A Profile of the Customers

Entering the

Bridgeport One-Stop System

between

June 2003 and June 2006

Prepared in June 2006 by
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Introduction

The State of Connecticut has utilized standardized assessments developed in partnership with the Comprehensive Adult Student Assessment System (CASAS) within its adult education and workforce development systems for over a decade. CASAS instruments measure a person's ability to apply basic skills (e.g. reading, math) in functional contexts. This report provides an extensive analysis of the abilities in reading and math for participants entering the one-stop center in Bridgeport, CT since 2003.

Workplace, Inc., the workforce development board in southwestern Connecticut, instituted computer-based administrations of the CASAS Employability Competency System (ECS) Form 130 reading and math appraisal instrument for all entrants to the Bridgeport, CT one-stop center in the summer of 2003. The use of computer-based assessments has brought a high level of consistency and integrity to the test administration process.

The ECS 130 is a locator test with 25 items each in reading and math. It is designed to provide an initial estimate of a person's ability in reading and math and serve as a resource for decisions relative to educational placement, pre-test form selection, and goal setting. The appraisal test is **<u>not</u>** designed for repeated use to monitor learning gains. Results from the appraisal test also cannot serve as a baseline for monitoring progress.

In addition to the appraisal test, adult education programs funded through the Connecticut State Department of Education (CSDE) utilize CASAS pre-post-assessments to measure progress and learning gains in reading, math, listening, writing, and speaking. These results are also reported to the U.S. Department of Education through the National Reporting System (NRS) framework. The NRS prescribes six (6) educational functioning levels for adult basic and secondary education (see Table 1). Broad descriptors for each of the skills levels are included at the end of this report.

Table 1: Educational Functioning Levels and CASAS Scaled Score Ranges

Educational Functioning Level	CASAS Scaled Score Range
1. Beginning Literacy	200 and below
2. Beginning Basic Education	201-210
3. Low Intermediate	211-220
4. High Intermediate	221-235
5. Low Adult Secondary	236-245
6. High Adult Secondary	246 and above

The remainder of this report utilizes the NRS levels as a framework to discuss the performance of entrants to the Bridgeport One-Stop system.

Methodology

In June of 2006, the Bridgeport One-Stop center submitted records from the prior three years for this analysis. Of the 3,075 participant records with demographic information, twenty five (25) records did not contain any data relative to the number of prior years of schooling and are excluded from this analysis. Of the remaining 3,050 records, 2,938 records (96.3%) contained either a reading or a math appraisal score. According to the One-Stop operator, this minor discrepancy is most likely due to the fact that the individual or the system experienced technical difficulty after which the tests were administered using the paper-pencil version. Four (4) records did not present an appraisal score in reading and five (5) records did not present an appraisal score in Math. These nine (9) records are also excluded from this analysis. Therefore, 2,929 records are included in the final analysis. In the case of repeat appraisal administrations, the earliest administration is considered.

To ascertain whether entrants to the One-Stop system without a high school diploma are being referred to adult education, the data from the One-Stop was cross referenced with the adult education data system. Records were matched if the first name, last name, and date of birth were identical in both systems.

Analysis

About 53% of entrants were functioning in the adult secondary levels in Reading at entry (see Table 2). Only about 8% of the entrants were functioning at the adult secondary levels in **both** reading and math at entry. The overall mean scaled score in reading was 234.4 (High Intermediate) and in math was 218.1 (Low Intermediate).

Table 2: Ability Levels in Reading and Math at Entry

Educational Functioning Level (Scaled Score Ranges)	Reading N (%)	Math N (%)
Beginning Literacy (200 and below)	15 (0.5%)	170 (5.8%)
Beginning Basic Education (201 – 210)	52 (1.8%)	553 (18.9)
Low Intermediate (211 – 220)	282 (9.6%)	1,009 (34.4%)
High Intermediate (221 – 235)	1,041 (35.5%)	949 (32.4%)
Low Adult Secondary (236 – 245)	1,072 (36.6%)	207 (7.1%)
High Adult Secondary (246+)	467 (15.9%)	41 (1.4%)
Total	2,929 (100%)	2,929 (100%)

About 71% of all participants reported having completed more than 10 years of education prior to entering the One-Stop system (see Figure 1).

