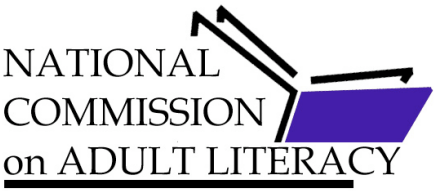

POLICY BRIEF

CHALLENGES IN ASSESSING FOR POSTSECONDARY READINESS

Prepared for the National Commission on Adult Literacy

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FOREWORD

Challenges in Assessing for Postsecondary Readiness is the tenth in a series of background papers contracted by CAAL for the National Commission on Adult Literacy. It was prepared for the Commission's December 6, 2007 meeting by Daryl F. Mellard and Gretchen Anderson of the Division of Adult Studies, Center for Research on Learning, University of Kansas.

This Policy Brief examines the major assessments in use today to measure adult learning gains and determine student placements – e.g., BEST, CASAS, TABE, COMPASS, ASSET, and ACCUPLACER in terms of their use and issues of alignment. Special attention is given to the GED as it relates to postsecondary readiness, and to issues of alignment between the skills needed to pass the GED and those needed for placement in a non-remediated college curriculum. On pages 16-18, the authors offer several recommendations to resolve the problems and challenges identified.

A list of commissioners and honorary commissioners making up the National Commission on Adult Literacy is given on the next page.

The Commission is an initiative of and managed by the Council for Advancement of Adult Literacy (1221 Avenue of the Americas – 46th Floor, New York, NY 10020, gspangenberg@caalusa.org. Commission study director Cheryl King operates from a CAAL office in Kentucky (National Commission on Adult Literacy, c/o Council for Advancement of Adult Literacy, 115 East 2nd Street, Suite 310, Owensboro, KY 42303, cherylking@caalusa.org). The Commission's principle funders to date are The Dollar General Corporation, The McGraw-Hill Companies, Inc., Harold W. McGraw, Jr., and the Charles Stewart Mott Foundation.

NATIONAL COMMISSION ON ADULT LITERACY

David Perdue - Retired Chairman and CEO, Dollar General Corporation (Commission Chair).

Morton Bahr – President Emeritus, Communications Workers of America.

Hon. Gerald Baliles - Director, The Miller Center of Public Affairs, University of Virginia; former governor of Virginia.

David Beré – President & Interim CEO, Dollar General Corporation

Bob Bickerton - Senior Associate Commissioner of Education for the Commonwealth of Massachusetts; Past President National Council of State Directors of Adult Basic Education.

Sherrie Claiborne – Chair, Public Policy, Commission on Adult Basic Education (COABE), and past president; COABE representative to and president of National Coalition for Literacy.

Marion Crain - Director, Center on Poverty, Work, and Opportunity, University of North Carolina.

John Comings - Director, National Center for the Study of Adult Learning and Literacy, Graduate School of Education, Harvard University.

Sharon Darling - President and Founder, National Center for Family Literacy.

Samuel Halperin – Senior Fellow & Founder, American Youth Policy Forum and Institute for Educational Leadership; Director of William T. Grant Foundation studies of non-college-bound youth, "The Forgotten Half."

Paul Harrington – President and CEO, Reebok International, Ltd.

George Kessinger – President and CEO, Goodwill Industries International, Inc.

Bridget Lamont - Vice Chair, U.S. National Commission on Libraries and Information Science; Past Chair and current member, Illinois Educational Labor Relations Board.

Hon. Ray Marshall - Rapoport Centennial Chair in Economics and Public Affairs, University of Texas (Austin); U.S. Secretary of Labor (Carter)); Member, National Skills Standards Board and Advisory Commission on Labor Diplomacy (Clinton); Co-chair, Commission on Skills of the American Workforce and of Commission on Skills of the American Workforce in a Global Economy.

Gail Mellow - President, LaGuardia Community College; On many national higher education boards and commissions; Gubernatorial appointee to New Jersey State Employment and Training Commission; Member, New Jersey Commission on Higher Education and Technology.

Owen Modeland - President, Correctional Education Association (incoming); Superintendent of Schools, Oklahoma Department of Corrections.

Mark Musick - James Quillen Chair, East Tennessee State University; President Emeritus, Southern Regional Education Board (SREB); Chaired Board of National Assessment of Educational Progress under three presidents.

