public Affairs & Government Relations GED Testing Service™ and Brian Smith, Legislative and Advocacy Manager of GED Testing Service™. The involvement of Linda Berlin, Option Pathway Coordinator, and Karen Zinn, GED Peer Trainer, with this report reflects their passions of how Free GED Testing has opened doors of opportunities for the adults and school-age students lacking a high school diploma. By such interactions, it is believed that the concerns and findings are a true reflection of the issues that this report must address.

The WVDE GED® Office also conducted a survey addressing particular issues. It is important to note that the survey was directed to those not having a high school diploma; therefore, five survey responses were extracted from the results due to the fact that the participants possessed a high school diploma. The results of this survey will be disclosed throughout this document.

To prove that steps are being taken to assure student preparedness for the CBT, the West Virginia GED® Office has worked closely with the WVDE Office of Adult Basic Education and Workforce Development, RESA Regional Directors, particularly RESA 3 ABE Staff, RESA 5 Regional Director Dianna Flanagan, and ABE instructors throughout the State, with intense discussions with Marcia Ware, Administrator of Mercer County Academy of Adult Learning, and her staff and Donna Metz, Principal, Marion County Adult Learning and Community Education Center.

In addition, GED Testing Service™ has been instrumental to provide the studies and research conducted that prompted the changes occurring with the GED® test.

Studies to Provide Information for Senate Bill 646

The first decree in Senate Bill No. 646 states:

“Therefore, in view of the findings and intent set forth in subsections (a) and (b) of this section, respectively, the state board shall undertake an exhaustive study of the issues surrounding administration of the GED® examination in the state including, but not limited to, the following:

(1) Analysis of research and/or pilot testing that was done in West Virginia by the American Council on Education prior to their decision to eliminate paper and pen examinations, including justifications offered for eliminating this type examination as a possible option;”

Although the studies conducted by GED Testing Service™ were not conducted in West Virginia, with the exception of a pilot study, the subjects were chosen to represent diverse geographic regions.

2010 GED® Test Center Profile

West Virginia has long been a leader in computer literacy. This leadership is noted in one of the first inquiries that GED Testing Service™ conducted for CBT. The 2010 GED® Test Center Profile brought attention to the fact that West Virginia was among only nine states that had computers available in at least three-fourths of our test centers, with the remaining states coming in at a much lower percentage. (Guison-Dowdy & Patterson, March 2011)

Perceptions and Pathways Pilot

To add to our leadership in computer literacy, a group of West Virginia GED® candidates confirmed readiness for the CBT tests during an interview with GED Testing Service™ research team as part of a test pilot for the Perceptions and Pathways Research. Perceptions and Pathways research began in February 2011 and continued through May. Before beginning interviews in six U.S. states, GED Testing Service™ conducted a pilot set of interviews. Working in cooperation with the West Virginia Department of Education GED® Office, headed by Debra Kimbler, GED Administrator™, GED Testing Service™ planned a site visit to West Virginia to launch Perceptions and Pathways. The research team included two Canadian researchers, Professor Allan Quigley and Sue Folinsbee, as well as GED Testing Service™ research staff. On January 28, 2011, five researchers interviewed nine GED® credential recipients at the Jefferson Adult Education Center, administered by Marty Soltis, Coordinator of Career, Technical and Adult Education, in Charles Town, West Virginia. He and ABE/GED® Instructor Frank Houston recruited GED® credential recipients locally.

Although West Virginia participated in the pilot study only, GED® participants were asked during a post-interview group discussion, which was not recorded but allowed the presence of West Virginia’s State GED Administrator™, “What are your comfort levels for CBT?” The test takers reported that they would be comfortable due to the fact that the ABE instructor would make sure they were prepared for such testing. Due to such a strong ABE program in West Virginia, even

the older individuals, who did not share the advance computer skills of their young counterparts, reported that they could do the CBT with assistance from ABE. Such support from the ABE program is exactly what the conclusion of the Perceptions and Pathways Pilot report disclosed, “Several GED® credential recipients credited the support and instruction they received at Jefferson Adult Education Center as instrumental to them passing the GED® tests and making a transition to postsecondary education.”

The six states that participated in the actual Perceptions and Pathways studies were California, Connecticut, Kansas, North Carolina, Texas, and Wyoming. (Patterson, 2011)

The Usability and Comparability Study for the GED Testing Service™

Link to download the Comparability Study PDF:

<http://www.gedtesting.com/uploads/files/9fcce4e39f88216fa5fd75e7ad996918.pdf>

GED Testing Service™ launched this research study in 2010, with the support of Pearson VUE, to evaluate the comparability of the paper- and computer-based versions of the GED® test. From May through October test-takers were recruited to take a computer-based test in one of the five GED® testing content areas. The computer-based tests were positioned as a paid practice opportunity; scores did not count towards a high school equivalency credential. More than 7,500 computer-based tests were delivered during the comparability study in 11 states—Arizona, California, Colorado, Florida, Georgia, Michigan, Missouri, New Jersey, North Carolina, Texas and Virginia.

Study Findings Summary

Overall, researchers found convincing evidence of comparability between the paper- and computer-based testing modes.

Based on results of a Usability Study performed earlier in 2010, slight modifications to the user interface and instructions served to mitigate potential obstacles of the CBT mode. Additionally, best practices documented during an extensive and thorough literature review led researchers to maintain question formats in the same straightforward manner as on the paper-based versions. Exposing test-takers to multiple-choice and other item types with which they were familiar allowed them to focus on ‘what’, rather than ‘how’, in order to answer a specific question.

Two separate studies also provided evidence of comparability. The first study looked specifically at the construct, or underlying trait of interest, measured by the paper-based version of each content area test and examined whether the same construct was measured by the computer-based version (excluding the essay).

For example, in one set of analyses, items that were difficult on the PBT version were equally difficult on the CBT version of the GED® test. The handful of questions that ‘behaved’ differently across the two administration modes were carefully studied by test specialists who determined that the differences were not due to test administration mode.

The second study involved the comparison of standard scores across the paper- and computer-based groups. Few significant differences were found. Those differences could be attributed to variations in the test-takers' motivation level. Because PBT candidates were dependent on their test performance to earn their high school equivalency credentials, they were highly motivated to do well. The CBT version, on the other hand, was understood to be a 'practice opportunity' in which CBT candidates may not have shared the same drive to perform well. Thus, the differences noted did not change the conclusion that the two testing modes are comparable.

The conclusions reached by these studies led to no changes in policy or program strategy. As GED Testing Service™ moves forward in adding CBT, it will continue to monitor comparability to ensure that the computer-based GED® test is a valid measure of a test-taker's knowledge.

The Process

Eligible individuals agreeing to participate in the study were provided a list of Pearson VUE test sites and a phone number to schedule their test. They also received an overview flyer and set of frequently asked questions to prepare them for the computer-based testing (CBT) experience. When test-takers arrived at the test center, they were offered a tutorial to become familiar with the look and feel of the computer-based tests, as well as navigation and item types.

Test-takers were allowed the same amount of time to complete the computer-based version of the test as for the paper-based test. Except for the essay portion, test-takers received an unofficial score report upon completion of the test and incentive checks were subsequently mailed to test-takers' address of record.

GED® testing center staff recruited test-takers for this study during registration for the paper-based tests; only candidates who had not yet taken the test for a particular content area in 2010 were recruited for the study.

