# The Education Bridge: A Longitudinal Analysis of the ACT 101 Programs' Effectiveness on Student Success

Chuck A. Baker Ed.D.

Follow this and additional works at: https://digitalcommons.wcupa.edu/jarihe

# The Education Bridge: A Longitudinal Analysis of the ACT 101 Programs' Effectiveness on Student Success

Dr. Chuck A. Baker, *Delaware County Community College*

## ABSTRACT

Scrutiny has been placed upon the K-12 program and its ability to effectively prepare students as learners and SAT performance has been used as a barometer of the efficacy of K-12 programs. Colleges keep records on academic performance and job placement rates to examine effectiveness. Less is known about the utility of compensatory programs' linking poor students from high school to college. One of these programs is ACT 101. The purpose of this research is to examine the ability of the ACT 101 program to be supportive assisting students in adequately preparing for college. During the summers of 2005, 2010, and 2016, students in the Act 101 program were analyzed for their levels of skill, will, and self-regulation using the LASSI assessment. Findings show that the ACT 101 program sufficiently establishes student competencies that aide successful navigation of college and enhance the likelihood that students have productive results as learners.

### Poverty and Academic Achievement

Substantial information has been written about socio-economic class and SAT performance and results suggest that socioeconomic background is associated with SAT outcomes (Zwick et al., 2007; Zwick et al., 2011; Dixon-Roman et al., 2013). Since many institutions of higher education use the SAT scores as a sifting and sorting mechanism for who gets accepted in, the relationship between socio-economics and college access establishes a tautological process in which well-to-do parents begat well-to-do college students. Since education is a means of upward mobility, this circular process establishes impediments for equity for poorer families. Recent data shows that the average income for those with high school degrees was $19,422. Those with Associates Degrees had mean incomes of $21,539 and Bachelor Degrees had mean incomes of $35,121. Given that education is the gateway out of poverty, intergenerational mobility as measured through econometric elasticity models should reflect positive gains between baby boomers, generation X cohorts, and millennials unless these impediments dilute the upward mobility of the poor. Mazunder in Corak (2013) examined the elasticity scores of intergenerational mobility in the United States of America from 1950 to 2000. Lower elasticity scores occurred in the 1950s, 1960s, and 1970s (i.e., .30, .32, .35 respectfully) the time period in which baby boomers were entering the job market when compared to the 1990s, and 2000s when elasticity scores reflect less intergenerational mobility (i.e., .55, .57) for generation Xers and millennials upward mobility. Decreases in intergenerational mobility intensify resource scarcity for those who already experience impoverishment.

Those who suffer from resource scarcity are more likely to attribute negative outcomes to be a result of personal flaws (e.g., a lack of industriousness) and less likely to attribute them to structural factors (e.g. race, gender) (Godfrey & Wolf, 2015) and yet, students who learn to take control of their academic performance through attributional information designed to encourage, personal-effort, and motivate perform better (Noel, et, al, 1987). In addition, resource scarcity may provoke out-group hostilities and increase ethnocentrism (Hobfoll & Lily, 1993; Hobfoll & Shirom, 2001; Hobfoll, 2004). Furthermore, since at least 1977, research has supported the association between economic impoverishment and lower scholastic expectations. Samuel Bowles showed that students whose families were poor were less likely to desire to go to college than were students who lived with families of wealth. In addition, research supports that poor students are significantly more likely to drop out of school, have lower grades than other students who do not live in poverty, and perform worse on standardized tests (Balfanz & legters, 2004; Guskey, 2011; Hopson & Lee, 2011; Reardon, 2011; Stuart & Hamel, 2011). In essence, the relationship between childhood impoverishment and less-than-satisfactory academic performance is well corroborated (Center of Education Policy, 2011; Reardon, 2011; Tavernise, 2012).

## Support Programs and Academic Achievement

The desire to help disadvantaged groups can be dated back to Lyndon Johnson's War on Poverty in 1964. An attribute of the program was the desire to eliminate the gap between the rich and poor by increasing the academic benefits that poor students receive. During this epoch, compensatory education programs, like head start and kindergarten have been utilized to establish a solid foundation for the education of youth. Along this route, compensatory programs have become one of the primary means to diminish or eradicate the learnings gap (Office of Head Start, 2017).

Several studies have supported the importance of compensatory programs and academic achievement. Research by Matthews and Mellon (2012) shows that English-themed programs implemented over one month during the summer increase positive student attitudes and behaviors important to academic achievement and diminish the learnings gap for English as a Second Language learners. Li. et, al (2009) found that students who participated in a summer enrichment program during middle school were more likely to take Advance Placement (AP) courses, major in math/science courses, and were more likely to desire to earn a doctorate while in high school. According to Crosnoe et al, (2015) children who come from low income families received substantial benefits from participation in school activity programs when examining academic performance results. Goldstein et al, (2017) shows that for students who live in highly concentrated poverty tracks, early intervention substantially increases vocabulary acquisition.  In the United States Military Academy, Ince and Priest (1998) used the LASSI to compare the student performance of three groups after one of the three went through a student success course. The other two

groups were control groups. Results indicated that the student success course group had improved performance on LASSI test measures when compared to the control groups.

