

POLICY BRIEF

ADULT EDUCATION AND POSTSECONDARY SUCCESS

Prepared for the National Commission on Adult Literacy

by Stephen Reder

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**September 4, 2007
(rev. 10-8-07)**

FOREWORD

This Policy Brief by Stephen Reder was developed for the August 20th meeting of the National Commission on Adult Literacy. While its publication does not necessarily reflect conclusions of the Commission, we are pleased to make it available as a public service.

Other materials developed for the August 20th meeting will be made available in the near future: a Policy Brief by senior researcher Julie Strawn of the Center for Law and Social Policy (*Policies to Promote Adult Education and Postsecondary Alignment*); a Policy Brief by education consultant James Parker (*Workplace Education: Twenty State Perspectives*); and a special perspectives paper developed by Tony Peyton of the National Center for Family Literacy (*Family Literacy in Adult Education: The Federal and State Support Role*).

A current listing of commissioners and honorary commissioners of the National Commission on Adult Literacy is given on the next page.

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ADULT EDUCATION AND POSTSECONDARY SUCCESS
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A. ABSTRACT

This *Policy Brief* takes a first look at a newly identified national population of GED holders, who are compared with their counterparts who received a high school diploma as well as with their counterparts who have no high school credential. The focus of these comparisons is on long-term postsecondary education outcomes. Because these postsecondary outcomes are vital for the economic well-being of individuals and society, the *Brief* considers carefully the role that adult literacy development plays in postsecondary education, not only for GED holders, but for those with high school diplomas and those without any secondary credentials at all. Far too many individuals in all three groups are shown to lack the skills needed to succeed in postsecondary education. These findings indicate that our adult education system needs to be substantially expanded and restructured, not only to increase the number of individuals it serves, but also to raise the skill levels of students well above the passing level of the GED if they wish to succeed in postsecondary education.

The *Brief* identifies other important barriers besides academic skills that need to be addressed in order to increase substantially the number of students obtaining college degrees. There is a surprisingly large unserved target population of adults who *already* have the basic skills needed for success in postsecondary education but face many of these other barriers to college entry and completion. Arguing for a broadened and restructured adult education system, the *Brief* suggests segmenting the target population for adult education into three groups:

- adults without secondary credentials needing improved basic skills to pass the GED, essentially the current target population for adult education
- adults with or without secondary credentials needing improved basic skills to complete a 2-year college degree
- adults who already have the necessary basic skills to complete a 2-year college degree but may need other skills or persistence supports to succeed in college

B. INTRODUCTION

The expansion and improvement of postsecondary education is crucial for the future economic well-being of the United States. As other papers prepared for the Commission persuasively show, the U.S. is losing ground internationally in terms of the educational quality of its current and projected future workforce.¹ Our high school dropout rates are too high and growing; our postsecondary persistence and completion rates are too low and declining. The limited distribution of functional literacy skills in our current workforce is a drag on our national productivity and economic well-being. Unless we develop and implement successful educational interventions, projections of our future workforce paint an even grimmer economic future for us.² As Jones and Kelly note, our educational pipeline is leaking everywhere.³ Many pieces of that pipeline need attention and reform. It is an urgent matter to plug various systemic leaks and improve the educational quality of the students coming out of the pipeline at all levels.

This *Policy Brief* focuses on one of those pieces: The role of adult education in preparing students for success in postsecondary education. Adult education, of course, already contributes to postsecondary preparation in a number of ways. Adult education helps students prepare for and pass the General Education Development (GED) Tests, an equivalency credential often required or recommended for postsecondary education.⁴ New types of adult education “transition” or “bridge” programs provide students with enhanced skill development for college and/or orientation to and information about college – how to get information about colleges, apply for financial aid, complete application forms for admission, use online catalogs to select courses and majors, and so forth. These programmatic efforts should facilitate students’ transition into postsecondary education and attainment of two- or 4-year college degrees.⁵

¹D. Jones and P. Kelly, 2007, *Mounting Pressures Facing the U.S. Workforce and the Increasing Need for Adult Education and Literacy*, paper prepared for the National Commission on Adult Literacy. A. Sum, 2007, *Forces Changing Our Nation’s Future: The Comparative Performance of U.S. Adults and youth on international Literacy Assessments, the Importance of Literacy/Numeracy Proficiencies for Labor Market Success, and the projected outlook for Literacy Proficiencies of U.S. Adults*, paper prepared for the National Commission on Adult Literacy.

²I. Kirsch, H. Braun, K. Yamamoto and A. Sum, 2007, *America’s Perfect Storm: Forces Changing Our Nation’s Future*, Princeton NJ: Educational Testing Service.

³Jones and Kelly, op. cit.

⁴Although there are other high school equivalency certifications besides the GED – such as the External Diploma Program and various state-specific equivalency certifications -- these involve very small numbers of students compared to the GED and are not considered here.

⁵Most of the data sources we will use in this *Brief* distinguish non-degree postsecondary vocational, technical and business programs, which often award certificates. These prove difficult to interpret meaningfully in national data sources because of the high level of heterogeneity in program and provider characteristics. For a good discussion of this, see W.N. Grubb, 2002, Learning and Earning in the Middle – I: National Studies of Pre-Baccalaureate Education. *Economics of Education Review*, 21(4). The higher quality evident in some state-level data systems have enabled some analysts to examine coherently certain combinations of postsecondary credits and credentials, e.g., D. Prince and D. Jenkins, 2005, *Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College policy and Practice from a Statewide Longitudinal Tracking Study*, Teachers College, Community College Research Center.

The GED is widely believed to play a very significant role in the pathway between adult and postsecondary education. More than sixty years ago, when the GED was first introduced, it was seen as a means for obtaining high school equivalency, designed for GIs returning from World War II without high school diplomas. Rather than bringing the older and more experienced returning GIs back into high school classrooms, equivalency exams and certificates were introduced. At that time, of course, a high school degree was the educational gateway into many occupations and economic self-sufficiency. In the ensuing decades, as higher education became increasingly important for career preparation and economic viability in our society, the GED has increasingly been seen not only as an alternative marker of a high school education, once an end in itself, but now as a gateway to postsecondary education as well.

Some time ago, in an earlier paper, I argued that the historical mission of adult education, high school equivalency, should be broadened to college readiness.⁶ The millions of young adults who drop out before completing high school need help with both completing and credentialing their secondary education as well as with preparing to go to college. Research on the characteristics of GED holders has focused on how their basic skills compare with those of traditional high school graduates,⁷ on economic returns to dropouts obtaining a GED,⁸ and on the effectiveness of the GED as a route to postsecondary education.⁹ Although the role of the GED as an alternative high school credential is reasonably well accepted, it is less clear how the GED should serve as a marker of college readiness.

In this *Policy Brief*, we will first take a look at the national population of GED holders, who can now for the first time be systematically compared with their counterparts who received a high school diploma as well as with their counterparts who have no high school credential. Although there are many ways in which these comparisons can be drawn, we will focus here on long-term postsecondary education outcomes. Knowing how important these outcomes are for the economic well-being of these individuals and of our society as a whole, we will look very carefully at the role which adult literacy development plays in postsecondary education, not only for GED holders, but for those with high school diplomas and those without any secondary credentials at all. We will see that far too many individuals in all three groups lack the skills they need to succeed in

⁶S. Reder, 1999, Adult literacy and postsecondary education students: Overlapping populations and learning trajectories. *The Annual Review of Adult Learning and Literacy*, 1, 111-157.

⁷J. Baldwin, I.S. Kirsch, D. Rock and K. Yamamoto, 1995, *The literacy proficiencies of GED examinees: Results from the GED-NALS Comparison Study*. Washington, DC and Princeton, NJ: American Council on Education and Educational Testing Service; M. Kutner, E. Greenberg, Y. Jin, B. Boyle, Y. Hsu and E. Dunleavy, 2007, *Literacy in Everyday Life: Results from the 2003 National Assessment of Adult Literacy* (NCES 2007-480), Washington DC: U.S. Department of Education, National Center for Education Statistics.

⁸S.V. Cameron and J. J. Heckman, 1993, The Nonequivalence of High School Equivalents, *Journal of Labor Economics*, 11(1); R. J. Murnane, J. B. Willett and K.P. Boudett, 1995, Do High School Dropouts Benefit from Obtaining a GED? *Educational Evaluation and Policy Analysis*, 17(2); J. Tyler, R. Murnane and J. Willett, 1999, Estimating the labor market signaling value of the GED, *Quarterly Journal of Economics*.

⁹Reder, 1999, *op. cit.*; J. Tyler and L. Magnuson, 2005, *Is the GED an effective route to postsecondary education?* Unpublished manuscript.

postsecondary education. This indicates that our adult education system needs to be substantially expanded and restructured, not only to increase the number of individuals it serves, but also to raise the skill levels of students well above the passing level of the GED if they wish to succeed in postsecondary education.

As we compare the postsecondary experiences of students entering with GEDs and regular high school diplomas, we will see other important barriers besides academic skills that need to be addressed if we are to substantially increase the number of students obtaining college degrees. We will identify a surprisingly large unserved target population of adults who *already* have the basic skills needed for success in postsecondary education but face many of these other barriers to college entry and completion. If the adult education system is appropriately restructured with the revised mission of college readiness, these adults will constitute a large new target population that could be served by a new component of the adult education system. With a broadened and restructured adult education in mind, we will suggest segmenting its target population into three groups:

- adults without secondary credentials needing improved basic skills to pass the GED, essentially the current target population for adult education
- adults with or without secondary credentials needing improved basic skills to complete a 2-year college degree
- adults who already have the necessary basic skills to complete a 2-year college degree but may need other skills or persistence supports to succeed in college

After identifying these three target populations, we will briefly describe some issues and considerations for redesigning the adult education system to better serve these populations (parts of which may well involve collaborations with postsecondary and K-12 institutions). The *Policy Brief* will conclude with a brief discussion of key research and development priorities for policy and program design for implementing a new adult education system.