To ensure the CBT GED® test would be user friendly for the test takers, in March 2010 GED Testing Service™ conducted The Usability Study for the GED Testing Service™. This study revealed that extensive changes were necessary to achieve the highly usable computer based format. Therefore, "Extensive changes to the CBT GED® tests were made as a result of this study; approximately 150-200 changes per round were made to the instruction screens and to the practice item screens throughout the three rounds of usability sessions."

In addition, the study recommended, "In order to reduce the anxiety GED® candidates may have about the computer-based GED® tests, Pearson VUE recommends that the GED Testing Service™ consider the following points for implementation:

- For the essay component of the GED® Language Arts, Writing Test it is recommended that keyboarding skills be regarded as a prerequisite.
- A functional version of the instruction screens and practice items developed for the usability study should be made available to GED® candidates prior to their scheduled exam time for the computer based GED® Tests." (Parshall & Colglazier, March 2010)

(2) Determination of the current and future costs to the state to provide GED® examinations free of charge to eligible individuals;

Cost for CBT

The cost to deliver GED® testing on computer will be \$24 per content area or \$120 for the full battery.

The cost of delivering the new GED test in 2014 will also be \$120 for the full 7.5 hour test.

While the cost is \$120, GED Testing Service™ will reimburse test centers \$5 for each appointment hour per person, averaging about \$38 dollars for the entire battery per test-taker. Even though this is a needed reimbursement for the GED® testing sites for providing examiners and maintaining test sites, this is \$12 less than the current \$50 generated by Free GED® Testing.

Nevertheless, the price of the CBT includes several services that are not included in West Virginia’s current \$50 charge – test battery leasing, some accommodations, scoring, instant unofficial score reports, flexible testing schedules, and test security. Since the increased price includes these services that the West Virginia GED® testing site currently pay directly to GED Testing Service™ and Oklahoma Scoring Service, this difference should make up some of the \$12 difference.

Implementing Costs for CBT Testing in West Virginia

The Legislature is currently providing \$360,000 funding per fiscal year for free GED® testing in West Virginia. January 1, 2013, the cost of testing will increase from \$50 to \$120.

During this first fiscal year of implementing the CBT, the cost per year will be lower than upcoming years due to the fact that counties will be using PBT from July through December and CBT from January through June. With approximately 2,824 candidates taking the test during the months of July – December and approximately 3,445 taking the tests during the months of January-June; therefore, the cost for the initial testing period for CBT and the cost for FY 2014 are as follows:

Funding Necessary for July 1, 2012-December 31, 2012	\$141,200	Testing 2,824 GED® candidates @ \$50 per test
Funding Necessary for January 1, 2013- June 30, 2013	\$413,400	Testing 3,445 GED® candidates @ \$120 per test
Total Funding for FY 2013	\$554,600*	
Funding Necessary for FY 2014	\$752,280*	Testing an average of 6,269 candidates @ \$120 per test
*From the US price of \$120.00 per test, GED Testing Service™ will reimburse GED® testing centers approximately \$38 per test to assist with the cost of paying examiners and computer maintenance. This is \$12 less than the \$50 fee the centers are currently receiving.		

Another implementation cost that must be absorbed by the GED® Testing Site is the one time purchase of a security kit for \$450. The kit contains two digital cameras, one for backup, one digital signature pad and a camera stand. As previously stated, this cost will be counterbalanced some with the savings of not having to purchase testing materials and to provide scoring.

Impact of the Increase

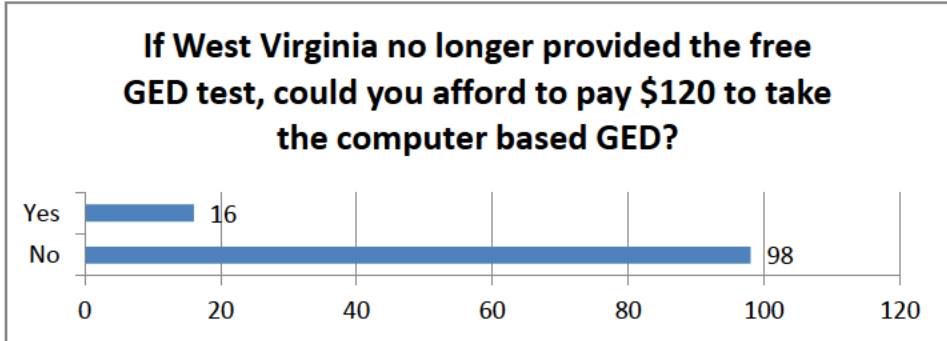
The impact of the increase in costs per individuals will affect the West Virginia test taker tremendously, since they cannot afford the \$50 currently being charged. It was during the 2008 Legislative Session that state legislation made the GED® test free in West Virginia; about 23,464 people have opted to take the GED® test during the past four (4) years. Approximately 17,087 of those tested earned a GED® diploma. Prior to Free GED® Testing, West Virginia tested an average of 4,500 per year. The chart below is an indication of how many GED® test takers have taken advantage of the Free GED® Testing:

Calendar Year	Number Tested	Number Completers	Number Passers	Passing Rate*
2008	5,559	5,440	3,944	72%
2009**	6,167	6,070	4,494	74%
2010	5,738	5,617	4,362	77%
2011	6,000	5,489	4,287	78%

*Passing rate is determined by the number of passers divided by the number of completers.
 **The greatest number taking the GED® test in West Virginia during any given year.

Since launching Free GED® Testing, West Virginia is currently issuing more diplomas per year than the number testing per year prior to free testing. This alone is a reflection of how cost versus free testing has made the GED® test accessible to more individuals without a high school diploma.

West Virginia’s potential GED® test takers voiced their viewpoint on Free GED® Testing in the “Computer Based GED® Test Survey for West Virginia.” (WV GED® Office, April 2012)



People may select more than one checkbox, so percentages may add up to more than 100%

West Virginia test takers are very fortunate to have free GED® testing for FY 2013 because this chart indicates that 86% of the 114 surveyed could not afford to pay the \$120 for CBT, causing the **impact of the cost increase to be detrimental to the GED® test taker**. Rather than testing approximately 6,000 GED® candidates, only 1,200 of those could afford to test in the future.

(3) Recommendations for statutory or rule changes to achieve the following goals:

- (A) Reducing or controlling escalating costs of administering the GED[®] examinations; and**
- (B) Retaining paper and pen testing for those individuals who request or require it; or**
- (C) Eliminating or reducing significantly the difficulty for individuals who are not comfortable or proficient in taking online examinations.**

(A) Reducing or controlling escalating costs of administering the GED[®] examinations:

As discussed under "Cost for CBT" of this report, the State of West Virginia, nor any other state, can control the minimum charge for the GED[®] test which is controlled by GED Testing Service[™]. The West Virginia GED Administrator[™] requested GED Testing Service[™] to consider a price reduction for our State but was told that the cost for taking the GED[®] is established so that the charge for taking the GED[®] test is equal for all jurisdictions. Therefore, it is up to each jurisdiction to determine the amount of the \$120 fee that the test taker will pay and what percentage, if any of the cost is provided by state funding.