Karen Narasaki - President, Asian American Justice Center; Vice Chair Leadership Conference on Civil Rights; Vice President of Coalition for Comprehensive Immigration Reform; Recipient of award of the Chair of the Congressional Black Caucus.

Juan Olivarez – President, Grand Rapids Community College; member, Board of National Institute for Literacy, Member Kent and Allegan (MI) Workforce Development Boards; Gov. Jennifer Granham appointee to Cherry Commission of Higher Education and Economic Growth.

Cam Preus-Braly - Commissioner, Oregon Department of Community Colleges and Workforce Development; President, National Council on State Directors of Community Colleges; Chair-elect Western Interstate Commission on Higher Education.

Hon. Tom Sawyer - Former member, U.S. House of Representatives (OH); Author, National Literacy Act of 1991; Former Mayor, Akron, OH; Extensive Congressional role in tracking U.S. and world demographic trends and applying them to policy and program purposes.

Hon. George M. Staples - Director General of U.S. Foreign Service and Assistant Secretary for Human Resources, U.S. Department of State; Former political advisor to the Supreme Allied Commander Europe (SACEUR) at NATO in Belgium; Former U.S. ambassador to many countries.

Gail Spangenberg - President and Founder, Council for Advancement of Adult Literacy; Former Operating Head, Business Council for Effective Literacy.

Andrew Sum - Professor of Labor Economics, Director of Center for Labor Market Studies, Northeastern University; National leader in labor market research related to adult literacy.

Robert Wedgeworth – Retired President & CEO, ProLiteracy Worldwide; Former President, American Library Association; A leader in creating the National Coalition for Literacy in its original form.

William White – President and Chairman, Charles Stewart Mott Foundation; Leads Mott's pioneering work in community education. Member, President Ronald Reagan's Task Force on Private Sector Initiatives; Observer, Carter Center's Delegation to the Palestinian Elections.

HONORARY COMMISSIONERS

David Baldacci – Author of 13 best-selling novels, translated into 38 languages and sold in more than 80 countries; Playwright; National ambassador for various charities, including the Barbara Bush Foundation for Family Literacy; Lawyer, trial and corporate law.

Alfredo G. de los Santos, Jr. – Distinguished Professor, Hispanic Research Center, Arizona State University; Recipient, Harold W. McGraw, Jr. Prize in Education; Board Member, Carnegie Foundation for Advancement of Teaching.

Thomas Donohue – President & CEO, U.S. Chamber of Commerce

Hon. Ruth Ann Minner – Governor, State of Delaware.

Hon. Richard Riley – Partner, Nelson, Mullins, Riley, and Scarborough; former Secretary of Education (Clinton Administration); Former Governor, South Carolina; Recipient Harold W. McGraw Jr. Education Prize for national leadership.

Executive Summary

The Commission seemingly confronts a number of significant challenges in setting a future course for comprehensive services that will ensure higher participation and success for students in postsecondary education. Some of those challenges reflect competing interests of various stakeholders such as USDE, service providers, test publishers, and consumers. Adult education learners approach the goal of college-level postsecondary education through three assessment gateways—measures of adult education program learning gains, a high-school equivalency exam, and college placement tests. On the surface, the assessments in this sequence might appear to work in concert and point to the same goal. However, although not at cross-purposes, the assessments are not well aligned with one another. This review of the three types of assessment produced four policy recommendations:

1. Improve psychometric quality of assessments
We question whether an assessment and its score that is used for designating a learner's NRS level, which is a classification function, is also appropriate for measuring a learner's gain in a curriculum and instructional program. We found data supporting the classification function in our review, but no data indicating the instruments' sensitivity to assessing learners' gains in the broad range of instructional and curricular programs offered in adult education.

2. Align adult education policies and practices with postsecondary goals
Postsecondary participation is only one of the five core outcomes on which adult education programs are evaluated. If the Commission gives postsecondary participation a higher priority, significant changes in adult education's mission, structure, and capacity building efforts would be needed. One needed change would be a closer alignment of the WIA Title II approved assessments with postsecondary requirements in reading and mathematics and less on life skills in home, employment, and community settings.

3. Align adult education services with college placement decisions
Postsecondary placement decisions help entrants understand their goals, the alignment of their goals with the postsecondary settings' programs and courses of study, and the content knowledge and skills needed to realize those goals. These matriculation activities are substantively different from what adult education offers. If increased postsecondary participation is an adult education goal, the rigor and relevance of current practices need review and a different direction charted. A first step might be to compare the range of content and skills required on commonly used college placement tests and their parallel in adult education program common assessments.