**LASSI Assessment Tool**

Education has been described as a middle class pedagogy. School curriculum are designed to teach middle class norms, values, language, and beliefs (Henslin, 2014). Ray Rist's (1970) research supports that students who use middle class words and appear to come from affluent families get higher levels of interaction in the classroom and by the end of the academic year, more favorable results. Rist's (1970) work is corroborated by Sternberg and Zhang (2000) who show the importance of student comprehension of the processes involved in the institution of education increases student outcomes.

The Learning and Study Strategies Inventory (LASSI) instrument has been used as an assessment tool to examine academic abilities of students from a variety of backgrounds. The LASSI is a good assessment tool for students to utilize. As a means of understanding college level learning, Kovach and Wilgosh (1999) used the LASSI as a tool to examine students with learning difficulties and highlighted skill deficiencies requiring remedial courses before the students had irreducible academic problems. The LASSI is an assessment tool that is widely accepted for its reliability and validity when examining several important factors in student learning. It is typically used as a means to assess student's levels of skill, will and self-regulation for successful academic results (Gornick, 1997; McDonald, 1997; Reaume, 1997). In essence the LASSI is an assessment tool that:

Focus(es) on both covert and overt thoughts, behaviors, attitudes and beliefs that relate to successful learning and that can be altered through educational interventions. Research has repeatedly demonstrated that these factors contribute significantly to success in college and that they can be learned or enhanced through educational interventions such as learning and study skills courses (*www.hhpublishing.com*).

**Act 101 Program**

K. Leroy Irvis was a civil rights leader and political visionary who spent almost three decades in politics. The first African American to be elected Speaker of the House in Pennsylvania, he created ACT 101 in 1971 (Associated Press, 2006). Every summer, students from economically disadvantaged homes participate in the ACT 101 program in many of the universities in the Commonwealth of Pennsylvania.

The ACT 101 program is a demanding learning curriculum implemented that extends aid to students who meet rudimentary financial prerequisites. The program is designed to help students who need to develop scholastic skills that may enhance their capabilities of successfully navigating college and earning their degree. A college in Southeast Pennsylvania, for example, has an Act 101 program implemented during the summer that offers courses in Developmental

English, Developmental Reading, Developmental Math, Computer Processing, Personal Growth and a Study Skills curriculum (www.dccc.edu). After completion of the summer Act 101 program, students have access to college skills and career exploration workshops, on- campus tutoring, academic advising, college classes and other student services and support mechanisms.

The program has shown success. In the 2012-2013 academic year, for instance, approximately 71 percent of the students who participated remained in college. The two year retention rate was almost 65 percent. In addition to strong retention rates, ACT 101 student course completion rates mimicked those of non-ACT 101 students. In 2012-2013, almost 89 percent of ACT 101 students successfully completed courses while a little less than 91 percent of non-ACT

## Methodology

This research examines student academic performance at a college in Southeastern Pennsylvania. The college has approximately 13,000 students. About 56 percent of the population is non-minority and 61 percent are under the age of 25.  The researcher gathered data from the ACT 101 program to examine student performance in 2005, 2010, and 2016. These three cohort groups allow for a longitudinal assessment of the program's efficacy by incorporating a pre-posttest design to analyze changes in each cohort group's level of skill, will, and self-regulation. To measure the possible cohort changes, this research design incorporates the Learning and Study Strategies Inventory (LASSI) tool.

The LASSI was selected because of its easy administration, its association with the types of programs offered by the Act 101 program, the relatively quick computational results it presents and the rich data which it can provide. The LASSI is composed of ten subscales and can be used as a diagnostic instrument and a prescriptive tool. The ten subscales are measure a student's: Motivation, Attitude, Anxiety, Concentration, Information Processing, Use of Study Aids, Test Taking Strategies, Selecting the Main Idea in Readings, Use of Time Management, and Self Testing. With its three primary components (skill, will, and self-regulation), the LASSI subscales are designed to measure each of these components. The Skill component of the LASSI scale is measured by the subscales of information Processing, Selecting Main Ideas and Test Strategies. The Will component of the LASSI scale is measured by the subscales of Anxiety, Attitude and Motivation, and the Self-Regulation component of the LASSI scale is measured by the subscales of Concentration, Self-Testing, Study Aids, and Time Management. The LASSI can be used to provide information about student weaknesses when compared to similar students so that interventions can be developed to strengthen those weak areas of learning, test taking, self-regulation, motivation, time management and study skills. The alpha coefficients of each subscale component are shown below. Each of these components has a coefficient alpha over .70. Table 1.1 lists the coefficient alphas for each subscale.

