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Literature Review

Adult Education to Postsecondary Transition

Texas State University-San Marcos

THECB

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Standards-Based Pilot Professional Development

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Abstract

This study uses a sample of 17 GED and adult education program teachers to document and describe the effects of the characteristics of a standards-based professional development on teachers' understanding of college readiness and how they prepare their students for college and workforce. The data collected from nine weeks of a pilot professional development (PPD) training focused on the application of the college and career readiness standards with an emphasis on the cross-disciplinary standards' impact on teaching curricula for college readiness and workforce success. A comparison of pre and post pilot professional development results reveal that teachers' understanding of college readiness changed and they provided a common view of what college readiness should encompass, look like and sound like in their classrooms. Other themed results also show that through the impact of the pilot professional development guided by college and career readiness standards, teachers were gradually introducing changes in form of teaching approaches, lesson preparation, student evaluation and understanding of their adult students. The summative view of these findings led to the overarching conclusion that, when a professional development course is designed with guidance from the *College and Career Readiness Standards*, that PD has an inbuilt potential to help instructors of adult education students to develop in their students the desired key cognitive and foundational knowledge, skills and attitudes that students will need to employ in order to successfully pursue a variety of college majors and to qualify for professional advancement, designed programs and to demonstrate learning outcomes that reflect established standards of relevant professions. .

EXECUTIVE SUMMARY

This paper reports on the findings of a pilot project to test the impact of a standards-based, online, professional development that was carried out with a group of 17 purposefully sampled teachers from four sites identified as those practicing adult education transitions models known to succeed with adult students around the State of Texas. The study used data collected from nine weeks of professional development training which focused in the application of the college and career readiness standards, with a deeper emphasis on the cross-disciplinary standards' impact on guiding the teaching curricula for college success. First, project staff solicited for nominations of sites with high rates of success in implementing curricula that worked effectively to help adult students transition to and succeed in college. Project staff then interviewed participants whose site leadership had volunteered to participate in the pilot project. The participants then took part in a nine-week, online, professional development activity. The professional development concluded with eight (8) participants answering questions during a conference that was held in Round Rock, Texas, from September 23-24, 2010. The final interview was designed to collect data related to how the participants viewed benefits they received from the professional development and suggestions for improving the PD. These reported results considered the impact of the professional development received by 17 teachers who completed the professional development. The key findings include the following: (a) Teacher academic preparation to aid in understanding how to tell when their students were ready to transition to post secondary education; (b) Knowledge gained from the PD, and (c) Skills gained for implementation in the classrooms. Secondary research questions led to the following information: (a) Participants' understanding of CDS's was positively associated with students' ability to transition to postsecondary education; and (b) Participants' understanding of CDS's was positively associated with students' persistence.

Background to the Study

In Texas, “for every 100 ninth graders... only 64 will graduate from high school on time, and only 35 will enter college immediately after high school. Only 22 will enroll in their sophomore year in college” (National Center for Public Policy and Higher Education, 2007). This pyramidal picture of student transition from one level to another defines how current teaching approaches are aligned to meet the different needs of ABE students, including students in ESL, GED and ASE programs. However, postsecondary education is seen as key for adult students’ attainment and social mobility and their participation in state and national development agendas (National Survey of Student Engagement, 2004; Smith, 2008). The economic and social well being of the country may be directly connected to the education levels of its people. On the other hand, research reveals that,

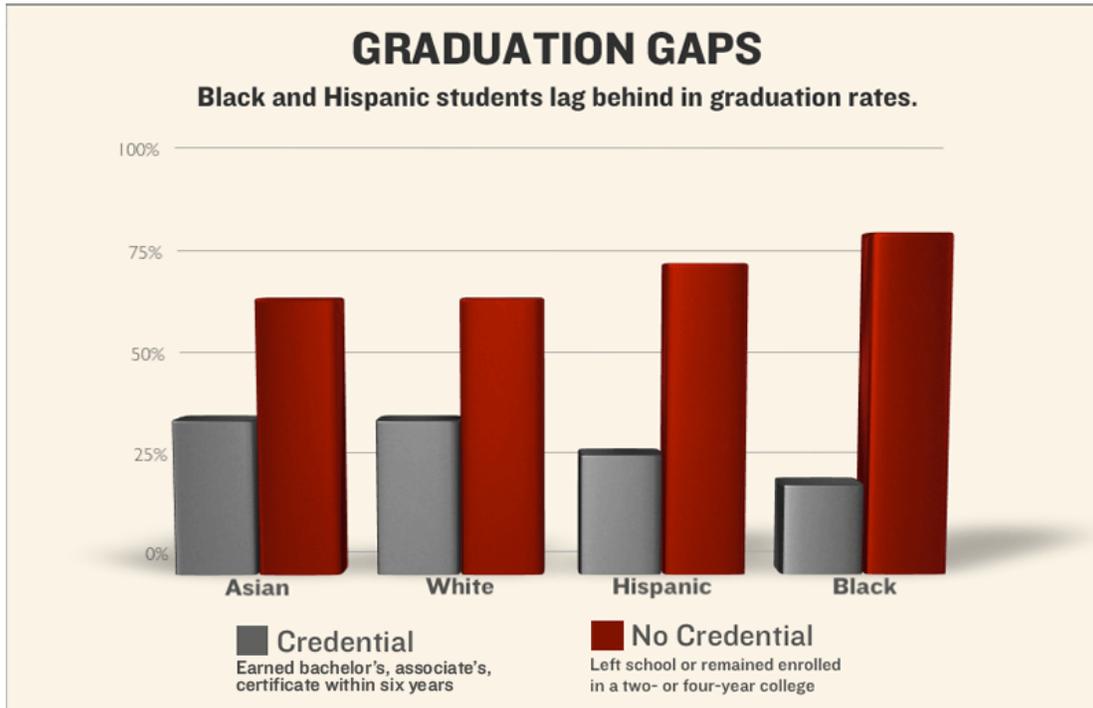
The likelihood that students will make successful transition to the college environment is often a function of their readiness—the degree to which previous educational and personal experiences have equipped them for the expectations and demands they will encounter in the college. (Conley, 2008, p. 3)

Therefore, although access to postsecondary education is a big concern for policy makers, research goes further to indicate that it is more important to establish how different ABE programs succeed in making students enroll, persist and transition into postsecondary education (Hill, 2008; Smith, 2008). Student participation in college education may be related to social class and family background.

Due to the changing demographics of the United States, we must focus our efforts on improving postsecondary access and success among those populations who have previously been underrepresented in higher education, namely low-income and minority students, many of whom will be the first in their families to go to college. (The Pell Institute for the Study of Opportunity in Higher Education, 2008, p. 2)

Graduation gaps exist between different demographic populations in Texas (see Figure 1). It is clear that the both Hispanic and African American students struggle to earn some form of postsecondary education academic credentials.

Figure 1. Student graduation gaps by race



Source: Texas Higher Education Coordinating Board retrieved from <http://www.texastribune.org/stories/2010/feb/02/graduation-rarity-community-colleges/> on February 8, 2010.

To a certain extent, there is need for ABE programs to align their teaching approaches to match the specific needs of a student population whose diversity includes: class, ethnicity, personality, cognitive style, learning patterns, lived experiences, and gender issues (Wlodkowski, 1999; Dembo, & Seli, 2008). On one hand, “access to higher education in America is increasingly becoming a privilege for upper-class youth” (Smith, 2008, p. 147), while on another, a common characteristic of students from low socioeconomic class (SES) is their lack of cultural capital and sufficient resources to make them competitive as college applicants (Rendon, Jalomo, & Nora, 2000; Smith, 2008). Most students who show low levels of academic preparation for college education are adults who

have limited English proficiency, and the majority of such immigrants—70% of the 32 million currently living in the U.S.—reside in California, New York, Texas, Florida, Illinois, and New Jersey (CLASP calculations from U.S. Census Bureau, 2002). This relation demonstrates that in these states, Texas included, ABE programs face challenges related to diverse demographics, ethnicity and culture, and to ensure the successful transition of these students, training programs should be crafted to meet their needs.

Closing the Gaps—Texas Project Summary

In March, 1999, the Texas Higher Education Coordinating Board embarked on the development of a higher education plan to meet the national expectations of closing the gaps by 2015. To achieve the specified objectives from the national plan, the Texas Closing the Gaps By 2015 planning meeting in San Antonio, emphasized that their plan needed to focus mostly on those critical goals and they had to be time specific in the achievement of the identified goals. The Coordinating Board also designed a plan for evaluating any progress that would be made toward achievement of those goals.

The appointed Planning Committee came up with three specific key result issues including a common consensus on the fact that to achieve the objective of closing the gaps by 2015, Texas would not only depend on the availability of financial resources, but also on different institutional creativeness—including institutional initiatives designed to meet the desired five year targets between 2005 and 2015. One such target was to make sure that teaching approaches meet the learning needs of the minority students especially the Latino population who were estimated to become the largest minority group by 2015. The original closing the gaps goals and targets for Texas that were revised include

1. *Closing the gaps in participation by increasing the*

- (a) overall Texas higher education participation rates from 5 percent 5.7 percent by 2015

- (b) higher education participation rate for the Black population of Texas from 4.6 percent to 5.7 percent by 2015
- (c) higher education participation rate for the Hispanic population of Texas from 3.7 percent to 5.7 percent by 2015
- (d) higher education participation rate for the White population of Texas from 5.1 percent to 5.7 percent by 2015.

2. *Closing the gaps in success by increasing the number of*

- (e) students completing bachelor's degrees, associate's degrees and certificates from 95,000 to 163,000 by 2015.
- (f) students completing bachelor's degrees from 57,000 to 104,000 by 2015.
- (g) students completing associate's degrees from 23,000 to 34,600 by 2015.
- (h) students completing doctoral degrees from 2,200 to 3,300 by 2015.
- (i) African American students completing bachelor's degrees, associate's degrees and certificates from 9,000 to 16,000 by 2015.
- (j) Hispanic students completing bachelor's degrees, associate's degrees and certificates from 18,000 to 50,000 by 2015.
- (k) students completing engineering, computer science, math and physical science bachelor's and associate's degrees and certificates from 14,500 to 29,000 by 2015.
- (l) students completing allied health and nursing bachelors and associate's degrees and certificates from 10,500 to 20,000 by 2015.
- (m) teachers certified through higher education programs annually from 13,000 to 30,000 by 2015.
- (n) math and science teachers certified through higher education programs from less than 1,000 to 3,000 by 2015.

(o) of students who achieve identifiable successes other than with certificates and degrees by 50% by 2015.

3. *Closing the gaps in research by increasing*

(p) federal research and development funding to Texas universities and health related institutions from \$845 million to \$1.3 billion by 2015.

(q) the level of federal science and engineering research funding to Texas institutions by 50 percent to \$1.3 billion.

(r) research expenditures by Texas public universities and health-related institutions from \$1.45 billion to \$3 billion by 2015. This is an approximate of about 5% increase per year.

Models of Transitions

Different models of postsecondary education transitions exist, including Credit-Based Transition Programs, College and Career Readiness Initiatives and the P-16 Initiative (Fowler & Gaye, 2009). However, still too many students drop out of high school, and among those who graduate from high school, there has been a huge decline in the number of students who enroll in and complete postsecondary education (Flower & Luna, 2009). Conley (2005) suggests that there is a disconnection between how K-12 schools prepare students for postsecondary education and the expected college standards. For example, in a 2006 report, the Commission on the Higher Education recommended an improvement on how students access and succeed in college (Roderick, Nagaoka, & Coca, 2009). One of the recommendations of the Commission of Higher Education was to strengthen of K-12 preparation and align “high school standards with college expectations” (Roderick et al., p. 186). These different suggestions seem to confirm that ABE education providers need to first understand the different strategies successful postsecondary

education programs use and then make such recommendations available so ABE education providers are armed with tools and ideas to ensure success for all students.

Purpose of the Study

The purpose of this study was to develop a deeper understanding of what college readiness entails, and describe how professional development based on College and Career Readiness Standards (CCRS) may be used to guide how programs bring students to *college readiness* and help the students transition to and succeed in post secondary education.

Research Questions

This study intended to answer the following research question, *how does professional development for postsecondary transition models designed with College and Career Readiness Standards in mind look like?*

Specific research questions included:

1. How do ABE programs understand *college readiness* in relation to CCRS?
2. How do ABE teachers determine when the students are ready to transition and succeed in college?
3. What professional development activities have the programs initiated and how have they modified them to suit the needs of their students?
4. What is the state of professional development for ABE teachers in relation to the CCRS at each of the program sites?
5. How are teachers implementing the CCRS and Cross-Disciplinary Standards (CDS) in their classrooms to help their students develop the skills needed to transition and succeed in college?
6. How do teachers and administrators determine the efficacy of their professional development programs?

LITERATURE REVIEW

Toward a Definition of College Readiness

Students vary in the levels at which both their families and high schools prepare them for college (Conley, 2008). For ABE students, those different levels of preparation may in turn impact how those students transition to college and will also determine how students will succeed within a college level environment (Wlodkowski, 1999; Conley, 2008; Roderick et al., 2009; Texas Higher Education Coordinating Board, 2009). Adult education programs (AEP), that include Adult Basic Education programs (ABE/ASE/ESL and GED) programs face challenges related to how they help students transition to postsecondary education. One such challenge is that teachers may be underprepared to effectively facilitate learning so their adult students meet the standards for college readiness and college entry requirements. According to Burchard & Swedzewski (2009), looking at how those education providers understand what *college readiness* means is one way to understand how ABE programs empower students with “self-awareness and strategies for areas of need, which [in turn may] consequently lead to learners’ increased approaches to the process of learning” (p. 14). In addition, such knowledge leads to a deeper understanding of how that conception guides how teachers prepare students for college transition.

Theorists and researchers have provided several definitions of *college readiness*, in terms of what to look for when interviewing applicants for admissions to college. One way to understand college readiness is to view it as

The level of preparation a student needs in order to enroll and succeed, without remediation, in a credit-bearing general education course at a post-secondary institution that offers a baccalaureate degree or transfer to a baccalaureate program. *Succeed* [therefore] is defined as completing entry-level courses at a level of understanding and proficiency that makes it possible for the student to consider

taking the next course in the sequence or the next level of course in the subject area.

(Conley, 2008, p. 4)

Approaching the definition of *college readiness* from this context, by specifying the standards of preparation for students emphasizes (a) the need for student-centered approaches, (b) an understanding that students may be considered ready to transition into college only when they demonstrate that they know the expectations of the different college level courses and (c) that students should demonstrate specific proficiencies show that they will be able to cope with content demands from each of the courses that they will take at college level (Conley, 2008; Dembo, & Seli, 2008; Texas Center for the Advancement of Literacy and Learning, 2008; Texas Higher Education Coordinating Board, 2009). What these diverse ideas about college readiness reveal is that there are a number of contributing factors that need to be considered when defining *college readiness*. These factors include students' cultural backgrounds, socioeconomic factors, and parents' educations. Additionally, students' "motivation, personal discipline, and perseverance are also key[s] to achieving and maintaining a strong academic record" (Geiser, 2009, p. 21).

In light of these observations, it is therefore important for ABE programs to provide professional development for educators so they may be able understand the different standards that define college readiness. This extension of the definition of college readiness suggests that for ABE providers to turn students' "aspirations into college attainment, [they will] need a clear indication of college readiness and clear performance standards for those indicators" (Roderick, Nagaoka & Coca, p. 185).