It is anticipated that due to the increase in the cost to take the GED[®] test that some states will no longer offer the GED[®] test and will develop their own test that shows mastery of high school skills. However, as reported by GED Testing Service[™], no state has made a public statement, nor given notification, that they will not offer the test. It is also reported that our neighboring states, -Virginia, Maryland, Pennsylvania, Ohio and Kentucky, have already or will start the process of implementing CBT. (A. Jennings, personal communication, May 2012)

The possibility of West Virginia developing a high school equivalency test would require careful development in alignment with standards, item development, field testing, standard setting, and hiring the correct personnel. This would be a lengthy and costly process. In addition, the time line required to develop such a test will not meet the needs of the test taker who requires a high school diploma today for a job tomorrow.

The GED[®] test is accepted by 98% of colleges and employers. When asked if the test taker would rather take a paper pencil test accepted as a high school diploma only in West Virginia by employers and colleges or a computer based test that is accepted across the nation as a high school diploma by employers or colleges, the answer was surprising. Eighty-eight percent (88%) of the 82 potential test takers that responded to this question answered, "I would take the computer based test recognized as a high school diploma by employers and colleges nationally."

(B) Retaining paper and pencil testing for those individuals who request or require it;

State policy changes cannot determine if the paper and pencil version of the GED[®] test will be retained for individuals who request or require it. This too is determined by GED Testing Service[™], owners and developers of the GED[®] test, and it has been determined that when the new GED[®] assessment begins January 1, 2014, PBT will cease.

PBT will only be used when accommodations warrant the use. It is important to remember that accommodations are individualized, and requests for accommodations are reviewed and decided on an individual, case-by-case basis. Therefore, there isn't an "always" nature to this, where you can necessarily say that all candidates with a particular disability will always need a particular accommodation, such as paper and pencil testing.

The number of conditions and circumstances that might warrant PBT include but are not limited to:

- 1) Migraines (computer use can actually trigger onset of a migraine in some people);
- 2) Testing a candidate who is not able to travel to a test center, such as a person in a hospital or rehabilitation facility (so it's easier to deliver a paper test to that facility than bring in a computer workstation);
- 3) Individuals with exceptionally poor vision who need the test magnified/projected on a screen larger than what can be delivered on the computer (e.g., a paper test can be used with a video magnifier/CCTV to enlarge much bigger than we can do with a 17-inch monitor).

Although West Virginia will be implementing CBT, January 1, 2013, it is the intention of the West Virginia GED Administrator[™] to retain PBT in a test site in each RESA for those who prefer to take PBT rather than CBT for the said year only.

Need for CBT Rather than PBT

Since it is not a jurisdictional decision to retain PBT, it is important to understand why GED Testing Service[™] decided to implement CBT. GED[®] testing on computer provides benefits to the testing program and adult learners today and will meet the program's needs for tomorrow. The GED[®] test on computer uses basic technology found in many job applications, workplaces, and training programs. From hospitals to construction sites, basic technology—including computer use and keyboarding skills—are common in the workplace today. Technology in the workplace will continue to trend upward, and test-takers can take advantage of this by mastering the basic keyboarding skills required on the GED[®] test.

The U.S. Department of Education has listed computer skills as a component of basic literacy, alongside reading and writing skills. West Virginia has made technology a priority, spending hundreds of thousands of dollars to update classrooms with cutting edge technology and computers for the 21st Century.

CBT makes it possible to realize the benefits that will be delivered with the new GED[®] testing system in 2014. Specifically, enhanced score reporting and the ability to have two performance

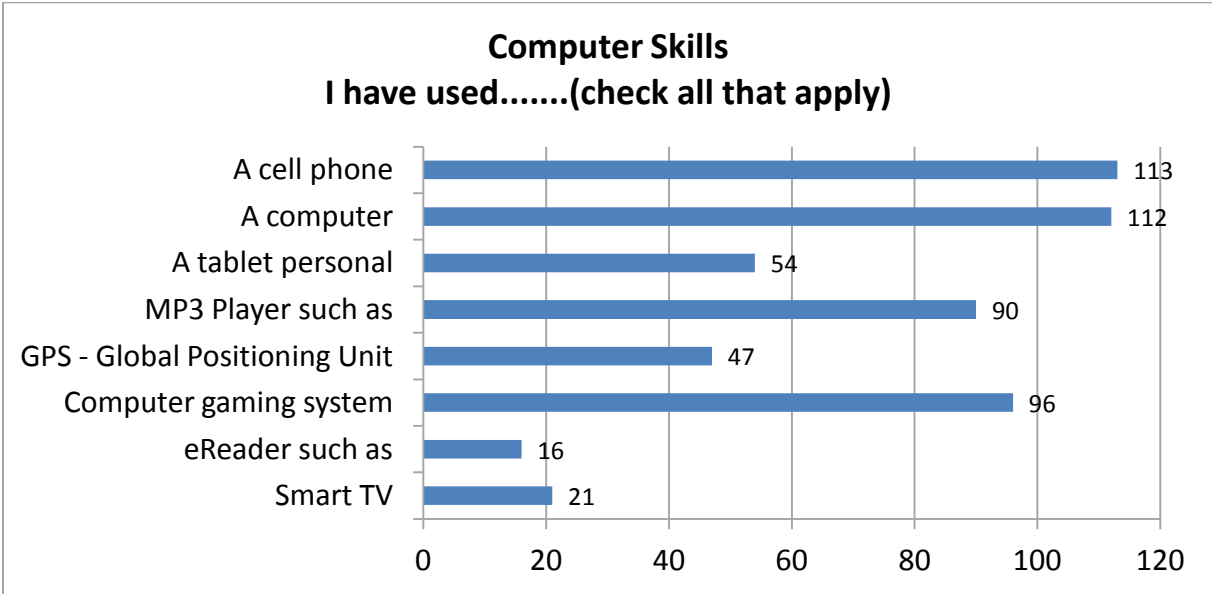
levels on the same test require the use of question types that are not possible in the pencil-and-paper format.