4. Role of the GED as a postsecondary predictor
Individuals who pass the GED are eligible for more postsecondary options, but that is not the same as indicating that the GED is a predictor of postsecondary success. Thus, the validity of the GED is not tied to how well persons who pass the GED perform in postsecondary settings. Other measures (e.g., TABE, ACCUPLACER, COMPASS, and ASSET) aligned with college placement decisions should be evaluated for the adequacy of their predictive utility and decision accuracy.

A. Introduction

Adult secondary education learners approach the goal of college-level postsecondary education through three assessment gateways: (a) measures of adult education program learning gains, (b) a high-school equivalency exam, and (c) college placement tests. On the surface, the assessments in this sequence might appear to work in concert and point to the same goal. However, although not at cross-purposes, the assessments are not well aligned with one another. Each assessment is specifically designed and reliably constructed to measure skills and traits particular to its purpose. Expecting that performance on one assessment will predict a similar level of performance on an assessment with a different purpose is inappropriate. Thus, for adult education programs, these multiple assessments are less an issue of one test being more reliable than another; they are a validity issue—that is, "do the test scores represent what is intended?"

To better understand this issue, we first present a review of the three most frequently administered learning gains instruments approved for use in Adult Education and Family Literacy Act-funded programs (i.e., BEST, CASAS, and TABE), and discuss their relation to the GED high-school equivalency exam and college readiness. Second, we examine the sufficiency of the GED as it relates to postsecondary readiness without remediation. Third, we review the three major placement exams for college applicants with GED credentials (i.e., COMPASS, ASSET, and ACCUPLACER), and discuss the research on alignment between the skills required to pass the GED and those skills required for placement in non-remedial college curriculum. Finally, we make specific policy recommendations regarding assessments in adult education programs to resolve the identified issues.

H.L. Mencken once said, "For every complex problem, there is a solution that is simple, neat, and wrong." In our effort to avoid over simplification of adult education assessment issues, we chose to include some technical data that may be fully appreciated by some readers, and less so by other readers. However, we hope that all readers will be able to understand the discussion on each topic and apprehend the recommendations that follow.

B. Psychometric Qualities of the Tests Measuring Learning Gains of Adult Education Participants

The Division of Adult Education and Literacy (DAEL) in the U.S. Department of Education administers the Adult Education and Family Literacy Act of 1998 (AEFLA) provision of the Workforce Investment Act (Title II of P.L.105-220) using a comprehensive accountability system. This system, known as the National Reporting System for Adult Education Programs (or NRS), requires AEFLA programs to annually report the number of learners who achieve each of five core outcomes (USDE, 2006):

- made a learning gain (advanced to next educational functional level)
- entered employment
- retained employment
- earned a secondary school diploma or GED
- placed into postsecondary education or training

Assessments approved by DAEL for documenting a learning gain must meet several criteria. Specifically, an approved assessment demonstrates that it: (a) is appropriate for measuring literacy and language development in adult students, (b) has standardized administration and scoring procedures, (c) has alternate, equivalent forms for pre- and post-testing, and (d) can be aligned with NRS educational functional levels (USDE, 2006). Although these psychometric standards are minimally acceptable, higher standards are reported in the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education standards for educational and psychological testing (AERA, 1999).

State and local adult education programs typically use standardized tests to monitor individuals' learning gains and readiness for passing the GED exam (American Council on Education [ACE], 2006). The three most commonly used assessments approved for NRS reporting are Basic English Skills Test (Center for Applied Linguistics [CAL], 2005, 2006), Comprehensive Adult Student Assessment System (CASAS, 2006) and Test of Adult Basic

Education (CTB/McGraw-Hill, 2004). Brief overviews of these three assessments, and their psychometric properties and validity issues, follow.

(1) Basic English Skills Test (BEST)

BEST (CAL, 2005, 2006) is an assessment of language proficiency designed for adult English language learners performing at survival and pre-employment skill levels. The BEST consists of two parts: BEST Plus, which is an oral interview, and BEST Literacy, which is a literacy skills assessment. Developed by language-testing professionals and English language educators, the BEST covers 13 content domains common to adult basic and secondary education curriculum. The test is normed on a national sample of English language learners representing over 100 different countries, and is intended for use with adult English language learners who are 16 years and older.

