THE RESEARCH AGENDA

# Does Completing College-Level Work in High School Result in Baccalaureate Success for Students?

*By Wil Perkins*

This study probed the predictive effects of accelerated college credits over and above the predictive effects of FAFSA EFC index number, sex, and first-generation status on baccalaureate outcomes on first-time college students. A hierarchical multiple regression on 2,817 students who graduated from a private university in central Arkansas was used. Although the results provided a positive correlation between accelerated college credit and bachelor degree outcomes, the result was generally negligible.

## Introduction/Literature Review

The allure of earning college-level credit while in high school is firmly set within the American cultural mindset. The promise is that by completing these courses, students will be academically prepared for the rigor of college-level work as well as save students time and money (Myers and Myers 2017). However, while certifying bachelor degree requirements, the author often found these courses relegated to the electives or repeated by students. In speaking with students about their motivation in taking these classes, some indicated that they got caught up in what their friends were doing in high school or were simply following their parents' directives. Therefore, the researcher began to wonder if these courses actually benefitted students and what other factors may be involved that contribute to degree attainment.

There are multiple ways for high school students to earn college-level credit. Pierson, Hodara, and Luke (2017) provide the generic term accelerated college credit (ACC) to cover the multiple ways high school students may earn these credits, including Advanced Placement (AP), dual-credit, and dual-enrollment courses. While the differentiation of these methods is essential on the secondary education level, when a student arrives on campus, what matters is that a student has college-level credit already completed. Myers and Myers (2017) indicated that the purpose of these ACC programs is to provide high school students with more rigorous coursework, opportunities to earn postsecondary experience, and college-level credit. As a result, stu-

dents may be more prepared for college-level work and have a shorter time to degree attainment, thus saving them on the cost of higher education. The benefits of earning college-level credit while in high school seem obvious but are deceptive.

Despite all the promises of the value associated with accelerated college-level credit, results from these programs are mixed. Politicians and higher education administrators continue to warn of decreasing college completion rates and the increasing need for remedial courses at the postsecondary level (Mokher and McLendon 2009). The assumption has been that by allowing high school students access to college-level credit programs, researchers would see positive benefits to bachelor's degree attainment. Still, these benefits have not always been apparent. Some researchers have found that ACC programs are not influencing degree attainment at the higher education level (Miller, *et al.* 2017; Speroni 2011a 2011b). These unexpected results raise the issue regarding what, if any, value is provided by earning college-level credit in high school. Therefore, investigating the effect of accelerated college credits on baccalaureate degree outcomes warrants further examination.

Other factors may be influencing students' postsecondary outcomes. Dougherty, Mellor, and Jian (2006) indicated that a self-selection factor is involved in student participation in ACC programs. The researchers noted that students who participate in ACC tend to perform better academically and are anticipating going to college. Additionally, socioeconomic standing, sex, and first-generation status may be contributing factors influencing degree outcomes (Castleman and Long 2013; Conger and Dickson 2017; Redford and Hoyer 2017). The individual characteristics of students who are self-motivated to work harder may affect each student's outcome. These variables also need to be considered in relation to how they affect degree attainment.

A critical indicator of students' success is the ability to reach educational goals. Researchers at the American Association of Collegiate Registrars and Admissions Officers (AACRAO 2019) conducted a survey in which more than 90 percent of registrar respondents indicated that graduation rates are considered one of their top indicators of student and institution success. Significant motivations for earning college credits while in high school are that these courses are reported to academically prepare students for the rigor of college-level work as well as save students time and money (Myers and Myers 2017; Troutman, *et al.* 2018). However, little evidence-based guidance exists presenting ways to structure ACC programs to give the most benefits to high school students (Miller, *et al.* 2017). If attaining college credit in high school prepares students for the rigor of college, educators would expect to see these students with higher cumulative college GPAs. If receiving college credits while in high school reduces the amount of time students need to spend completing a bachelor's degree, educators would expect to see these students completing their bachelor's degrees at a faster pace than their peers. The expectation would be that if ACC saves students money, then these students should be completing fewer hours at the institution. These educational achievements should cause students who completed college-level work in high school to stand out from their peers who did not participate in accelerated college courses.

The purpose of providing financial aid to students is to increase college access and success. Castleman and Long (2013) reported that the cost of higher education had risen faster than median income since the 1970s, making college less affordable. To address the issue, the government offers assistance through the FAFSA, which collects information about the financial resources of students' families. From the data collected, the government determined the Expected/Estimated Family Contribution (EFC) index number, which colleges use to determine how much need-based financial aid a student is eligible to receive. The EFC index number is set according to a formula established by law (United States Department of Education 2019). To calculate financial need, the total cost of attendance at the institution is subtracted from the EFC index number to determine the student's eligibility for loans and grants (Castleman and Long 2013). The EFC index number uses a number of factors, including a student's family income and assets, the size of the family, and how many members of the family will be attending college during the year.