**Table 1.1**

| Subscale | Coefficient Alpha |
|---|---|
| Anxiety | .87 |
| Attitude | .77 |
| Concentration | .86 |
| Info. Processing | .84 |
| Motivation | .84 |
| Self-Testing | .84 |
| Select Main Ideas | .89 |
| Study Aids | .73 |
| Time Management | .85 |
| Test Strategies | .80 |

Table 1.1: LASSI Subscale Alpha Coefficients

The subscales illustrate that the internal consistency of each factor is relatively sound. Study Aids has the lowest alpha coefficient at .73 and Selecting Main Ideas has the highest alpha coefficient at .89 (*www.hhpublishing.com*). The LASSI instrument has been proven to have validity and reliability.

From the literature reviewed it was apparent that the Act 101 course programs offered during the summer of 2005 relate to the LASSI subscales to an appreciable degree. The following key illustrates the association and thus, one of the rationale for selecting the LASSI as a pre and posttest.

**LASSI Key:**

Motivation (MOT)
Attitude (ATT)
Anxiety (ANX)
Concentration (CON)
Information Processing (INFO PRO)
Study Aids (STU AID)
Test Strategies (TEST STR)
Selecting Main Idea (SMI)
Time Management (TM)
Self Testing (ST)

**LASSI Key Association with Act 101 Programs**

Speech and Communication
ATT, CON, INFO PRO

Computer Processing
INFO PRO, CON, STU AID, TEST STR

Mathematics
INFO PRO, CON, STU AID

Study Skills
MOT, ANX, CON, INFO PRO, STU AID, ST, TEST STR

Reading
CON, INFO PRO, STU AID, ST, SMI, TEST STR, ST

Personal Growth
MOT, ANX, CON, INFO PRO, TM

After analyzing changes in student perceptions of skill, will, and self-regulation, this research utilizes an ANOVA design to compare the persistence of cohort groups who were in the ACT 101 program for the years 2005, 2010, and 2016 at the college in Southeastern, PA.

**Implementation Process**

During the first week of the Act 101 program in the summer of 2005, thirty-four students completed the LASSI 80 question, ten subscale questionnaire. During the next five weeks of the Act 101 program, in addition to tutoring, students were in Speech and Communication, Computer Skills, Mathematics, Reading, Study Skills, and Personal Growth classes. These courses are designed to enhance student development, personal growth and prepare them for the rigors of college. During the last week of the program, the LASSI was administered once again. Due to attrition, twenty-nine students completed the LASSI posttest. Students who did not take LASSI posttest had their scores omitted from the research (N=5 omitted).

During the summer of 2010 and 2016, the same pre-test, posttest LASSI implementation design was administered to ACT 101 students. In 2004-2005 fiscal year PA government allocated $9.32 million to the ACT 101 program. As previously stated, there were 34 students who participated in the ACT 101 program that year. Over the next decade there was a 76 percent reduction in ACT 101 funding and currently the state apportions $2.24 million. The student participation rate in the program dropped by three-quarters over the next decade (Sturla, 2015). Given such significant budget cuts in ACT 101 funding throughout the Commonwealth of Pennsylvania, student participation rates diminished in the Southeastern, PA College in which data was collected for this research. From the 34 students in 2005, the program participation diminished to twelve students who participated in 2010 and thirteen in 2016.

**Findings**

**The 2005 ACT 101 Cohort**

Table 1.2 shows the results of the 2005 ACT 101 cohort's mean LASSI scores on each subscale component and shows the national mean scores for comparison purposes. Column one lists each of the subscale components of the LASSI instrument. The second column lists the pretest mean scores for the 2005 ACT

101 cohort for each subscale. The pretest scores range from 21.69 (anxiety) to 32.72 (attitude). Recall that the Will component of the LASSI scale is measured by the subscales of Anxiety (pretest score 21.69), Attitude (pretest score 32.72) and Motivation (pretest score 30.21). Will power is an important characteristic distinguishing college degreed students from those who drop out. The fourth column is a computation of the difference between the pretest score and the national average score for each subscale component. Notice that for the Will component of the LASSI the difference between the ACT 101 2005 cohort mean scores and the national mean scores are -3.83 (anxiety), -.69 (attitude), and -.98 (motivation). The ACT 101 students have lower perceptions on their levels of Will capabilities than the national student average. The post-test scores (column fifth column) show substantial increases in perceptions of Will capabilities in 2005. When looking at the differences between posttest scores and the national averages (column seven), Anxiety scores increased to 1.69 above the national average. Increases of 1.59 and 3.95 above the national averages for attitude and motivation respectively.