Psychometrics: Both BEST Plus and BEST Literacy report high inter-rater reliability (.90–.97), as well as a high level of test/retest reliability (.89) and parallel-form reliability (.91). As an indication of validity, the technical manual presents correlations that demonstrate a significant and positive relationship between teacher ratings of student proficiency and student performances on the test (.72).

Validity Issues*:* English as a Second Language (ESL) educators report that BEST is not ideally suited for assessing whether English language learners meet the academic language requirements of a postsecondary environment. The assessment focuses on life skills related to employment, home, and community, but does not measure the type of vocabulary required to read and comprehend college level text books (Santos, 2004). Academic language proficiency has been associated with postsecondary success rates for both native and non-native English speakers, with the greatest impact being on non-native speakers (Santos, 2004).

(2) Comprehensive Adult Student Assessment System (CASAS)

CASAS (2006) is an assessment and evaluation system designed for adult basic and secondary education instructional programs for the purpose of measuring skills needed by adults and youth in everyday life (e.g., reading and writing tasks presented as a job

application form). The assessment is competency based (i.e., a learner does not advance to the next skill level until he or she demonstrates sufficient mastery of the preceding level). The assessment's publishers indicate learners scoring at or below a 235 on the CASAS reading scale, and at or below a 225 on the CASAS math scale can be considered functioning below a high school entry level (8.9 grade level equivalent). However, many adult education programs report using the same scores as the indication that the student is ready to take the GED.

CASAS does not provide equivalent scores based on a K-12 academic school achievement test because CASAS tests are constructed to assess life skills in employment, home, and community environs. However, the publishers provide estimated grade level equivalents for the purpose of adult education program record keeping only (Table 1).

Table 1. CASAS Scaled Levels and Corresponding Grade Level

Reading	Math	Grade Level Equivalent
below 200		1
201 – 205		2
206 - 210	Below 200	3
211 - 215	201 – 205	4
216 - 220	206 - 210	5
221 - 225	211 - 215	6
226 - 230	216 - 220	7
231 - 235	221 - 225	8
236 - 240	226 - 230	9
241 - 245	231 - 235	10
246 - 250	236 - 240	11
251 - 255	241 - 245	12
266+	245+	13+

Psychometrics: CASAS reports a "very good" internal consistency for the reading and math sections (.91–.97). Low correlation between reading and math scores (R = .59) indicate these portions of the assessment measure separate competencies. The internal consistency of the

listening portion of the CASAS is also considered "good" (.76–.92). No data were available on test/retest, or alternate and parallel form reliability.

Validity Issues: Government agencies and state institutions have documented the validity of the CASAS assessment (e.g., U.S. Department of Education, Joint Dissemination Review Panel, Department of Education's Program Effectiveness Panel, as well as five validation studies in four states: Iowa, Indiana, Connecticut, California). Additionally, the publisher reports a "monotonic increasing relationship" between CASAS scores and GED scores in both reading and math, and between CASAS reading scores and the cumulative score across the five areas on the GED (CASAS, 2003). However, adult education programs cannot assume from such relationships that CASAS is a valid measure for the specific skills needed for success in postsecondary education. Hock and Mellard (2005) found that the CASAS reading assessment focuses on lower-order skills such as word comprehension and fact-finding and includes significantly fewer questions that require higher-order thinking and inferential skills as compared to GED questions. Thus, even as CASAS reports a high correlation between its scores and the GED, it may not assess the kind of reading skills (e.g. critical, reflective, and analytical) needed at the college level.

(3) <u>Test of Adult Basic Education (TABE)</u>

TABE (CTB/McGraw-Hill, 2004) is the most widely used assessment in adult basic and secondary education (Kirsch, Jungeblut, Jenkins, & Kolstad, 1993). Its purpose is to provide valid competency levels and measure progress among native English-speaking adult learners with limited literacy skills. The TABE was also designed to be used at the postsecondary level to measure educational gain in a remedial environment.