Consistent with literature that informed this study, researchers adopted the definition of college readiness from the THECB (2008) which argues that *college readiness* refers to the foundation of skills students require to succeed in pursuing a variety of college majors and students' ability to demonstrate those skills in order "to succeed in entry-level

community college and university courses... [and the ability] to use content knowledge to weigh and analyze important issues and questions in a field of study” (p. iii). What this means for college transitions is that (a) there is need to understand students as individuals, (b) foster learning conditions that allow students to build a foundation of college readiness skills, and (c) help students experience postsecondary learning environments and develop an understanding of what to expect as they prepare for postsecondary education. Next, we discuss the importance of CCRS and CDS.

Importance of Texas CCRS and CDS to College Transition Programs

The Texas CCRS are divided into two sections, the CCRS and the CDS. The CCRS are specified for four subject areas of the school curriculum: English/language arts, mathematics, science and social studies. The CCRS describe and clarify the skills and knowledge that teachers should target to develop in their students, so that the students will be ready not only to transition to college but to succeed when they are in college. Therefore, developing the specified skills in each subject area means that at the time of exiting their respective programs, students will be career ready.

Since the standards driven education curriculum was introduced in Texas, it has been observed that both in elementary and middle schools, “test results have improved, especially among students of color, and more students of all backgrounds are entering and completing postsecondary education programs” (THECB, 2009, p. iii).

The formulation of the CCRS was founded on the findings that although test results at elementary and middle schools had improved among students of all backgrounds, Texas continued “to trail other states in preparing and sending students to postsecondary education” (p. iii). This observation gave the Texas legislature a clear reason for designing a curriculum driven by defined college and career readiness standards (THECB, 2008). CCRS serve as a compass to help ABE programs prepare students for college readiness by

ensuring that students develop “core knowledge and skills and a foundation in literacy and basic mathematics...[to] help students develop a foundation of skills that they can employ to successfully pursue a variety of college majors” (p. iii). According to the Texas Higher Education Coordinating Board (THECB), “generally, the more standards a student can demonstrate successfully [for each subject], the more likely it is that he or she will be college ready” (2008, p. iv). This observation implies that students will benefit from mastering the College and Career Readiness Standards. It also means that teachers who understand how to determine the presence or absence of CCRS will succeed more with their ABE students.

Brief Description Subject Areas Covered by CCRS

CCRS are specified for four key subject areas including English/language arts, Math, Social studies and Science. The English/language arts standards describe what students should be able to do in five different aspects of the subject, including writing, reading, speaking, listening, and research. Mathematics standards require that teachers systematically and intentionally help their students understand mathematics as a way of *knowing* by developing mathematical reasoning skills in different facets of the subject that include, numbers, geometry, algebra, measurement, probability, statistics, math functions, solving problems, making connections, and representing and communicating ideas. Students who master the math skills mentioned above “are likely to be successful in entry-level college mathematics courses and to be prepared for courses in related disciplines that require mathematical proficiency” (THECB, 2008, p. 8). By math proficiency, THECB refers to fact that students should not only be able to manipulate numbers, but should be able to solve problems and apply mathematics concepts across subjects.

Upon successfully graduating from ABE programs, students who can manage to demonstrate proficiency in the ten science standards are considered “ready to explore and

appreciate the richness and complexity of the natural world,” and also able to apply different scientific ways of learning and thinking, math applications and scientific ways of communication (THECB, 2008, p. 14). However, to experience success in college, ABE students should meet the benchmarks for science outlined in the College and Career Readiness standards. The ten foundational skills or behaviors students should demonstrate for science standards include (a) understanding science as a way of thinking and learning, (b) using scientific applications of mathematics, (c) using of the scientific applications of communication; (d) applying science and technology to solve real life problems in the societies they love, (e) applying the cross-disciplinary themes of science; and (f) applying biology, chemistry, physics; earth and space science, and environmental science concepts to different fields of education.

To help their ABE social studies students succeed at college level, program providers must ensure those students master the cognitive skills to “apply in a systematic manner the fundamental concepts, approaches, and terminologies common to a range of social studies disciplines including history, geography, political science, economics, and sociology” (THECB, 2008, p. 24). In short, and consistent with the working definition of *college readiness* adopted in this paper, students also need to demonstrate the ability to apply the CCRS across disciplines or subject areas. To ensure thorough preparation of students in the different subjects, ABE educators will be expected to develop in their students the skills described in the cross-disciplinary standards (CDS). Such preparation will ensure that they will be able to apply the CCRS across subjects. According to the THECB (2008), students should demonstrate proficiently in the CDS by the time they are considered ready to exit the ABE programs.

Importance of Cross Disciplinary Standards

Cross-disciplinary standards are designed to identify those cross-cutting knowledge and skills that help students to make connections between the four subjects, English, mathematics, science and social studies (Conley, 2008; THECB, 2008). Therefore cross-disciplinary standards help teachers to develop in their students the ability to apply those learning skills from CCRS across the different content, contexts and subjects' matter, so they equip ABE students with skills and knowledge to solve problems at college level and also in their workplaces (THECB, 2008). The CDS help students solve problems in school and apply learned theory to solve problems in real life situations. The CDS demystifies the college curriculum for students by arming them with key cognitive skills and foundational skills both of which are needed to read, write, research, and present information across disciplines.

This suggests that preparing students for college and helping them to transition to college requires that ABE service providers should prepare students for college readiness by addressing four specific education skills: contextual skills and knowledge; academic preparation, cognitive preparation, and key content knowledge (Conley, 2008; Roderick et al., 2009; Texas Higher Education Coordinating Board, 2009). To do this, through continuous professional development adult education providers must develop a clear understanding of their students needs in each of these four areas.

In Texas, this approach would require that trainers/facilitators prepare teachers to be able to help their students prepare for college by first insuring that they meet the specified Texas College Career Readiness Standards (Conley, 2008, Roderick et al., 2009; Texas Higher Education Coordinating Board, 2009). As their name suggests, the Texas College Career Readiness Standards for all subject areas clearly describe the skills that students need to demonstrate in listening, speaking, reading, writing, science, social studies, and math in order to be considered college ready (Vella, 2002; Texas Higher

Education Coordinating Board, 2008). Once the students have acquired these skills, they will then move on to the higher order skill of applying the skills across the curriculum as described in the CDS (Texas Higher Education Coordinating Board, 2008). Additionally, students need to master the Texas cross-disciplinary standards (CDS) which are divided into two major groups: key cognitive skills and foundational skills. Each group includes sub-categories defining what needs to be accomplished under each of the two main standards. Therefore, an accurate assessment of how students can use college readiness skills across disciplines—including reading, writing, and mathematics readiness skills—plays an important role in understanding how teachers in the ABE programs prepare students to transition to college (Wlodkowski, 1999; Kamel, 2008). For each of the skills, teachers should prepare students so they show higher levels of function in terms of how they apply cognitive skills to solve problems across disciplines.

Key Cognitive Skills

Participants entering ABE programs often suffer from an array of cognitive skills deficiencies (Vella, 2002; Conley, 2005; Kamel, 2008). A lack of formal education may have caused them to adopt non-traditional learning styles. These learners may also lack critical thinking and problem solving skills, rendering them academically unready for college level work. Such problems may be compounded by learning disabilities (if present) and deficiencies in the basic skills of reading, writing, and math. Further hampering college performance for ABE students may be their lack of good academic habits (Conley, 2005; Kamel, 2008). As a result, it is important for ABE providers to understand the cognitive skills challenges these students face and empower them to overcome these challenges. According to the THECB, college readiness should be measured as those college readiness skills that students are able to demonstrate at the time of exiting a program to enter college. This approach assumes that students are also evaluated at the time they enter ABE

programs, throughout the programs, and at the time of exiting the programs. Throughout each program therefore, teachers will be able to systematically identify their students' strengths and weakness and continuously prepare their students to meet different content standards and benchmarks for ABE learners (Wlodkowski, 1999; Brookfield, 2005; Conley, 2008; Kamel, 2008).

Theorists and researchers agree and argue that cognitive skills are important because they shape students' access to and readiness for college education (Brookfield, 1987, 2005; Conley, 2008; Kamel, 2008; Texas Higher Education Coordinating Board, 2008). Cognitive skills are also viewed as key to student success in postsecondary education because, when present, they empower students to engage in work from a wide range of courses (Wlodkowski, 1999; Van Blerkom, Van Blerkom, & Bertsch, 2006; Conley, 2008; Texas Higher Education Coordinating Board, 2008; Roderick et al., 2009). Because postsecondary education courses present higher level demands for students than high school courses, the development of key cognitive skills is central to successful transitioning of adult students to postsecondary education (Conley, 2008).

The literature identifies six key cognitive areas that educators need to develop in students in order for students to be considered cognitively ready to transition into college (Conley, 2005; Conley, 2008; Texas Higher Education Coordinating Board, 2008; Roderick et al., 2009). The key cognitive skills that students should demonstrate include intellectual curiosity, reasoning capacity, problem solving, academic behaviors; collaborative and independent working habits; and academic integrity. Intellectual curiosity is reflected when students engage themselves in dialogues that satisfy their academic curiosity (Brookfield, 2005; Conley, 2008; Texas Higher Education Coordinating Board, 2008). Students who possess sufficient reasoning capacity demonstrate their cognitive readiness for college level by using a variety of sources in addition to their own ideas to inform their conclusions.

Problem solving skills involve using various approaches and evidence to respond to a problem and can be described as a student's ability to collect and test data and systematically use that information to provide solutions to existing problems. Student academic behaviors such as appropriate study habits, striving for accuracy, and completing and mastering tasks are necessary for academic success and may be associated with a student's collaborative and independent working habits. Such skills will help students survive college learning culture and environments by working in groups and as individuals. Finally, academic integrity refers to the student's ability to select appropriate sources and cite materials in academic papers while understanding, maintaining, and adhering to ethical academic conduct. According to the Texas Higher Education Coordinating Board (2008), key cognitive skills are important because these skills promote the ability of students to work on academic assignments both independently and collaboratively. Each of the six broad skills develops students' abilities to succeed in academic work at the college level. Conley (2008), adds that cognitive skills prepare students (a) to be able to capture content from a wide range of courses and (b) for a strong academic cultural shock in which "some students will be far more comfortable than others...but they will all experience some degree of culture shock" (p. 4). Therefore, when students are cognitively ready to transition to postsecondary education, they should be able to demonstrate five specific behaviors including, problem solving, research, reasoning; argumentation and proof; interpretation, precision and accuracy (Conley, 2008). Research reveals that university professors have named these skills as key determinants for college success (Vella, Berardinelli & Burrow, 1998; Vella, 2002).

In addition, the Texas Adult Education Content Standards and Benchmarks for ABE/ASE and ESL Learners specify learning behaviors and skills students should be able to demonstrate at the time of exiting the programs. These include standards for reading,

writing, using math to solve problems, and communication (whether verbal or oral) for ABE (Texas Adult Education Content Standards and Benchmarks for ABE/ASE and ESL Learners, 2007). For example, each of the standards specifies what students should be able to do when they complete ABE programs. In addition, the important key is for the ABE providers to monitor their students' progress by setting up the *specified benchmarks* at each level. The benchmark levels are identified as levels 1-6, and as the students progress through each benchmark level for a specific standard, they should demonstrate progress and become more proficient in progressive levels of difficulty in groups and with increasing independence. At level six, they should be able to apply learned skills across disciplines. One question that continues to arise from this observation is whether established standards for adult education GED programs and K-12 sufficiently prepare students for postsecondary education? Also, regarding ABE education providers, one must ask whether teachers are adequately and professionally prepared to meet the challenges related to helping ABE students develop the cognitive skills needed to enroll, persist and succeed in postsecondary studies.

Foundational Skills

Among the most important foundational skills students should demonstrate include the abilities to (a) read across the curriculum, (b) write across the curriculum, (c) research across the curriculum; (d) collect and use data; and (e) use technology for various purposes including gathering information, organizing, analyzing, managing information, and communicating among many other uses (ACT, 2004; Texas Higher Education Coordinating Board, 2008). In the view of Roderick et al. (2009), foundational skills may also be referred to as core academic or readiness skills because they are “highly valued and are most often cited by college professors and students as the weakest areas of preparation in high school...particularly in the amount and type of reading and writing required and the

analytic and thinking skills emphasized.” (2009, p. 190). This observation confirms the view that certain college courses present higher order learning challenges to students, and hence there is a need to prepare them for those challenges by making them aware of their learning strengths and weaknesses. Literature on metacognitive awareness consistently provides evidence that students who are more aware of their learning strengths and weaknesses demonstrate greater readiness to employ strategies that help them succeed (Van Blerkom D. L., Van Blerkom M. L., & Bertsch, 2006; Buchard & Swerdzewski, 2009).

In another aspect of college readiness, students should be able to show skills involving *college knowledge* that include information management and navigating such complex processes as “admissions and financial aid processes, as well as develop[ing] an understanding of college norms and culture” (Roderick et al., 2009, p. 190). Studies also reveal that low-income and minority students fail to access postsecondary education because they do not possess sufficient college knowledge skills such as applying for federal grants. “The American Council on Education estimates that approximately one in five low-income students who have enrolled in college and would likely be eligible for federal Pell Grants never filed a Free Application for Federal Student Aid (FAFSA)” (Roderick et al., 2009, p. 198). However, a study carried out in Chicago also added to this notion, and concluded that completion of the online federal financial aid was an important predictor indicating whether an accepted student would finally be enrolled.

This wide range of skills that students should demonstrate in order to transition to college provides a road map of the skills that educators should strive to develop in their students to help them become college ready. Such skills empower students to succeed by making sure that they are ready to personally manage their learning behaviors—time management, persistence, applying for financial aid, self control, strategic study skills, and the ability to learn collaboratively in teams (Lundell, Higbee, Hipp, & Copeland, 2004;

Venezia, Kirst, & Antonio, 2004). Therefore, in line with the THECB content standards, benchmarks for ABE/ASE and ESL learners, and other literature informing this study, college readiness may be defined as the ability of adult education providers to help students become aware of their learning needs and provide them with learning strategies that help students increase their cognitive and foundational skills to meet the challenges of college learning.

Literature reveals that ABE students require amplified preparation in skills that should be reflected first by them passing the GED. Second, armed with their GEDs, students should demonstrate that they are ready to compete in more demanding, post-secondary education environments (Conley, 2005; Richards, 2006; Texas Higher Education Coordinating Board, 2008). As a result, ABE students need advanced cognitive and foundational skills preparations that empower them to meet the demands of college work including: collaborative learning, technology navigation skills, study skills and managing time to meet demanding schedules (Texas Higher Education Coordinating Board, 2008). These skills are more than just passing a GED. Achieving success in post-secondary education settings presents higher level challenges than ABE settings. The different contexts across the country demand that ABE providers meet each situation using strategies and practices contingent to the needs of their students or context. However, 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”(National Commission on Adult Education [NCAL], 2007, p. 1). And, when the standards guiding each of these initiatives are juxtaposed, some gaps emerge.

Identified Gaps between Content Standards and Career Readiness Standards

Identifiable gaps exist between the *Texas Adult Education Content Standards and Benchmarks and the Texas College for ABE/ASE and ESL Learners* and the *Texas College and Career Readiness Standards*. These gaps highlight a shortcoming in professional development for ABE teachers, and unless professional development addresses those gaps, transition rates for ABE students to postsecondary education will continue to pose problems. Considering the differences between the *Texas Adult Education Content Standards and Benchmarks for ABE/ASE and ESL Learners* and the *Texas College and Career Readiness Standards* in the English/Language Arts area, a side-by-side comparison yields interesting results and observations.