The Skill component of the LASSI scale is measured by the subscales of Information Processing (pretest score 26.59), Selecting Main Ideas (pretest score 24.97) and Test Strategies (pretest score 25.86). At the pretest comparison stage (see column four) Information Processing had a -.66 score when compared to the national average. Selecting Main Ideas had a -3.09 difference between the LASSI pretesting of the ACT 101 cohort from 2005 and the national average. Test Strategies had a -3.27 difference. Student's beliefs about their skill levels for the 2005 cohort w4ere below the national mean on all three Skill components. When examining posttest scores, Information Processing increased to 5.92 above the national mean, Selecting Main Ideas increased by 2.01 and Test Strategies increased by 1.39 above the national mean.

The Self-Regulation component of the LASSI scale is measured by the subscales of Concentration (-.69 comparing pretest to the national average), Self-Testing (-.70 comparing pretest to the national average), Study Aids (1.13 comparing pretest to national average), and Time Management (.09 comparing pretest to the national average). Interestingly, the comfort with using study aids and time management had pretest scores above the national means. When looking at Self-Regulation after post-testing, Concentration increased by 4.55, Self-Testing increased by 7.27, Study Aids increased by 5.09, and Time Management increased by 5.26 above the national mean scores.

Table 1.2 shows that the ACT 101 program that was implement between the pretest and posttest of the LASSI was important in increasing student's Skill, Will, and Self-Regulation. While eight of the ten subscales had scores below the national mean at the beginning of the ACT 101 program, every subscale component was above the national average after the six week program was completed at the posttest period.

## TABLE 1.2

| Subscale | Group Mean Score (Pretest)* | National Mean Score *** | Pretest & National Difference | Group Mean Score (Posttest)** | National Mean Score *** | Posttest & National Difference |
|---|---|---|---|---|---|---|
| **TABLE 1.2: ACT 101 (2005) LASSI Subscale Mean Scores (pretest – posttest administration)** | | | | | | |
| Anxiety | 21.69 | 25.52 | -3.83 | 27.21 | 25.52 | 1.69 |
| Attitude | 32.72 | 33.41 | -0.69 | 35.00 | 33.41 | 1.59 |
| Concentration | 26.62 | 26.97 | -0.35 | 31.52 | 26.97 | 4.55 |
| Info. Process | 26.59 | 27.25 | -0.66 | 33.17 | 27.25 | 5.92 |
| Motivation | 30.21 | 31.19 | -0.98 | 35.14 | 31.19 | 3.95 |
| Self-Testing | 23.83 | 24.53 | -0.70 | 31.80 | 24.53 | 7.27 |
| Select Main Idea | 24.97 | 28.06 | -3.09 | 30.07 | 28.06 | 2.01 |
| Study Aids | 26.38 | 25.25 | 1.13 | 30.34 | 25.25 | 5.09 |
| Time Manage | 26.17 | 26.08 | 0.09 | 31.34 | 26.08 | 5.26 |
| Test Strategies | 25.86 | 29.13 | -3.27 | 30.52 | 29.13 | 1.39 |

*The scores for the Act 101 group in Table 1.2 are group mean scores at pretesting.

**The scores for the Act 101 group in Table 1.2 are group mean scores at post-testing

***Means of the national sample of students who took the LASSI are from 2002. The scale is Appendix C (Table 24) in the LASSI overview

When comparing the pretest scores and posttest scores from the 2005 ACT 101 program, the results are significant. The t-test statistical finding is 4.145. The level for $p = .05$ is 1.7344 and for $p = .01$ it is 2.552 at 18 degrees of freedom. The results are statistically significant and support that the ACT 101 program increases student Skill Will, and Self-Regulation.

The most satisfactory result of the ACT 101 program is the ability to prepare students for college level learning and eventually success by graduating. The program collects data on student performance and the average GPA of the 2005 ACT 101 cohort at graduation was 2.43 (see appendix A for each student's GPA).

### The 2010 ACT 101 Cohort

The results of the 2010 cohort are presented in Table 1.3 below. Recall this is the period in which ACT 101 program funding had diminished substantially. Given that it is a needs based program, funding requirements became much more stringent and only twelve students participated. Yet, the results showed to be similar. Once again the LASSI pretest scores had eight of the ten subscales below the national average. It is only Motivation and Study Aids in which the 2010 cohort had pretest scores above the national mean scores. Yet, when looking at the posttest scores, the cohort performed substantially better after the six-week ACT 101 program. Scores at the posttest period range from a .88 increase in Anxiety to Self-Testing 4.87.