Figure 1: Highest Grade Level Completed Prior to Entry
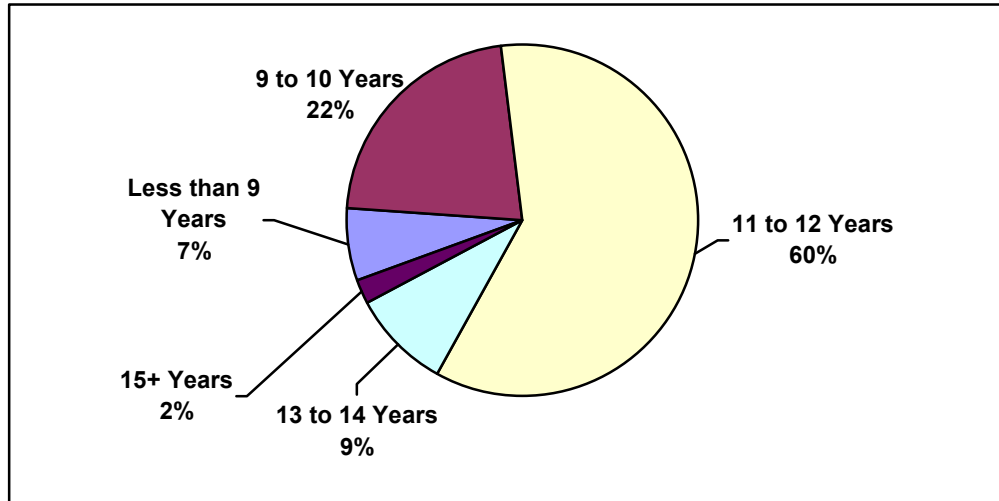
Students with fewer than 11 years of schooling tended to function in the High Intermediate level in reading. Those with more years of schooling functioned on average in the adult secondary levels. Math abilities, however, were significantly lower when compared to reading. Participants entering with up to 12 years of schooling were functioning on average at the Low Intermediate level while those with more than 12 years of schooling were functioning in the High Intermediate range.

Figure 2: Highest Grade Level Completed and Ability Levels
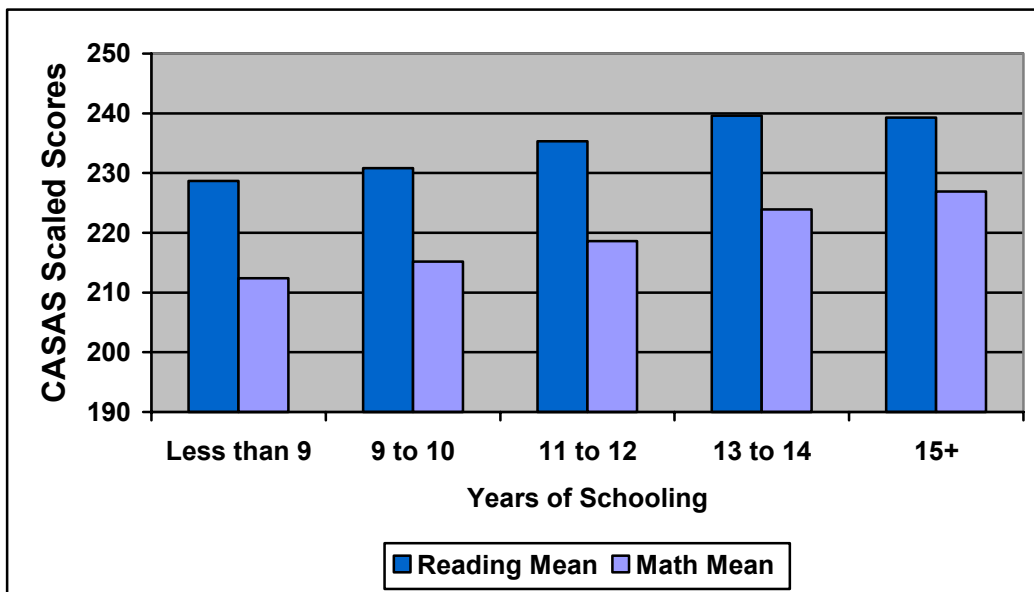
A majority (62%) of the participants had earned a high school diploma or a higher credential prior to entry (see Figure 3).