- a. First, the *ABE/ASE Standards* overall seem to be focused on very basic, survival skills, while the *College and Career Readiness Standards* seem more focused on academic preparation.
- b. Second, the individual standards in the *ABE/ASE Standards* are very simplistic and contain little detailed content. On the other hand, the *College and Career Readiness Standards* contain much more detailed descriptions of the standards and the skills expected.
- c. Third, the *ABE/ASE* writing standards are not geared to produce college level writers. Additionally, the *College and Career Readiness* standards are more focused on college expectations.
- d. Fourth, the *ABE/ASE Standards* are progressively arranged, moving the learner through a series of minutely advancing skills step-by-step. This is unlike the *College and Career Readiness Standards* which present related but rather specific skills each of which must be mastered by students.

The question that needs to be answered is what are ABE/ASE programs doing to fill the gaps that exist between these standards? If found in the different programs, answers to this question will help narrow these gaps and provide teaching-learning processes for ABE/ASE and ESL learners that provide opportunities for developing the *college readiness skills* as detailed in the CCRS standards allowing these students to enter college prepared for success.

Existing Barriers to College Readiness

Literature reveals that students, especially those from low socio-economic status (SES) backgrounds, face a number of challenges that make it difficult for them to be college ready or even to succeed when they are enrolled in college (The Pell Institute of Opportunity in Higher Education, 2008). Some of the barriers or challenges to college readiness that ABE students face include:

- a. Some students, especially those from minority backgrounds come from families that have low academic backgrounds.
- b. They do not have financial support to help them concentrate only on academic work, so they will have outside college responsibilities like multiple jobs, children, and other personal commitments that may reduce their commitment to college education. “Research has shown that these factors lower students’ chances of persisting to graduation” (The Pell Institute of Opportunity in Higher Education, 2008).
- c. Earlier education experiences may not have prepared them well enough for successful college participation.
- d. They may not have been exposed to social experiences that foster a college readiness culture including—studying in groups, and knowing how to access and use student support services online or in person. According to The Pell Institute of

Opportunity in Higher Education, “lower levels of academic and social integration... are inextricably linked to finances and financial aid” (2008, p. 3).

Suggestions for Breaking the Barriers to College Readiness

Various initiatives nationwide—and in Texas in particular—commonly practice and recommend a wide range of strategies help students overcome barriers that limit their college readiness and prepare them for college success (The Pell Institute of Opportunity in Higher Education, 2008). Such recommendations include:

- a. ABE providers should equip their students with improved academic preparation for college courses by engaging students through access to college preparatory courses and also by exposing them to best practices from teachers who understand college readiness as guided by the working definition in this paper.
- b. ABE providers should provide strong counseling services that promote a college going culture.
- c. ABE providers need to help promote college transition through bridge and orientation programs by providing advising, tutoring, and mentoring services to ABE students.
- d. ABE providers should focus on demystifying college culture for their students by exposing those students to college environments early through college tours.
- e. Programs should provide or facilitate access to financial aid.
- f. ABE providers should help student develop computer skills—today, for students to succeed in college, computer skills are an absolute necessity. This is because most if not all assignments at colleges are submitted electronically or computer typed. In some cases, students are evaluated through their participation in online discussion forums, and financial aid and class registration in most colleges is done online. Therefore, for students to be considered college ready,

transitioning them to college may involve helping them develop computer literacy skills.

- g. ABE providers should provide support for students to complete GED courses and outreach to students who may have dropped out or are about to drop out of GED programs before they earn their certifications. Important attention should be paid to the gaps that may exist due to lack of prior preparation.
- h. Finally, ABE providers should arrange additional support resources for adult students, like child care and additional financial aid.

A closer look at the different suggestions on how programs might help students overcome barriers to college readiness reveals that teacher preparation plays a key role in making students ready for college. There is also a need to address the subjects and situations that may increase rate of student withdrawal from ABE programs. In the literature reviewed, mathematics seems to be the *immediate* obstacle students face as they try to earn a GED. However, reading and writing (at a level described in the CCRS) are also vital skills for students to meet both the working definition for college readiness and experience success in college or certification programs. Therefore, it is important to understand how different programs conduct their academic preparation in mathematics, reading, and writing. The next section describes three initiatives that address college readiness.

Texas Efforts that Address College Readiness

In Texas, specific efforts are in place to ensure that each student, whether traditionally and non-traditionally prepared, has the best opportunity to become college ready through the Texas Success Initiative (TSI) program. The TSI is coordinated by the Texas Higher Education Coordinating Board (THECB), and its purpose is to assess students and create conditions for allowing them to successfully complete college-level

academic courses including reading, writing, and mathematics. The assessment components of the TSI program include:

- a test students take prior to their first semester
- remedial programs, designed to prepare students for college courses, and
- academic advising for all participating students.

From a more global perspective, three state agencies in Texas formed a partnership to address transition of adult education students into postsecondary education: (a) the Texas Education Agency (TEA), whose main focus is K-12 education programs, (b) the Texas Workforce Commission (TWC), which oversees workforce training and, (c) the Texas Higher Education Coordinating Board, which oversees postsecondary education including the development of adult basic and remedial programs for adult students transitioning into postsecondary education.

The TEA statewide initiatives that address the non-traditionally prepared population of students include various K-12 school readiness programs for at-risk youths. Two of the programs are relevant to this study: the College and Career Readiness Initiative and the P-16 Initiative. Another initiative addressing the needs of adult learners under the College and Career Readiness Initiatives is the Dropout Recovery Program (DRP). The DRP addresses specific objectives to identify and recruit students who have dropped out of Texas public secondary schools and provide them with the educational and social services needed to assist them in earning a high school diploma or its equivalent and/or to demonstrate college readiness.

The P-16 Initiative began as a collaborative effort of the TEA, the State Board for Educator Certification (SBEC), and the THECB in 1998. It was then passed into legislation in 2003. The P-16 Initiative was designed as a response to the challenges engendered by

Texas's need to close the gap between high school/ABE/ASE/GED and postsecondary education and as an effort to "develop and strengthen partnerships and relationships between public education, higher education, and the civic and business communities" (Texas Education Agency, n.d). Therefore, P-16 initiatives, under the College and Career Readiness division, outline an integrated system of education starting at preschool (the P) through a four-year college degree (grade 16). The goal of P-16 is to have students enroll in postsecondary education or enter the workforce.

The TWC initiative partners with Adult Basic Education (ABE) providers within local workforce development areas. The objective of the partnership is to provide services which may include job search assistance, labor market information, and partnerships with ABE and Workforce programs.

THECB's Division of College Readiness Initiatives, which is housed in the P-16 Initiatives Division, focuses on transitioning both traditional age college students and adults into postsecondary education. Adult Education, a relatively new department within THECB, has as its primary objective the alignment of adult basic education (ABE) and postsecondary education. The THECB and TEA collaborated to develop the CCRS in 2006.

Another initiative of the THECB Adult Education and Developmental Education department is the development of Intensive Summer Programs (ISPs) to "promote successful transition and college success for recent GED graduates" (Texas Higher Education Coordinating Board, 2009, p. 5). Successful ISPs target academically at-risk students and offer them the opportunities to develop those skills associated with persistence and academic success in postsecondary education. Some adult education programs that operate with ISP grants include:

- Cleburne ISD (with Hill College)
- Midland College
- Victoria College
- Lone Star College System
- Tyler Junior College
- Kilgore College
- Texarkana ISD (with Texarkana College)
- Austin Community College
- Paris Junior College
- Wharton County Junior College

Towards a Model for Developing Effective College Readiness

Since fall of 2009, THECB has provided innovative grant opportunities to encourage ABE providers to address transition into postsecondary education through intensive long-term grant funded programs similar to the ISPs in goals and scope. The first phase of the current study identified and described some promising transitions practices in Texas. The current study used lessons learned from the results of the first study and the literature reviewed to identify components necessary to create a hybrid transitions model that may best inform current practices in Texas. The first phase of the study was conducted in three separate stages, including the summit, survey, and site visits. Results from the summit informed the survey study and results from both the summit and survey study informed the site visit stage of the study. Results from the first phase revealed that providers use a variety of transitions strategies contingent to their contexts and the individual needs of their students. Some of the practices that cut across all the three stages of data collection during phase one include that providers employed the following best practice strategies and they commonly agreed that these practices showed evidence of effectiveness:

1. Introducing students to college culture through such activities as creating partnerships with local universities, intensive courses in core content, and introducing college tours. Each of these practices helped to demystifying college culture and encouraged a college-going culture in the students.

2. Guidance and counseling, caring for students, using retention specialists, and providing information related to logistics of applying to and registering in college helped to create individualized attention to the students
3. Aligning the curriculum to college level requirements so that students experience, GED, training and intensive summer programs expose students to realistic college preparation
4. Providing organizational support including giving students information about pre-transitional processes and how to apply for funding,
5. Providing cognitive support services and increased training in the use of technology

The literature that informed the current research also identified best practices models that can be used to help programs improve. The first phase of this study revealed that participants identified some evidence of effectiveness of these strategies. Specific examples included improved test scores—both pre-and post-tests on the ASSET, TCOM, and ACCUPLACER increased. They also observed success rates in the intensive programs. There was clear increase in student retention and graduation rates within programs. All programs agreed that the qualitative feedback from students revealed that the students experienced success and personal motivation.

Challenges Faced by ABE Programs

During the first phase of the study, programs also revealed that they still had challenges regarding Mathematics. Although Mathematics is the immediate barrier to transition/advancement into post-secondary education, the cognitive and foundational skills of reading, writing, and research enhance and ensure students success in college courses. While mathematics is a serious impediment and should be addressed, reading and writing skills appear to be more important to college success. Therefore, professional development should focus on arming teachers and programs with strategies to equip students with the

necessary college achievement skills based on the established standards (CCRS/CDS). By doing so, it is believed that students will leave adult education programs with the critical thinking and problem solving skills that will be necessary as they progress into their post-secondary educations.

Feedback from a preliminary presentation at the Texas Association for Literacy and Adult Education conference (TALAE), indicates that adult education site teachers have trouble procuring professional development services or field sites are developing professional development resources themselves or in conjunction with other organizations. Additionally, when asked about specific challenges to implementing college readiness programs, respondents at the 2010 TALAE conference cited funding, technology (often tied to funding), and developing partnerships with other educational institutions.

In Texas, “for every 100 ninth graders...only 64 will graduate from high school on time and only 35 will enter college immediately after high school. Only 22 will enroll in their sophomore year in college” (National center for Public Policy and Higher Education, 2007).

Considering the dismal high school graduation rates in Texas and poor performance among students who enter college immediately after graduating from high school, it is clear that adult education is a key component of the educational system which must be considered, improved, and adjusted to meet the changing needs and demographics of Texas. Additionally, varying socioeconomic factors, cultural backgrounds, and familial educational environments and attitudes greatly affect the readiness of students—adult or otherwise—for success in college.

So, for college transitions, these factors translate into the creation of a program of college entry preparation that (a) understands and recognizes students as individuals (considering the factors listed above), (b) fosters learning conditions that ensure students

build a foundation of college readiness skills (soft skills included), (c) helps students *experience* post-secondary learning environments through inclusive practices, and (d) develop a realistic understanding of what students should expect as they prepare for post-secondary education. The implementation and inclusion of the CCRS and CDS are vital factors in improving the preparation of underprepared students for post-secondary education achieving these goals.

“The more standards a student can demonstrate successfully, the more likely it is that he or she will be college ready” (THECB, p. 3). Because the CCRS details and outlines the skill perceived to be necessary across the disciplines considered vital to post-secondary educational success, those standards should serve as the benchmarks and goals for successful adult education programs. The findings of the THECB cited above alone seem to justify the implementation of CCRS and the—possibly even more important—CDS. Even a cursory comparison of the current *Texas Adult Education Content Standards and Benchmarks for ABE/ASE and ESL Learners* and the *Texas Career and College Readiness Standards* reveals large gaps. These gaps represent the shortcomings of the ABE/ASE Standards and illustrate (when read with the CCRS in mind) the unrealistic expectation that ABE/ASE Standards driven programs will produce graduates who are indeed *college ready*.

The Cross Disciplinary Standards represent a set of skills that might be even more important than the individual content area standards because the CDS represent the cognitive and foundational skills needed for success across the college curriculum. So, a student who may possess sufficient reading and writing skill to survive Freshman Composition yet is unable to apply that skill effectively to his/her other classes, is not likely be successful in other college courses. To ameliorate this situation, students should meet the standards outlined in the CDS by the time they exit from Adult Education programs to

ensure they possess the reading, writing, and research skills vital to their success in post-secondary education. The CDS are divided into two major groups: key cognitive skills and foundational skills. Cognitive skills deficiencies may result from a lack of formal education experienced by Adult Basic Education/GED students and might have caused them adopt non-traditional learning styles. These students may also lack critical thinking skills, problem solving skills, and the *good academic habits* necessary for college success. These skills prepare students to access content from a wide variety of college courses and for the culture shock often associated with transition to college (Conley, 2008). Foundational skills include those abilities not directly related to specific subject areas but skills like reading across the curriculum, writing across the curriculum, researching across curriculum; collecting and using data, and using technology for various purposes—communication and gathering, organizing, analyzing, and managing information (ACT, 2004; THECB, 2008). These skills may be referred to as core academic or readiness skills and are most often cited by both students and academic professionals as the most neglected aspect of high school education (Roderick et al., 2009).

Summary of Literature Review

The first chapter of this study revealed that adult student transitions to postsecondary education in the U.S. in general, and Texas in particular, are facing problems. Literature pointed out that Texas lags behind most states in transitioning students to postsecondary education. Building on these revelations, this literature review defined *college readiness* in the context of how it would succeed with the Texas CCRS and CDS as a basis for operating programs in Texas. The importance of the CCRS and CDS to transitions was described. The literature shows that it is important for programs to pay attention to the development of key cognitive skills and foundational skills as a strategy for making students ready for college. One way to do that was to understand the barriers to

college readiness and for each program to design strategies for breaking those barriers. On the backdrop of all these findings from literature, the current study constructed a tentative model for helping students to be college ready. Finally, a cursory inspection and comparison of the CCRS/CDS and ABE/ASE Standards reveals shocking and widespread gaps. It is these gaps in training that result in unsuccessful transition to college by underprepared students.

METHODOLOGY

The primary purpose of this study was to collect data to describe how a professional development model built by using the CCRS and CDS helps to inform teaching practices for ABE/GED programs in Texas. The secondary purpose of the study was for project staff and participants to develop a deeper understanding of what college readiness entails, and what teachers should do to help students transition to and succeed in post secondary education. The initial number of participants for the study included twenty-three (25) teachers from four (4) different programs purposely selected around the state of Texas. The teacher participants came from one independent school district, and three community colleges. Triangulation of data collection, sources and analysis was used to ensure/increase reliability of the findings and data collected (Rossman & Rallis, 2003; Marshall & Rossman, 2006). The study intended to answer the research question *how does professional development for postsecondary transition models designed with college and career readiness standards (CCRS) in mind look like?*

Selection of Participants

Of the expected twenty-five participants, a total of twenty-one teachers volunteered to participate in the pilot professional development study but seventeen teachers volunteered to complete the nine-week online professional development. Teachers were paid a stipend for participating in the professional development pilot study. The project staff

made two visits to Northside ISD and Austin Community College and one visit each to Del Mar and Midland Colleges. The two visits each at Northside ISD and Austin Community College were designed to accommodate participation by teachers who taught both day and evening classes. Figure 3 shows a detailed breakdown of the dates of visits and the numbers of participants by site.

Figure 3: Transition Project Pilot Study Schedule March & April 2010

Location/Site	Participants who attended orientation at each site				
	Date of site Visit	Teachers	Transition Specialists	Administrators	Total Attendees
Northside ISD	3-29-2010	2	1	2	7
San Antonio, TX	4-27-2010	2			
Del Mar College	4-1-2010	4	1	2	7
Corpus Christi, TX	Day & Evening				
Austin Community College	4-8-2010	7	0	0	7
Austin, TX	Evening				
	4-9-2010				
	Day				
Midland College		6	1	1	8
Midland, TX	4-23-2010				
		21	3	5	29
Total Attendees					
Total of actual participants		18	3	0	21

Explanation: A total of 29 participants attended face to face orientation. Of these, 21 signed up to participate and 17 completed the online professional development program

Participants answered pre and post online professional development interview questions.