Typically, the lower the EFC index number, the more need-based financial aid a student is eligible to receive (United States Department of Education 2020). The purpose of the EFC index number is to identify students with fewer financial resources, allowing access to federal (and often state) resources that make college more affordable to them. Two programs now represent the bulk of federal aid to college students, the Pell Grant and the Stafford Loan (Dynarski and Wiederspan 2012). Many states offer grants to in-state students to supplement federal financial assistance. Additionally, institutions often provide scholarships. Without these resources, many students would not be able to afford to attend a higher education institution.

Another factor affecting degree attainment is the student's sex. Women are not just accessing higher education at a more significant rate; they are also completing degrees at a faster pace than their male counterparts. McFarland, *et al.* (2019) reported that the six-year completion rate was higher for females compared to males. McFarland's group also concluded that in the 2016–17 academic year, women earned 57 percent and men 43 percent of all bachelor's degrees conferred within the United States, which coincides with the enrollment rates of males and females. The divide continues past the baccalaureate level, and the gap between females and males persists through graduate level work (Adebayo 2008). A clear connection exists between the student's sex and completion rates. Women are succeeding at outpacing men in earning postsecondary credentials, partially because there are more women than men enrolling in four-year universities.

First-generation college student status applies to students whose parents did not complete any college degree. According to Toutkoushian, Stollberg, and Slaton (2018), most researchers tended to consider a student as having a first-generation status if either one or both parents did not graduate from college. Some common characteristics typify this group. These students tend to come from low-income households, with 77 percent earning less than $50,000 a year (Pike and Kuh 2005; Redford and Hoyer 2017). In 2012, the overwhelming majority of first-generation students were white (Redford and Hoyer 2017); however, current research indicates that they are now more likely to be from other races (Postsecondary National Policy Institute 2018). Additionally, first-generation students often have life experiences that contribute to the development of skills that enable them to be successful in college. Because these students tend to come from lower-income households, they are used to having to persevere despite obstacles and expect to have to work harder in college (Byrd and MacDonald 2005; Cataldi, Bennett, and Chen 2018). The attributes of first-generation students have the potential to influence them in both positive and negative ways. These common characteristics allow researchers to make some generalizations about these students.

## Material and Methods

The hypothesis for this study was that no predictive effect will exist for the number of college-level hours completed during high school over and above the predictive effects of the Free Application for Student Aid Expected Family Contribution (FAFSA EFC) index number, sex, and first-generation college student status on the number of years to completion for graduates who were first-time college students from a private university in central Arkansas. The second hypothesis looked at graduation GPA, while the third hypothesis examined the total number of hours completed at the institution.

The researcher used a nonexperimental, hierarchical regression strategy for this quantitative study. The predictor variable for hypotheses one through three was the number of ACC hours. The covariate variables for the three hypotheses were the FAFSA EFC index, sex, and first-generation college student status. The criterion variables were the number of years to graduation for hypothesis one, graduation GPA for hypothesis two, and the total number of hours completed at the institution for hypothesis three. The total number of hours was calculated by subtracting the number of ACC hours from the hours used in the degree program to determine how many hours were completed after enrollment at the institution.

Data used in the study were selected from the available population of undergraduate students who com-

**TABLE 1** ➤ Descriptives of Data Sample

| | ACC | | Non-ACC | | Overall |
|---|---|---|---|---|---|
| | Female | Male | Female | Male | |
| N | 810 | 459 | 882 | 666 | 2,817 |
| First-Generation | | | | | |
| n | 94 | 43 | 107 | 77 | 321 |
| % | 11.6 | 9.4 | 12.1 | 11.6 | 11.4 |
| Mean | | | | | |
| ACC Hours | 13 | 13 | — | — | 13 |
| EFC Index Number | 18,749 | 19,630 | 16,002 | 18,952 | 18,080 |
| Years to Completion | 3.67[a] | 3.87 | 3.97 | 4.23 | 3.93 |
| Overall GPA | 3.51 | 3.36 | 3.40 | 3.13 | 3.36 |

[a] 3.67 = 8 traditional semesters (Fall/Spring)

pleted bachelor's degrees from fall 2011 to fall 2019 at a private university in central Arkansas. Only degree programs that required the same number of hours to reach completion were included. Students were excluded if they had completed multiple majors or degrees at the same time and if the EFC index was null. There was a substantial sample size of 2,817 records. The descriptive statistics of the data sample are displayed in Table 1.