Figure 3: Highest Credential Earned
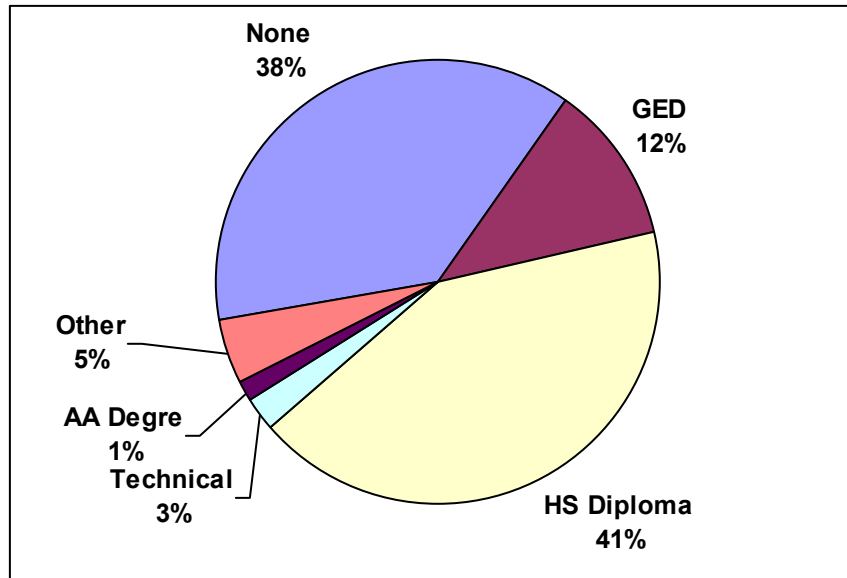
Participants with a technical credential on average scored the highest in reading while those with an A.A. degree on average scored the highest in math (see Table 3). Participants without a high school diploma or General Educational Development (GED) diploma scored lower than all the other groups, especially in math.

Table 3: Highest Credential Earned and Ability Levels

Credential Earned	Number (Percent) of Participants	Mean Reading Score	Mean Math Score
None	1,024	230.0	213.6
High School Diploma	1,286	236.1	219.3
GED Certificate	359	238.3	223.4
Technical	81	241.1	223.8
A.A. Degree	47	238.7	227.3
Other	132	235.7	219.7

About 74% of all entrants were female (see Table 4). Males on average scored slightly higher than females at entry while their average reading scores were very similar.

Table 4: Participation and Performance by Gender

Gender	Number (Percent) of Participants	Mean Reading Score	Mean Math Score
Female	2,154 (73.5%)	234.2	217.2
Male	775 (26.5%)	234.9	220.5

White students on average performed better at entry in both reading and math than their minority counterparts (see Table 5).

Table 5: Participation and Performance by Race/Ethnicity

Race/Ethnicity	Number (Percent) of Participants	Mean Reading Score	Mean Math Score
Black or African American	1,361 (46.5%)	235.3	217.9
Hispanic/Latino	987 (33.7%)	230.9	215.8
White	500 (17.1%)	238.9	222.9
Other	81 (2.8%)	232.0	219.9

Native English speakers comprise the vast majority of the population and performed better in reading than their Spanish speaking counterparts while those speaking "other" languages performed well in math (see Table 6).

Table 6: Participation and Performance by Native Language

| Native Language	Number (Percent) of Participants	Mean Reading Score	Mean Math Score
English	2,201 (75.1%)	235.9	218.8
Spanish	621 (21.2%)	229.4	215.1
Other	107 (3.7%)	231.7	221.7

Over 77% of the entrants were over the age of 21 (see Table 7). Reading performance was fairly even across the age groups. Adults older than 30 performed slightly better in math than those younger than 22 years of age.

Table 7: Participation and Performance by Age

Age Category	Number (Percent) of Participants	Mean Reading Score	Mean Math Score
<22 years of age	666 (22.7%)	233.0	216.3
22-30 years of age	1,087 (37.1%)	235.2	217.8
31-40 years of age	689 (23.5%)	234.7	219.3
41 or older	487 (16.6%)	233.9	219.6

There was no appreciable change in the ability level of entrants over the past three fiscal years (see Figure 4).