Project staff used a purposeful sampling approach to identify and select the final sites and participants for the study. For this study, purposeful sampling involved that project staff identified and invited teacher participants “because they [could] purposefully inform an understanding of the research problem and central phenomenon in the study” (Creswell, 2007, p. 125). Because this project intended to answer a question related to successful practices, and how to tell when students were considered ready to enter and

succeed in college, the research team deliberately looked for a homogeneous group of teacher participants who were considered to come from programs that provided them with broad experience related to answering the overarching research question. Consistent with research methodology experts, this approach was intended to help facilitate the group interviews and the focus of the study (Marshall and Rossman, 2006).

For many years in the United States and in Texas specifically, the focus of adult education has been priority core services in GED completion and teaching of English as a second language (ESL). However, today these skills are considered basic in adult education. Currently, the general trend is that the adult education system has moved a step further to focus on moving transitions to higher levels by including a focus on assisting students to *transition to and succeed* in postsecondary education. The new focus was necessitated by the increase in

- levels of resources, including funding and availability of material resources that have improved
- accountability requirements beyond those stated basic skills—GED completion and teaching English as a second language
- the introduction of the Closing the Gaps Plan by 2015 and 2030
- the improvement in the economy/society and the need for an educationally prepared adult population or workforce.

Therefore, an improvement in the way classroom practitioners prepare adult students for college requires that new classroom practitioner skills should be introduced to meet the needs of the students and the current education policies in adult education. This study is a step towards achieving that goal, including that of closing the gaps by 2015 agenda.

Data Collection Methods

On Site Face-to-face Orientation

Literature guiding research methods reveals that currently, while computer software is not largely used for collecting research data, there is a plethora of software that supports research (Denzin & Lincoln, 1998). This observation indicates that it is important for researchers to ensure that participants understand how to use any new software that will support data collection and analysis. The advantages of using computers to capture data include that (a) computers help researchers to receive large quantities of data and to manage that data, (b) researchers can reorganize and save data according to the research questions that the provided responses will be answering, (c) connections between data and emerging concepts from the collected data may be easily constructed (Denzin & Lincoln, 1998) and (d) participants may review and edit their data to increase the accuracy of their understanding of a phenomenon being studied (Marshall & Rossman, 2006). Between March 26 and April 02, 2010, project staff visited each of the four selected sites and conducted face-to-face on site orientation for teachers and program administrators who had volunteered to participate in the study. Although administrators were not eligible to participate in the professional development, their ability to access the tracs site and presence at the face-to-face meetings were necessary to ensure support for the project and participants. Figure 2 shows the specific dates and sites that project staff visited to conduct the initial face-to-face orientation and collect data by interviewing participants.

Figure 2: On-site visit schedule for face-to-face orientation with participants

Date	Site visited	Activities realized
March 29, 2010	Northside ISD, San Antonio, TX	<ul style="list-style-type: none"> • Face-to-face orientation • Preliminary interviews
April 01, 2010	Del Mar College, Corpus Christi, TX	<ul style="list-style-type: none"> • Face-to-face orientation • Preliminary interviews
April 08, 2010	Austin Community College	<ul style="list-style-type: none"> • Face-to-face orientation
April 09, 2010	Austin Community College, Austin, TX	<ul style="list-style-type: none"> • Preliminary interviews

April 23, 2010	Midland College, Midland, TX	<ul style="list-style-type: none"> • Face-to-face orientation • Preliminary interviews
April 27, 2010	North Side ISD in San Antonio	<ul style="list-style-type: none"> • Face-to-face orientation • Preliminary interviews

The orientation exercise was designed to help participants understand how to use the tracs and to participate. Project staff also explained the activities that were going to be involved during the professional development program and the research process. During the orientation activity, project staff

- explained to the participants how the professional development process would be conducted.
- explained to participants how they could access tracs site to navigate the virtual professional development activities and to make their contributions
- encouraged participant to keep a journal of any observed changes related to the activities that they initiated as a result of the professional development. In addition participants made suggestions for improving the professional development to better serve their different sites.
- defined the expectations for participating in the study
- conducted pre-professional development focus group interviews with participants at each site

Towards the end of each orientation exercise, participants at each site were re-interviewed to establish their new understanding of *college readiness* and *transitions*. Interviews were recorded and later transcribed with the permission of the participants. At the end of the professional development during the month of June 2010, participants were asked to respond to the same questions that they answered at the beginning of the professional development. Repeating the same interview questions was important for this study because the project staff wanted to

establish if the professional development had brought about any changes in the way participants understood *college readiness*, and also how they used CCRS and CDS to help their students become college ready. The purpose of the final interviews was to determine if teachers' understanding of students' *college readiness* and transitioning had changed. From the final interviews, project staff also intended to collect data that helped evaluate the changes that resulted from the on-line professional development. Participants were also expected to share their future plans regarding improving transitions. Data was also used to make recommendations for further improvement of the professional development program. Figure 3 shows the online professional development model that was designed with the CCRS and CDS in mind.

Using a Developed On-line Tracs Site

During the period February 22 to March 19, 2010 project staff developed and tested a tracs site for teachers, administrators and project staff to be able to log on and participate virtually. The tracs site allowed teachers to be able to log on to the site and download three readings for each week, read and then post their responses to each of the three questions that were posted on line by project staff. One standard question for each work expected teachers to demonstrate that they had read the articles and the other two questions were designed to solicit teachers' views and experiences with the online professional development. It was expected that participants needed to read other participants' posts and respond to at least two postings from the rest of the participants. This feature of the professional development was not available for this TRACS web site at Texas State University-San Marcos. Teachers were not able to access posts from other participants.

When the tracs site had been developed, project staff tested the site by login on and creating documents. Satisfied with the site, project staff then carried out a

face-to-face orientation activity with all participants. The objective was to explain and demonstrate to all participants how all participants would access the tracs site to participate. In addition, prior to using the tracs site therefore, all participants were provided with background readings related to transitions.

Figure 3: On-line professional development program for transitions

Period	Cross Disciplinary Standards (Sub-Topics)	Foundational and Key Cognitive Skills (Learning Outcomes and behaviors)
Week One	Writing across the Curriculum	<ol style="list-style-type: none"> 1. Writing clearly and coherently using standard writing conventions. 2. Write in a variety of forms for various audiences and purposes. 3. Compose and revise drafts.
Week Two	Reading across the Curriculum	<ol style="list-style-type: none"> 1. Use effective pre-reading strategies. 2. Use a variety of strategies to understand the meanings of new words. 3. Identify the intended purpose and audience of the text. 4. Identify the key information and supporting details. 5. Analyze textual information critically. 6. Annotate, summarize, paraphrase, and outline texts when appropriate. 7. Adapt reading strategies according to structure of texts. 8. Connect reading to historical and current events and personal interest.
Week Three	Research across the Curriculum	<ol style="list-style-type: none"> 1. Understand which topics or questions are to be investigated. 2. Explore a research topic. 3. Refine research topic based preliminary research and devise a timeline for completing work. 4. Evaluate the validity and reliability of sources. 5. Synthesize and organize information effectively. 6. Design and present an effective product. 7. Integrate source material. 8. Present final product.
Week Four	Use of Data	<ol style="list-style-type: none"> 1. Identify patterns or departures from patterns among data. 2. Use statistical and probabilistic skills necessary for planning an investigation, and collecting, analyzing, and interpreting data. 3. Present analyzed data and

		communicate findings in a variety of formats.
Week Five	Technology	<ol style="list-style-type: none"> 1. Use technology to gather information. 2. Use technology to organize, manage, and analyze information. 3. Use technology to communicate and display findings in a clear and coherent manner. 4. Use technology appropriately.
Week Six	Intellectual curiosity, Reasoning, Problem solving, Academic behaviors, Work habits, Academic integrity	<ol style="list-style-type: none"> 1. Engage in scholarly inquiry and dialogue 2. Accept constructive criticism and revise personal views when valid evidence warrants. 3. Consider arguments and conclusions of self and others. 4. Construct well-reasoned arguments to explain phenomena, validate conjectures, or support positions. 5. Gather evidence to support arguments, findings, or lines of reasoning. 6. Support or modify claims based on the results of an inquiry. 7. Analyze a situation to identify a problem to be solved. 8. Develop and apply multiple strategies to solving a problem. 9. Collect evidence and data systematically and directly relate to solving a problem. 10. Self-monitor learning needs and seek assistance when needed. 11. Use study habits necessary to manage academic pursuits and requirements. 12. Strive for accuracy and precision. 13. Persevere to complete and master tasks. 14. Work independently. 15. Work collaboratively. 16. Attribute ideas and information to source materials and people. 17. Evaluate sources for quality of content, validity, credibility, and relevance. 18. Include the ideas of others and the complexities of the debate, issue or problem. 19. Understand and adhere to ethical codes of conduct.
Week Seven		

Virtual Participation

Participants

- explored current research on transition topics. Each of the selected articles was intended to draw the attention of the teachers to a specific development of skills and attitudes both among the teachers and the students.
- read and reacted to the contents of the articles that they were assigned to read each week.
- discussed how they would apply what they read to their lessons with ABE and GED students. They also were given the opportunity to suggest or extend the same ideas that they learned from the articles that they were assigned to read. Figure 4 shows the titles of the resources and the intended objectives that each article covered.

When project staff had completed the site visits and all the orientation activities, participants continued to provide information by posting information related to their experiences with the professional development model

- Teachers developed lesson plans based on current research and specifically addressing the cross disciplinary standards (CDS) from the CCRS including
 - Reading across the curriculum
 - Writing across the curriculum
 - Academic behaviors across disciplines—research, writing etc
- Implemented lesson plans in classes
- Reflect on *what worked*
- Report findings from each week's lesson
- Present reflections at a conference

Project staff monitored all the virtual activities. During the ninth week, project staff posted the same questions that were used during the initial interviews on line and participants were invited to each respond to the same questions.

Data Analysis and Report Writing Plan

Brief Description of PD Pilot Study Questions and their Purpose

The nine week online section of the pilot professional development study was designed with questions that fell into three distinct categories or themes. The majority of questions covered the theme of reading comprehension. Questions in this category solicited for specific reflections regarding reading for comprehension, and invited participants to restate the concept or statement in their written responses. The purpose of the reading comprehension questions was to determine and document whether (over the course of the pilot study) teachers accurately read and reflected (what we considered) the intent of the author. In short, these questions ask whether the text produced by the participants demonstrated that they read and identified key aspects of the article.

The second theme of the pilot professional development questions were related to the application—in adult education classroom settings—of concepts or techniques presented in the articles. Throughout the study, questions covering this theme asked participants to identify and describe new lessons, if any, they would create which reflected concepts or techniques learned from the assigned reading/article. The purpose of such questions was to invite participants to describe new knowledge, concepts, techniques presented therein to be incorporated into lessons they might create in future.

The third theme of the pilot professional development questions were self reflexive in nature. In this project, self reflexive questions probed participants to reflect on their past teaching experience and consider episodes when they felt their performance needed some form of improvement, as defined by specific examples found in the assigned article. The participants then described those classroom experiences and then shared ideas on how [in the light of the current information from the professional development] they would modify their teaching approaches after having read the articles. Further probing questions in this

category probed participants to evaluate the differences between traditional students and non-traditional students within a university environment or simply asked participants to reflect on the relative positions and conditions of their adult students.

Regarding the readings a number of questions are being presented to the “texts” produced by pilot study participants:

1. Did the teacher/participants in the professional development pilot correctly identify what we considered the appropriate or proper response in each reading?
(Does the text they produced reflect this?)
2. How do the participants understand the CCRS and CDS?
3. How are participants implementing CCRS and CDS in their classrooms?
4. What “new teaching skills” have participants identified as vital to student success that have not been reflected by the Key Cognitive/Foundational Skills?
5. How did participation in the professional development pilot study change the teachers’ practice?

*“Adult learners are often referred to as nontraditional students, as if their presence on campus somehow represents a daring departure from business as usual. But the fact is that on many higher education campuses, adult students are business as usual”
(Stephen Brookfield 1997)*

Research Findings

The study set out to answer the following overarching question: When designed with the College and Career Readiness Standards (CCRS) and the Cross-Disciplinary Standards (CDS) in mind, *what does professional development for postsecondary transition models look like?* To answer this broad question, project staff asked six specific research questions that helped to collect data to answer the broad research question. The first specific research question this study intended to answer was *how do ABE programs understand college readiness in relation to CCRS and CDS?* During face-to-face orientation research activities, project staff conducted focus group interviews with the participants, allowing them to share their initial understanding of *college readiness*.

Brief Description of PD Pilot Study Questions

Reading comprehension/theory acquisition. The first part of the research project was designed to establish the level of understanding the participants had with the CCRS and the CDS. Participants were also asked to demonstrate their understanding of how to tell when their students were ready for college. The second part of this online pilot professional development (PPD) study was designed with standard questions that fell into three distinct categories or themes. The first standard question of the PPD for each week covered the theme of reading comprehension. Questions in this category solicited for specific reflections regarding gains participants made in reading for comprehension, and invited participants to restate the concept or statement in their written responses. The purpose of the standard reading comprehension questions was to ensure and document whether (over the course of

the pilot study) teachers accurately read and reflected (what project staff considered was) the intent of the author(s). Reading comprehension questions asked whether the online text posted by the participants demonstrated that they read and identified key aspects of the article, and if so how the participants viewed and matched the content of the weekly readings to the learning and transition needs of their adult students. In addition the questions also helped project staff to introduce adult education theory to the participants.

Application. The second theme of the PPD study questions were related to the application—in adult education classroom settings—of concepts or techniques presented in the articles. Throughout the study, questions covering this theme encouraged participants to identify and describe new lessons, if any; they would create to reflect concepts or techniques learned from the assigned readings/articles. The purpose of such questions was to encourage participants to describe what they considered current adult education theoretical knowledge, ideas, concepts and andragogic techniques presented therein to be incorporated into CDS and TCCRS based lessons they might create in future. Therefore, participants were also encouraged to constantly refer to the CDS and TCCRS in order to design or modify their original lesson plans and teaching-learning activities/techniques so that they would focus on developing cross disciplinary skills required for adult education students to demonstrate at postsecondary and or workforce level. Teachers also had to connect those created lessons to how the new instructional techniques were helping students pass their GED, in addition to developing deeper understanding of the TCCRS and the CDS, and how the standards helped teachers to provide enriched student preparation for transitioning to workforce and postsecondary education.

Self Reflection: The third theme of the PPD questions was self-reflexive in nature. In this project, self-reflexive questions probed teacher participants to critically reflect on their past teaching experiences and consider episodes when the teachers felt their classroom

practices needed some form of improvement, as defined by specific examples found in the assigned articles for each week. Some of the critical self-reflection questions included

- a. What has/not changed in the participant's teaching approaches?
- b. How is the new approach different from or similar to the past/previous?
- c. How do the participants view the change benefiting their students in terms of developing the expected postsecondary and workforce skills?

The participants then described those classroom experiences and shared practical ideas on how [in the light of the current theoretical information on adult education from the PPD] they would modify their teaching approaches after reading the articles. For some teachers, they reported what they had been doing successfully that was also confirmed by both the weekly reading articles, the TCCRS and mostly the CDS. Further probing questions in this category asked participants to evaluate the differences between traditional students and non-traditional students within a university environment or simply asked participants to reflect on the relative positions and conditions of their adult students. Therefore, participants were able to identify what they thought were best practices for their adult students and how they felt, in the light of the new knowledge, they should have been presenting the lessons under their given circumstances of their students. All three themes from the questions allowed project staff to create a data analysis plan that helped produce a standards-based professional development model for ensuring successful transitioning of adult students into postsecondary education and workforce.