C. THE NATIONAL POPULATION OF GED HOLDERS

We have not previously had a comprehensive picture of the national population of GED holders. Although the GED Testing Service publishes annual statistical reports about the number and characteristics of GED passers, those are characteristics at the time the GED was taken, and do not contain information about post-GED experiences such as employment or postsecondary education and training. National surveys conducted by the U.S. Census or the Department of Labor could offer a broader perspective on GED holders, but they typically categorize the high school diploma with the GED and equivalency credentials, so that it is not possible to identify GED holders.

Some large scale educational surveys of the adult population conducted by the U.S. Department of Education have distinguished the high school diploma and GED (or

equivalent) as *highest* levels of educational attainment.¹⁰ This distinction between secondary credentials is masked, however, by any subsequent postsecondary experience and credentials. Individuals who obtained a college degree after graduating from high school or obtaining the GED, for example, were categorized in terms of their college degree rather than in terms of the high school diploma or GED. These surveys thus also fail to provide information about GED passers' subsequent postsecondary education and life experiences.

There have been smaller scale research studies comparing GED holders with high school dropouts and/or high school graduates, conducted typically as single-cohort longitudinal studies that track educational or labor market outcomes of high school students or GED takers over relatively short periods of time.¹¹ Many of these longitudinal studies do not follow individuals long enough after leaving high school or getting the GED to observe their long-term postsecondary education and economic outcomes. As we shall see, GED holders appear to take much longer than traditional college students to begin and complete their postsecondary education (if they start it at all), and so many of their long-term postsecondary outcomes do not fully appear in the relatively short term tracking studies.

Two recent large-scale national education surveys contain data that enable us to look at the national population of GED holders in important new ways. Both the National Household Education Survey/Adult Education Component of 2005 (NHES) and the National Assessment of Adult Literacy of 2003 (NAAL) asked respondents questions about their level of educational attainment *and* the type of secondary credential they obtained.¹² By combining answers to these questions, we can identify the national subpopulation of GED holders regardless of the amount of postsecondary education they may have received. We could, for example, compare the subpopulation that obtained a GED and later received a 2-year college degree with the subpopulation that obtained a GED and never started college or the one that started college but never completed a degree.

¹⁰Examples would be the National Adult Literacy Survey (NALS) of 1992 and an earlier NHES adult education survey; further information about these and other related surveys is available at www.nces.ed.gov.

¹¹See, for example, J. Tyler, 2004, Does the GED improve earnings? Estimates from a sample of both successful and unsuccessful GED candidates, *Industrial and Labor Relations Review*, 57(4), 579-598. Reviews are provided by D. Boesel, N. Alsalam and T.M. Smith, 1998, *Educational and labor market performance of GED recipients: Research synthesis*. Washington DC: U.S. Department of Education, and by J. Tyler, 2003, The economic benefits of the GED: Lessons from recent research, *Review of Educational Research*, 73(3), 369-403.

¹²For further information about these surveys, see www.nces.ed.gov/naal/ and www.nces.ed.gov/nhes/

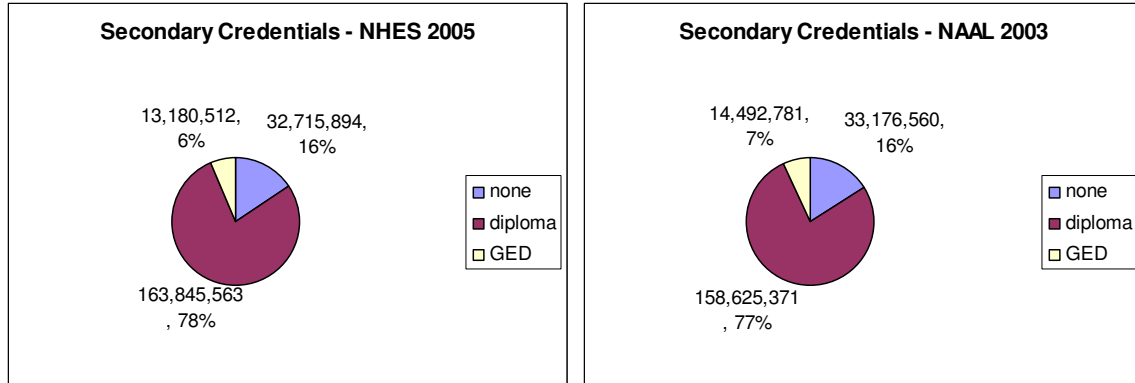


Figure 1. Secondary credentials in U.S. population age 16 and above. Excludes students still in high school and individuals in prison. Source: Left, National Household Education Survey, Adult Education Component, 2005; Right, National Assessment of Adult Literacy, 2003. Author calculations.

Figure 1 displays the size and secondary credential composition of the U.S. household population as surveyed by the NHES and the NAAL. The total number of GED holders estimated by NHES is 13.2 million compared to the 14.5 million estimated by NAAL. Considering the differences in dates and procedures between the two surveys (e.g., NHES was a telephone survey, NAAL a face-to-face survey) and their sampling errors, these two estimates are quite close. They also compare quite favorably with the total number of GEDs awarded in the United States between 1943-2005, according to administrative reports of the GED Testing Service: 15,245,822.¹³ NHES asked individuals who had GEDs if they received them during the 12 months preceding the interview: an estimated 411,164 adults received GEDs in the preceding 12-month period, which compares quite favorably with the number reported administratively by the GED Testing Service for 2004: 405,724.¹⁴ The overall mix of secondary credentials in the U.S. household adult population shown in the two pie charts in Figure 1 are also remarkably similar: about 77 percent have regular high school diplomas, 7 percent have GEDs or other high school-equivalencies, and 16 percent have no secondary credentials at all. These percentages correspond to about 14 million GED holders, 33 million adults without high school credentials, and 159 million adults with high school diplomas. These triangulations and cross-validations give us confidence in examining the GED population through the survey data. Because the NAAL has a larger sample size, more detailed questions and, most importantly, hands-on literacy assessments, most of our subsequent analyses will be based on the NAAL rather than the NHES data.¹⁵

¹³2005 *GED Statistical Report*, Table 21. Washington DC: General Educational Development Testing Service of the American Council of Education. These administrative data report the number of GED Credentials *awarded*, some of whose recipients were deceased, serving in the military or residing in prison at the time of the surveys and thus would not be included in the NHES or NAAL estimates reported here. The NAAL and NHES GED estimates include small numbers of individuals with other equivalency credentials.

¹⁴2004 *GED Statistical Report*, Table 6. Washington DC: General Educational Development Testing Service of the American Council of Education. NHES estimate is author's calculation.

¹⁵The author's analyses of the public release NAAL data were made with AM Software (Beta Version 0.06.03) developed by the American Institutes for Research.

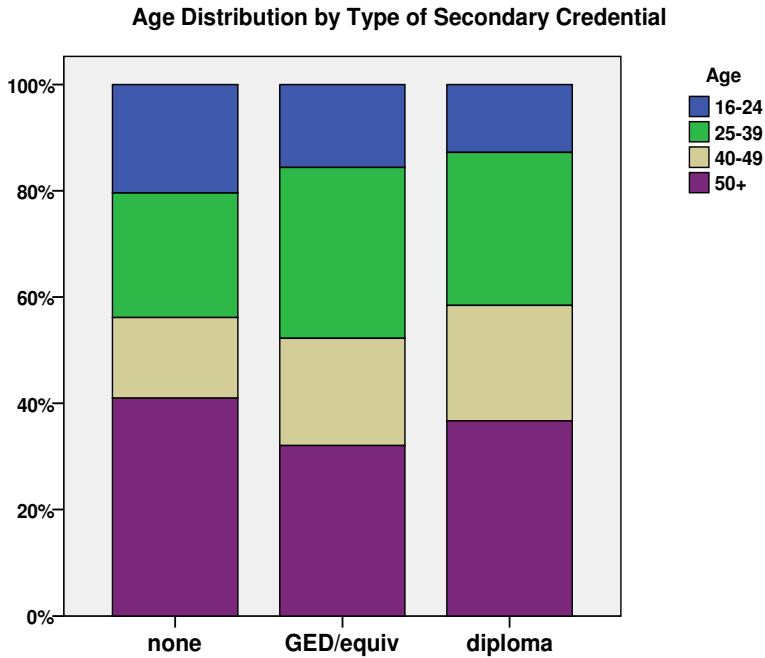


Figure 2. Age distribution of U. S. population age 16 and above by type of secondary credential. Excludes students still in high school and individuals in prison. Source: National Assessment of Adult Literacy, 2003. Author calculations.

A wide range of other descriptive characteristics could be contrasted in this manner among these three subpopulations. We will present only a few examples here. The age distributions of the three groups are shown in Figure 2. Although there are small variations, the three subpopulations have roughly similar age distributions. About 40-50 percent of each is between the ages of 16-39 (top two sections of each bar graph), which will be an important target population suggested below.

The gender mix in the three subpopulations is similar, with slightly more men (51 percent) in both the None and GED/Equiv subpopulations and more women (53 percent) among those with high school diplomas. About 10 percent and 9 percent of the GED/Equiv and Diploma subpopulations, respectively, are foreign-born, whereas a much larger percentage (30 percent) of the None group are foreign-born. This reflects the high barriers that cultural and linguistic differences pose for obtaining both high school diplomas and GEDs.