Figure 4: Entering Ability Level By Fiscal Year
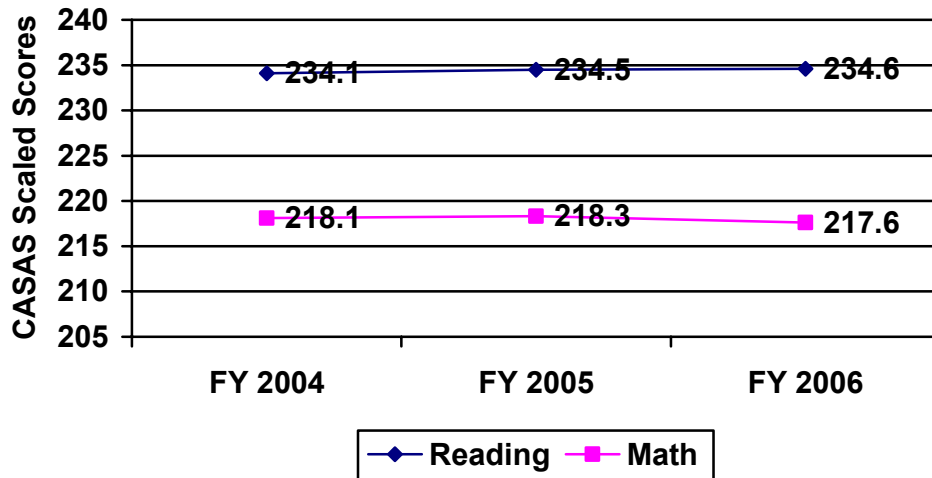
Some entrants who reported not having a high school diploma are also attending adult education programs. Of the 1,024 entrants without a diploma, 209 were referred to adult education programs from the One-Stop while another 174 had attended adult education prior to entry at the One-Stop. These numbers may be somewhat underreported since the matching of records is not based on a specific identification number but on the exact match of name and birth date fields that are more prone to data entry errors.

Conclusion

As expected, entrants with more years of prior education on average perform better than those with fewer years; those without a high school diploma enter with the lowest ability levels. That said, though a majority of entrants reported having completed over 10 years of schooling and having earned a high school diploma or higher credential, most are functioning below the adult secondary levels in math. The performance in reading abilities is significantly better though higher performance might be expected from those with more years of prior education and those possessing diplomas or certificates.

Though some entrants without high school diplomas are also participating in adult education programs, many (63%) are not. In addition to the fact that these numbers may be underreported because of the data match procedures referenced earlier, another likely explanation is that these entrants, for a variety of reasons, might need to engage more immediately with the world of work leaving little time for improving their basic skills.

High school graduates who are generally functioning in the High Intermediate range in math and reading might benefit from short intensive refresher courses while those generally functioning in the Low Intermediate range might need targeted educational interventions.

Educational Functioning Level Descriptors for Adult Basic Education (ABE)

NRS/CASAS Level	Educational Functioning Level Descriptors for ABE
Beginning ABE Literacy CASAS Scaled Scores Reading: 200 and below Math: 200 and below	**Reading/Writing:** Individual has no or minimal reading and writing skills. May have little or no comprehension of how print corresponds to spoken language and may have difficulty using a writing instrument. At the upper range of this level, individual can recognize, read and write letters and numbers, but has a limited understanding of connected prose and may need frequent re-reading. Can write a limited number of basic sight words and familiar words and phrases; may also be able to write simple sentences or phrases, including very simple messages. Can write basic personal information. Narrative writing is disorganized and unclear; inconsistently uses simple punctuation (e.g., periods, commas, question marks); contains frequent errors in spelling. **Computation:** Individual has little or no recognition of numbers or simple counting skills or may have only minimal skills, such as the ability to add or subtract single digit numbers. **Functional/Workplace:** Individual has little or no ability to read basic signs or maps, can provide limited personal information on simple forms. The individual can handle routine entry level jobs that require little or no basic written communication or computational skills and no knowledge of computers or other technology.
Beginning Basic Education CASAS Scaled Scores Reading: 201 - 210 Math: 201 - 210	**Reading/Writing**: Individual can read simple material on familiar subjects and comprehend simple and compound sentences in single or linked paragraphs containing a familiar vocabulary; can write simple notes and messages on familiar situations, but lacks clarity and focus. Sentence structure lacks variety, but shows some control of basic grammar (e.g., present and past tense), and consistent use of punctuation (e.g., periods, capitalization). **Computation**: Individual can count, add and subtract three digit numbers, can perform multiplication through 12; can identify simple fractions and perform other simple arithmetic operations. **Functional/Workplace:** Individual is able to read simple directions, signs and maps, fill out simple forms requiring basic personal information, write phone messages and make simple change. There is minimal knowledge of, and experience with, using computers and related technology. The individual can handle basic entry level jobs that require minimal literacy skills; can recognize very short, explicit, pictorial texts, e.g. understands logos related to worker safety before using a piece of machinery; can read want ads and complete simple job applications.