To address the three hypotheses, a hierarchical, multiple regression was conducted to determine the degree of predictive effect the number of ACC hours had on different criterion variables over and above the other covariate variables in the model. Each hypothesis was to be tested by using two models—one with the criterion and covariate variables and the second with the addition of the predictor variable. The result determined the degree to which $R^2$ changed between the models to discover if ACC hours significantly added to the predictive effect of the group. Each hypothesis was tested with a 0.05 level of significance. The data were analyzed statistically by using the SPSS software. Before conducting the regression analysis, the data were examined to determine that assumptions of multiple regressions were met. Scatterplots, multicollinearity, homoscedasticity, and case-wise diagnostics were completed.

Limitations of this research included subjects from just one private institution in the south; therefore, the results may not be representative of a larger population of students in the United States. The researcher was unable to quantify the motivations or actions of students' use of accelerated college credits because the data did not track the students' progress throughout their degree program. Simply because students had completed accelerated college credits did not mean they were motivated to finish as quickly as possible.

Additionally, the method used by the student to obtain ACC was not categorized in this study. The research did not attempt to learn if there was a difference on the effect of degree outcomes if the student received ACC credit from exams, dual-credit, or dual-enrollment courses to determine if one delivery method may be superior to other methods. Furthermore, the researcher was unable to determine if a student's enrollment at the institution was continuous or if the student stopped out for a time and then returned to finish.

## Results

Model one yielded a result that predicted years to completion, $F(3,2812) = 46.69$, $p < 0.001$, $R^2 = 0.047$, $R^2_{adj} = 0.046$. However, as indicated by the value of $R^2$, only 4.7 percent of the variance in the years to completion could be predicted from the covariate variables. When ACC was included in model two, the prediction was improved, $R^2$ change = 0.056, $F(1, 2811) = 176.93$, $p < 0.001$. From the value of $R^2$, 5.6 percent of the variance in the years to completion could be predicted from model two. The null hypothesis was therefore rejected. A summary of the regression model is presented in Table 2 (on page 7).

These findings indicate that accelerated college credits contributed to the prediction of the years to completion, after controlling for the covariate variables, $F(4,2811) = 81.42$, $p < 0.001$, $R^2_{adj} = 0.103$. The result is a medium effect size. An examination of the beta weights

of the individual predictors (*see* Table 3) indicates that accelerated college credits (β = -0.238) and sex (β = 0.155) had the highest beta and contributed to predicting the years to completion. The beta weight for sex indicates that females were more likely to benefit from accelerated college credits; however, when adding the ACC variable, there is a slight increase that shows a positive reaction for males. The student's FAFSA EFC index number (β = -0.132) beta weight shows the higher the EFC, the more likely the student will have reduced time to degree completion. The students' first-generation status (β = 0.015) did not significantly predict their years to completion. Accelerated college credits, on the other hand, showed a negative relationship with the outcome (β = -0.238), indicating that students who used accelerated college credits had a reduced time to degree completion.

**TABLE 2** ➤ Model Predicting Years to Completion

| | SS | df | MS | F | p |
|---|---|---|---|---|---|
| **Model 1** | | | | | |
| Regression | 67.81 | 3 | 25.60 | 46.67 | 0.000 |
| Residual | 1542.68 | 2812 | 0.55 | | |
| Total | 1619.49 | | | | |
| **Model 2** | | | | | |
| Regression | 168.16 | 4 | 42.04 | 81.42 | 0.000 |
| Residual | 1451.33 | 2811 | 0.52 | | |
| Total | 1619.49 | | | | |

In conclusion, when years to completion were regressed on the covariant variables, the model showed a clear relationship between the predictor and outcome variables. The results from the coefficient table revealed the equation for predicting years to completion as the following: Years to Completion (predicted) = 4.017 + (-0.001)(FAFSA EFC) + (0.241)(Sex) + (-0.019)(ACC). Specifically, ACC and sex were statistically significant and the most important predictors of the outcome. For every hour of ACC a student arrives with, the student can expect to receive 0.019 years reduced from their time to completion. However, a lower FAFSA EFC index number negatively affected students' time to completion and the first-generation status of students was not statistically significant.