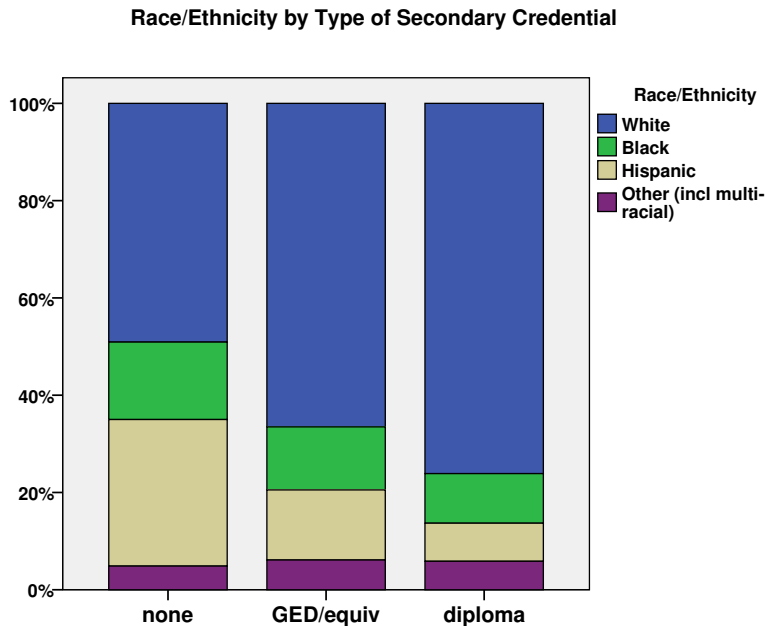


Figure 3. Race/ethnicity of U. S. population age 16 and above by type of secondary credential. Excludes students still in high school and individuals in prison. Source: National Assessment of Adult Literacy, 2003. Author calculations.

Figure 3 displays the race/ethnicity composition of the four subpopulations. The percentage of Blacks and Hispanics declines sharply as we move from the None to the GED to the diploma subpopulations. This pattern again reflects the importance of cultural and linguistic factors in obtaining high school diplomas and GEDs. The intermediate composition of the GED population evident in the figure suggests that the GED may function as a gateway, especially for minority populations.

Figure 4 displays the labor force participation of the three subpopulations for the week preceding the interview. The GED holders again have something of an intermediate distribution between those of the None and Diploma subpopulations, while positioned closer to the distribution of those with high school diplomas than of those without secondary credentials. The diploma subpopulation has slightly higher rates of full-time employment and slightly lower rates of being out of the labor force than the GED subpopulation. But both of these subpopulations with secondary credentials groups have substantially higher rates of full-time employment and substantially lower out-of-labor-force rates than the subpopulation without high school credentials. The disadvantaged position of individuals without secondary credentials, evident in this figure, undoubtedly reflects their hugely diminished postsecondary experiences that we will see below in Figure 6. Very few get any college experience and hardly any attain college degrees. What is surprising, considering previous research comparing GED and high school diploma populations, is that the two appear as close as they do here in terms of labor force participation. Although postsecondary education and other important variables need to be considered in making such comparisons, this broad similarity is striking and suggests that the GED may be an effective gateway to labor force participation for many adults.

Labor Force Participation by Type of Secondary Credential

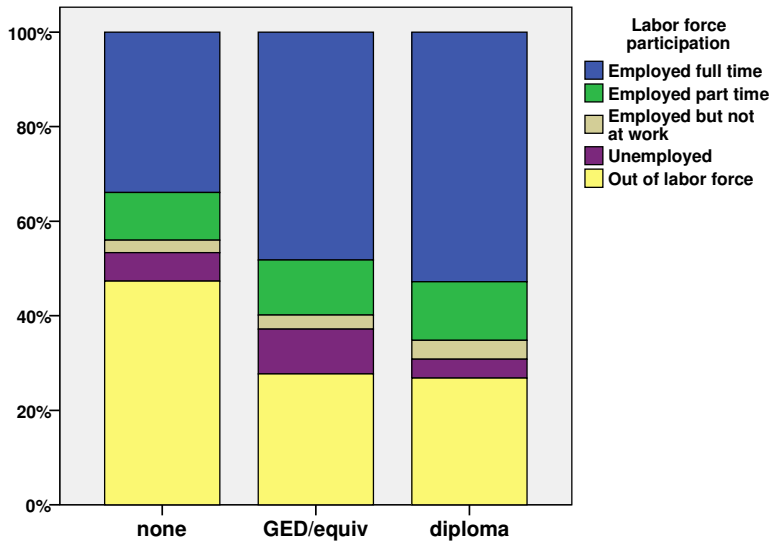


Figure 4. Labor force participation of U.S. population age 16 and above by type of secondary credential. Based on week preceding interview. Excludes students still in high school and individuals in prison. Source: National Assessment of Adult Literacy, 2003. Author calculations.

Although Figure 4 might seem like good news for adult education, the picture is not nearly as positive once we consider the wages of those who are working in each population. The distribution of weekly wages is shown in Figure 5 for each of the three subpopulations. The intermediate position of the GED population's wage distribution is evident in the figure. Substantially larger percentages of workers with high school diplomas earn higher wages while much smaller percentages earn lower wages compared to workers without high school credentials. Workers with GEDs have an intermediate wage distribution: at both ends of the wage distribution, the percentage of workers with GEDs earning a given amount is intermediate between the corresponding percentages for workers with no credential and workers with high school diplomas. These comparisons, of course, are not yet conditioned on other important variables, such as the amount of postsecondary education, training and work experience individuals obtain after high school or receiving the GED. Keeping in mind the limitations of these unconditional comparisons, we see that those who obtain GEDs tend to have better labor market outcomes than those without high school credentials, and worse labor market outcomes than those with regular high school diplomas. Although some of these differences may well result from corresponding differences in the amount of postsecondary education individuals go on to obtain after high school or the GED, these national data suggest that the GED may serve effectively as a gateway to further education and labor market activity.

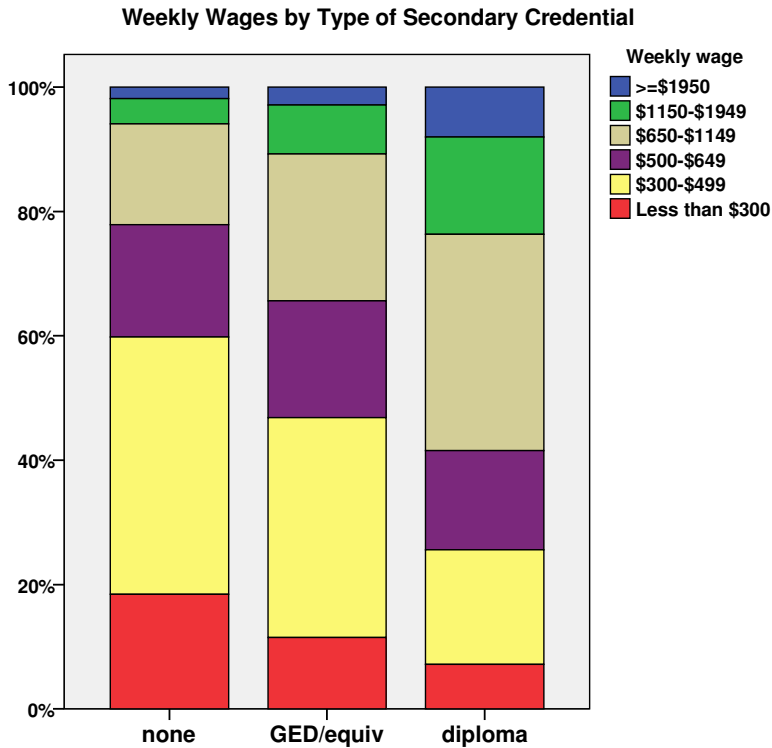


Figure 5. Weekly wages of U.S. population age 16 and above for week preceding interview, by type of secondary credential. Excludes students still in high school, individuals in prison and individuals not employed at all the previous week. Source: National Assessment of Adult Literacy, 2003. Author calculations.

Figure 6 displays the educational attainment of the U.S. adult population in terms of their secondary credentials: none, GED/equivalent, or high school diploma. The educational attainment of the three subpopulations differs dramatically. About 10 percent of adults without secondary credentials have postsecondary experience but hardly any have a college degree (AA or higher). About one in three GED holders has postsecondary experience, and about one in three of GED holders with postsecondary experience (11 percent of all GED holders) have a college degree. More than two-thirds of their college degrees are 2-year Associate of Arts degrees. About 70 percent of adults with high school diplomas have postsecondary experience, two-thirds of whom have college degrees, the majority of which are bachelor's (4-year) or postgraduate degrees. Clearly GED holders obtain much more postsecondary education than those without any high school credentials, but much less than those with regular high school diplomas. Although these qualitative trends are well known in educational practice as well as in postsecondary research,¹⁶ their quantitative extent has not been previously reported.

¹⁶Boesel *et al*, *op. cit.*; Reder, 1999, *op. cit.*

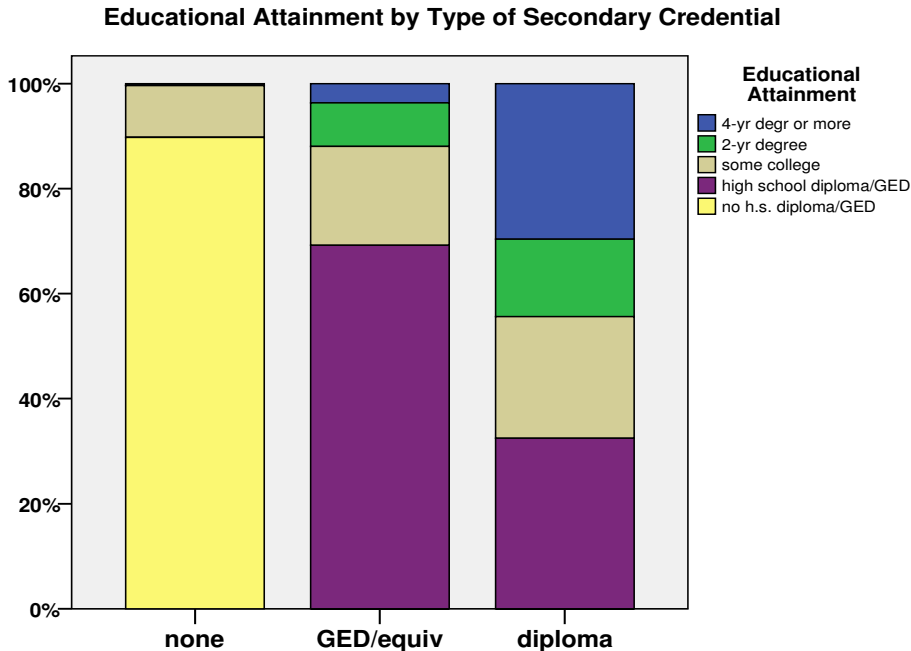


Figure 6. Educational attainment of U.S. adults age 16 and above by type of secondary credential. Excludes students still in high school and individuals in prison. Source: National Assessment of Adult Literacy, 2003. Author calculations.