The tests combine characteristics of norm-referenced and criterion-referenced tests. These tests provide information about the relative ranking of examinees against a norm group, as well as criterion-referenced information about the instructional needs of individual examinees. TABE is available in both paper-and-pencil and computer-based testing forms measuring academic content areas of reading, mathematics computation, applied mathematics, and language. Supporting the measurement of these content areas are optional

vocabulary, language mechanics, and spelling tests. Selected-response items are organized by content categories that reflect current trends in adult education, national standards, and adult curricula.

The TABE is normed on a sample drawn from adult examinees (ages 14 to adult) from diverse backgrounds enrolled in ABE and ASE programs. In 2003 the publishers released the latest version of the TABE in response to changes to the GED in 2002.

"The assessment levels extend from the basic literacy level, which includes beginning reading and mathematics skills, upward to the most advanced levels, which include objectives in all content areas that are taught at the high school level and beyond and are also measured on the GED tests" (CTB/McGraw-Hill, 2004 p. 5). Publisher-provided grade level equivalents are shown in Table 2.

Table 2. TABE Test Levels

Test Level		**Grade Level Equivalent**
L	Literacy	0.0–1.9
E	Easy	2.0–3.9
M	Medium	4.0–5.9
D	Difficult	6.0–8.9
A	Advanced	9.0–12.9

Test levels D and A are of particular interest with regard to issues of postsecondary readiness. Currently, many adult education programs permit students achieving about an 8th grade equivalency (e.g., TABE level D) to take the GED. However, the test level A is more likely to be valid measure of postsecondary readiness as measured by knowledge gained in a secondary environment.

***Psychometrics**:* While the TABE's internal consistency reliability for all levels is rated as "acceptable" (.88–.95) the technical manual does not include reliability reports on test/retest, inter-rater reliability, or alternate forms. Table 3 expands on the psychometric attributes of test levels D and A because of their importance to a discussion on postsecondary readiness.

Validity Issues: Because the TABE design is more easily tied to an academic curriculum than either CASAS or BEST, it may be the most valid of the NRS approved assessments for measuring postsecondary readiness. On the other hand, its use of academic terms and theoretical problems may initially produce artificially suppressed indicators of literacy for older adult learners who have been out of academia for some time, as compared to CASAS or BEST, which assess life skills related to employment, home, and community contexts. However, after older learners are re-exposed to the vocabulary and context of academia, TABE can provide a more valid assessment of college readiness (Cumming, Gal, & Ginsburg, 1998).

Table 3. Descriptive Statistics for TABE

Level	Test	Number of Items	Mean	SD	Reliability
L, E, M	Battery	--	--	--	.82–.95
D	Reading	50	32.04	9.77	0.91
D	Mathematics Computation	40	23.39	7.55	0.88
D	Applied Mathematics	50	25.31	8.70	0.87
D	Language	55	34.65	9.89	0.90
A	Reading	50	33.92	9.90	0.92
A	Mathematics Computation	40	21.76	8.45	0.90
A	Applied Mathematics	50	22.62	8.94	0.88
A	Language	55	36.30	10.87	0.92

Note: Form 9 Complete Battery Core Tests

(4) Adult Education Assessment Observations

Finally, academic preparedness, and thus the number of developmental courses that an individual must take, is a function of instruction, not assessment. Adult education program curriculum and assessment standards must be examined to assure that the students who

intend to go on to collegiate postsecondary education are getting the academic support they need to realize their goal. This may mean that adult education programs must find a way of increasing the intensity of the instruction and the time the participants spend in the program and on task in order for them to reach these goals (Adelman, 1999).

C. Relationship of GED Test Performance and Postsecondary Readiness

A shared misconception is that high school equivalency credential is an indicator of postsecondary education readiness. Neither high school completion through a traditional program nor the GED is a good predictor of collegiate postsecondary performance or readiness. Nearly one-third of first-year college students (both GED and traditional high school graduates) are placed into remedial courses, a situation that substantially reduces their odds of earning a college degree (Adelman, 1998).

The GED is intended as a high school equivalency exam, and not designed as an assessment of postsecondary readiness. The 2002 Series GED test reflects the standards developed at national and state levels for the core academic disciplines of language arts, social studies, science, and mathematics.

The GED is established such that the median score for graduating seniors is 500, and a minimum passing score is 450. The U.S. national average passing score is 522 (ACE, 2006). Table 4 details by academic domain and for the entire battery the average scores individuals who passed the GED exam.