**TABLE 1.3**

| | Group Mean Score (Pretest)* | National Mean Score *** | Pretest & National Difference | Group Mean Score (Posttest)** | National Mean Score *** | Posttest & National Difference |
|---|---|---|---|---|---|---|
| **TABLE 1.3: ACT 101 (2010) LASSI Subscale Mean Scores (pretest – posttest administration)** | | | | | | |
| **Subscale** | | | | | | |
| Anxiety | 22.20 | 25.52 | -3.32 | 26.40 | 25.52 | 0.88 |
| Attitude | 33.00 | 33.41 | -0.41 | 34.40 | 33.41 | 0.99 |
| Concentration | 24.70 | 26.97 | -2.27 | 28.40 | 26.97 | 1.43 |
| Info. Process | 25.30 | 27.25 | -1.95 | 29.90 | 27.25 | 2.65 |
| Motivation | 32.50 | 31.19 | 1.31 | 34.80 | 31.19 | 3.61 |
| Self-Testing | 24.10 | 24.53 | -0.43 | 29.40 | 24.53 | 4.87 |
| Select Main Idea | 25.30 | 28.06 | -2.76 | 29.40 | 28.06 | 1.34 |
| Study Aids | 26.70 | 25.25 | 1.45 | 28.40 | 25.25 | 3.15 |
| Time Manage | 25.10 | 26.08 | -0.98 | 28.60 | 26.08 | 2.52 |
| Test Strategies | 26.70 | 29.13 | -2.43 | 31.20 | 29.13 | 2.07 |

*The scores for the Act 101 group in Table 1.3 are group mean scores at pretesting.

**The scores for the Act 101 group in Table 1.3 are group mean scores at post-testing

***Means of the national sample of students who took the LASSI are from 2002. The scale is Appendix C (Table 24) in the LASSI overview

The t-test result is 2.530 which is significant at $p < .05$ at 18 degrees of freedom. The mean GPA for the 2010 ACT 101 cohort was 2.45 (see Appendix B for individual student GPAs). In addition to students acquiring stronger levels of academic skill, motivation, will, and self-regulation, these characteristics seem durable and encourage academic success.

**The 2016 ACT 101 Cohort**

In 2016, thirteen students participated in the ACT 101 program. According to Table 1.4, students had lower levels of Skill, Will, and Self-Regulation on every LASSI subscale component than the national average. Given that ACT 101 students have lower discernments about their capability levels than the national student average at pretesting, once again, the LASSI scores show that student's perceptions about Skill, Will, and Self-Regulation increased by post-testing.

## TABLE 1.4

| | Group Mean Score (Pretest)* | National Mean Score *** | Pretest & National Difference | Group Mean Score (Posttest)** | National Mean Score *** | Posttest & National Difference |
|---|---|---|---|---|---|---|
| **Subscale** | | | | | | |

TABLE 1.4: ACT 101 (2016) LASSI Subscale Mean Scores (pretest – posttest administration)

| Subscale | Group Mean Score (Pretest)* | National Mean Score *** | Pretest & National Difference | Group Mean Score (Posttest)** | National Mean Score *** | Posttest & National Difference |
|---|---|---|---|---|---|---|
| Anxiety | 21.20 | 25.52 | -4.32 | 21.9 | 25.52 | -3.62 |
| Attitude | 28.40 | 33.41 | -5.01 | 32.9 | 33.41 | -0.51 |
| Concentration | 23.30 | 26.97 | -3.67 | 29.6 | 26.97 | 2.63 |
| Info. Process | 26.00 | 27.25 | -1.25 | 31.6 | 27.25 | 4.35 |
| Motivation | 28.10 | 31.19 | -3.09 | 34.1 | 31.19 | 2.91 |
| Self-Testing | 24.00 | 24.53 | -0.53 | 30.4 | 24.53 | 5.87 |
| Select Main Idea | 24.00 | 28.06 | -4.06 | 28.1 | 28.06 | 0.04 |
| Study Aids | 24.80 | 25.25 | -0.45 | 30.6 | 25.25 | 5.35 |
| Time Manage | 22.50 | 26.08 | -3.58 | 29.3 | 26.08 | 3.22 |
| Test Strategies | 23.90 | 29.13 | -5.23 | 29.2 | 29.13 | 0.07 |

*The scores for the Act 101 group in Table 1.4 are group mean scores at pretesting.

**The scores for the Act 101 group in Table 1.4 are group mean scores at post-testing

***Means of the national sample of students who took the LASSI are from 2002. The scale is Appendix C (Table 24) in the LASSI overview

The t-test result for the 2016 cohort pretest-posttest comparison is 3.879.

## ANOVA

The fact that the ACT 101 program focuses upon offering a new group of students from low-income families its program services each year, the expectation is that these students should have similar skills sets when entering and leaving the program. Therefore, unlike the typical Analysis of Variance assessment in which the researcher desires statistically significant differences between groups, this research hopes to accept the null hypothesis at both the pre-ACT 101 and post-ACT 101 stages. Consistency would support that the program acquires similar successful results from each of the cohorts in the longitudinal study.

## TABLE 1.5

TABLE 1.5: ANOVA for LASSI Subscale Mean Scores (Pretest Scores 2005, 2010, 2016)

| | Degrees Freedom | Sum Squares | Mean Squares | F-Ratio |
|---|---|---|---|---|
| Between | 2 | 24.39 | 12.19 | 1.35 |
| Within | 27 | 243.80 | 9.03 | |

** $p<.01$ significant and * $p< .05$ significant

Table 1.5 shows that at df 2, 27 the F-Ratio is 1.35 and is not statistically significant. When comparing the pretest scores between the 2005, 2010 and 2016 ACT 101 cohorts, there is no statistically significant difference. The students come into the program with similar capabilities in skill, will, and self-regulation.