D. POSTSECONDARY TRANSITION OF THE GED POPULATION

We begin our look at the flow of GED recipients through the postsecondary pipeline by considering their transition into postsecondary education. Anyone who is currently in college, has taken some college courses, or has received a 2-year Associates degree or 4-year Bachelor’s degree is defined as having transitioned into college. Figure 7 displays estimated transition rates of high school graduates (diplomas or GEDs) into 2-year or 4-year college programs. Rates are calculated from the NHES 2005 and NAAL 2003 survey data. For each survey, the rates are calculated as the fraction of all individuals holding high school diplomas or GEDs who report “some college”, “2-year degree” or “4-year degree” or higher as their level of educational attainment. The estimates from the two national surveys are highly consistent: about 27 percent of the national GED population has transitioned into college, compared with about 63 percent of the national population of high school diploma holders.¹⁷

¹⁷If we include transition into vocational, technical and business programs of less than 2-years, including certificate programs, the transition rates of both groups rise slightly but the significant overall gap between HSD and GED groups remains.

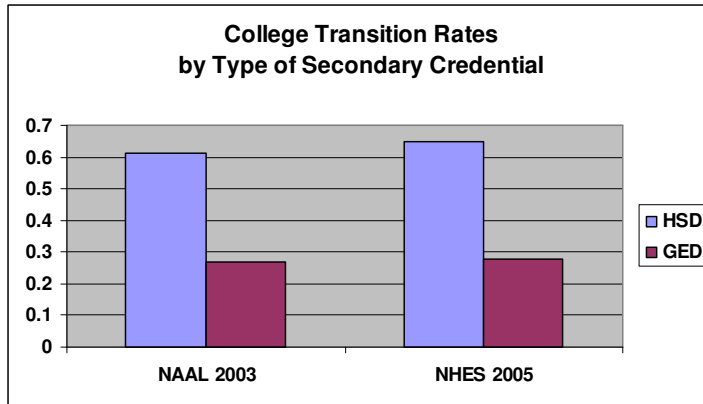


Figure 7. Proportion of individuals beginning postsecondary education by type of secondary credential: high school diploma (HSD) or GED. Source: National Household Education Survey/Adult Education Component, 2005; National Assessment of Adult Literacy, 2003. Author calculations.

There are many reasons why postsecondary transition rates are so much lower for GED holders than HSD holders. College prep counseling and support is available to many high school students within their high schools and college-bound peer and college-experienced family networks. Figure 8 shows the proportion of individuals who are “first generation” college students, that is, individuals neither of whose parents attended college. Previous research has shown that these “first-generation” college students are at high risk of not completing college programs they start.¹⁸ Figure 8 suggests that first-generation status may influence the transition into postsecondary education as well. Nearly 80 percent of the adults who never transitioned into college are first-generation,¹⁹ and that percentage is not significantly different for GED and HSD holders. There is a substantially lower first-generation rate among individuals who do transition into college: 47 percent of the transitioning students with high school diplomas are first-generation, compared to 65 percent of students starting with GEDs. Many first-generation high school graduates and GED holders may need college information and planning support to develop realistic transition plans. Those who dropped out of high school and followed the GED pathway into college may have needed additional supports, in part because of their higher first-generation rates and in part because many dropouts do not have extensive access to college-bound peer networks in high school.

¹⁸E. C. Warburton, R. Bugarin & A-M Nuñez (2001). *Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students*. Washington DC: U.S. Department of Education, National Center for Education Statistics. Although individuals’ socio-economic characteristics and high school curricula, variables that independently influence postsecondary education experiences, are correlated with first-generation status, first-generation status has substantial effects even with the effects of these other variables controlled.

¹⁹First-generation is defined here as an individual neither of whose parents *attended* college, whereas some other researchers have defined it as an individual neither of whose parents attained a college *degree*.

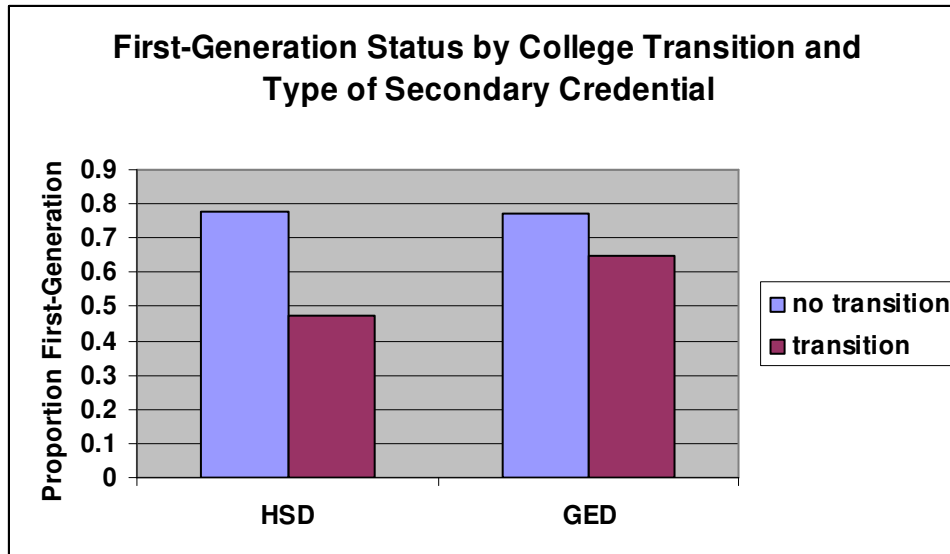


Figure 8. Proportion of adults having parents who never attended college by type of secondary credential and eventual postsecondary transition. Source: National Assessment of Adult Literacy, 2003. Author calculations.

Neither the NAAL nor the NHES surveys asked respondents who received a GED about the reasons or goals they had for passing the GED at the time they were tested. Administrative data collected during GED testing, however, includes background information about the GED candidates and their reasons/goals for testing. In 2005, the most recent year for which data are available, about 84 percent of the GED *passers* answered the multiple response question about their reasons for testing. Although the percentage of GED passers who report further education as a reason for testing has risen dramatically since 1949 when the question was first asked, that percentage has been relatively stable between 2002 and 2005, hovering slightly over 60 percent.²⁰

This apparently high rate of postsecondary educational aspiration, however, encompasses a wide range of types of further education, including academic college programs, technical or trade programs, skills certification programs, and job training. If we look more closely at the educational reasons given by GED candidates in 2005, we see that 21 percent were planning to attend 4-year colleges and 28 percent were planning to attend 2-year colleges. The corresponding figures for 2004 were similar: 22 percent and 29 percent, respectively. Thus approximately half of the GED candidates are planning college education at the time they test for the GED.²¹ Comparing the transition rates estimated above for GED passers, we see that far fewer wind up transitioning into college.

Although some innovative “transition” or “bridge” programs are trying to provide some of these needed supports, the current adult education system may not be well positioned with respect to the postsecondary pipeline to have much overall impact on the successful

²⁰2005 GED Statistical Report, *op. cit.*, Table 19.

²¹2005 GED Statistical Report, *op. cit.*, Table 14A and 2004 GED Statistical Report, *op. cit.*, Table 11A. Note that because candidates could select multiple responses, the percentage planning to attend either a 2- or 4-year college is likely smaller than the sum of the two percentages.

transition of GED passers. Both the NHES and the NAAL asked individuals about their history of taking basic skills classes. According to my calculations, only 16 percent of the GED population in NAAL has ever taken a basic skills course (outside of their regular school program). Among individuals in NHES who received their GED in the 12 months preceding the interview, 38 percent prepared for the tests by taking a basic skills class or by working with a tutor. The GED Testing Service reports that 33 percent of GED candidates in 2005 prepared through classes. By all accounts, much preparation for the GED takes place outside of formal adult education programs. Other kinds of delivery models may be needed to reach many of these learners.²²

E. POSTSECONDARY ATTAINMENT AND PERSISTENCE IN THE GED POPULATION

In this section we look at the experiences of postsecondary students after they have transitioned into college, paying particular attention to their persistence and degree attainment. We will continue to analyze the NAAL and NHES education surveys of the national adult population to contrast the postsecondary experiences of GED and regular high school diploma holders. We will also look carefully at data from another survey which follows a specific national cohort of postsecondary students from the beginning of their postsecondary experiences, that is, right after they have transitioned into college.

The Beginning Postsecondary Student Survey of 1996-2001 (BPS) follows the population of first time postsecondary students in 1996 from a randomly sampled cross-section of undergraduate institutions (less than 2-year, 2-year and 4-year institutions).²³ Much is known about these beginning postsecondary students including the type of their secondary credentials and details of their academic preparation in high school. These students are closely followed for five to six years through the end of the 2001 academic year, regardless of whether they remain in the same institution, or change institutions as many do, stop out for a while and then return, or leave altogether. The BPS contains much richer information about the college students and their high school and family background and postsecondary experiences than is available in either of the broader surveys we have been examining, the NAAL and the NHES. But as we will see, one of the limitations of the BPS is that it does not follow students beyond the five and-a-half-year period, which appears too short a follow-up period for tracking the eventual degree attainment of many adults.