The GED was normed on a representative sample of graduating seniors, not seniors who were specifically on a pre-college academic track. Generally, students academically prepared for college should score differently on the GED than students who have not been exposed to the same preparatory curricula. However, no published data is available comparing performance on the GED for these two populations.

Table 4. Standard GED Passing Scores

Subject	Median	Mean	*SD*
Writing	480	496	62
Social Studies	520	532	71
Reading	530	555	92
Science	520	534	72
Mathematics	480	496	70
Battery	510	522	57

Note: United States examinees only

Further, performance on the GED is not predictive of college grade point average (Tyler, 2003). In fact, current high levels of enrollment in college remediation classes suggest that neither those who pass the GED nor those who receive a high school diploma are assured of being academically prepared for college (American College Testing [ACT], 1997). Yet, incoming college students who earned GEDs were more likely than traditional high school graduates to need remediation (22% compared to 15%), particularly in the areas of writing and mathematics (Reder, 2000). Furthermore, GED recipients were more likely to spend a longer time in remediation than traditional high school students (Adelman, 1998). While the remedial classes may provide needed academic preparation, students who participate in multiple remediation courses in math and reading are significantly more likely to drop out of college (Adelman, 1998). However, once given proper remediation, GED recipients were found to perform nearly as well as traditional high school graduates when measured by college grade point average (Murnane, Willett, & Tyler, 2000).

Finally, no research to date quantifies the sufficiency of the GED in preparing a student for postsecondary course work. However, due to the complex demographic nature of the typical GED recipient and the absence of data, it would be premature to suggest that the GED lacks academic rigor relative to postsecondary readiness.

D. Relationship of the Tests Used in Evaluating Learning Gains and College Placements of Adult Education Participants

The typical high school graduate will take the SAT or ACT college entrance exam and submit a transcript of their academic record in order to gain entrance into a two- or four-year college. Adult education learners who earn a GED can also take these exams, but do not have an academic transcript for colleges to evaluate. Therefore, many postsecondary institutions require GED-credentialed applicants to take a placement exam in lieu of these traditional measures of academic readiness.

Three commercial assessments have been published to aid in advising and course placement by identifying a student's content knowledge deficiencies that merit placement in developmental or remedial courses. Each of these instruments, COMPASS (ACT, 1997), ASSET (ACT, 1994), and ACCUPLACER (The College Board, 2003), allow individual institutions to establish local norms and locally calibrated cut-scores to fit unique, institutional academic requirements. Understandably, this proprietary flexibility in establishing cut-scores makes correlations between GED scores and student placement difficult. Thus, even as concordances exist linking TABE and GED scores to college placement tests, due to the individualized nature of the cut-scores these relationships are not generalizable.

(1) COMPASS

COMPASS (ACT, 1997) is an adaptive computer-based test comprised of reading (natural sciences, social sciences, prose fiction, humanities, and practical reading), writing (usage/mechanics, rhetorical skills), mathematics (numerical skills/pre-algebra, algebra, college algebra, geometry, and trigonometry) and English as a second language (grammar/usage, reading, and listening) components. The items are based upon a sampling of two- and four-year institutions in order to identify specific topics covered in remedial, entry-level, and advanced courses in the three content areas. The assessment is normed on the entire population taking the COMPASS, with data automatically collected as scores and diagnostic feedback are generated.

Psychometrics. The validity of the COMPASS is based upon its ability to effectively place students in the appropriate level of instruction as well as to assess the effectiveness of the remedial instruction for revised placement. Equivalent form reliability ranges between .73–.90. Test/retest reliability data were not reported.

Table 5. COMPASS Predictive Validity

COMPASS Subtest	Postsecondary Class	Correlation with Class Grade ≥ C
Writing skills	Composition	.67
Reading test	Composition	.67
Numerical Skills/Pre-algebra Placement Test	Arithmetic Elementary Algebra	.72 .63
Algebra	Intermediate algebra College algebra	.68 .67

Note: Median correlation across institutions of COMPASS test scores with related post secondary classes.

The test's publisher offers a predictive validity system to measure a student's predicted probability of success in a standard-level course. Institutions can then choose their own definition of success, (i.e., grade of A, B, C) to establish the appropriate cut-score for that particular institution. Median correlations between COMPASS and course grades appear to be adequate (e.g., median accuracy rate from .60 for composition to .78 for pre-calculus; see Table 5). Standard error measurements for each score provide institutions with confidence intervals for establishing localized cut-scores for minimum student performance.