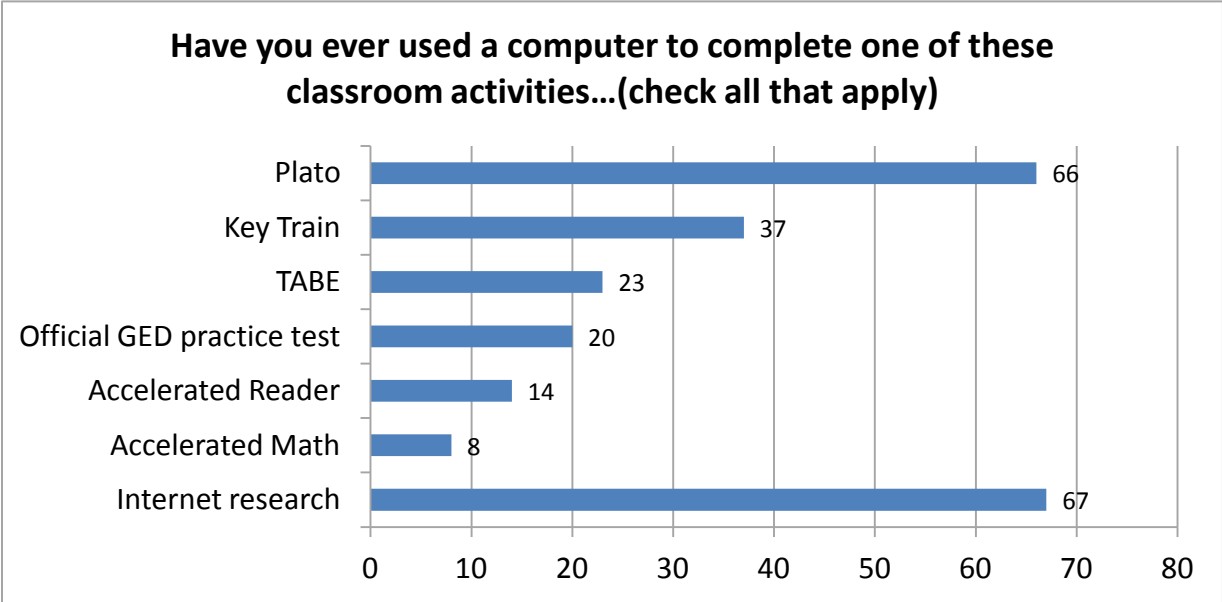
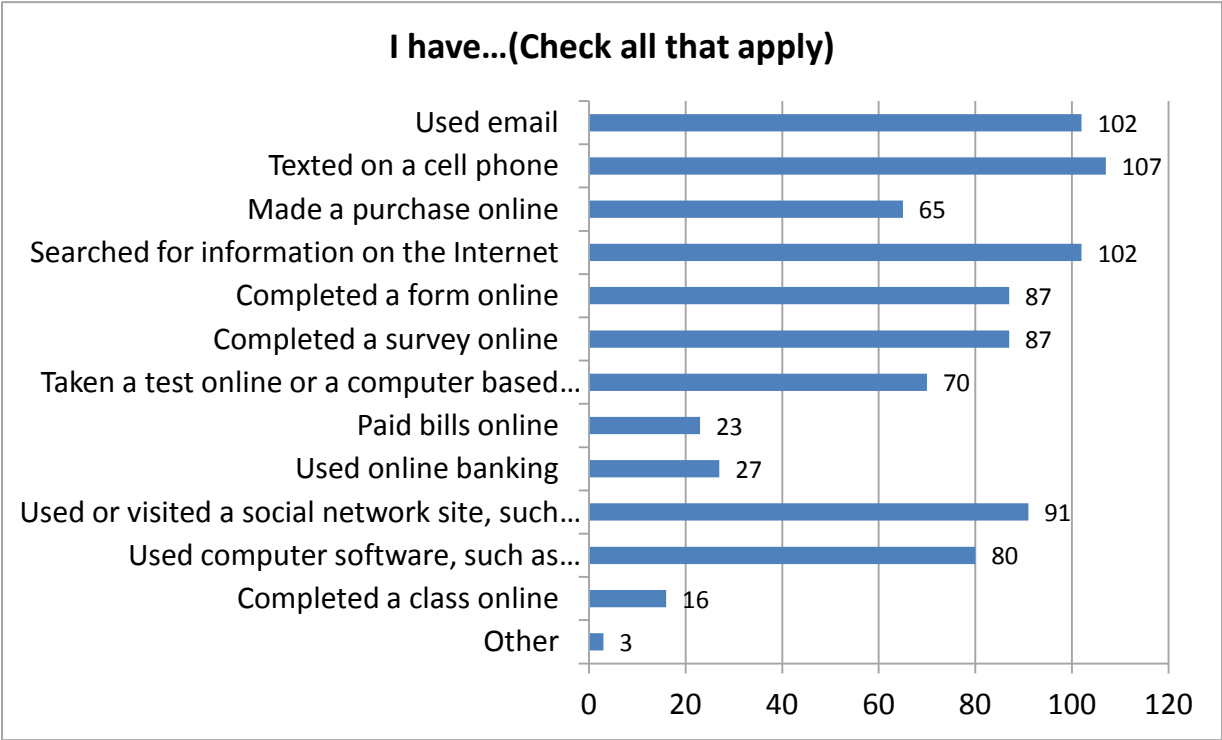
CBT improves the test-taker experience while reducing paperwork and time spent on manual processes. Specifically, CBT offers these immediate and mid-term benefits to the GED® testing program:

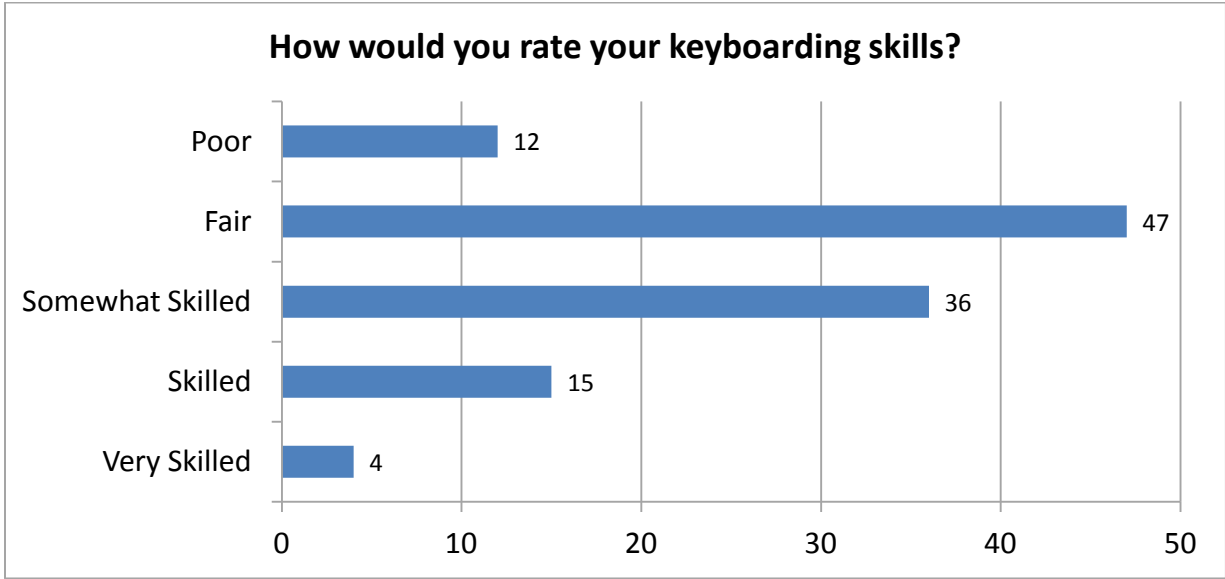
- One-stop registration and scheduling available to test-takers 24/7 online and through a toll-free number
- Enhanced test security
- Flexible testing experience
- Instant score reports

In a world increasingly reliant on smart phones, laptops and Facebook, someday soon there will be a generation that has never handwritten an essay and will expect on-demand registration and computer-based testing. (CT Turner, personal communication, June, 7, 2012)

When West Virginia test takers were asked via the survey, questions to select items to determine technology and computer skills, the following questions and results were recorded:







These results from the survey indicate that most potential GED® test takers have used devices requiring some technology skills, have completed classroom activities using computers and rate keyboarding skills as fair. Once again, this survey provides information that indicates computer readiness for the CBT GED®.

(C) Eliminating or reducing significantly the difficulty for individuals who are not comfortable or proficient in taking online examinations.