According to the BPS data, about 3.3 million students first started their postsecondary education in the 1996 school year. Among these first-time postsecondary students were about 3.0 million with regular high school diplomas, 212,000 with GEDs and 88,000 with no high school credential.²⁴ These three groups of students beginning their postsecondary education show very different enrollment patterns in terms of the level of

²²S. Reder, 2007. Giving literacy away, again: New concepts of promising practice. In A. Belzer (Ed.), *Toward defining and improving quality in adult basic education: Issues and Challenges* (pp. 255-276). Mahwah, NJ: Erlbaum.

²³For more information about this survey, see www.nces.ed.gov/surveys/bps/

²⁴Beginning Postsecondary Student Survey, 1996 cohort, author's calculations.

the first institution they attended. Figure 9 shows the percentage of students with each type of secondary credential who began their postsecondary education at 4-year, 2-year and less than 2-year institutions. Enrollment in 2-year institutions is broken out according to whether students first enrolled in AA degree or non-degree certificate programs. In each secondary credential category, most students begin their postsecondary experience in 2-year institutions. But as we move from left to right in the figure, from None to GED to HSD, we see progressively:

- increasing percentages of students who started in 4-year institutions
- decreasing percentages who started in less-than-2-year institutions (that award only certificates not college degrees)
- among students who started in 2-year institutions, an increasing percentage who first enroll in 2-year AA degree programs rather than certificate programs

We again see that the distribution for GED students is intermediate between those for the None and HSD students. About three in four GED students entering postsecondary education do so in 2- or 4-year institutions, with the vast majority of these entering 2-year institutions. Within 2-year institutions, GED students enroll equally often in AA degree and certificate programs.

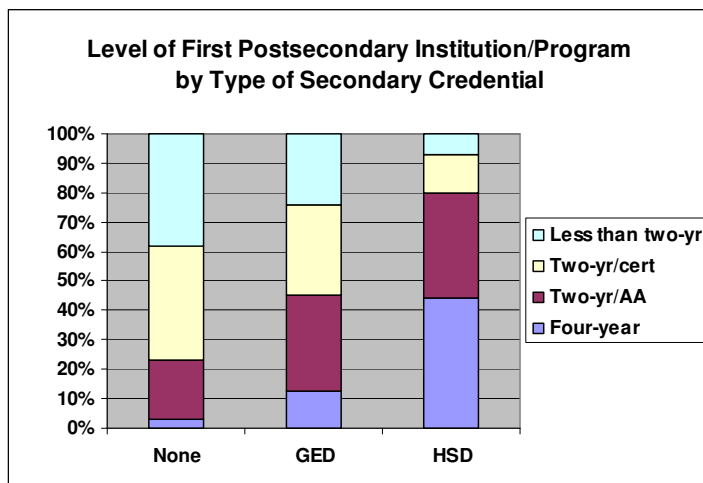


Figure 9. Institutional level of first postsecondary enrollment by type of secondary credential. Enrollments in 2-year institutions are separated into AA degree and certificate categories. *Source:* Beginning Postsecondary Student Survey, 1996. Author calculations.

Figure 10 displays another view of these enrollment patterns, the mix of secondary credentials for students beginning their postsecondary education at different institutional levels in 1996. Enrollment in 2-year institutions is again disaggregated by whether that initial enrollment was in an AA degree or a certificate program. Most students beginning their postsecondary education at 4-year institutions have high school diplomas; about equal numbers of students beginning AA degree programs at 2-year institutions have GEDs or high school diplomas; most students beginning certificate programs at 2-year or less-than-2-year institutions do not have either high school diplomas or GEDs.

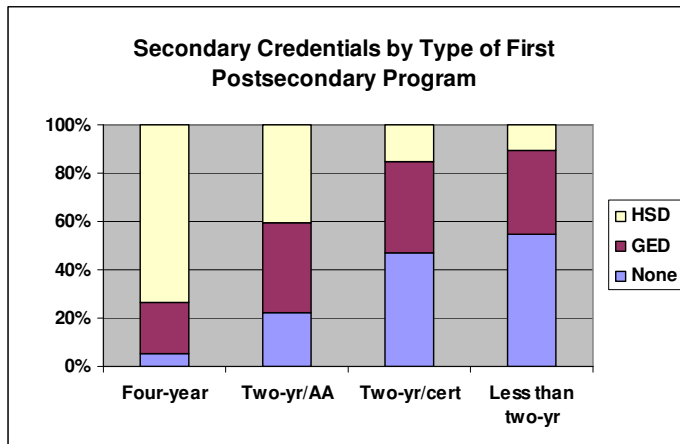


Figure 10. Secondary credentials by institutional level/program of students' first postsecondary enrollment. Source: Beginning Postsecondary Student Survey, 1996. Author calculations.

We next estimate degree attainment rates for students who do transition into postsecondary education. Since we saw earlier that very few students entering postsecondary education without any secondary credential ever attain degrees, we will focus here on contrasts between those entering with high school diplomas and GEDs. Figure 11 displays estimates of degree attainment rates for postsecondary students. For the NAAL and NHES surveys, these rates are calculated as the percentage of adults in the population with at least “some college” who have attained Associate’s or Bachelor’s or higher degrees.²⁵ For the BPS data, the attainment rate is calculated as the percentage of students who started in a 4-year institution or in an AA degree program in a 2-year institution or in 1996 who attained Associate’s or Bachelor’s or higher degrees by 2001.

In each set of estimates, the attainment rates are substantially higher for students with high school diplomas than for students with GEDs. This of course fits with previous research. The attainment rates for both groups are much higher when calculated for the entire adult population from the NAAL and NHES data than when calculated from the 5-6 year follow-up of the single-cohort BPS students.²⁶ Indeed, the population-based degree attainment estimates for GED are nearly 50 percent (44 percent for NAAL 2003 and 48 percent for NHES 2005), much higher than the 17 percent estimated from the BPS 1996-2001 follow-up data. This suggests that the 5-6 year tracking of BPS is much too

²⁵Adults reporting currently being enrolled in college are considered to have “some college” for the purposes of these estimates. Adults reporting “vocational, trade or business” rather than “some college” as their highest level of attainment are not included as having transitioned into college and thus are not counted in these estimates. It is difficult to categorize these heterogeneous non-degree programs in meaningful and consistent ways with the scant information available in these surveys. For a thorough discussion of these difficulties, see Grubb, *op. cit.*

²⁶Reder, 1999, *op. cit.*, calculated similarly low rates from the earlier BPS 1990-1995 data.

short a follow-up period to capture the degrees that many adults with GEDs (and HSDs) eventually attain.²⁷

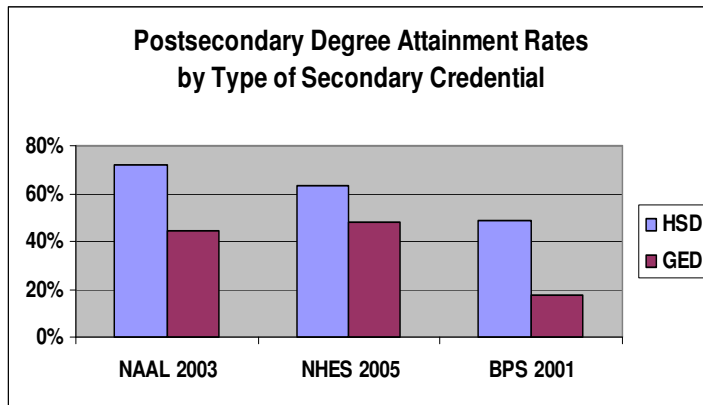


Figure 11. Postsecondary degree completion rates by type of secondary credential. *Source:* Left, National Assessment of Adult Literacy, 2003; Center, National Household Education Survey, Adult Education Component, 2005; Right, Beginning Postsecondary Student Survey 1996-2001. Author calculations.

Figure 12 shows estimates of postsecondary persistence rates based on the same NAAL, NHES and BPS data. We define a postsecondary persistor as an individual who has attained a 2-year or 4-year degree or is currently enrolled in a two- or 4-year college. By definition, persistence rates are always higher than attainment rates, as we see comparing Figures 11 and 12. The overall pattern of persistence rates in Figure 12 is similar to the pattern of attainment rates in Figure 11. Postsecondary students with high school diplomas have significantly higher persistence rates than postsecondary students with GEDs in all of the data sets. The overall persistence rates are much higher in the national education surveys than in the BPS data, for many of the same reasons discussed above for attainment rates. Estimated persistence rates from the two national education surveys are above 60 percent for postsecondary students with GEDs, more than twice as high as the five-to-six year rate shown in the BPS data. As with attainment, it seems that longer follow-up periods are needed to capture postsecondary persistence, especially for students with GEDs.

²⁷There are other reasons why the NAAL and NHES population-calculated attainment estimates may be higher than the BPS estimates. The population-calculated rates would be higher if survey respondents without college degrees substantially *underreport* their unsuccessful attempts at college. I know of no evidence, however, that this occurs in surveys like NAAL and NHES. Another possibility is that the survey respondents *overreport* their college degree attainment, but this, too, seems unlikely given the close correspondence between the overall educational attainment levels in these surveys and those in other data sources. Another potential source of error for the GED rates would be systematic misreporting of GED credentials, but as we saw above, the overall self-report rates for GEDs correspond quite closely with counts in administrative records.