(2) <u>ASSET</u>

ASSET (ACT, 1994) is a paper-and-pencil test comprised of two versions: a Basic Skills Test (writing, numerical, reading, and study skills), and an Advanced Mathematics Test (elementary algebra, intermediate algebra, college algebra and geometry). An alternate parallel form is available for both versions.

The ASSET content is based upon a curriculum survey given to mathematics, reading, and English departments of community colleges across the nation. The norm groups were comprised of incoming freshmen at 23 U.S. community colleges. The Basic Skills Tests were administered to a random sample of incoming freshmen, while the Advanced Mathematics

Tests administration was restricted to a sample of students who had previously received a designated level of math instruction.

Psychometrics: The validity of ASSET is based on its ability to accurately place students in the appropriate level of instruction as well as to assess the effectiveness of the remedial instruction for revised placement. Internal consistency ratings were .65–.87, and single form test/retest reliability were .76–.90. Equivalent form reliability ranges between .73–.87, with a test/retest reliability with a two-week interval is .66–.86.

As with COMPASS, ACT provides predictive validity by which an institution can forecast a student's chance of success in a standard-level course. Institutions can then choose their own definition of success, (i.e., grade of A, B, C) to establish the appropriate cut-score for the particular institution. Standard error measurements for each score interval are provided for establishing confidence intervals. This flexibility is particularly important since each academic institution establishes its own cut-scores to fit the specific academic requirements for student performance.

Additionally, while ACT collects data on the students taking the COMPASS as part of student demographics including type of high school diploma, to date they have not published analysis comparing the performance of GED students on the COMPASS and those of traditional high school students.

Table 6. ASSET Predictive Validity

ASSET Subtest	Postsecondary Course	Course Grade Correlation	GPA Correlation
Writing skills	Development English Developmental English	.30 (.34) .26 (.31)	.33 (.34)
Reading test	Std. freshman English Developmental English Developmental reading	.24 (.26) .19 (.22) .19 (.24)	.27 (.29)
Numerical Skills	Elementary algebra Fundamentals of arithmetic	.34 (.43) .42 (.57)	.24 (.25)
Elementary Algebra Intermediate Algebra	Intermediate Algebra College Algebra	.46 (.50) .30 (.34)	n/a

(3) ACCUPLACER

The ACCUPLACER (The College Board, 2003) is an online adaptive placement test that consists of nine subtests covering reading, writing, mathematics, and English language skills for non-native speakers. The assessment's content was established by committees of subject matter specialists and developed to conform to national standards such as the National Council of the Teachers of Mathematics and the Educational Testing Service. Norming samples were drawn from data voluntarily submitted by institutions. Scores and diagnostic feedback are generated immediately and interpreted using the placement rules established by the particular institution.

Psychometrics: ACCUPLACE validity lies in its ability to predict course grades in college curriculum. Its reliability is demonstrated by internal consistency ratings of .86–.92. The test/retest reliability ranged between .73–.96.

Correlations between ACCUPLACER and course grades appear to be adequate, demonstrating a positive correlation. Correlations are likely to be attenuated because student-level factors such as attendance, drop out, motivation, and perseverance have great effects on course grades, and these factors are not taken into account by ACCUPLACER.

Table 7. ACCUPLACER: Predictive Validity

ACCUPLACER Test	Postsecondary Course	Course Grade Correlation
Reading Comprehension	Developmental Reading	.18
Sentence Skills	Developmental English	.15
Arithmetic tests	General Mathematics, Arithmetic, Elementary and Intermediate Algebra	.31–.38
Elementary Algebra	Elementary Algebra	.19
College Level Mathematics (CLM)	Intermediate and College Algebra, Pre-calculus, Calculus	.32–.49
Sentence Meaning (ESL)	Low ESL Writing Upper ESL Writing Low ESL Language Arts	.16 .11 .22
Reading Skills (ESL)	Developmental Reading Low ESL Reading Low ESL Vocabulary Low ESL Language Arts	.10 .41 .41 .19

(4) Issues with College Placement Tests

Action is needed from both sides of the academic equation. Colleges around the nation are working to demonstrate scale equivalents of test scores across the major instruments: GED, TABE, COMPASS, ASSET, and ACCUPLACER. However, this objective is hindered by the lack of standardization on the local college level. As Adelman spells out in *Answers in the Tool Box* (1999), postsecondary course requirements and content are not comparable across institutions. Thus, assessment cut-scores must differ accordingly. The good news is a process is underway through which institutions can validate their scores on a single, national scale. However, that does not change the fact that an individual, entering college with or without a GED, will experience differing levels of success on these assessments, a condition wholly dependent upon the standards set by the institutions.