Therefore, regarding the readings a number of questions are being presented to the "texts" produced by pilot study participants:

1. Did the teacher/participants in the professional development pilot correctly identify what project staff considered the appropriate or proper response in each reading? (Do the text they produced reflect this?)

2. How do the participants understand the TCCRS and CDS?
3. In the light of the PPD, how are participants implementing or hope to implement TCCRS and CDS in their classrooms?
4. What “new teaching skills” did participants identify as vital to promoting successful adult student transitioning to postsecondary education and workforce that have not been reflected by the Key Cognitive/Foundational Skills?
5. How did participation in the professional development pilot study change the teachers’ practice?

These questions reflect our discovered standards-based model for developing an evaluation tool of the standards-based professional development program. This model may provide adult education teachers with improved instructional skills to help adult learners to successfully transition to postsecondary education and workforce by developing college readiness skills and then measuring the students’ readiness to transition and succeed in postsecondary education and workforce through the use of TCCRS and CDS respectively.

To confirm how the PPD influenced instructional practice, next, we used qualitative themes that emerged from the data to discuss how the online pilot professional development impacted the classroom practices of the seventeen (17) teachers of adult education who participated in the PPD. To achieve this, project staff used both quantitative and qualitative data to document the impact of the online section of the professional development on classroom practices of the adult education teachers. The discovered themes helped project staff describe what this professional development program, when guided by the TCCRS and the CDS, should look like.

Discovered themes from the online section of the PPD include that participants revealed that the PPD has the potential to

- a. extend the participants’ knowledge of adult students learning styles;

- b. influence change of perceptions of students' responsibility in the teaching-learning process—avoid seeing only blame in the students, and seeing the need for teachers to be reflective on how they teach adult students;
- c. help participants understand individual needs of adult students—instructors reported they realized a need to align instructional content and structure of their lesson plan activities (TCCRS) to how adult students learn and to the skills expected of students in post-secondary academic curriculum (CDS); raises the need to organize instruction so that they identify and develop specific postsecondary cross disciplinary skills in incremental fashion; and aligning topics and content across the curriculum so that students see relationships and interdependence between subjects
- d. encourage critical reflection among teachers—to continuously assess presence of or absence of the CDS during the TCCRS stage of implementing standards to support persistence and adult education programs completion; develops and fills in college-level skills (TCCRS) through modeling critical thinking and problem solving; encourages development of research, reading and writing college-level assignments that cut across the curriculum; and encourages adult education teachers to constantly repeat tasks, concepts and to allow students to re-tell and describe those processes needed to carry out certain learning activities;
- e. help instructors discover the need to create and promote *a college culture* within their classrooms through lessons presentations including—social tools—collaborating with other students, making connection across the curriculum, organizing time being flexible, systematic and managing subject content and language usage; using the library to do research; developing active working memory through practicing and being persistent; and

- f. enrich classroom practice for teachers. Consistent with the literature that guided this study, participants reported that a PD guided by TCCRS and CDS has the potential to help modify classroom instructional approaches to focus on developing specific college and career readiness skills including intellectual curiosity, reasoning, problem solving, academic behaviors, work habits, reading and writing across the curriculum, and the use of technology (Brookfield, 2005; Conley, 2008; THECB, 2008).

Throughout the study, project staff discovered that the theme of *change of attitudes* ran through all the other themes, and therefore cannot be separated from the rest of the themes. This theme is discussed throughout the other themes.

Figure 2

	The Online Pilot Professional Development:			
	Confirmed and legitimized Participants' Current Teaching Approaches		Helped Participants to Change Current Teaching Approaches	
	Actual Number	Percent	Actual Number	Percent
Understanding challenges faced by adult students	17/17	100	17/17	100
Participants understood what college readiness entails and confirmed they now use CDS when evaluating college readiness among students	2/17	11.8	15/17	88.2
College and Career Readiness Standards and CDS improved my understanding of what needs to be covered in my subject area and how I should cover the content	-	N/A	17/17	100
Need to integrate use of technology in subject area taught by the teacher	6/17	35.3	11/17	64.7
Saw the need to use CDS as a continuous assessment tool for evaluating presence of college-readiness skills	-	-	15/17	88.2

Promoting reading, writing and research across the curriculum in my subject area	3/17	17.6	12/17	70.6
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In places where the responses do not balance between the two options, missing participants' reflections did not confirm their positions on the probes.

The PPD Improved Participants' Understanding of College Readiness

One way to demonstrate the benefits/impact of the PPD guided by CDS was to ask participants to identify, name and describe positive changes that they noticed in their knowledge, attitudes, beliefs and understanding of how to prepare adult learners for transitioning and succeeding in postsecondary educational environments. Asking this probing question to participants helped project staff to determine how the PPD helped to enrich/amplify the way participants understood transitions, and how their beliefs and understanding had shifted or not shifted to assimilate the expected knowledge and skills for them to be effective teachers of adult students transitioning to postsecondary and workforce education.

One finding specific to this study revealed that the weekly readings led participants to develop a common vision and understanding of what transitions should look like, feel like, and sound like in their classrooms. This finding was important to the purpose of this study project because it revealed that the PPD had the potential to help participants to develop a common understanding of what they need to look for to determine when students were ready to transition into and succeed in postsecondary settings. In addition, the finding also revealed their understanding of what college readiness entails led to changes in the attitudes, beliefs and ways of promoting transitions. Participants also demonstrated that the PPD had the potential to help them develop a common focus on the college readiness standards that their students needed to demonstrate at the time of exiting each of their programs.

Throughout this study, participants reported that the assigned weekly readings/articles from the PPD each provided them with clear and specific theoretical understandings of adult learners that they regarded *vital* for helping them to understand what adult education transitions entails. This led project staff to conclude that a PD designed and guided by TCCRS and CDS has the potential to help unify important teacher working concepts and purposes to a common goal standards assisted transitions to postsecondary. One question that participants continuously reflected on was, “what does literature/theory say participants should look for in their adult students as they teach students in their different subject areas in order to ensure that students consistently demonstrate first the learning behaviors related to TCCRS for each subject area, and second their readiness to demonstrate college readiness skills (CDS) seamlessly transition to and succeed in postsecondary education (CDS)?” This question helped participants to discover a common theme and or their description of their understanding of what transitioning students to postsecondary education entails or looks like. The strength of this finding to the purpose of this project was that the PPD demonstrated that the standards driven PPD has the potential to develop campus cohorts of adult education instructors who will have a common understanding of what college readiness looks like.

Another major finding of the PPD revealed that participants realized a huge need for a professional development that focused on standardized classroom instructional and assessment approaches for seamless transitions between topics, chapters and finally to college work:

Participant: It was refreshing to have a professional development that was *really professional*. I have been able to *re-orient my students*, even those who previously had not aspired to further their education, to plan beyond obtaining their GED. I feel as though I am now truly teaching my students *valuable content* in a manner that they

can retain beyond their official GED test administration. My students are experiencing added levels of understanding and progress that they had not previously experienced.

Participant: As a result of this pilot professional development project, I have *expanded* my view on how I should teach in the GED classroom along with how I should interact with and assess my adult students' college readiness skills. I have realized the importance of instilling certain college success related skills in our adult students that I took for granted were innate. I have been able to review classroom assignments and activities, and include in them exercises that will help the students become proficient in these college readiness skills and knowledge.

Both posts reveal that a standards guided professional development has the potential to connect classroom instruction to common standards, and has the ability to professionalize the field. It gives direction to instruction and helps to inspire the students to reflect on participating in college education. Instruction influenced by CDS and CCRS also adds value to the content taught and the assignments given in ABE classrooms. This justifies the need for a standards-based professional development. The need was revealed by the diverse ways through which participants viewed and defined transitions from their various perspectives. When their responses were analyzed, results data confirmed that participants' different approaches to understanding transitions influenced their diverse approaches to how they approached preparation of their students for postsecondary education.

Pre-PPD Definitions of College Readiness

Results from the face-to-face orientation activities revealed that participants understood *college readiness* from varying perspectives each depending on the roles that they performed within their programs. Participants also shared their varying levels of knowledge of and experience with the TCCRS and the CDS. Altogether, from the 17 participants who took part in this study, both their written and oral responses revealed three outstanding themes or perspectives through which they defined college readiness.

The themes that emerged from the pre-PPD data included that they understood college readiness (a) as that level of knowledge indicated by students' test scores, (b) through observed specific classroom behaviors and skills demonstrated by adult students, and (c) as defined according to contexts/expectations from the subjects that the participants taught.

College Readiness Viewed Through Test Scores. Responses showed that participants defined college readiness as a learning outcome represented by the students' performance in various tests that teachers gave students in preparation for their final/GED examinations. According to the responses that fell into this category, participants used test scores to measure and define college readiness. Throughout all four research sites, participants consistently agreed that, according to their experiences, students who earned higher test scores should be considered ready to enter and succeed in postsecondary education. However, according to researched literature on CDS, test scores do not clearly name and describe the presence or absence of actual skills that students will have demonstrated by passing or failing a test in order to be considered ready for college careers (Conley, 2008; THECB, 2008). According to such research, some of the skills may be buried inside the tests taken by the students, while other skills may not necessarily be evaluated in the test that a student may have passed or failed (Conely, 2005). One participant specified that, according to his/her experience, "the student should exhibit the standards in their written assignments and behaviors in the classroom... [but], when their scores in the GED [practice tests] are in the 600's or higher, they are ready for college work..." The following quote from a written response by another participant summarized the general view from the responses that fall under this category/theme:

Participant: A student is ready to transition to and succeed in college when they can prove (through standardized tests such as ACCUPLACER) that they have acquired the academic skills; they have the self-confidence to know that they can be

successful; they have awareness of the rigor involved and the skills to balance their various responsibilities (time management) of their academic and professional lives.

However, the responses from this category/theme reveal that some of the participants placed *college readiness* measured by test results at the time when students achieved those scores when they took placement examinations to enter into the different ABE programs. Defining college readiness in this manner leaves out those andragogic learning processes that help adult students to be college-ready. When project staff juxtaposed these definitions with the organization and or hierarchy of the TCCRS, CDS and the literature that informed this study, such definitions could be classified as entrance skills to ABE programs, where as “college readiness” as defined by literature refers to those skills that students need to demonstrate at the time of exiting the ABE programs (Conley, 2008; THECB, 2008). This finding demonstrates two things, (a) that a gap exists between the participants understanding of what college readiness entails, and how research and experts define it, (b) that participants were in need of a professional development to help them develop deeper understanding of college readiness, TCCRS and CDS to be able to know when, who, why and what to evaluate in order to measure the impact of their teaching.

Students’ Classroom Behaviors as Indicators for College Readiness

Another theme that emerged from the responses to the questions was that participants from all four research sites consistently agreed that there were a number of specific classroom behaviors that their adult students demonstrated as a demonstration of how teachers saw and defined college readiness being exhibited by their students. In addition to the behaviors mentioned, responses under this category added a new dimension that the participants’ approaches were mostly guided by *trial and error* as opposed to a clear knowledge of TCCRS and CDS. This response demonstrated to project staff that teachers were genuinely demonstrating a need of a professional development to guide their

understanding of college readiness and how it may be achieved. Specific student behaviors commonly mentioned during the interviews and also through written responses included that students should be able to, (a) manage their time, (b) show self-confidence, (c) read with comprehension, (d) demonstrate good study habits, (e) consistently participate in classroom activities, (f) show commitment and (g) write according to stipulated expectations—“five paragraph stories, logical arrangement of work and in a grammatically correct manner” (Participant). One way to look at what the above behaviors demonstrate is that students who were not college ready did the opposite of the listed behaviors. Project staff then concluded that students were viewed as at fault.

College Readiness Defined According to Subject Area Expectations

Three participants viewed college readiness as those expected skills and students’ achievement through various scores in subjects that they taught—English Language Arts, Social Studies, Science and Mathematics. Another group whose responses closely resembled those in this category pointed out that they were not sure, but they felt that it probably depended on the subject area. The following response represents and summarizes responses that fell into this broad category:

Participant: [In English Language Arts,] students need to be able to read critically, analyze what they have read and articulate in a grammatically correct cohesive manner. In addition, they need to form good study habits and to be able to analyze and take notes. After learning a concept, they should be able to use the concept in varying ways. When they can do these things, they may be ready to transition...

This response, and the general trend from other responses by the participants from all four sites is consistent with the literature on TCCRS and CDS which guides that students should demonstrate those skills that help them to be able to do research, collect information and analyze information before they can write coherently across the curricula

(Conley, 2008; THECB, 2008). However, defining college-readiness this way omits to mention the role of the teachers if their students fail to demonstrate all the behaviors named in the definition. Another participant added that for her, college readiness referred to

A set of *literacy* skills demonstrated by a student, based on his/her ability to read, college culture skills, write and communicate effectively in college environments... and we just use trial and error... [but] I'm not too clear on how I'd determine when a student is college ready. I've read the TCCRS and the CDS—is not unfamiliar to me, but I don't believe I have sufficient expertise at present to answer beyond what I've just said.

This definition, together with the ideas from other participants extended the concept of college readiness from the literature that guided this study, by adding that college readiness should also be viewed in the context of the students' abilities to demonstrate what participants commonly defined as "*college culture skills (CCS)*." For the participants, college culture skills involve the students' ability to collaborate with other students, showing self-confidence, participating in classroom activities, demonstrating organized study habits and to be able to constantly defend their thinking positions/decisions in an academic environment. At all the four research sites, there was an overwhelming presence of ELA teachers and a big limited presence of teachers for the other subject areas. Project staff observed that most of those present were not content experts for such subjects as Math, Science and Social Studies. Phase 1 of this study revealed that most students who were still stuck in the GED programs were having difficulties passing the Math component of the exam.

Previous PDs and how they Guide Teachers

Preparation of Students for College

Both focus group interviews and written responses from participants revealed that most of the participants had not participated in professional development opportunities that specifically focused on helping them to understand how to measure students' *college readiness* and how to help participants to consciously identify and develop college readiness skills in their students. Of the professional developments named and described by the participants, two teachers had recently attended a professional development course on how to teach Math at Austin Community College (ACC), another two had participated in online courses each, and one teacher each had attended a professional development related to how teachers could develop critical thinking and reading skills among their students. According to the participants, they discovered from the pilot professional development (PPD) that encouraging critical thinking was key to helping the teachers meet their students' individual learning needs. All these professional development opportunities mostly addressed at least one aspect of the TCCRS and CDS, but the participants agreed that they did not walk away with a complete and clear understanding or knowledge of those specific skills that students need to demonstrate in order to be considered ready to transition and succeed in college.

Another teacher identified a professional development related to what she called, *data detective session*, which focused on helping teachers to develop skills to identify and to analyze missed questions in a test and for teachers to be able to help students learn or memorize those missed concepts. From a general perspective of the literature guiding this study, this description explains that teachers participated in professional development that helped them improve and or strengthen students' test taking skills which, according to the TCCRS and the CDS may not be sufficient or a direct indicator of college readiness. This

may lead teachers to believe that test scores are a good indicator for college readiness or absence of it. Besides these named professional development courses, most participants commonly revealed that they had not yet participated in professional development opportunities that were deliberately designed to help them know and address the development of college readiness skills among students. Consistent with findings from the literature that informed our study, most participants mentioned that their success with students was based not on their knowledge of the college and career readiness standards, but only on their intuition, experience and or trial and error (Cameron, 1981; Perin, 1999; THECB, 2008). One participant summarized the general experiences of most participants from the four research sites visited by project staff:

Recently, I participated in an online PD opportunity discussing challenges to student retention and reading research related to how best meet students' needs and continue with their studies to meet their goals. At this point, I am not aware of how I am implementing the TCCRS and the CDS in my classroom though I assume I am to some extent. I am just not familiar enough with the TCCRS and the CDS to state exactly how I am doing so.