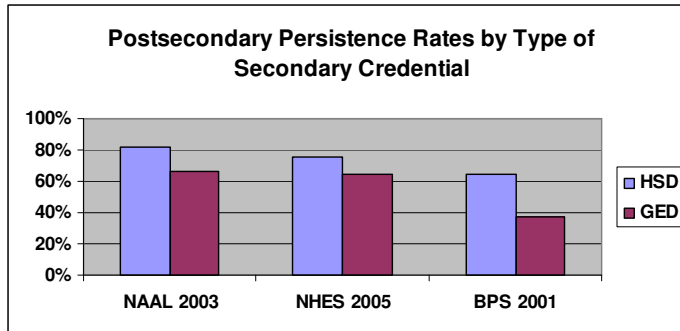


Figure 12. Postsecondary persistence rates by type of secondary credential. *Source:* Left, National Assessment of Adult Literacy, 2003; Center, National Household Education Survey, Adult Education Component, 2005; Right: Beginning Postsecondary Student Survey 1996-2001. Author calculations.

Figure 13 provides more detail about the BPS follow-up data for students who begin their postsecondary education in AA degree programs in 2-year institutions. The figure shows the “persistence track” – the mix of attainment and persistence outcomes in 2001 – for HSD and GED students starting in AA degree programs in 2-year institutions in 1996. There are several interesting features in these data. The most common outcome for either group of students is “Never attained, left without return”, the outcome for 42 percent of the students with high school diplomas and 58 percent of those with GEDs. Another common outcome, about 20 percent of each group, is “Never attained, still enrolled.” These are the persisters, still enrolled 5-6 years after enrolling in an AA degree program. The size of this group reflects the tendency of both HSD and GED students to persist in postsecondary education through the end of a relatively short-term follow-up period such as in BPS or other longitudinal studies, something we suggested as a reason for seeing much higher long-term attainment and persistence rates in our population-based than in the short-term cohort-based estimates. Some as yet unknown proportions of the “Never attained, left without returning” and “Never attained, still enrolled” outcomes would presumably turn into degree attainments had BPS followed postsecondary students over longer periods of time, driving the cohort degree attainment rates close to the population-based rates.

Another interesting outcome in the persistence track is “Attained Certificate”, which is something of a credential “downgrade” since all of the students in this analysis began their postsecondary education in AA degree programs rather than certificate programs. The percentage of downgrades is about the same, 6-7 percent, in both the high school diploma and GED students.

About 1 in 3 (32 percent) of the students with high school diplomas attained a college degree within the BPS follow-up period, 20 percent being 2-year and 12 percent 4-year degrees. The 4-year degrees represent a credential “upgrade”, an increasingly common outcome for community college students enrolling in academic transfer programs to 4-year institutions. Only 16 percent of students who begin AA degree programs attained a college degree within the follow-up period, 12 percent being 2-year degrees and 4 percent 4-year degrees.

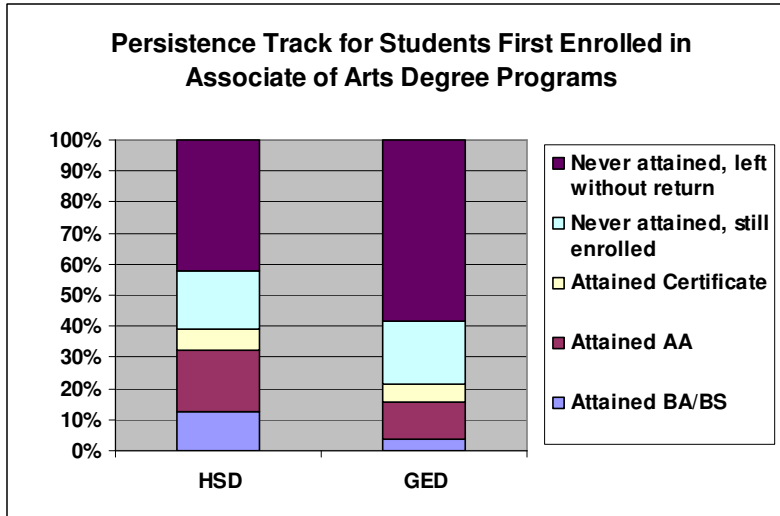


Figure 13. Persistence track outcomes for postsecondary students first enrolled in 1996 in Associate of Arts degree programs in 2-year institutions, by type of secondary credential. Source: Beginning Postsecondary Student Survey 1996-2001. Author calculations.

There has been some research on the student background factors associated with postsecondary student persistence and degree attainment in earlier BPS data.²⁸ We will use two indexes developed in this previous research on persistence and attainment. A Socioeconomic Diversity Index is based on three factors: the student’s total family income, highest educational level of the student’s parents, and proportion of the student’s high school student body eligible for the federally subsidized free lunch program during the 1994-1995 school year. A postsecondary Risk Index for non-persistence is comprised of six student characteristics:²⁹

- older than typical postsecondary students
- attend part-time rather than full-time
- financially independent
- working full-time while enrolled
- single parent
- have dependents other than spouse

The mean scores on these indexes are shown in Figure 14 for students beginning their postsecondary education in 1996 in Associate of Arts degree programs in 2-year institutions by the type of their secondary credential. The Socioeconomic Diversity Index ranges in scale values from 1-3, with higher scores reflecting more socioeconomic disadvantage. The benchmark score of 2, approximately the average index value for GED students beginning AA degree programs, represents a “moderate degree of disadvantage”.

²⁸L.K. Berkner, A.C. McCormick, and S. Cuccaro-Alamin, 1996. *Descriptive Summary of 1989-90 Beginning Postsecondary Students: 5 years Later, with an Essay on Postsecondary Persistence and Attainment* (NCES 96-155). U.S. Department of Education, National Center for Education Statistics. Washington DC: U.S. Government Printing Office.

²⁹The original index had a 7th factor: having a GED. Since we are interested in contrasting GED and HSD populations, we omit this factor from our analyses.

The corresponding students with high school diplomas have a statistically significant lower score, indicating that the GED students have more socioeconomic disadvantage. The scale scores for the Risk index correspond to the number of factors from the list above that the postsecondary students have. Whereas HSD students beginning the 2-year degree programs have an average of 1.5 risk factors, the average GED student beginning those programs has about twice as many risk factors (an average of just below 3). It is thus no surprise that GED students entering these programs have lower overall rates of persistence and degree attainment.

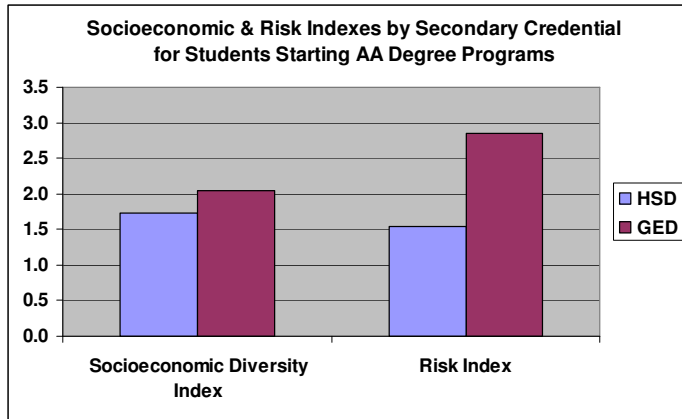


Figure 14. Mean values of Socioeconomic Diversity (left) and Risk indexes for first-time postsecondary students beginning Associate of Arts programs in 2-year institutions, by secondary credential. Source: Beginning Postsecondary Student Survey, 1996. Author calculations.

F. LITERACY AND THE POSTSECONDARY PIPELINE

Although the progress of students through the postsecondary pipeline likely depends on a wide range of literacy and other skills, we will focus here mainly on the Prose, Document, and Quantitative (PDQ) literacy proficiencies measured in the NAAL and a number of other state, national, and international surveys. These measures are at the center of some other policy papers of the National Commission.³⁰ Furthermore, these measures are known to be well aligned with the GED Tests³¹ and have recently been used in a major national survey of U.S. college students³², so they are well suited for our current purposes. Nevertheless, it is important to emphasize that other important skills not directly assessed by the PDQ (e.g., writing skills, critical reading skills, study skills, planning, and self-management skills, etc.) are also important to postsecondary success.

There is of course a very strong case that the PDQ literacy proficiencies are intimately involved in the outcomes of postsecondary education. They are positively correlated with college students' GPAs and with college students *not* taking remedial skills courses.³³

³⁰Jones and Kelly, *op. cit.*; Sum, *op.cit.*

³¹Baldwin *et al, op. cit.*

³²J. D. Baer, A.L. Cook and S. Baldi, 2006, *The Literacy of America's College Students*. Washington DC: American Institutes for Research.

³³Baer et al, *ibid.*

Students with progressively more postsecondary experience and higher levels of degree attainment exhibit progressively higher levels of Prose, Document and Quantitative literacy.³⁴ At each stage of the pipeline, the proficiencies of those in school preparing for the next higher level of attainment are lower than the proficiencies of those who have attained and stopped at that next level; their proficiencies in turn are lower than those of individuals who have moved on further in the pipeline and are preparing for the next higher level of attainment.³⁵ Consistent as these empirical patterns are, they can be quite difficult to interpret. I've previously described two processes underlying this progressive pattern of literacy change in the postsecondary education pipeline: literacy selection and literacy development.³⁶

Although educational credentials and literacy skills are strongly correlated, they are not necessarily the byproduct of the same learning experiences. On one hand, the more schooling individuals participate in, the more their literacy tends to develop and the more proficient they likely become. This is a *literacy development* process. On the other hand, literacy proficiency is often a gatekeeper that limits individuals' access to educational opportunities; successively higher levels of education become increasingly selective in terms of their literacy requirements. This selective filtering of literacy proficiencies through the educational system is a *literacy selection* process. Both individuals through self-selection and educational institutions through selective student admissions and retention practices implement literacy selection processes. Keeping both of these literacy processes in mind, let's look at the PDQ proficiencies in the postsecondary pipeline.