TABLE 1.6

| TABLE 1.6: ANOVA for LASSI Subscale Mean Scores (Posttest Scores 2005, 2010, 2016) | | | | |
|---|---|---|---|---|
| | Degrees Freedom | Sum Squares | Mean Squares | F-Ratio |
| Between | 2 | 19.35 | 9.68 | 1.22 |
| Within | 27 | 213.85 | 7.92 | |

** p<.01 significant and *p< .05 significant

The findings in Table 1.6 shows that at df 2, 27 the F-Ration is 1.22 and again not statistically significant. Therefore, the growth in the program is consistent and the program provides utility in enhancing student's skill, will and self-regulation capabilities.

TABLE 1.7

ACT 101 Cohort 2005 Mean GPA = 2.43

ACT 101 Cohort 2010 Mean GPA = 2.45

ACT 101 Cohort 2016 Mean GPA = 2.47

The mean grade point averages (GPAs) of ACT 101 students at this college in Southeastern Pennsylvania supports its success. The average GPAs were persistently well over a 2.00 and typically coalesced around a C+ for each cohort group.

**Conclusion**

Data from the Bureau of the Census corroborates the well-established relationship between academic achievement and income. In 2015, the mean income for those with high school degrees was $19,422. Those with Associates Degrees had mean incomes of $21,539 and Bachelor Degrees had mean incomes of $35,121. The nature of education and its manner of funding bends toward students who come from affluent families (Bowles, 1977; Porter, 2015). The ACT 101 program is a mechanism that helps to level the opportunity structure for under-privileged students. Recall that the ACT 101 program is a needs based program that serves college students in the Commonwealth of Pennsylvania. In the 2013-2014 school year, the median family income for ACT 101 students was $20,381 and the median for Pennsylvania families at-large was $66,522 (Sturla, 2015). It has been established that students who suffer financially tend to show lower academic competence and success than do those who come from financially stable homes (Reardon, 2011; Tavernise, 2012). In addition, income inequality has been associated with self-esteem with those youth from lower socio-economic backgrounds having less self-esteem (Osborne, 2015) and the self-confidence students have influences their scholastic capabilities (Imran, 2013; Srivastava, 2013)

This research examined the competencies in the ACT 101 program to instill skill, will, and self-determination in students as measured by the LASSI. In the initial 2005 analysis, the data supported that students receive substantial benefit from ACT 101. Across the Commonwealth of Pennsylvania, $9.3 million was allocated to the program. In 2010, the follow-up analysis shows that the funding fell to $2.7 million and yet, the program maintained its utility showing important and statistically significant results. In the third analysis during the 2016 assessment, the results were yet significant and still, funding has not rebounded. The research shows that ACT 101 program increases student's skill, will, and self-determination (as measured by the LASSI) and these students were subsequently more capable of matriculating through their respective college programs. These findings are established through the t-test and ANOVA results in tables 1.2 through 1.7 as well as appendices A, B, and C.

While this research is longitudinal and robust, the design has some limitations. Initially, although the research focuses upon analyzing ACT 101 student's skill, will, and self-regulation growth; the program offers much more than the fostering of these capabilities for increasing academic proficiencies. Future research could focus upon the tutoring, writing assistance and other support services encouraged by and linked through the ACT 101 program. In addition, the LASSI was used due to its easy administration. Measuring student competence and self-esteem with supplementary measures would further corroborate the importance of compensatory programs designed to bridge the gap between impoverished students and their peers.

## APPENDIX A: Student GPA

| SUMMER 2005 | STUDENT NAME | OVERALL GPA |
|---|---|---|
| 1 | Student One | 2.36 |
| 2 | Student Two | 2.28 |
| 3 | Student Three | 3.00 |
| 4 | Student Four | 3.45 |
| 5 | Student Five | 1.61 |
| 6 | Student Six | 2.28 |
| 7 | Student Seven | 2.77 |
| 8 | Student Eight | 2.00 |
| 9 | Student Nine | 2.61 |
| 10 | Student Ten | 3.48 |
| 11 | Student Eleven | 3.00 |
| 12 | Student Twelve | 3.21 |
| 13 | Student Thirteen | 1.96 |
| 14 | Student Fourteen | 2.30 |
| 15 | Student Fifteen | 3.14 |
| 16 | Student Sixteen | 2.92 |
| 17 | Student Seventeen | 1.91 |
| 18 | Student Eighteen | 2.83 |
| 19 | Student Nineteen | 2.53 |
| 20 | Student Twenty | 2.45 |
| 21 | Student Twenty-one | 1.00 |
| 22 | Student Twenty-two | 2.41 |
| 23 | Student Twenty-three | 2.85 |
| 24 | Student Twenty-four | 3.00 |
| 25 | Student Twenty-five | 1.81 |