Another participant added, "My greatest asset [for succeeding with these students] has been my [recent] experience as a [Ph.D.] student and what I would like to have seen or experienced differently through my dissertation journey." To summarize, the results from the face-to-face orientation activity of this study answered the first two specific research questions—*(a) how do ABE programs understand college readiness in relation to TCCRS?* *(b) how do ABE teachers determine when their students are ready to transition to and succeed in college?* Participants commonly agreed that they really did not have a clear definition of college readiness in terms of its characteristics in the context of TCCRS and CDS and also they commonly agreed that they used test scores and their intuition to

measure students' levels of readiness for college transition. Most participants attended professional development opportunities that were related to teaching of reading, while only one reported attending a professional development activity related to Math. Nothing was mentioned in relation to Social Studies, Science and Counseling.

According to the majority of the responses from the participants, the weekly readings helped to create standard definitions of what college-ready skills graduates from each of their campuses/programs should demonstrate. The following qualitative post PD responses confirm the results of the actual count of the responses that fell into this category.

Table 1: Participants' understanding of expected post secondary skills

Students should demonstrate the following expected post secondary skills				
Foundational Skills	Confirmed and legitimized Teaching Approaches		Helped Participant Change Current Teaching Approaches	
	Actual Number	%	Actual Number	%
Read across the curriculum	6/17	35.3	14/17	82.4
Write across the curriculum	4/17	5.9	15/17	88.2
Research across the curriculum	7/17	41.3	10/17	58.8
Use data and technology	8/17	47.1	10/17	58.8
Key Cognitive Skills				
Work habits	-	-	15/17	88.2
Academic behaviors	10/17	58.8	12/17	70.5
Problem solving	6/17	35.3	10/17	58.8
Reasoning	7/17	41.3	10/17	58.8
Academic integrity	-	-	15/17	88.2

Qualitative posts that confirmed the general consensus depicted in the quantitative data in table 1 including that for the teachers, it is very important to have a clear understanding of what standards mean and how they can be used to gauge/determine the knowledge and skills that teachers need to develop and in their students so that they may be considered college ready.

Participant: I can tell when my students are college ready when they can demonstrate the skills and knowledge related to the Cross Disciplinary Standards. For me, the CDS now serve as a guide line for how to prepare my adult education students to be successful in entry-level college courses. They [CDS] not only name

skills necessary in all subject areas but they break them down so instructors can form lessons around each skill and the expected levels of knowledge. The Cross Disciplinary Standards indicate skills that are necessary to a student's success in college regardless of the subject. By referring to these standards, as an instructor I can/will ensure students develop these skills while expanding their knowledge in specific subject areas.

Participant: Just because a student can or has obtained a GED or high school diploma does not mean they are ready for college. The CCRS and the CDS sections of the study have shown that when they leave high school, many students may have gaps in their postsecondary knowledge and skills. Obtaining a GED only means they may have learned just enough to pass to the next grade, but may be lacking the skills necessary to survive in a college classroom. College readiness therefore means that our students should demonstrate the foundational and key cognitive skills and knowledge. The professional development has been an eye opener for me...

Participant: *College readiness* in regards to adult students means the students have the motivation, desire and ability to attend college. It indicates that after the teaching processes, the student has made adjustments to their everyday life in order to obtain a college education. It also means that they have a strong academic base upon which to build. College readiness also means these adults students are prepared to demonstrate those skills related to postsecondary education and to be successful in higher education.

One finding that is specific to this study is that participants reported that the PPD helped them understand one function of CDS and TCCRS as that of developing the professional skills and knowledge needed to be able to help their students develop test taking skills for any standardized tests like GED and or TAKS. This definition helped to raise questions that may help further improve/create tests so that they continuously evaluate students for skills related to the CDS and TCCRS. This finding also raised questions that may help further improve tests so that they are designed to continuously evaluate students to establish their levels of CDS skills. Is it about time we had a test on CCRS and CDS?

Figure 2:

The Online Pilot Professional Development:

Standards-Based Pilot Professional Development

	Confirmed and legitimized Participants' Current Teaching Approaches		Helped Participant Modify Current Teaching Approaches	
	Actual Number	%	Actual Number	%
The PPD increased the participants' understanding of what college readiness entails	4/17	23.5%	13/17	76.5%
Reported that they now use or hope to consistently use CDS to evaluate college readiness among students	1/17	5.9%	17/17	100%
Participants current understanding of challenges faced by adult students	10/17	58.8%	16/17	94.1%
College and Career Readiness Standards improved participants' understanding of what needs to be covered in the subject area they teach and how cover the subject content	7/17	41.2%	14/17	82.4%
The PPD helped participants become reflective on their own instructional methods and to continuously modify them to suit the needs of their students	6/17	35.3%	17/17	100%

Questions related to assessing the impact of the PPD include what is going on as a result of their participation in the PPD? What does this PPD look like from the eyes of the participants? Project staff concluded that a professional development guided by CDS has the potential to equip instructors with skills to help their students transition and succeed in postsecondary education by helping them to (a) define and describe standards for successful transitions in their daily lessons, (b) identifies examples of strategies for applying TCCRS and CDS, (c) introduces background adult education theoretical ground and (d) encourages practitioners to create built-in critical reflections on practice. The PPD also helped to confirm and encourage instructors to continue using current practices that worked to help students to improve their college readiness preparation.

**Potential to Influence Change of Perception Towards Students Responsibilities
in the Teaching-Learning Process**

Posted responses from the teacher participants revealed that this online professional development activity influenced the participants to review their perceptions regarding three common issue, including (a) avoiding seeing only blame in their students, (b) being reflective on how they teach adult students, and (c) confirming or suggesting ideas for improving teaching practices that they may have always used. All these sub-themes helped participants understand the importance of paying attention to the individual or group needs of their adult education students as opposed to blaming them for their learning weaknesses—a theme that was prevalent in the pre-PPD stage of the research. Project staff concluded that the PPD was designed with elements that introduced participants to understand the postsecondary education skills that their adult learners need to acquire in order to succeed postsecondary settings. This helped teachers to understand how and when to evaluate their teaching so that it matches the requirements of successful transitions.

Participant: All the readings were interesting. I now have a better understanding and appreciation of the CDS and the CCRS. The three readings of week six were the ones easiest to read and relate to. They helped improve the quality of my lesson plans and how to teach research. The readings that impacted me the most were for week three “The Craft of Research”. The information was amazing and I will never assign a research paper without using the steps presented in the reading. It makes the research more meaningful and I believe students will be able handle the assignment with more success and enthusiasm. I wish I had these tools earlier...

Participant: Teachers should consider problems students have with mechanics and content and address those issues separately based on the student needs. To be truly effective, teachers should build relationships with students, and making them feel comfortable and increase their level of trust.

Avoid Seeing only Blame in Students

From the qualitative data, participants consistently agreed that the weekly readings helped them understand that students should not always be blamed for their learning problems. Participants’ weekly posts revealed that their responses were guided by the form of the perspective of what they observed in their various subjects. Consistent with literature on andragogy, (Knowles, 1980; Brookfield, 1999) participants accept that adult students learn better when instructors expose them to learning situations where they interpret experiences of others that are connected to theirs, and also when instruction leads them to see the social, political and cultural connectedness of the lesson content.

Participant: [From a writing perspective] We as teachers need to learn more about why students are not able to write successfully. The author [article] suggests that this problem starts early and many times it’s not the fault of the student. Shaughnessy addresses the emotional process that the teacher and students might experience. She recommends changing methods and approaches to help with the problem, and to allow students to connect with ideas of other students that may be different from theirs. This way, students will be motivated to write...

Participant: To be effective, we the teachers must understand the CDS because if I don’t know them, I won’t be able to teach them to students. So to be effective, teachers... must understand basic difficulties students have with language and writing standards. Teachers should not consider students vessels to be filled with knowledge and then blame those students when they do not produce the desired learning outcomes. By considering the background of the student, it is possible to understand the difficulty formal written English poses, and then make choices that best help align my teaching to meet the learning needs of my students.

The Online Pilot Professional Development (PPD):	Confirmed and legitimized participants’ current approaches	Helped participant improve current perception and approaches
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Standards-Based Pilot Professional Development

	Actual Number	%	Actual Number	%
Encourages participants to avoid seeing only blame in their students	-	-	17/17	100
Helps participants see the importance of understanding students' difficulties as skills development needs	3/17	17.6	17/17	100
Has potential to develop strategies for developing cognitive and foundational skills in adult students	4/17	23.5	11/17	64.7
Empowers instructors with strategies for developing research skills in adult students	4/17	23.5	10/17	58.8

Potential to Develop Authentic Postsecondary Skills. Participants felt that the PPD helped them to be reflective on how they teach/lesson presentation methods adult students. During the online PPD activity, participants discovered and raised ideas that commonly revealed that teachers, when preparing adult students for transitioning into postsecondary education should continuously reflect on their teaching approaches so that they can always teach to the vantage point of their adult students. In addition, participants confirmed that they could see the benefit of the PPD as that of matching content of their lessons to the CCRS and the CDS and also to the students' experiences. According to a bigger number [94.1%] of responses that fell under this sub-category teachers felt that the PPD had the potential to encourage modifying instructional approaches that use TCCRS and CDS would help students to construct new knowledge by building from their own lived experiences.

Participant: Re-evaluate teaching methods would be the first thing a teacher should do. Maybe the old way is not the best way anymore. Explore the influences in the adult students' lives... Relate teaching to what the students already know. The goal of all teachers and students is to be life-long learners; and life-long learning happens

best in community. What can be more ideal than a classroom situation where the instructor is learning along with the students? This kind of atmosphere sets the stage for the facilitator of knowledge, not just a dispenser.

Participant: We must abandon the paradigm and call into question the abilities of the teacher, meaning we need to ask probing questions about the connections between student failure and teacher methods and attitudes

These reflections, which represent a the common understanding of a majority of the views of the participants, agree with the constructivism theorists who suggest that effective student preparation for higher levels of learning involves the teacher as a facilitator of new knowledge, getting to know the students and their problems, and then believing in their abilities the teacher should then engage the students from their zones of comfort (Vygotsky, 1978; Freire, 1998; SEP, 2001; Richards, 2006; Noddings, 2007). It also involves understanding the gap between current learned skills and those defined by the post-secondary education curriculum (CDS) and then suggests taking concrete actions to close those gaps. Project staff therefore concluded that standards based PPD has the potential to encourage participants to learn from the problems that their students face and to persistently enrich their student preparation strategies so that they incorporate development of college-readiness skills. Those college-readiness skills are clearly defined in the CDS and the TCCRS. However, to bring students to the college readiness to the standards levels described in the CDS, teachers need to develop a strong knowledge base of the TCCRS and CDS.

Regarding reading and writing, for example, the following posts from two participants summarize this general view of the majority of the participants whose responses showed that the articles selected for the PPD helped participants realize that matching *teaching methods* and their content to the skills described in the TCCRS and the

CDS was important factor for developing students college readiness skills in reading and writing.

Participant: The article—Lundsford article provides examples of how to teach writing using variety of stages. First the author explains that students need the ability to form abstract ideas from information... is an important skill that is linked to the CDS and it helps to develop when teaching writing. If the student is unable to “de-center” then it is difficult for them to write—across the curriculum. I find several students do this, but I didn’t know how to fix the cause of this issue. This article has given me a new insight. I just began using literature books with the same and similar questions to the ones Lundsford uses throughout this passage.

Regarding research across the curriculum, one participant found the PPD very beneficial because it empowered the participant with skills for developing improved lessons on how to promote postsecondary research and knowledge skills.

Participant: Chapters 3-8 of “The Craft of Research” are the best readings I have encountered in a long while. They give excellent theoretical guidance on how to do simple research from formulating the question to be researched to writing the paper. The language used in these chapters, and the steps identified are suitable for the level of my current students. The content is directly related to developing the foundational skills—research, writing and reading across the curriculum. I can link the activities to the key cognitive skills—intellectual curiosity and academic integrity. Now, I hope to use a well written persuasive essay for the students to analyze. They have to define the author’s argument, identify the warrant, and evaluate the author’s evidence.

Several participants reported that they had learned from the PPD, a need for reflecting from a reading and writing perspective. Focusing on this approach, shows that the PPD offered participants ideas to realize that teachers of adult education students need to understand the CDS’s foundational skills and cognitive skills in order understand what to do in order to effectively prepare the students to be ready to read and write at college

level. Most reflections in this category agreed that PPD had revealed that successful postsecondary instruction should be student centered and that development of writing skills should be influenced by students' backgrounds before students can apply the skills across the curriculum. To achieve these participants agreed that the PPD had helped them to develop a clear focus on what to teach, the skills that students should demonstrate, and how to support student learning by aligning teaching resources to develop specific standards defined skills and finally to focus on aligning content across the curriculum so that it matches the expected development of postsecondary level cognitive and foundational skills.

Participant: I feel Shaughnessy's most important point is... the problem with many Basic Writing courses is not the student's writing or the student himself, but rather the teacher and/or administrator's *ideas* and *ways of approaching* [teaching methods] that writing. Shaughnessy likens this approach to that of a doctor (the teacher) discussing her patients (students) who assumes that it is the patient with the malady rather than the doctor with inadequacies. It is the student's "health" that is often called into question rather than the teacher's....

Participant: I have begun teaching Science, Social Studies, Math and Writing with more depth. Rather than just teaching decimals, I am teaching the metric system. Rather than teaching the geometry problems in the Steck Vaughn book, I am showing the logic and theorems behind the problems, so my students can achieve reasoning skills through math problems. In math for example, I am now using data from city populations to teach students about graphs and extrapolation

While adding the dimension of careful planning for lessons to match the cross disciplinary skills needs of their students, another participant extended this voice when he/she posted a response that emphasized that the PPD had revealed that lessons should not be designed to a one-size fits all model. From the research question, *student centered teaching approaches*

would mean that teachers matched their instruction to embrace those TCCRS and CDS skills for which students would have demonstrated a deep need.

Participant: The most important point from this article is that English teachers should evaluate where their students are academically. This would help them to plan lessons according to the college ready skills needs of their students, rather than try to use generic lesson plans.... The author(s) emphasize that sometimes we, as teachers need to change our teaching styles so that our students can learn. If we start every class based on what “we” think need to be taught, then our students may not be ready, we can cause a lot of confusion with students and their teacher as well

According to the overarching research question and the purpose of this research project, this reflection adds the understanding that participants learned that each time teachers prepare lessons, they need to ask themselves a few CDS related probing questions in relation to each of the topics they will teach, including (a) what skills CDS can my students demonstrate already? (b) what skills do they still need to demonstrate before they can learn this new material (gap)? (c) in which other topics from another subject area(s) do they need to apply the cross disciplinary skills that I am about to extend/develop with this lesson? These questions will not only help teachers of adult students to close the gaps in terms of skills needed to survive in postsecondary education, but students will also be able to master other skills required at CCRS level. This PPD therefore has the potential to ensure that instructors of adult students are equipped with ideas to be able to develop in their students, all the college readiness standards and skills in a clear and well-defined manner. This approach in turn, will help their adult students to master those college readiness skills (Conley, 2008; THECB, 2008). The quote above also emphasizes the

importance of making sure that instructors use adult student centered approaches (Knowles, 1980).