CBT Training

GED Testing Service™ has worked closely with various consulting groups, organizations, and representatives from K-12, two-year and four-year institutions, and the employment sector in order to shape the Assessment Targets for the new assessment. The new assessment targets are derived from the Common Core State Standards (CCSS) and similar career and college readiness standards in place in Texas and Virginia. The new Assessment Targets are informed by research that suggests a clear and elegant set of essential skills necessary for success in a credit-bearing postsecondary course, as well as in job training programs. The targets are:

- Clear, understandable, and consistent
- Include rigorous content and require applications of knowledge through a range of levels of cognitive complexity
- Based on evidence

To get ready for this change, GED Testing Service™ will be providing training for ABE instructors at the West Virginia Adult Education Association Conference that will be held October 22-24. This training will include preparing students for the CBT that will be implemented in 2013, in addition to the new GED® assessment. (D. Faucette, personal communication, June 2012)

Professional development in the West Virginia Adult Basic Education (WVABE) program will also provide an array of opportunities for instructors to participate in sessions that will emphasize the skills necessary for their students to take CBT and the new GED® test.

Mercer County Academy of Adult Learning staff have developed a plan with an added importance in the ABE classrooms being placed on typing abilities, in addition to computer skills. Furthermore, the students will be assessed when entering the Mercer County ABE classrooms on typing abilities. Based on this assessment and discussions with the student, it will be determined if further typing skills are needed and the amount of time the student will be able to devote to practice. A schedule will be implemented for the student. For example, the student will focus on academics for two and one-half hours (2 ½ hrs.) and devote on-half hour (½ hr.) to computer skills.

As the student progresses with a typing program, the student will then begin writing his/her own thoughts either in sentence or paragraph form. This group of instructors feels strongly that this added benefit of practice time will help students be proficient enough to type the Language Arts, Writing essay.

As far as the multiple choice part of the test, practice using the mouse is a must for those without any computer ability. Although very few enter the ABE classroom without any computer ability. Students are already completing classroom activities by using Plato, on-line activities, etc., to teach other necessary skills. The various functions of the computer will be addressed as well, such as the space bar, scrolling, backspace, delete key, etc.

In the Parkersburg area, RESA 5 has made a checklist for introducing CBT to their students, which will include but is not limited to:

- Student will use computers from day one
- All instructors will focus on basic computer training
- MS Office – word processing will be utilized
- Online testing practice will be created for students in all areas
- Keyboarding practice will be implemented
- Free software programs such as Learning Express Library will be utilized to help prepare students
- Test taking strategies will be taught
- Game format will be used to practice
- Instructors will use technology such as responders for lessons
- PC versions of OPT and online TABE will be offered
- PLATO/Key Train/WIN software will be implemented
- Printouts:
 - Diagnostic report
 - Instant feedback
 - Resource guides

While these are only examples of two ABE plans for teaching CBT, ABE classrooms throughout West Virginia have already started working with the students to increase the skills necessary to pass a CBT, even in rural areas that may not have appropriate broadband.

CBT in Rural Areas

In 2012 when GED Testing Service™ and ACE leadership recognized the need to offer the GED® test on computer, it was aware of the sizable current and potential test-taking population located in suburbs or rural areas – and the need for a delivery system that would work in corrections settings. Due to Pearson VUE's unique delivery system, it was approached to provide a viable solution to reach the adult learners in these settings. The system, which will deliver the GED® test, does not require an internet connection at the time of testing. This means that the tests can be easily loaded in secure, encrypted packets on desktop or laptop computers and then go mobile. These computers can be taken to rural locations, tests can be delivered in mobile testing centers, and virtually any quiet and appropriate setting can serve as a testing site since an internet connection is not necessary when an adult takes the GED® test on computer. This system will give significant flexibility to several states that have a high proportion of rural test-takers. (Turner, CT, personal communication, May 2012)

Summary

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Perceptions and Pathways Pilot, which was conducted in West Virginia, revealed that test takers reported that they would be comfortable taking a CBT due to the fact that the ABE instructor would make sure they were prepared for such testing. Due to a strong ABE program in West Virginia, even the older individuals, who did not share the advance computer skills of their young counterparts, reported that they could do the CBT with assistance from ABE.

To ensure that the CBT GED® test would be user friendly for the test takers, in March 2010 GED Testing Service™ conducted **The Usability Study** for the GED Testing Service™. This study revealed that extensive changes were necessary to achieve the highly usable computer based format. Therefore, “Extensive changes to the CBT GED® tests were made as a result of this study; approximately 150-200 changes per round were made to the instruction screens and to the practice item screens throughout the three rounds of usability sessions.”

In addition, the study recommended, “In order to reduce the anxiety GED® candidates may have about the computer-based GED® Tests, Pearson VUE recommends that the GED Testing Service™ consider the following points for implementation:

- For the essay component of the GED® Language Arts, Writing Test, it is recommended that keyboarding skills be regarded as a prerequisite.
- A functional version of the instruction screens and practice items developed for the usability study should be made available to GED® candidates prior to their scheduled exam time for the computer based GED® tests.”

To ensure that the computer-based tests and paper-and-pencil tests are comparable measures of a test taker’s knowledge, **The Comparability Study** used the final changes to the Usability Study to actually allow GED® candidates to take a pilot CBT of a content test. Scores of the CBT and PPT were compared.

(2) Determination of the current and future costs to the state to provide GED® examinations free of charge to eligible individuals;

Since 2008, House Bill 4477, which provided Free GED® Testing in West Virginia, has made it affordable for more than 23,000 to test during the past three (3) years, with approximately 17,000 of those tested achieving the GED® diploma.

Although the CBT cost may exceed our current charges, this test is definitely a stepping stone to the new GED[®] test that will be unveiled January 2, 2014. GED Testing Service[™] has already announced that the price will stay the same for the new test which will measure high school equivalency in addition to career-and-college readiness. A GED[®] graduate must remain competitive with students who complete their high school credentials in the traditional manner. As the education community embraces CCSS and other career- and college-ready standards in place in states like Texas and Virginia that have not adopted the CCSS, the new assessment from GED Testing Service[™] will meet the market's demand for test-takers to be able to demonstrate these high-level skills.

National Curriculum Survey evidence suggests that test-takers who demonstrate fluency with the skills measured in the new assessment will be better prepared for what they plan to do with their lives. A graduate will no longer hold a high-school equivalency credential, but a roadmap for life's success. The GED[®] testing program will fulfill its promise to be a stepping-stone toward a college classroom or a better career and a family sustaining wage.

In addition, test centers will be reimbursed by GED Testing Service[™] approximately \$38 per test. Although this reimbursement is \$12 less than the current \$50 that testing sites are receiving from Free GED[®] Testing, items such as scoring fees and testing materials are included in the \$120 cost. Nevertheless, the \$38 reimbursement will be needed to pay GED Examiners[™] and maintain computer labs and testing sites across the state.

During the implementation of CBT, total funding for FY 2013 will be \$554,600, due to using PBT July 2012 through December 2012 and CBT January 2013 through June 2013. Funding necessary for FY 2014 will be \$752,280 due to CBT be used July 2014 through June 2015.

(3) Recommendations for statutory or policy changes to achieve the following goals:

(A) Reducing or controlling escalating costs of administering the GED[®] examinations;

Policy changes cannot reduce or control escalating cost of administering the GED[®] test. West Virginia State GED Administrator[™] requested a reduction in cost but was told that the cost for taking the GED[®] is established to ensure the charge for taking the GED[®] test is equal for all jurisdictions; therefore, it is up to each jurisdiction to determine the amount of the \$120 fee that the test taker will pay and what percentage, if any of the cost is provided by state funding.