## APPENDIX B: Student GPA

| SUMMER 2010 | |
|---|---|
| STUDENT NAME | OVERALL GPA |
| Student One | 2.32 |
| Student Two | 2.48 |
| Student Three | 2.96 |
| Student Four | 2.96 |
| Student Five | 1.97 |
| Student Six | 2.26 |
| Student Seven | 3.25 |
| Student Eight | 2.81 |
| Student Nine | 2.91 |
| Student Ten | 2.36 |
| Student Eleven | .69 |
| Student Twelve | 2.48 |

## APPENDIX C: Student GPA

| SUMMER 2010 | |
|---|---|
| STUDENT NAME | OVERALL GPA |
| Student One | 2.32 |
| Student Two | 2.48 |
| Student Three | 2.96 |
| Student Four | 2.96 |
| Student Five | 1.97 |
| Student Six | 2.26 |
| Student Seven | 3.25 |
| Student Eight | 2.81 |
| Student Nine | 2.91 |
| Student Ten | 2.36 |
| Student Eleven | .69 |
| Student Twelve | 2.48 |

**Work Cited**

Associated Press (March 18, 2006). K. Leroy Irvis, first Black chosen as Speaker of Pennsylvania House, dies. The New York Times. Retrieved from http://www.nytimes.com/2006/03/18/politics/k-leroy-irvis-first-black-chosen-as-speaker-of-pennsylvania-house.html

Balfanz, R.; & Legters, N. (2004). Locating the dropout crisis: Which high schools produce the nation's drop outs? In G. Orfield (Ed.), Dropouts in America: Confronting the graduation rate crisis, Cambridge, MA: Harvard Education Press. pp 57-84.

Census Bureau (2015). Mean earnings of workers 18 years and over by educational attainment, race, Hispanic origin, and sex (1975-2015). Table 3, Historical Tables. https://www.census.gov/data/tables/2016/demo/education-attainment/cps-detailed-tables.html

Corak, M. (July, 2013). Income inequality, equality of opportunity, and intergenerational mobility. Journal of Economic Perspectives, 27 (3), pp. 79 – 102.

Crosnoe, R.; Smith, C.; & Leventhal, T.  (August, 2015). Family background, school-age trajectories of activity participation, and academic achievement at the start of high school. Applied Developmental Science, 19 (3), pp. 139-152.

Dixon-Roman, E.J.; Everson, H.T.; & McArdle, J.J. (2011). Race, poverty and SAT scores: Modeling the influences of family income on black and white high school students' SAT performance. Teachers College Record, 115 (4), pp. 1-33.

Godfrey, E.B. & Wolf, S. (2015). Developing critical consciousness or justifying the system? A qualitative analysis of attributions for poverty and wealth among low-income racial/ethnic minority and immigrant women. American Psychological Association, 22 (1), pp. 93-103

Gornick, Sally. 1997. Project START. Essex Community College. Baltimore, Maryland.

Guskey, T.R. (May 25, 2011). Stability and change in high school grades. NASSP Bulletin, Sage Journals, 95 (2), pp.85-98. Retrieved from http://journals.sagepub.com/doi/abs/10.1177/0192636511409924?journalCode=buld

Henslin, J. (2014). Sociology: A Down to Earth Approach. Pearson Publishing.

Hopson, L.M., & Lee, E. (2011). Mitigating the effect of family poverty on academic and behavioral outcomes: The role of school climate in middle and high school. Children and Youth Services Review, 33, 2221=2229. Retrieved from http://psycnetapa.org/record/2011-16865-001

Hobfoll, S., & Lilly, R. (April 1, 1993). Resource Conservation as a Strategy for Community Psychology. Journal of Community Psychology, 21, 128-148.

Hobfoll, S., & Shirom, A. (2001). Conservation of Resources Theory. In R. Golembiewski (Ed.). Handbook pof Organizational Behavior. Dekker.

Hobfoll, S. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing Conservation of Resource Theory. Applied Psychology: An International Review, 50 (3), 337-421.

Hobfoll, S. (2004). Stress, Culture and Community: The Psychology and Philosophy of Stress. Springer Publishing.

Hobfoll, S., & Dekel, R. (March, 2007). The impact of resource loss on holocaust survivors facing war and terrorism in Israel. Aging Mental Health, 11 (2), 159 – 167.

Hobfoll, S., Jackson, A., & Hobfoll, I. (December, 2002). The impact of communal-mastery versus self-mastery on emotional outcomes during stressful conditions: A prospective study of Native American women. American Journal of Community Psychology, 50 (6), 853-871.

Ince, Elizabeth J. and Robert Priest. (1998). "Changes in LASSI scores among Reading and Study Skills Students at the United States Military Academy." Research and Teaching in Developmental Education. Vol.14 (2). P.19.