Project staff concluded that educators of adult students who follow this lesson presentation model of promoting student participation and collaborative learning will always ensure that all students become actively involved in constructing new knowledge, acquiring college readiness skills, and in selecting what they need to learn and how they would like to learn the concepts. One big voice that continued to come to the surface in most posts was that adult students learn better in a participatory but democratic social environment (Knowles, 1980; Merriam & Caffarella, 1999). This observation demonstrates that the PPD has the potential to equip teachers of adult learners with instructional related theory and ideas to create collaborative learning committees in their classrooms. This finding is consistent with what literature on adult learning theory encourages (Knowles, 1982; Merriam & Caffarella, 1999; Brookfield, 2005; Conley, 2008).

PPD has Potential for Developing Authentic Evaluation Techniques for College Readiness and Instruction

Posts consistently revealed that participants acknowledged that the PPD had shown that lesson activities should include a deliberate focus on assessing the presence or absence of college-ready learning outcomes, including students' abilities to

- research and analyze information across the curriculum
- write across reports the curriculum
- solve problems
- collect and organize data to make senses and to use it to respond to given questions

- interpret information by drawing conclusions from a variety of acknowledged sources

Participants confirmed that they saw potential guidance from the CCRS and CDS to help them develop evaluation instruments that included those skills and standards described in the standards.

Standards-Based PPD Encourages Ongoing Assessment

Consistent with literature, approaching adult learners with standards driven instructional approaches as described in the CDS and the TCCRS actually work and will help teachers of adult learners to embrace the teaching practices, ideas and beliefs that help to successfully ensure seamless transitions to postsecondary education. One of the most common responses to the readings was that when using the CDS to help students prepare for college transition, teachers discovered that assessments of presence or absence of CDS skills should be done in an ongoing manner. According to the participants, this PPD has the potential to ensure continuous and complete surveillance in all teaching-learning processes. The PPD empowers instructors to be able to tell exactly what skills need more attention.

What project staff learned from the participants' responses is that a PD guided by TCCRS and the CDS has in-built principles of the adult learning theory and helps in the development of critical thinking skills which are key to college success. The PPD also encouraged participants to practice ongoing assessments/evaluation of teaching-learning outcomes against the CDS. Project staff also concluded that the PPD revealed its potential to help instructors of adult students to understand what standards are and what they are capable of doing in terms of focusing instruction so that ABE students develop the desired college-readiness skills and knowledge. Therefore, it is important to introduce a

professional development that uses TCCRS and CDS to guide teachers of adult students do three things;

1. helping teachers of adult students to ensure that instruction is consistently aligned to expected college readiness standards
2. ensuring that each lesson is explicitly defined according to the matching standards and that assignments are also defined by the college readiness standards
3. helping teachers to target the development of college readiness skills within each and across the content of subjects

Learn from the Students. The PPD has the potential to encourage teachers to learn from their students. This will help teachers of adult students to fashion lesson plans that focus on closing the gaps between the current levels of the skills that their students exhibit and those adult students are expected to demonstrate at a given time within each topic.

Participant: The article suggests that effective teachers must “*make a decision that demands professional courage*” and “*remediate himself to become a student of new disciplines and of the students themselves*” (p. 317). I think this is an excellent suggestion because it requires us, as teachers to recognize that we too still have the ability—and the need—to learn, both about and from the students. It [the pilot professional development program] also encourages us to think outside the box so to speak and to move from our comfort zone or discipline and learn from other areas of study and research—and for an English teacher like me, perhaps this would mean studying mathematics or music, and for a mathematics teacher perhaps language or philosophy, etc.

When teachers learn from their students, it will help ensures that their instructional approaches and selection of teaching material is continuously modified to focus on developing specific college-readiness skills and knowledge areas in which adult

students demonstrate need. In addition, student centered approaches encourage instructors to open dialogues with individual students so that they develop deeper knowledge of their students' individual learning needs. The PPD also has the potential to help teachers continuously raise standards for students, and to enhance students' awareness of where they need to be in order to be college ready.

Participant: This pilot project has made me realize that it is necessary for me to go a step (or many steps) beyond what I had been doing in the classroom, and what I expect from my students. I need to enhance each student's awareness of where they need to be, set the bar a little higher, integrate more cognitive and foundational skills into my lessons, and more clearly communicate what I expect from them and what they should expect from themselves. I need to continue to assist them in becoming more active participants in their learning and responsible for their learning. When creating a lesson plan I now think broader and try to figure out how other skills could be combined in one lesson. I have more focus on the future – how will the skills we are working on today apply to what they will need for tomorrow, instead of simply how they can complete each task and help them focus only on test taking skills

**PPD Provides Techniques for Aligning Instructional Methods
to Standards for Developing Expected College Skills**

Participants consistently agreed that a better understanding of the demands of each standard helps teachers of adult students to make informed decisions regarding those teaching approaches and techniques that may have the potential to help students acquire the much needed postsecondary skills as defined in the TCCRS and CDS. For example, participants reported that after reading each group of standards and other related articles, she had to create lesson plans that covered the different components of the CDS by introducing examples of teaching-learning activities that match the outlined standards. Therefore, basing on the literature/articles read, participants reported that one benefit from the PPD was that the readings helped them realize that it was important to design assignments whose themes were founded on adult education theoretical understanding.

Teachers observed that when guided by TCCRS and CDS within each subject area, they needed to organize assignments such that they introduce both key cognitive skills and foundational skills that challenge their students need to demonstrate at the time of exiting their different subjects. Citing readings for THECB, teachers reported that the PPD helped them produce quality lessons plans by encouraging comprehensive coverage of the TCCRS and CDS—because, “generally, the more standards a student can demonstrate successfully, the more likely it is that he or she will be college and career ready” (THECB, 2008, p. iv). Participants reported the content of the professional development helped them realize that adult students could benefit if instructors helped them master the TCCRS at subject level first while they continuously and consciously assess and develop in them the exit skills—CDS. This general consensus led the project staff to conclude that, TCCRS should be treated as those skills to need to develop throughout each subject and then the CDS should be treated as those skills that students need to demonstrate by the time of exiting their different adult education programs.

According to the reflections from the participants, the focus of the TCCRS breathed new life and energy to their daily lessons and helped adult students to succeed in their GED and or in their TEKS first and then later they will be ready to demonstrate the CDS. Participants discovered that there was a relationship between skills listed in the TCCRS and those that were required for students to succeed in the TEKS or GED. From the various posts, project staff concluded that the PPD has the potential to help participants to be able to go past their fear of opening the college culture to the adult students by encouraging the teachers to apply basic learning principles across subjects.

Participant: I often use these types of assignments for my students. I normally begin the planning with the end product in mind. For instance, the end product for this week was an essay planning the ideal vacation. The essay focused on not where

the student planned to go, but why he/she chose that place, as well as what activities he/she would be doing there. The student would then be given a budget for the vacation and a time frame. Next the student would be asked to research using internet to find a place, mode of travel, and to determine a budget. We would work on using specific verbs and adjectives to describe the place as well as elaboration and details. Next, students would organize their ideas into sections: place, travel, activities, and budget. Following this step, students would write the essay including a comprehensive plan for the trip that meets their budget and time frame. Since most of my students have not travelled a lot, under such conditions this assignment would have so far shown that it has a lot of challenges. The assignment would be a good one for gauging the CDS because it is cross-curricular in nature—including language, social studies, geography, math and technology. In my view, helps me identify the indicators—cognitive and foundational skills that my adult students should demonstrate...

Participant: I use the biography of a person that they really like, admire and are inspirational for them and others. After they complete this activity, I ask the students to share their work and make questions about others biography, make comparisons and or similarities and differences between them. After such a workshop, I ask my students to write and with all the information getting for them. This activity involves developing the intellectual curiosity skills, reasoning, working collaboratively with others, and problems solving all of which are aspects of the CDS—this helps me identify what students can do with the content and the learning materials related to each of the skills that I am teaching. This way, I guess I am able to target the content of instruction to match the right level of difficulty for my adult students...

These posts address some of the skills and strategies mentioned in the CDS and TCCRS including, seeking supports from others, planning, budgeting, writing,

researching, organizing, using technology and interviewing. Therefore, this PPD demonstrated that an adult classroom, when guided by the CDS and the TCCRS, is characterized by a huge emphasis on cooperative learning, accepting the way others think and behave, flexibility, learning independently, and unifying knowledge from various subjects to be able to create new knowledge. This is because standards and adult education theories from the PPD helped participants realize that their students are different.

Potential for Developing Basic Research Skills for ABE Students

Sources of Information: Results from the posts revealed that participants discovered ideas about how to help beginning adult student researchers to develop citation skills, data/information location skills and how to make conclusions from data. Four potential research sources for finding data/information related topics that were consistently mentioned by the participants after they read the articles included helping students to use libraries, people, bibliographical trails, and the internet to collect data. Clearly, participants reported that the PPD had helped them discover that each skill should be developed separately and in scaffolding small incremental approaches. In relation to the four sources of information, skills related to the CDS and the TCCRS that teachers discovered were vital for helping students to pass GED first and then proceed to postsecondary education or career related activities included (a) helping students to be able to read critically within and across the curriculum, (b) take full notes, (c) organizing information, (d) predicting and (e) seeking help. Appendix DD shows what one participant discovered was important information to take from the PPD that helped his/her students to know in order to be able to read critically within and across the curriculum. Another participant added a post that summarized how she/he would develop research skills for beginning researchers like GED students,

Participant: I will ask students to take a trip to the local library. Allow the students to pick a topic and learn how to locate information on that topic using card or computerized catalogue. Each student must then write a report giving direction as to how to accomplish this task. Ask students to make a list questions related to their research topic. Put students into groups and have them discuss the relevancy of their questions related to their topic... students will need to identify someone they could possibly interview to gather additional information. Also ask students to list two other sources that they found from the bibliography of an original source.

In relation to sources of information, one participant shared a post that revealed the importance of the information gained from the PPD. The participants discovered that the readings on research and other sources of had helped them realize the importance of helping students know the different sources of information. The post also revealed that the PPD has the potential for developing a variety of skills including note taking, using library catalogs and classifying different sources.

Participant: Wow!! If only our students could go to the library on a regular basis!! These chapters covered the use of libraries and their value in research studies. The library has a multitude of resources for adult education students to be successful in their resource projects. Catalogs, resources, note taking, secondary resources, and the list goes on and on. These articles not only describes the resources available for students, but how one can use these resources to correctly help students cite the sources to make research credible and high quality.

Similarly, these posts also address some of the standards and skills mentioned in the CDS and TCCRS. They include interviewing, use of technology, writing and researching. While suggesting a model of how to develop research skills for her/his beginning researchers, one participant emphasized a need to ensure that beginning researchers learn from their

immediate experiences. The following post suggests an activity that takes recent events from the country, or local events that relate to students life.

Participant: Since Midland is a town where the economy revolves around oil, I would select a recent event that students could relate and find relevant, such as the BP oil spill in the Gulf of Mexico. Students can gather information about the spill per se in the news and newspapers. They can talk to people related to the oil industry to find out if the oil spill might affect oil prices. They can read what meteorologists think might happen in the Gulf during hurricane season. After students gathered the information, I would explain what a claim is and what evidence is. I would divide them by groups and ask them to write their information in a Clustering Format, and afterwards an essay. I would give students the following instructions:

1. *Write* a claim in the center circle
2. *Write* three evidences that support your claim in the circles connected to the center circle
3. Write a five paragraph essay using the above information

Other skills related to research and writing that participants mentioned included organization of research paper, teaching ethical considerations, making sure the data is accurate—precision, sufficiency, representativeness, authority and perspicuity. With guidance from the readings related to developing research and report writing skills among beginners, participants provided a lesson plan model that integrates some of the college-ready instructional approaches that may promote transitions to postsecondary education (see Appendix BB). The assigned readings from the *Craft of research* helped participants prepare lessons to help students understanding *reliability* and then ensure when they write.

One group of participants mentioned that they found it difficult to link the topic of ethical considerations to the ideas from the CDS. This following post summarizes the general feeling for those participants, whose post fell in this category,

Participant: I want to note here that I had difficulty finding a connection between this reading and the skills we want to equip our students with to ensure they are successful upon entering higher education and the workforce. It is not that I feel the information is not important (it is incredibly important), but I feel it addresses issues that do not come up in the first years of undergraduate studies. In fact, I think in some instances these issues do not arise until a student begins graduate work

Because of the number of similar posts related to this article, project staff concluded that it was necessary for program staff to model this aspect of the PD for some participants. The computer software that was used in this PPD does not allow participants to view responses from other participants. Project staff realized this weakness late into the online section of the research process. An improved version of this PD will allow participants to view posts from other participants so that they can learn from other participants' ideas.

The PPD has Potential to Provide Knowledge of Adult Learning Theory

Throughout the online PPD, most participants reported that the activity helped them realize that they needed to understand the individual needs of their adult students first in order for them to be able to understand how they would effectively prepare lessons that can help them to be ready for postsecondary education and environments (Knowles, 1980; Brookfield, 2005; Conley, 2008). One group of responses in this category confirmed that participants thought it was important to first understand those behaviors that students should be able to demonstrate within a postsecondary environment before they could consider themselves ready to preparing their students for postsecondary learning

environments. This approach helps teachers to effectively design adult education strategies for postsecondary bridging. The role of the instructor therefore is to facilitate learning.

Participant: For adult students making the transition into college, “*college readiness*” means not only academic preparation, but also personal preparation. I gained a lot from this professional development and I am now aware that preparing adult students for postsecondary education involves building well-defined standards-based lessons and to design assignments that are relevantly aligned to students’ needs—that help them to demonstrate the skills defined in the CCRS and the CDS. It may require changes in attitude, expectations, and beliefs about adult students. “College life” has its own culture, and adult students need help for them to be aware of that culture so that they can be active, productive and successful independent participants in the learning community. This means I should first understand theory related to how adult students learn, then learn more about those cross-disciplinary skills and knowledge required for my students to succeed in their GED first and then to succeed within postsecondary education set-up.

Discussing the Creation of Learning Communities. One clear trend that was easily discernable from the data was that participants reported that the PPD helped them realize that it was important for them to create learning communities through the use of small but teacher created groups. Through such groups, students should be able to generate ideas related to the topic that they will be learning at that particular time. When teachers create learning communities in their classrooms, instructors will be promoting development of college readiness skills related to engaging scholarly inquiry and dialogue, collaborating, accepting criticism and ideas from others, and seeking assistance from others. All these behaviors are required characteristics in postsecondary educational settings. The participants agreed that, in the light of the information from the PPD, they needed to modify their lessons to reflect the college settings and to constantly remind students that in postsecondary education, the system would require them to demonstrate abilities to collaborate and produce a product of their collaboration.

PPD Legitimized Current Instructional Practices. One consistent pattern that emerged from the reflections from the online PPD showed that some participants reported that some of their current practices were legitimized by the readings from the PPD and that further reflections led them to realize need for continuous modification of their current practices to improve transitioning adult students into postsecondary education. This was due to the fact that some of the participants expressed that they had limited experience using standardized teaching approaches, especially the TCCRS and the CDS.

Participant: In the past, I have always noticed that students draw from their own personal experiences instead of sticking to the assigned topic. I find several students do this but I didn't know why or how to fix the cause of the issue. This article has given me new insight. I began using a class set of literature books with similar questions that Lunsford uses throughout the passages. I felt it was important because the assignments model good writing with correct grammar and punctuation.... This article addresses the importance of reasoning and using data when writing, both aspects being listed cross-disciplinary standards.