Developing a high school equivalency test would be a lengthy and costly process and would not meet the needs for the test taker needing a high school diploma today for a job tomorrow.

(B) Retaining paper and pen testing for those individuals who request or require it;

Once again, State policy changes cannot determine if the paper and pencil version of the GED[®] test will be retained for individuals who request or require it. This also is determined by GED Testing Service[™] and it has been determined that when the new GED[®] assessment begins January 1, 2014, PBT will cease.

Even though West Virginia will be converting to CBT January 1, 2013, it is the intention of the West Virginia GED Administrator™ to retain PBT in a test site in each RESA for those who prefer to take PBT rather than CBT throughout December 31, 2013. Nevertheless, after that date, PBT will only be available for test takers requiring it for accommodations.

(C) Eliminating or reducing significantly the difficulty for individuals who are not comfortable or proficient in taking online examinations.

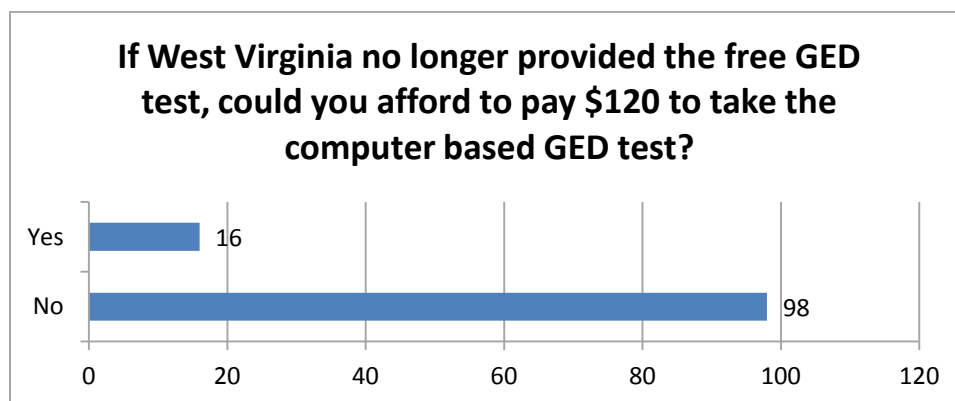
ABE centers throughout the State have already started the process of implementing instruction to assist those who are not comfortable or proficient in taking online examinations. In addition, GED Testing Service™ will provide training for instructors to ensure a smooth transition from PBT to CBT and to provide activities for the ABE classroom that will improve performance on the CBT as well as the new 2014 GED® test.

Throughout the report, results from the “Computer Based GED® Test Survey for West Virginia” were shared. It is noted that most of those without a high school diploma who were surveyed confirms West Virginia leadership in computer literacy as the majority have had access to several technology devices that require some computer skills.

Nevertheless, the most profound findings of this survey were:

The GED® test is accepted by 98% of colleges and employers. When asked if the test taker would rather take a paper pencil test accepted as a high school diploma only in West Virginia by employers and colleges or a computer based test that is accepted across the nation as a high school diploma by employers or colleges, the answer was surprising. Eighty-eight percent (88%) of the 82 potential test takers who responded to this question answered, “I would take the computer based test recognized as a high school diploma by employers and colleges nationally.”

In addition, one question asked, “If West Virginia no longer provided the free GED® test, could you afford to pay \$120 to take the computer based test?” The response follows:



People may select more than one checkbox, so percentages may add up to more than 100%

Although not reported, GED® testing is not only used by adults, but also used by high school students in the Option Pathway. The Option Pathway is a dropout prevention program designed by the WV GED® Office to keep students in school rather than dropping out. This program is

the merging of the GED® test and Career Tech Education (CTE) Pathways. To date the Option Pathway has prevented over 600 students from dropping out of school and over 250 have received a high school diploma during the two (2) years that the program has been in existence in 33 counties. The students taking advantage of this pathway certainly do not have the \$120 necessary to take the CBT version of the GED® test.

From the findings in this report, West Virginia test takers are willing to accept the challenges projected with the implementation of CBT for the GED® test. More importantly, in 2014 GED Testing Service™ will unveil a new assessment that ensures the GED® testing program is no longer an endpoint for adults, but rather a springboard for further education, training, and better paying jobs. Four content-area assessments—Literacy, Mathematics, Science, and Social Studies—will measure a foundational core of knowledge and skills, and an additional performance level will certify that adults are ready for college and careers. Nevertheless, training in ABE centers and by GED Testing Service™ will assure a smooth transition from PBT to CBT to the new 2014 test.

It is also important to note that policy changes cannot change nor determine cost and retaining PBT in West Virginia. The GED® Office is only capable of projecting the cost of the GED® tests through December 2014 due to the announcement by GED Testing Service™ of the decision to keep the \$120 test fee for this time period.

The most significant item in the entire report is that:

“West Virginia is very fortunate that the Honorable Governor Earl Ray Tomblin and the 2012 Legislators continued funding for Free GED® Testing for FY2012-2013.”

References

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APPENDIX

Senate Bill No. 646

(By Senators Laird, Plymale, Foster, Miller and Stollings)

[Introduced February 17, 2012; referred to the Committee on Education.]

A BILL to amend the Code of West Virginia, 1931, as amended, by adding thereto a new section, designated §18-2-6b, relating to the General Educational Development Diploma (GED); making legislative findings; setting forth legislative intent; and requiring the State Board of Education to study GED issues and make a report with recommendations by a certain date.

Be it enacted by the Legislature of West Virginia:

That the Code of West Virginia, 1931, as amended, be amended by adding thereto a new section, designated §18-2-6b, to read as follows:

ARTICLE 2. STATE BOARD OF EDUCATION.

§18-2-6b. General Educational Development diploma; legislative findings and intent; examination costs; testing materials and procedures; report required.

(a) The Legislature makes the following findings related to the General Educational Development (GED) examination:

(1) The GED examination is an instrument for success that can keep a student from dropping out of school and can transform the future for both school age and adult individuals who attain a GED diploma. One in every seven Americans with a high school credential has received the GED, as well as one in every twenty college students. For those who have not graduated from high school, attaining a GED diploma greatly increases their employment opportunities and earning potential.

(2) While West Virginia's average per-capita income has increased over the past ten years as the state's economy has held steady or grown slightly, most other states have shown declines. Despite these positive changes, West Virginia still ranks as one of the five poorest states in the nation. Additionally, many counties within the state fall far below the state average; therefore, the current cost of the GED examination would be difficult for many citizens to afford without help and significant increases will make the cost of the GED examination prohibitive.

(3) In addition to the cost factor, large areas of West Virginia are without broadband Internet access or without adequate broadband Internet access speeds, which results in diminished opportunities for rural residents to participate in the rapidly unfolding digital revolution compared to their nonrural neighbors. Citizens living in these areas have few opportunities to become adept in computer technology and, therefore, most, especially adults seeking to earn a GED years after leaving the public school system, are not proficient or even comfortable using the Internet.

(4) Individuals who can benefit most from earning a GED diploma are those who lack many of the skills needed to secure employment or to function successfully in an age dependent upon technology. They also are those who lack the financial

resources to obtain the needed skills so most citizens for whom the GED diploma becomes unattainable are likely to remain in a state of poverty.