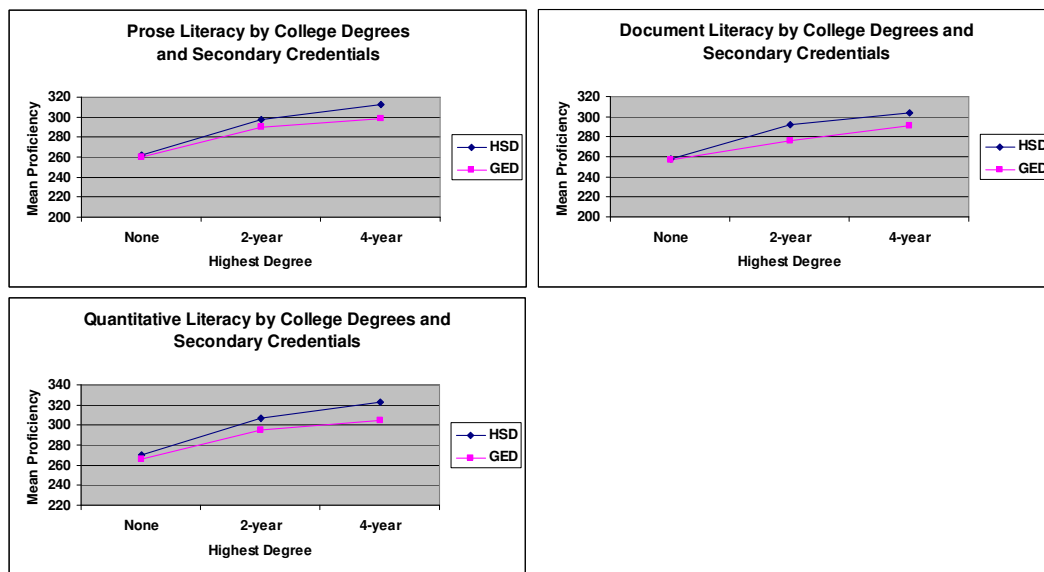


Figure 15. Mean Prose, Document and Quantitative literacy proficiencies by highest college degree attained and secondary credentials. Source: National Assessment of Adult Literacy, 2003. Author calculations.

³⁴Kutner *et al*, *op.cit*.

³⁵Reder, 1999, *op. cit*.

³⁶S. Reder, 1998, Literacy selection and literacy development: Structural equation models of the reciprocal effects of education and literacy. In M. C.Smith (Ed.), *Literacy for the 21st century: Research, policy and practice* (pp. 139-157). Westport, CN: Greenwood Publishing (Praeger).

Figure 15 plots the mean PDQ proficiencies by the highest level college degree attained by students with high school diplomas or GEDs. The plots are similar for each proficiency. Proficiencies rise from “None” (i.e., no college degree) to the 2-year to the 4-year degree for both HSD and GED students. The proficiencies appear almost identical for the HSD and GED students without college degrees and appear to separate gradually at higher degree levels with HSD students with college degrees having higher proficiencies than GED students with those same degrees. Despite this apparent trend, none of the comparisons between GED and HSD students at a given level of attainment is statistically significant.³⁷ Less important than any marginal differences that may be present between HSD and GED students in our “synthetic pipeline” is the overall rise of proficiency with level of attainment. Although this is well known for adults in general, this is the first time we have been able to see this separately for those with GEDs and HSDs.³⁸

Another way to see the importance of literacy skills in the postsecondary pipeline is to look at remedial courses taken (i.e., non credit-bearing basic skills courses often called developmental or remedial education). Figure 16 shows the percentage of postsecondary students who have taken one or more remedial courses within their first two years of postsecondary education. Separate percentages are shown for the common types of remedial courses: reading, writing, math and study skills. Also shown is the combined percentage of students who have taken *any* remedial course.

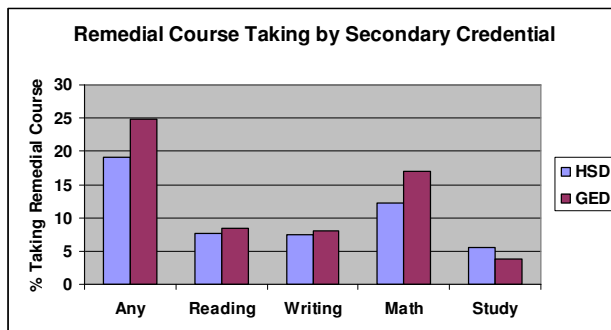


Figure 16. percentage of students with HSD or GED credentials who took one or more remedial courses of various types during the first two years of their postsecondary education, by Source: Beginning Postsecondary Student Survey, 1996. Author calculations.

Overall, there is a surprisingly high rate of remedial course-taking in postsecondary education, both for students entering with high school diplomas and those entering with GEDs. One in four (25 percent) students with a GED winds up taking at least one remedial course in college. Nearly as many (19 percent) HSD students do as well. Both groups of students show the same pattern over types of remedial courses taken, with

³⁷The relatively small size of the GED subsamples at the higher attainment levels reduces our statistical power to detect relatively small effects. Only one of the t-tests comparing GED and HSD students at a given level of attainment even approached significance the .05 level: HSD students with 2-year degrees had higher Document proficiencies (p=0.054). With larger sample sizes we might find more significant differences between HSD and GED students’ proficiencies.

³⁸Differences in proficiencies by degree level are highly significant within both the HSD and GED populations.

remedial math being most frequently taken by either group. As with the PDQ comparisons above, apparent differences between HSD and GED students in remedial course taking are not statistically significant, with only the difference in the overall rate of taking “Any” remedial course approaching significance ($.05 < p < .10$). As we saw in Figure 15 for the PDQ proficiencies, marginal differences between the skill needs of GED and HSD students appear far less important than the high levels of apparent need faced by many postsecondary students regardless of their secondary credentials. Adult education and GED testing are indeed doing a good job with their historical mission of creating high school equivalency.

The low postsecondary transition, persistence and attainment rates we saw above remind us that all is not well in our educational pipeline. Although the postsecondary transition, persistence and attainment rates for GED students are considerably lower than those of HSD students, it appears from our analyses that this is not likely due to overall differences in literacy and numeracy skills. Much more telling are the differences we found in non-cognitive areas such as first-generation status, socioeconomic diversity and risk indexes we looked at. In these areas, GED students tend to be substantially behind their HSD counterparts, and research indicates these differences may account for their reduced levels of postsecondary success.

G. NEW MISSIONS, TARGET POPULATIONS, AND PROGRAM COMPONENTS FOR ADULT EDUCATION

This *Policy Brief* began with our need to increase substantially the number of youth and adults succeeding in postsecondary education. Although the approximately 15 million GEDs produced through the adult education system over the past 60 years or so is a good start, the system needs to be expanded and broadened to have the necessary educational and economic impact. If the adult education system upgrades its mission from high school equivalency to college readiness, our analyses identify three broad target populations for it to serve based on three levels of educational goals:

High school equivalent: This target population is the one currently being served by the adult education system, with the mission of developing and certifying individuals’ skills and knowledge to be equivalent to those of high school graduates. The GED is the certification process. Some individuals with high school diplomas or higher levels of educational attainment still need to develop skills to this level – a recent national survey of learners in the adult education system found 20 percent of native-born students in the system already had high school diplomas or higher levels of attainment (and considerably higher percentages of foreign-born students).³⁹ We have good evidence that this component is effectively fulfilling its mission.

³⁹M. Tamassia, K. Lennon, K. Yamamoto and I. Kirsch, 2007, *Adult Education in America: A First Look at Results from the Adult Education Program and Learner Surveys*, Princeton NJ: Educational Testing Service, p. 81 ff.

College equivalent: This target population is defined as having high school equivalent skills but neither a college degree (2- or 4-year) nor the skills needed to attain one. The adult education mission for this population is to raise their skills to the college-ready level. Some learners in this component of the system would have GEDs, but many would have regular high school diplomas. Presumably a college-ready skills certification could be developed for use with this component of the adult education system. We will consider below how to identify the target skill level and estimate the size of this target population. Design and implementation of this component should be carried out collaboratively with developmental/remedial postsecondary education professionals and researchers.⁴⁰

College ready: This target population has college-equivalent skills but neither a college degree nor some of the persistence supports needed to attain one. Research on postsecondary persistence and attainment has identified a range of non-cognitive factors that impact persistence and attainment rates even when skill levels are adequate. Some of these factors were described above in presenting the Socioeconomic Diversity and Risk indexes (Figure 14). Our preceding analyses indicate that these persistence barriers are particularly salient for adult education students (i.e., GED holders). We found substantial and statistically significant differences between the GED and HSD postsecondary students on these measures but not on measures related to college-level skills. Furthermore, the recent National Survey of America's College Students reported that there is no association between persistence indicators (e.g., how long graduating students had been in college, part-time vs. full-time enrollment, number of institutions attended) and assessed PDQ proficiencies.⁴¹ We noted above that relatively few of the GED students entering college have ever taken a basic skills class, suggesting that the current adult education system is not well positioned to reach many in need of transition-related and persistence support components. These findings taken together suggest that the adult education system, as part of its college readiness mission, should develop a postsecondary persistence support component delivered separately from its skills development components. We will consider below some promising strategies as well as some research and development needs for this component.

None of what is being proposed here should be seen as threatening the current adult education system. Its existing mission, target population and ESL, ABE, and ASE programs would remain intact as a component of the new system. Youth and adults with postsecondary aspirations would need to participate in the existing high school-equivalent component and/or have their skills and knowledge certified with the GED before participating in the college-equivalent component. Students in the college-equivalent

⁴⁰Although there is an active community of scholars and practitioners in developmental education, there has surprisingly been very little collaboration between them and their counterparts in adult education. A network of resources can be located through the National Center for Developmental Education at <http://www.ncde.appstate.edu>.