E. Summary

After reviewing the assessment gateways through which adult education learners enter postsecondary education, we return to our assertion that the assessments are not well aligned with one another. In general, each assessment is reliably constructed to measure skills and traits particular to its purpose (Table 8). However, the validity issue—that is, "do the assessments' scores accurately represent what we intend for them to represent?—stands out when the assessments are considered in relation to one another. Four policy recommendations related to this issue follow.

Table 8. Reliability Comparisons

Assessment	Internal Consistency	Test-retest	Parallel-forms
BEST	.90–.97	.89	.91
CASAS	.91–.97	not reported	not reported
TABE	.88–.95	not reported	not reported
COMPASS	.73–.88 (Standard length) .76–.90 (Extended length)	not applicable	not applicable
ASSET	.65–.87	.76–.90	.73–.87 (single session) .66–.86 (2-week interval)
ACCUPLACER	.86–.92	.73–.96.	not applicable

F. Recommendations

The Commission seemingly confronts a number of significant challenges in setting a future course for comprehensive services that will ensure higher participation and success for students in postsecondary education. Some of those challenges reflect competing interests of various stakeholders such as USDE, service providers, test publishers, and consumers. Weaving these varied interests into recommended policies is possible and our paper suggests several areas for prioritizing those efforts. We are also confident that as the Commission considers those priorities, no single policy mechanism will be sufficient. Thus, a mix of policy instruments should be considered as recommendations are developed and weighed.

Those policy instruments that seem most applicable include: mandates, increasing resource availability, reconsidering budgetary priorities, capacity building, incentives, and systems change. A mix of these instruments could focus on increasing the participation and successful outcomes for students in postsecondary settings.

(1) Improve psychometric quality of assessments: Adult education program staffs are required to report learning gains using standardized assessments. We question whether an assessment and its score used for designating a learner's NRS level, which is a classification function, is also appropriate for measuring a learner's gain in a curriculum and instructional program. The score should indicate whether the learner is or is not making gains and that decision requires psychometrically sound assessments that can be administered frequently, and have very focused item content. The test items need to be focused on the specific skills or content matched to the instructional goals. We found data supporting the classification function in our review, but no data indicating the instruments' sensitivity to assessing learners' gains in the broad range of instructional and curricular programs offered in adult education. Recall that adult education programs are accountable for assessing learners' progress in achieving one or more of five core outcomes.

(2) Align adult education policies and practices with postsecondary goals: Most participants in adult education programs are not considering postsecondary goals. Postsecondary participation is only one of the five core outcomes on which adult education programs are evaluated. Thus, if the Commission gave postsecondary participation a higher priority, we anticipate that significant changes in adult education's mission, structure, and capacity building efforts would be needed. One needed change would be a closer alignment of the WIA Title II approved assessments with postsecondary requirements in reading and mathematics and less on life skills in home, employment, and community settings.

(3) Align adult education services with college placement decisions: Postsecondary placement decisions help entrants understand their goals, the alignment of their goals with the postsecondary settings' programs and courses of study, and the content knowledge and skills needed to realize those goals. These matriculation activities are substantively different from what adult education offers. Thus, if increased postsecondary participation is an adult

education goal, the rigor and relevance of current practices need review and a different direction charted. A first step might be to compare the range of content and skills required on commonly used college placement tests and their parallel in adult education program common assessments.

(4) Role of the GED as a postsecondary predictor: The GED publisher is clear that the utility of this instrument is in measuring learners' skills and knowledge associated with a high school program of study and in assessing the achievement gains of adult learners through their program participation. Individuals who pass the GED are eligible for more postsecondary options, but that is not the same as indicating that the GED is a predictor of postsecondary success. Thus, the validity of the GED is not tied to how well persons who pass the GED perform in postsecondary settings. Other measures (e.g., TABE, ACCUPLACE, COMPASS, and ASSET) aligned with college placement decisions should be evaluated for the adequacy of their predictive utility and decision accuracy.

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