(b) It is the intent of the Legislature to make the GED diploma available to the widest possible range of state residents who have not achieved a high school diploma. To keep the GED diploma within reach of state citizens, the Legislature intends to examine the following issues:

(1) Impact on prospective GED test takers of the proposed changes in the design and delivery of the qualifying examination made by the American Council on Education (ACE) in 2011;

(2) Impact of the increase in costs per test taker; and

(3) Alternatives available to reduce costs and to retain the option of pen and paper testing for those who desire it.

(c) Therefore, in view of the findings and intent set forth in subsections (a) and (b) of this section, respectively, the state board shall undertake an exhaustive study of the issues surrounding administration of the GED examination in the state including, but not limited to, the following:

(1) Analysis of research and/or pilot testing that was done in West Virginia by the American Council on Education prior to their decision to eliminate paper and pen examinations, including justifications offered for eliminating this type examination as a possible option;

(2) Determination of the current and future costs to the state to provide GED examinations free of charge to eligible test takers; and

(3) Recommendations for statutory or policy changes to achieve the following goals:

(A) Reducing or controlling escalating costs of administering the GED examinations; and

(B) Retaining paper and pen testing for those individuals who request or require it; or

(C) Eliminating or reducing significantly the difficulty for individuals who are not comfortable or proficient in taking online examinations.

(d) The state board shall complete its work and report its findings, conclusions and recommendations, together with drafts of any legislation or policy changes necessary to effectuate the recommendations, to the Legislative Oversight Commission on Education Accountability no later than July 1, 2012.

(NOTE: The purpose of this bill is to examine the issues surrounding proposed changes in administration and costs of examinations to receive a General Educational Development (GED) Diploma. The bill sets forth legislative findings and intent. The bill requires the State Board of Education make a study of the issues

concerning the GED, including costs of administering the examinations and exploring optional pen and paper testing. The bill requires the report and recommendations be made by July 1, 2012.

2010 GED Test Center Profile

Anne Guison-Dowdy
Margaret Becker Patterson

NOTE: ONLY PAGE 7, WHICH WAS SITED IN THE REPORT, OF THIS 92 PAGE DOCUMENT WAS COPIED FOR THE APPENDIX. A COPY OF THE ENTIRE REPORT HAS BEEN PROVIDED FOR THE COMMITTEE.

availability of instruction via computers could potentially benefit recruitment into preparation programs since adults could gain computer literacy skills as well as academic skills.

Policies for First Retesting

- More jurisdictions indicated requiring a wait time before first retesting than not, with a median of 30 days required
- Three-fifths of test centers did not require their candidates to participate in instruction before first retesting.

These findings have implications in terms of candidates' preparedness for retesting, which

seems crucial as retesting candidates already failed in one or more content area test and need

to increase their skills in that area.

Computer Capacity

- Nearly 60 percent of test centers had computers available for GED candidate use in 2010 (23 computers, on average)

• Nine U.S. states had computers available in at least three-fourths of their test centers:

Alaska, Arkansas, Hawaii, Kansas, Maine, North Dakota, Oklahoma, South Dakota, and West Virginia

- California, Michigan, and Texas had more than 50 test centers each with potentially additional computers available
- About 60 percent offered computer-based testing (outside the GED Tests)
- Less than half of all test centers with computers available for candidate use in 2010 anticipated barriers to computer-based GED testing. An important exception among test centers expecting barriers was the Inter-regional Contracts subgroup
- Test security was chief examiners' top concern, followed by candidates' limited computer literacy and the cost of computer equipment.

The strong prevalence of networked computers and internet access in these test centers is

promising for computer-based testing and the 21st Century GED Initiative. Also promising is

that half of respondents believed more computers at their facility could be made available for

candidate use. At the same time, a strong note of caution comes from the data on barriers to

computer-based testing. Many test centers lack space, computer equipment, or internet access and would likely require sufficient resources and policy changes to enhance their capacity.



GENERAL EDUCATIONAL DEVELOPMENT
TESTING SERVICE

Perceptions and Pathways Research
West Virginia Pilot
January 28, 2011

A major focus of the 21st Century GED[®] Initiative is helping more adult learners to have a successful transition to postsecondary education. Getting a college degree or certificate will ultimately help them improve their labor-market and educational status. A recent study, *Crossing the Bridge*, by GED Testing Service revealed that approximately 43% of GED credential recipients enrolled in postsecondary education (Patterson, Zhang, Song, & Guison-Dowdy, 2010). This report laid the groundwork for more in-depth examination of GED credential recipients' postsecondary education experiences in a new qualitative study called Perceptions and Pathways.

Perceptions and Pathways research begins in February 2011 and continues through May. Before beginning interviews in six U.S. states, GED Testing Service conducted a pilot set of interviews. Working in cooperation with the West Virginia Department of Education GED Office, headed by GED Administrator Debra Kimbler, GED Testing Service planned a site visit to West Virginia to launch Perceptions and Pathways. The research team included two Canadian researchers, Professor Allan Quigley and Sue Folinsbee, as well as GED Testing Service research staff. On January 28, 2011, five researchers interviewed nine GED credential recipients at the Jefferson Adult Education Center, administered by Marty Soltis, Coordinator of Career, Technical and Adult Education, in Charles Town, West Virginia. He and ABE/GED Instructor Frank Houston recruited GED credential recipients locally.

These nine GED credential recipients represented a diverse cross section of adult learners, with some completing GED Tests very recently and others decades earlier; some had completed postsecondary degrees while others had passed the GED Tests so recently that they had yet to make a decision about further education. Several GED credential recipients credited the support and instruction they received at Jefferson Adult Education Center as instrumental to them passing the GED Tests and making a transition to postsecondary education. The information gained from the West Virginia pilot benefitted not only researcher preparation for field interviews but also provided numerous insights into GED credential recipients' education experiences.

Since past behavior is often the best predictor of future behavior (Bentler & Speckart, 1979), knowledge of what has happened in the past to GED credential recipients and how they reacted then will help predict life-choice patterns in the future for GED credential recipients who go on to postsecondary education. And, more important, it may point to positive interventions and supports that can be provided along the pathway to postsecondary education. Perceptions and Pathways aims to establish a model to explain GED credential recipients' perceptions and decision processes along the educational pathway from secondary into postsecondary education. For more information on the Perceptions and Pathways study, contact Margaret Patterson, Research Director, at margaret_patterson@ace.nche.edu.

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GED TESTING SERVICE[®] COMPUTER-BASED TESTING PILOT: Usability Study Overview

The GED Testing Program: Moving Forward

Since the American Council on Education developed the GED Test in 1942, more than 17 million adults—or one of every seven Americans—have earned the GED credential. Although the content area subjects of the GED Test haven't changed, priorities, assumptions, and assessment criteria continually evolve to meet the needs of candidates, higher education, and the job market. Ensuring that the GED Test meets the challenges of the 21st century is an important goal at GED Testing Service.

In 2009, GED Testing Service investigated the potential delivery of the GED Test as a computer-based exam, in addition to offering the paper-based format. Working with Pearson VUE, a global leader in computer-based testing (CBT), the testing service commissioned two studies to learn more about GED test-takers and the GED Test. The first was a usability study intended to evaluate and establish ease-of-use standards for a computer-based GED Test. The second will be a comparability study to ensure equivalency of CBT to the paper-based versions of the tests.