NRS/CASAS Level	Educational Functioning Level Descriptors for ABE
Low Intermediate Basic Education CASAS Scaled Scores Reading: 211 – 220 Math: 211 – 220	**Reading/Writing**: Individual can read text on familiar subjects that have a simple and clear underlying structure (e.g., clear main idea, chronological order); can use context to determine meaning; can interpret actions required in specific written directions, can write simple paragraphs with main idea and supporting detail on familiar topics (e.g., daily activities, personal issues) by recombining learned vocabulary and structures; can self and peer edit for spelling and punctuation errors. **Computation:** Individual can perform with high accuracy all four basic math operations (addition, subtraction, multiplication, and division) using numbers up to three digits; can identify and use all basic mathematical symbols. **Functional/Workplace**: Individual is able to handle basic reading, writing and computational tasks related to life roles, such as completing medical forms, order forms or job applications; can read simple charts, graphs labels and payroll stubs and simple authentic material if familiar with the topic. The individual can use simple computer programs and perform a sequence of routine tasks given direction using technology (e.g., fax machine, computer operation). The individual can qualify for entry level jobs that require following basic written instructions and diagrams with assistance, such as oral clarification; can write a short report or message to fellow workers; can read simple dials and scales and take routine measurements.
High Intermediate Basic Education CASAS Scaled Scores Reading: 221 – 235 Math: 221 – 235	**Reading/Writing**: Individual is able to read simple descriptions and narratives on familiar subjects or from which new vocabulary can be determined by context; can make some minimal inferences about familiar texts and compare and contrast information from such texts, but not consistently. The individual can write simple narrative descriptions and short essays on familiar topics; has consistent use of basic punctuation, but makes grammatical errors with complex structures. **Computation**: Individual can perform all four basic math operations with whole numbers and fractions; can determine correct math operations for solving narrative math problems and can convert fractions to decimals and decimals to fractions; can perform basic operations on fractions. **Functional/Workplace**: Individual is able to handle basic life skills tasks such as graphs, charts and labels, and can follow multi-step diagrams; can read authentic materials on familiar topics, such as simple employee handbooks and payroll stubs; can complete forms such as a job application and reconcile a bank statement. Can handle jobs that involve following simple written instructions and diagrams; can read procedural texts, where the information is supported by diagrams, to remedy a problem, such as locating a problem with a machine or carrying out repairs using a repair manual. The individual can learn or work with most basic computer software, such as using a word processor to produce own texts; can follow simple instructions for using technology.

NRS/CASAS Level	Educational Functioning Level Descriptors for ABE
Low Adult Secondary CASAS Scaled Scores Reading: 236 - 245 Math: 236 - 245	**Reading/Writing**: Individual can comprehend expository writing and identify spelling, punctuation and grammatical errors; can comprehend a variety of materials such as periodicals and non-technical journals on common topics; can comprehend library reference materials and compose multi-paragraph essays; can listen to oral instructions and write an accurate synthesis of them; can identify the main idea in reading selections and use a variety of context issues to determine meaning. Writing is organized and cohesive with few mechanical errors; can write using a complex sentence structure; can write personal notes and letters that accurately reflect thoughts. **Computation**: Individual can perform all basic math functions with whole numbers, decimals and fractions; can interpret and solve simple algebraic equations, tables and graphs and can develop own tables and graphs; can use math in business transactions. **Functional/Workplace**: Individual is able or can learn to follow simple multi-step directions, and read common legal forms and manuals; can integrate information from texts, charts and graphs; can create and use tables and graphs; can complete forms and applications and complete resumes; can perform jobs that require interpreting information from various sources and writing or explaining tasks to other workers; is proficient using computers and can use most common computer applications; can understand the impact of using different technologies; can interpret the appropriate use of new software and technology.
High Adult Secondary CASAS Scaled Scores Reading: 246 and above Math: 246 and above	**Reading/Writing**: Individual can comprehend, explain and analyze information from a variety of literacy works, including primary source materials and professional journals; can use context cues and higher order processes to interpret meaning of written material. Writing is cohesive with clearly expressed ideas supported by relevant detail; can use varied and complex sentence structures with few mechanical errors. **Computation**: Individual can make mathematical estimates of time and space and can apply principles of geometry to measure angles, lines and surfaces; can also apply trigonometric functions. **Functional/Workplace**: Individuals are able to read technical information and complex manuals; can comprehend some college level books and apprenticeship manuals; can function in most job situations involving higher order thinking; can read text and explain a procedure about a complex and unfamiliar work procedure, such as operating a complex piece of machinery; can evaluate new work situations and processes, can work productively and collaboratively in groups and serve as facilitator and reporter of group work. The individual is able to use common software and learn new software applications; can define the purpose of new technology and software and select appropriate technology; can adapt use of software or technology to new situations and can instruct others, in written or oral form on software and technology use.