Participant: I found the articles' ideas to be the most helpful to me in designing new standards guided lessons and *activities for developing skills related to writing across the curriculum*. For example in Lundfords' article, her examples detailing the integration of hands-on learning were particularly resonating for me. And *I am currently working on re-designing many of my approaches to teaching punctuation and grammar*. This Lundfords' article is also related to the skills named in the CDS, such as engaging students in scholarly inquiry and dialogue; helping them to strive for writing accurately and precisely, constructing well-reasoned arguments, and to *write clearly and coherently using standard writing conventions*. The Lundfords' article has a clear guide on how to help student compose and revise drafts.

Participant: I benefited most from the insight I gained from the articles for this week. I have not yet, but do plan to implement the use of “workshops” in my classroom as described in the “Cognitive Development and the Basic Writer.” Most of all I will implement the use of exercises that focus on students recognizing and discovering knowledge rather than that memorizing. All along I have been emphasizing a lot on memorization but this article says that doesn’t represent real learning. I am excited to use the activities similar to the ones observed in the reading. I think my students will have better outcomes than they were previously with the *drill* work I used previously. I now understand why that work was ineffective.

The participants accept that the articles helped them to become more critically reflective teachers, particularly helping the teachers to reflect on how current teaching practices will need to change to meet the need to prepare students to become independent learners, and to be able to *write across the curriculum and to discover knowledge*. One important finding of this study is that throughout the post-PPD results, participants’ discussions and posts resonate with the literature-based definition of what college readiness entails (Conley, 2008; THECB, 2008).

The PPD Encourages Promoting Collaborative Learning Activities

The participant accepts that the articles helped her/him to become a critically reflective teacher, particularly helping the teacher to reflect on how current teaching practices will need to change to meet the need to prepare students to become independent learners, and to be able to *write across the curriculum*.

Participant: I plan on introducing the activity on working in small groups discussing writing activities to improve everyone’s writing of essays. I believe I will talk to the students about building trust with each other first so that they can feel comfortable in helping each other improve their writing.

Participant: Assignments should lead students from imitating to generating new ideas. They should guide students to reason and infer. The teacher should not lecture.... Students should write and discuss their writing in groups. Exercises should guide students to infer generalizations based on their own work. After reading this article, I would have my students work in groups to answer the questions. I would have the students rewrite the article so that it supports the charts and graphs that I will give them. This will allow the students to use the timeline and the information in a logical manner that supports their understanding of the data.

Participant: At this point, I have not implemented any new lessons, but after reading these articles, I now know what kinds of lessons to start planning with my students. First I need to know where my students are academically. I need to do some kind of informal assessment to get a feel of what they can do. Next, I now know that I need to start with something small and then gradually get them to the essay. Previously I always thought that they could just write. Following this reading, group work and/or activities is be something that I would like to start working with because I know that students will feel more comfortable with writing if they work together and they can gradually start writing on their own.

These quotes demonstrate that the participants gained new knowledge from the readings, and were able to link the content of the readings to the CDS. The participant reveals that this new knowledge helped to enrich the approaches that he/she as been using. Following the readings, the participant will promote collaborative lesson planning with the students, collaborative group work and using incremental concept building to allow adult students to gradually build on the concepts that they will learn. The participant concluded by saying,

What I have learned is that students will become better writers if they... start writing short paragraphs and gradually build those paragraphs into other paragraphs, so that one day they will realize that they actually have an essay before their very own

eyes. I think I will *break it down* from the very beginning it will start to make sense to them and then writing will not be such a struggle for them.

The PPD Showed Need to Promote College Culture in the Classrooms

Reflecting on the overall structure of the TCCRS and the CDSs when read together with the weekly articles, participants reported that participation in the PPD helped them realize a need for teaching approaches that involve developing what participants referred to as, *a college culture among students within their classrooms*. This finding was a new discovery from this study that led the project staff to conclude that it was important to add the development of *college culture skills (TCCRS)* to the list of foundational skills for the CDSs. Examples of key college success skills suggested by the participants include that the standards based PPD helped them realize that it is necessary to include (a) organizing skills, (b) making presentations, (c) personal responsibility, (d) ability to develop relationships/networking with other students and professors, (e) abilities to work in teams, (f) goal setting and (g) knowing when to seek help.

According to this major finding and category of the responses, participants viewed college culture skills as those that allow teachers to create learning experiences with a climate that best helps adult students to discover students' habits that can make them to succeed within a college learning environment. Such instructional skills included teaching behaviors involving encouraging students to discover new knowledge and how that links to learning strategies that can successfully help adult students to be ready to succeed in college; using different approaches to reading and researching; and also to be able to analyze data and write about that researched data.

Suggested Model for Incorporating TCCRS and CDS's into Lesson Instruction

A second outstanding finding of this PPD study is the data that revealed that participants suggested a teaching model based on cross disciplinary standards (CDS) for

transitioning adult students into post secondary education. Throughout the online professional development study, participants shared a variety of suggestions regarding how they would develop lessons that incorporated the CDS and the TCCRS during instruction. A closer analysis of the different lesson plans and the written narratives from the participants revealed a possible cross disciplinary *standards model teaching* (STM) for ensuring successful adult students' transition to post secondary education.

Project staff juxtaposed the different lessons plans and modifications that participants posted on the online PPD with the cross disciplinary standards—Key Cognitive Skills and the Foundational Skills from THECB. Participants added a few more skills to the two lists. Under intellectual curiosity skills, participants suggested inclusion of a new cross disciplinary standard that students should be able to demonstrate the ability to *question and appreciate the work of others* and *time management and organizational skills* were added to the work habits skills. Participants also suggested inclusion of another cross disciplinary standard—*developing college culture skills* to the list of foundational skills. Figure xx shows the CDS at a glance adapted from the THECB (2008, pp. a59-a65) including additional Key Cognitive Skill from the results of this study.

Figure 3: Cross Disciplinary Standards at a glance-Tool for ensuring students meet college requirements

Key Cognitive Skills		
Intellectual Curiosity	Work Habits	Problem Solving
<ol style="list-style-type: none"> Engage in scholarly inquiry and dialogue Accept constructive criticism and revise personal views when valid evidence warrants Question and appreciate the work of others. 	<ol style="list-style-type: none"> Work independently Work collaboratively Time management and organizational skills. 	<ol style="list-style-type: none"> Analyze a situation to identify a problem to be solved Develop and apply multiple strategies to solving a problem Collect evidence and data systematically and directly relate to solving a problem.
Academic Behaviors	Reasoning	Academic Integrity [Academic Honesty]
<ol style="list-style-type: none"> Self-monitor learning needs and seek assistance when needed Use study habits necessary to manage academic pursuits and requirements Strive for accuracy and precision Persevere to complete and master tasks Show commitment Consistently participate in classroom activities 	<ol style="list-style-type: none"> Consider arguments and conclusions of self and others Construct well-reasoned arguments to explain phenomena, validate conjectures, or support positions Gather evidence to support arguments, findings, or lines of reasoning Support or modify claims based on the results of an inquiry. 	<ol style="list-style-type: none"> Attribute ideas and information to source materials and people Evaluate sources for quality of content, validity, credibility, and relevance Include the ideas of others and complexities of the debate, issue, or problem Understand and adhere to ethical codes of conduct.
Foundational Skills		
(A) Reading Across the Curriculum	(B) Writing Across the Curriculum	(C) Research Across the Curriculum
<ol style="list-style-type: none"> Use effective pre-reading strategies Use a variety of strategies to understand the meanings of new words Identify the intended purpose and audience of the text Identify the key information and supporting details Analyze textual information critically Annotate, summarize, paraphrase, and outline texts when appropriate Adapt reading strategies according to structure of texts Connect reading to historical and current events and personal interest. 	<ol style="list-style-type: none"> Write clearly and coherently using standard writing conventions Write in a variety of forms for various audiences and purposes Compose and revise drafts. 	<ol style="list-style-type: none"> Understand which topics or questions are to be investigated Explore a research topic. Refine research topic based on preliminary research and devise a timeline for completing work Evaluate the validity and reliability of sources Synthesize and organize information effectively Design and present an effective product Integrate source material Present final product.
(D) Use of Data		(E) Technology
<ol style="list-style-type: none"> Identify patterns or departures from patterns among data Use statistical and probabilistic skills necessary for planning an investigation, and collecting, analyzing, and interpreting data Present analyzed data and communicate findings in a variety of formats. 		<ol style="list-style-type: none"> Use technology to gather information Use technology to organize, manage, and analyze information Use technology to communicate and display findings in a clear and coherent manner Use technology appropriately.
(F) College Culture Skills		

<ol style="list-style-type: none">1. Use critical thinking approaches2. Organize information3. Make presentations4. Use personal judgments to prioritize activities so that they set and meet personal goals5. Networking--create relationships that benefit/support their academic growth6. Know when and where to seek help	
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Source: Adapted from THECB (2008).

To understand how the model works, we read the suggested standards based lesson plans and then we asked the following questions that enabled us to see how teachers deliberately developed standards enriched college readiness skills lesson plans as suggested by the CDS.

1. What college readiness skills were incorporated into the suggested lesson plans?
2. How does the teacher suggest he/she will apply the skills across the curriculum?
3. How does the teacher of adult students align their teaching resources so that they match the skills defined in the CDS and the CCRS?
4. How do the identified skills relate to successful college transitions or determining when students are college ready?
5. How much repetition is required for students to clearly master the college readiness skills?
6. How is the teacher helping to develop critical thinking skills among adult learners?
7. How do we tell that the students can readily demonstrate the learned standards?

Figure 4: CDS related vocabulary used by participants in the lesson plans and suggested presentation techniques that may help teachers of adults to develop TCCRS and CDSs or college readiness skills

Summarizing passages	Comparing	Collaborating in groups	Making organizers	Analyzing the information
Making conclusions and supporting them	Writing in your own words	Asking questions	Reading and summarize	Identifying/What problems do you see?
Composing	Identifying patterns	Listening and writing the main points	Reading and underlining main points	Debating
Writing notes from stories and discussing	Reporting your findings Finding solutions and sharing them with others	Putting events from the story in order starting with	Reading and writing questions regarding what they may want to know from the author of this story	Organizing information and record Categorizing
Dramatizing	Group interviewing and one-on-one interviewing	Making trips, observing and recording...	Following guided conversations/ <i>discussions</i>	Problem solving games
Case studying	Participation in	Participative	Suggesting ways for	Recording and

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and providing solutions	groups	storytelling and conversion techniques	improving a product to a colleague (student)	editing drafts Sorting information
Listening to others and responding	Creating journals interpreting	Being sensitive to others	Role playing activities...	Organizing groups to share lived experiences and problem solving techniques
Watching video cassettes/observing processes and recording	Making lists of guiding materials to do a planned activity-research	Drawing (models), illustrating and explaining	Teaching others and or modeling	Programming Developing map concepts
Identifying	Grouping... Classifying according to a certain characteristics...	Finding information about your friend and record it	Writing a logical story using this information	Writing questions that you would ask someone to find out about this
Solving problems				
Writing a response to the speech by the president on the topic of	Imagining you meet with a person who makes doughnuts...	Reading and write information related to...	Finding information about the __ from the internet	Showing/ demonstrating
Interviewing a friend and writing	Watching this video and summarizing	Listening to this tape and respond/react	Discussing Using a list to discuss...	Reading and then acting a story...
Summarize	Listing and reporting...	Classifying and describe each group	Discussing and then writing	Explaining/selecting and re-arranging
Finding/showing the difference	Organizing or put into categories	Choose and defend your choice	React/respond to the...	Capture the main ideas...
Suggesting	Showing/ demonstrating	Comparing/ contrasting	Researching and writing	Predicting/opposing
Note taking	Making connections between old knowledge and new knowledge	Reading for specific information	Using time lines to tell stories/describe events	Comparing and contrasting
Comparing some given matrices Searching for information...	Analyzing and evaluating Organizing time and events...	Practicing... Editing... Drawing from their personal experiences...	Calculating Synthesizing...	Argue for/against Breaking it down
Illustrating	Developing activities that span the disciplines	Group analysis	Demonstrating interconnectedness	Describe the process to your best friend

Interpreting, and working with pictures and graphs	Applying knowledge of mathematical concepts to	Defining and selecting data to use in solving the problem...	Determining, and or communicating results using tables, algebraic models, graphs, and charts	Reading, writing, and interpreting
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Developing Postsecondary Skills Through CDS

Participants reported that the PPD as had the potential to help them consciously develop in their students the *needed or expected postsecondary skills*. According to the participants, *expected postsecondary skills* are those learning behaviors that support adult students to demonstrate learning abilities valuable or helpful for to them to study and succeed at postsecondary education level. Developing the cross disciplinary skills among nontraditional students will equip them with postsecondary student culture [college culture skills] to pursue and succeed with postsecondary academic and career-market credentials. According to the participants experiences with this PPD that focused on the use of CDS equipped them with knowledge about how to evaluate when their students were ready to transition and succeed in postsecondary education by:

1. introducing ideas on how to build a culture of higher education expectations
2. helping to be conscious and deliberately aim to reduce the gaps in postsecondary participation and success
3. suggesting ideas on how to change instructional strategies to consciously help adult students acquire postsecondary skills, attitudes and behaviors
4. helping participants to know how to increase or expand their students' focus on those academic/curriculum combinations they will need in order to secure employment and career opportunities in postsecondary environments
5. helping the participants to raise their teaching strategies to levels beyond the demands of the challenges faced by adult students

Conclusions

Findings from the PPD lead to the following conclusions which answer the overarching question of the research project which asks how the use of CDS and CCRS promote understanding of topics and assignments from the context and view of students and helps students identify skills that are key to demonstrating achievement of learned concepts and readiness to transition to and succeed in postsecondary education:

1. Introducing standards to guide professional development for teachers of adult education promotes deeper understanding of how topics within the subjects relate to each other, and will make it clearer to teachers of adult students on how to use specified benchmarks to systematically develop college readiness skills and knowledge. This approach helps teachers of adult students determine the skills that students should and can demonstrate and those that still need to be developed/improved in order for adult education students to be considered college ready.
2. The use of standards to develop a professional development course for teachers of adult students ensures that teachers become equipped with skills and knowledge to understand and interpret what college readiness looks like, and sounds like among their adult students. It also equips the instructors with ready attitudes to continuously develop instructional methods that demonstrate a holistic focus to planning and develop postsecondary skills and knowledge that cut across the curriculum—including foundational and key cognitive skills. When teachers plan with standards as benchmarks, it helps them to continuously evaluate learning outcomes in relation to continuous development of desired college level behaviors, knowledge, attitudes and skills.
3. Participating in a standards-based professional development empowers the teachers of adult students with the ability to tell when their adult students have acquired the abilities needed to carry out college relevant learning tasks and to provide the students with abilities, skills, attitudes and knowledge needed to carry out college level assignments. The professional development empowers instructors of adult students with alternative strategies to fill the college level skills and knowledge gaps

so that adults students will become empowered to demonstrate higher order thinking skills.

4. Standards-based professional development makes instructors teach with focused rigor on a wide range of specific benchmarks as determinants of how students have learned (skills and abilities) and to teach content at the right levels for their adult students.
5. Teachers with some experience with standards-based professional development will become equipped with decision making abilities to prioritize—through planning and or preparing, lessons that will be based on their students’ college level needs and other established benchmarks, lessons that will raise their students’ level of mastery skills and knowledge related to GED first and then postsecondary education.
6. Teachers develop teaching-learning tools and content tools for continuously evaluating the impact of teaching-learning processes. The tools may also be used for assessing and improving professional development programs so that they emphasize on focusing assessment on accurate standards-based reporting on learning outcomes that describe college readiness.
7. The standards based professional development provides teachers and program planners with clear strategies to reform and aid adult education transition programs to better align resources to improve efforts and quality of teacher skills by eliminating ineffective approaches.

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