"That is why we will provide the support necessary for you to complete college and meet a new goal: By 2020, America will once again have the highest proportion of college graduates in the world."

*-President Obama to a joint session of Congress,
February 2009*

The Usability Study: What We Know

"Usability in the context of creating software is an approach that puts the user, rather than the system, at the center of the process."

-Microsoft

The goal of the usability study was to understand how test-takers would interact with the GED Test using hardware (that is, a keyboard and mouse) and software (scrolling, graphics, and exhibit windows) and to make improvements where necessary. During the three-month prototype phase of the study, GED Testing Service and Pearson VUE adapted sample questions based on those in the Official GED[®] Practice Test. To achieve score comparability between the two formats, questions on the paper-based test cannot simply transfer (as they are) to a computer-based test.

For the usability study, GED Testing Service identified three participant characteristics for the test candidate base: age, native language and level of computer experience. Applicants rated their own level of computer skill from very low to very high.

Continued on back...

Usability Study Overview

...Continued from front

Usability professionals observed several different groups of participants across three rounds of testing in January and February 2010. Participants interacted with multiple question-types that required the use of 20 unique computer skills. These skills ranged from basic functionality of a mouse and keyboard to interacting with on-screen buttons, pop-up windows, and features such as scrolling and dragging.

Between rounds, testing experts made many improvements to instructions and question layouts. To make instructions clearer, for example, the experts added, revised, and reformatted the directions. They also made adjustments to the placement of on-screen buttons and graphics to facilitate ease-of-use.

Over the course of three rounds of testing, test developers made more than 500 modifications to the instruction and practice question screens. By the end of the study, the testing service was satisfied that the study had achieved its goal of a highly usable computer-based format for the GED Test.

“Usability is like love. You have to care, you have to listen, and you have to be willing to change.”

*-Jeffrey Zeldman, author,
Designing with Web Standards*

Next Steps: Taking What We’ve Learned Forward

“People underestimate their capacity for change. There is never a right time to do a difficult thing.

A leader’s job is to help people have vision of their potential.”

-John Porter, Professor of Sociology, Carlton University (Canada)

Preparedness was another factor related to testing success. Participants who had either registered for or had completed at least one content area test responded to the instructions and practice questions with far greater ease than those less prepared.

Notable recommendations include:

- Ensure candidates have basic keyboarding skills, which are a prerequisite for the essay question format in the GED Language Arts, Writing Test.
- Make a functional version of the instruction screens and practice questions developed for this study available to GED Test candidates before they take the test.
- Reduce the number of question formats (i.e., multiple choice, short answer, essay).
- Arrange questions of a similar format together into a single section and open each section with a brief tutorial specific to that question type.

The web-based online tutorial includes many enhancements recommended in the usability study.

The next phase in reviewing CBT is a comparability study to ensure that the computer-based and paper-based tests are comparable measures of a test-taker’s knowledge. The study launched on May 11, 2010, and will run until mid-summer. Stay tuned for further updates!

“Now I can do anything.”

-Evie Eaves, age 97, upon earning her GED credential



GED TESTING SERVICE® COMPUTER-BASED TESTING COMPARABILITY STUDY

PARTICIPATING JURISDICTIONS

Eleven jurisdictions participated in the study: Arizona, California, Colorado, Florida, Georgia, Michigan, Missouri, New Jersey, North Carolina, Texas and Virginia.

THE COMPUTER- BASED GED® TESTS

The study utilized three forms for each of the five content area tests.

GED Testing Service launched this research study in 2010, with the support of Pearson VUE, to evaluate the comparability of the paper- and computer-based versions of the GED® test. From May through October, test-takers were recruited to take a computer-based test in one of the five content areas: Mathematics; Science; Social Studies; Language Arts, Reading; and Language Arts, Writing. The computer-based tests were positioned as a paid practice opportunity; scores did not count towards a high school equivalency credential. More than 7500 computer-based tests were delivered.

THE PROCESS

Eligible individuals agreeing to participate in the study were provided a list of Pearson VUE test sites and a phone number to schedule their test. They also received an overview flyer and set of Frequently Asked Questions to prepare them for the computer-based testing (CBT) experience.

When test-takers arrived at the test center, they were offered a tutorial to become familiar with the look and feel of the computer-based tests, as well as navigation and item types.

Test-takers were allowed the same amount of time to complete the computer-based version of the test as for the paper-based test. Except for the essay portion, test-takers received an unofficial score report upon completion of the test and incentive checks were subsequently mailed to test-takers' address of record.

CBT test-taker recruiting:

GED® testing center staff recruited test-takers for this study during registration for the paper-based tests; only candidates who had not yet taken the test for a particular content area in 2010 were recruited for the study.

Incentive:

Participants were paid \$15 for taking a computer-based GED® test with the potential to earn an additional \$20 – for a total of \$35 per test – if they achieved a score of 410 or higher. Participants could take one computer-based test in each content area, and were paid for each test completed.

SUMMARY

Overall, researchers found convincing evidence of comparability between the paper- and computer-based testing modes.

Based on results of a Usability Study performed earlier in 2010, slight modifications to the user interface and instructions served to mitigate potential obstacles of the CBT mode. Additionally, best practices documented during an extensive and thorough literature review led researchers to maintain question formats in the same straightforward manner as on the paper-based versions. Exposing test-takers to multiple-choice and other item types with which they were familiar allowed them to focus on 'what', rather than 'how', in order to answer a specific question.

Two separate studies also provided evidence of comparability. The first study looked specifically at the construct, or underlying trait of interest, measured by the paper-based version of each content area test and examined whether the same construct was measured by the computer-based version (excluding the essay). For example, in one set of analyses, items that were difficult on the PBT version were equally difficult on the CBT version of the GED® test. The handful of questions that 'behaved' differently across the two administration modes were carefully studied by test specialists who determined that the differences were not due to test administration mode.

The second study involved the comparison of standard scores across the paper- and computer-based groups. Few significant differences were found. Those differences could be attributed to variations in the test-takers' motivation level. Because PBT candidates were dependent on their test performance to earn their high school equivalency credentials, they were highly motivated to do well. The CBT version, on the other hand, was understood to be a 'practice opportunity' in which CBT candidates may not have shared the same drive to perform well. Thus, the differences noted did not change the conclusion that the two testing modes are comparable.

The conclusions reached by these studies led to no changes in policy or program strategy. As GED Testing Service moves forward in adding CBT, it will continue to monitor comparability to ensure that the computer-based GED® test is a valid measure of a test-taker's knowledge.

At the time of test registration, test-takers involved in the study were asked to complete an assessment of their computer skills. Following are their responses.

Have you ever taken a computer-based test?

Yes 53 %

No 47 %

How often do you use a computer?

Every day 24 %

Almost every day of the week 53 %

About once a week 5 %

Once every few weeks 2 %

Rarely or never 6 %

test-taker responses.

How comfortable do you feel writing or sending emails on a computer?

Very comfortable 72 %

Somewhat comfortable 25 %

Somewhat uncomfortable 5 %

Very uncomfortable 4 %

I have never performed this function 4 %

How comfortable do you feel filling out forms, surveys, or applications on a computer?

Very comfortable 58 %

Somewhat comfortable 30 %

Somewhat uncomfortable 5 %

Very uncomfortable 4 %

I have never performed this function 3 %