⁴¹Baer et al, *op. cit.*.

program would develop and/or certify their skills and knowledge (with some to-be-developed assessment) prior to college entry. Some prospective college students would also need persistence support from the college-ready component before starting their postsecondary education (although some supports might be delivered while students are enrolled in college). Although the envisioned new target populations and program components represent a considerable broadening of the mission and scope of adult education, they also represent an enormous opportunity for the field to grow and restructure in ways that will couple it closely with an expanded and more effective postsecondary pipeline.

To illustrate some of these opportunities for adult education, let us consider the size of the target populations for the college-equivalent and college-ready components. A key issue is how to define and assess the skills necessary for postsecondary success. Many postsecondary institutions have been dealing with this issue for many years, of course, in their admissions processes. That is one base of expertise and experience that can be drawn upon. Other institutions, including many urban universities and community colleges, are not as skill-selective in their admissions but rely heavily on post-matriculation skills assessments for placing students into remedial or developmental courses. That represents another base of relevant expertise and experience. These assessments of course should be grounded in strong systemic collaborations between adult and postsecondary education.

For illustrative purposes, we will use the PDQ proficiencies, since we have systematic national data about them for a range of relevant populations. The specific details of these estimates are of course very preliminary. Considerable research and development needs to be done to refine the necessary definitions and assessments, so what we are presenting here only illustrates the general approach.

We would expect to continue using the GED to define the skill threshold for the high school-equivalent population. For convenience in our illustration, however, we will use the high school-equivalent PDQ scores as the marker.⁴² Table 1 shows a number of relevant benchmarks on each of the NAAL scales to consider in choosing a cut point for college-equivalency. The mean for individuals with only a high school diploma or GED is shown in the first row of the table; the second row contains the cut point defining the low end of the NAAL Intermediate range on each proficiency scale; the third and fourth rows contain the mean proficiencies for adults with educational attainment levels of an Associates or Bachelors degree, respectively; the bottom row is the threshold for the NAAL-defined Proficient range on each scale.

⁴²Baldwin *et al*, *op. cit.*; Y-c Hsu and C. George Ezzelle, *The Literacy of U.S. Adults with GED Credentials: 2003 NAAL and 1992 NALS*, paper presented at the annual conference of the American Educational Research Association, April 9-15, 2007.

	Prose	Document	Quantitative
Mean for HSD/GED	262	258	268
<i>Intermediate</i> cut point	265	250	290
Mean for 2-Year Degree	298	291	305
Mean for 4-Year Degree	314	303	323
<i>Proficient</i> cut point	340	335	350

Table 1. Alternative illustrative cut points for college-equivalent NAAL literacy proficiencies. See text for explanation. Source: M. Kutner, E. Greenberg, Y. Jin, B. Boyle, Y. Hsu and E. Dunleavy, 2007, *Literacy in Everyday Life: Results from the 2003 National Assessment of Adult Literacy* (NCES 2007-480), Washington DC: U.S. Department of Education, National Center for Education Statistics.

With only one exception, these alternative benchmarks are sequentially order on each of the three scales. For our illustrative purposes, we will choose the mean score for the 2-year degree as our definition of college-equivalency. This is near the middle of the Intermediate skill level on each scale. Using that definition, we estimate the size of the college-ready target population in Table 2. The number shown in each cell of the table is the estimated number of adults without a 2-year college degree or higher who have college-equivalent skills and are not currently enrolled in high school or college. These individuals are indeed the “low hanging” fruit: They *already* have the skill needed for postsecondary success but do not have a college degree and are not currently in an educational program. Many may face postsecondary transition and persistence barriers that specialized adult education programs could address. The estimates in the first row of the table are for the full adult age range, 16 and above, whereas the second row of the table delimits the age range for 16-39 since older adults may be less inclined to go back to school.

	Prose	Document	Quantitative
Target population, age 16+	24,663,382	28,311,028	27,700,925
Target population, age 16-39	10,996,710	12,670,026	10,269,642

Table 2. Estimates of size of College Ready target population, U.S. adults (age 16 and above; age 16-39), no college degree, not in high school or college, with college-ready literacy proficiency. See text for explanation. Source: National Assessment of Adult Literacy, 2003. Author calculations.

To illustrate the example further, we can calculate the estimated sizes of the target populations for all 3 components, as shown in Figure 17. The estimated size of the *high school-equivalent* target population is about 23 million (age 16-39, no college degree, not currently in school/college). Interestingly, about half of this target population has a high school diploma, 11 percent have GEDs and 40 percent have no secondary credential. The estimated size of the *college-equivalent* target population is about 12 million, of whom 72 percent have HSDs, 14 percent GEDs, and 14 percent no secondary credential. This population needs to boost its skills from the high school-equivalent to the college-equivalent level. The estimated size of the *college-ready* target population, which has the literacy skills needed to attain at least a 2-year college degree but may need persistence support, is about 10 million. Of these, 78 percent have HSDs, 13 percent have GEDs, and

8 percent have neither secondary credential. This target population has the skills needed for postsecondary success but needs screening and specialized services to facilitate postsecondary transition, persistence and attainment. Using the NAAL data, we estimate that 60 percent of this college-ready target population are first-generation college students, for whom promising interventions are being developed to help them better understand such things as faculty expectations for college level work, course catalogs and syllabi, and the role of the successful college student.⁴³

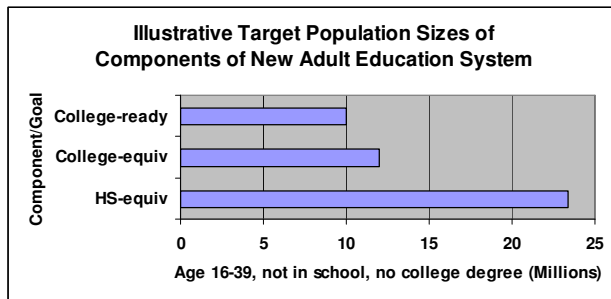


Figure 17. Estimated sizes of the target population for the three components (goals) of the expanded adult education system. See text for explanation. Source: National Assessment of Adult Literacy, 2003. Author calculations.

The opportunities for adult education to expand in serving these new target populations are clear. Although the traditional high school equivalency mission of adult education has the largest target population of the three components, the other two components – under the assumptions made in this illustrative example – together have target populations totaling about the same size, so that the expanded adult education system would have a total target population about twice as large as it currently does. Furthermore, the addition of the college-equivalent and college-ready programmatic goals would much more closely articulate the adult education system with higher education and bring the expertise of adult and higher education professionals into closer collaboration. Of course, for all of this to happen, considerable investment must be made in research and development needed to support the expansion and articulation of adult education with other parts of the educational system. The likely return on such investment is enormous given the magnitude of the economic payoff for repairing our leaky secondary/postsecondary educational pipeline.

H. RESEARCH & DEVELOPMENT FOR THE NEW ADULT EDUCATION SYSTEM: Key Issues in Policy and Program Design

There are many key issues that need research and development before we can effectively implement this expanded adult education system and articulate it closely with the K-12 and postsecondary systems to forge a more seamless educational system. From the perspective of the research and proposed model we have been discussing, there are a number of high priority topics for research and development. Among these are:

⁴³P. J. Collier, 2007, *Improving First-Generation Student Retention and Performance in Higher Education*, unpublished draft manuscript.

- How should we define the skills needed for college readiness and postsecondary success? We have seen that skill differences between the GED and HSD populations are relatively minor in comparison to the magnitude of the college readiness problems facing both populations. Eleven states have already adopted definitions of “college readiness” for their high schools and another 14 are in the process of doing so.⁴⁴ This is a natural context and framework for adult education to develop its new college-equivalent and college-ready components.
- How can the skills needed for college readiness and postsecondary success be assessed? How well do assessments being used for college admissions and placement align with instruments used or potentially used in adult education? Particular attention should be paid to the AccuPlacer and Asset assessments widely used for placement in community colleges and the CASAS and TABE assessments widely used in adult education. Does it make sense to develop a national College Readiness Credential? How would it compare with the new Workplace Readiness Credential?
- More systematic experimentation and evaluation needs to be undertaken with innovative types of transition and bridge programs in adult education. A focus on both skill development from the high school-equivalent (GED) level to the college-equivalent level and on persistence support is important. Collaboration with postsecondary programs is critical, including developmental/remedial skills programs as well as student support services such as TRIO programs.
- New techniques for sustained delivery of skill development and persistence supports need to be developed. Technology may have a very important role to play here since participation in face-to-face adult education programs is usually fragmented and expensive to provide in an on-demand manner.
- Longer term longitudinal studies of target populations are needed to understand transition, persistence and attainment processes and outcomes better. We especially need better information about longer-term postsecondary outcomes for non-traditional college students. The two cycles of the Beginning Postsecondary Student Survey, 1989-1994 and 1996-2001 each followed beginning cohorts for 5-6 years only, an interval that appears to censor many longer-term postsecondary outcomes. These studies are very expensive to conduct well, but the Commission can play a leadership role in garnering support for such critical research.
- As Grubb has persuasively argued, these longitudinal studies and higher education researchers need to collect much more detailed and systematic information about the varieties of sub-baccalaureate programs and providers, so that the economic impact and ROIs of these non-degree programs can be more meaningfully evaluated. Such systematic description may be more feasible to

⁴⁴*Diplomas Count*, special publication of *Education Week*, June 12, 2007, p.7.

implement and interpret within state-level rather than national-level data systems.⁴⁵ Excellent examples of research and development driven by a state-level data system can be seen in research reports by Washington State.⁴⁶

⁴⁵ Grubb, *op. cit.*

⁴⁶ See, for example, Washington State Board for Community and Technical Colleges, April 2005. *Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Practice from a Longitudinal Student Tracking Study (The “Tipping Point” Research)*.