Imran, H. (Dec. 1, 2013). Self-esteem manifestation in students with high and low academic achievement. Pakistan Journal of Psychology, 44(2), p. 53-67.

Kovach, Karen and Lorraine.R. Wilgosh. 1999. Learning and Study Strategies, and Performance Anxiety in Postsecondary Students with Learning Disabilities: A Preliminary Study. Development Disabilities Bulletin Vol 27 (I).

Li, Y.; Alfeld, C.; Kennedy, R.P; & Putallaz, M. (Spring, 2009). Effects of summer academic programs in middle school on high school test scores, course-taking, and college major. Journal of Advanced Academics, 20 (3), pp. 404-436.

Matthews, P.H. & Mellom, P.J. (2012). Shaping aspirations, awareness, academics, and action: Outcomes of summer enrichment programs for English-learning secondary students. Journal of Advanced Academics, 23 (2), pp. 105-124.

McDonald, Lucy. 1997. Chemeketa Community College. Salem, Oregon.

Noel, J.G.; Donelson, R.F.; & Kelley, K.N. (1987). Improving the performance of failing students by overcoming their self-serving attributional biases. Basic and Applied Social Psychology, 8 (1&2), pp. 151-162.

O'Donnell, J. & Kirkner, S.L. (2014). Effects of an out=of-school program on urban high school youth's academic performance. Journal of Community Psychology, 42 (2), pp. 176 – 190.

Office of Head Start (June 15, 2017). History of Head Start. An Office for the Administration of Children and Families. https://www.acf.hhs.gov/ohs/about/history-of-head-start

Osborne, D.O; Sibley, S.G; & Sengupta, N.K. (April 1, 2015). Income and neighborhood-level inequality predict self-esteem and ethnic identity centrality through individual and group-based deprivation: A multilevel path analysis.

Palen, John. J. (2000). Social Problems or the Twenty-First Century. McGraw-Hill. CA.

Porter, E (Sept.22, 2015). Economic scene: Education gap between rich and poor is growing wider. New York Times. https://www.nytimes.com/2015/09/23/business/economy/education-gap-between-rich-and-poor-is-growing-wider.html

Reardon, S.F. (2011). The widening academic achievement gap between the rich and poor: New evidence and possible explanations. In R. Murnana & G. Duncan (Eds.), Whither opportunity? Rising Inequality and the Uncertain Life Chances of Low-Income Children. New York: Russell Sage Foundation Press.

Reaume, Denise. 1997. The University of Western Ontario. Learning Skills Services. Ontario, Canada.

Right to Know (2015). https://www.dccc.edu/about/about-college/right-know

Rist, R. (1970) Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. Harvard Educational Review: September 1970, 40 (3), pp. 411-451

Srivastava, S.K. (Jan. 1, 2013). To study the effect of academic achievement on the level of self-confidence. Journal of Psychosocial Research, 8(1), pp. 41-51.

Sternberg, R.J. and L.F. Zhang. 2000. Perspectives on Cognitive, Learning and Thinking Styles. NJ: Lawrence Erlbaum.

Stuart, L., & Hahnel, C. (2011). A report card on district achievement: How low-income African American and Latino students fare in California school districts. K-12 Policy. Education Trust-West, CA. Retrieved from *https://eric.ed.gov/?id=ED520738*

Sturla, M. P. (May 26, 2015). The ACT 101 Program. House Democratic Policy Committee. House of Representatives. Drexel University, PA. Retrieved from http://www.pahouse.com/files/Documents/Testimony/2015-05-26_17-18-58__hdpc052615.pdf

Tavernise, S. (Feb., 9, 2012). Education gap grows between the rich and poor, studies say. The New York Times. Retrieved from http://www.nytimes.com/2012/02/10/education/education-gap-grows-between-rich-and-poor-studies-show.html

Weinstein, Claire. E., David R. Palmer and Ann C. Shulte. 2002. Learning and Study Strategies Inventory. Second Edition. H&H Publishing Company, Inc.

*www.dccc.edu/studentservices/act101.html*

*www.hhpublishing.com*

Zwick, R; Himelfarb, I (June, 2011). The effect of high school socioeconomic status on the predictive validity of SAT scores and high school grade-point average. Journal of Educational Measurement, 48 (2), pp. 101-121.

Zwick, R.; Greif, G. (March, 2007). New perspectives on the correlation of SAT scores, high school grades, and socioeconomic factors. Journal of Educational Measurement, 48 (2), pp. 23-45.

---

**Biography**

**Dr. Chuck A. Baker** is a professor of sociology at DCCC. He teaches diversity courses and acknowledges the importance of differing perceptions among people. He has worked to foster intellectual diversity and pushes classroom dialogue into areas beyond the traditional topics of discrimination, promoting conversation independent of emotional talking points.