**TABLE 3** ➤ Unstandardized and Standardized Coefficients for Predictors of Years to Completion

| | B | SE | β | t | p | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|
| **Model 1** | | | | | | | |
| Constant | 3.893 | 0.021 | | 185.62 | 0.000 | 0.047 | 0.046 |
| FAFSA EFC[1] | -0.001 | 0.000 | -0.139 | -7.54 | 0.000 | | |
| Sex | 0.261 | 0.029 | 0.169 | 9.15 | 0.000 | | |
| First-Gen[2] | 0.040 | 0.044 | 0.017 | 0.90 | 0.367 | | |
| **Model 2** | | | | | | | |
| Constant | 4.017 | 0.022 | | 179.54 | 0.000 | 0.104 | 0.103 |
| FAFSA EFC[1] | -0.001 | 0.000 | -0.132 | -7.38 | 0.000 | | |
| Sex | 0.241 | 0.028 | 0.155 | 8.69 | 0.000 | | |
| First-Gen[2] | 0.035 | 0.043 | 0.015 | 0.81 | 0.417 | | |
| ACC[3] | -0.019 | 0.001 | -0.238 | -13.30 | 0.000 | | |

[1] FAFSA EFC = Free Application for Federal Student Aid Expected Family Contribution index number
[2] First Gen = First-Generation
[3] ACC = Accelerated College Credit Hours

**TABLE 4** ➤ Model Predicting Graduation GPA

| | SS | df | MS | F | p |
|---|---|---|---|---|---|
| **Model 1** | | | | | |
| Regression | 43.92 | 2 | 21.96 | 118.78 | 0.000 |
| Residual | 520.27 | 2814 | 0.19 | | |
| Total | 564.19 | | | | |
| **Model 2** | | | | | |
| Regression | 57.13 | 3 | 19.04 | 105.64 | 0.000 |
| Residual | 507.06 | 2813 | 0.18 | | |
| Total | 564.19 | | | | |

When testing for the assumption of intercorrelation for hypothesis two it was discovered that the FAFSA EFC Index number had a strong correlation with graduation GPA; therefore, the variable was removed from the regression analysis. Model one yielded a result that predicted graduation GPA, $F(2,2814) = 118.79$, $p < 0.001$, $R^2 = 0.078$, $R^2_{adj} = 0.077$. As indicated by the value of $R^2$, only 7.8 percent of the variance in the graduation GPA could be predicted from the covariate variables. When ACC was included in model two, the prediction was improved, $R^2$ change $= 0.023$, $F(1, 2813) = 73.25$, $p < 0.001$. From the value of $R^2$, 10.1 percent of the variance in the graduation GPA could be predicted from model two. The null hypothesis was therefore rejected. A summary of the regression model is presented in Table 4.

These findings indicate that accelerated college credits contributed to the prediction of the graduation GPA, after controlling for the covariate variables, $F(1,2813) = 73.25$, $p < 0.001$, $R^2_{adj} = 0.100$. The result is a medium effect size. An examination of the beta weights of the individual predictors (*see* Table 4) indicates that sex ($\beta = -0.258$) and accelerated college credits ($\beta = 0.153$) had the highest beta and contributed to predicting the graduation GPA. The beta weight for sex indicates that females were more likely to benefit from accelerated college credits regarding GPA, but when adding ACC male students would experience a slight benefit. First-generation status ($\beta = -0.082$) beta weight shows that being a first-generation student negatively affects the graduation GPA; however, the inclusion of ACC also benefited them.

In conclusion, when graduation GPAs were regressed on the covariant variables, model two showed a clear relationship between the predictor and outcome variables. The results from the coefficient table revealed the equation for predicting graduation GPA as the following: Graduation GPA (predicted) = 3.419 + (-0.237)(Sex) + (-0.166)(First Gen) + (0.007)(ACC). Specifically,

**TABLE 5** ➤ Unstandardized and Standardized Coefficients for Predictors of Graduation GPA

| | B | SE | β | t | p | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|
| **Model 1** | | | | | | | |
| Constant | 3.468 | 0.011 | | 318.64 | 0.000 | 0.078 | 0.077 |
| Sex | -0.245 | 0.017 | -0.268 | -14.78 | 0.000 | | |
| First-Gen[1] | -0.119 | 0.026 | -0.084 | -4.65 | 0.000 | | |
| **Model 2** | | | | | | | |
| Constant | 3.419 | 0.012 | | 281.64 | 0.000 | 0.101 | 0.100 |
| Sex | -0.237 | 0.016 | -0.259 | -14.48 | 0.000 | | |
| First-Gen[1] | -0.116 | 0.025 | -0.082 | -4.61 | 0.000 | | |
| ACC[2] | 0.007 | 0.011 | 0.153 | 8.56 | 0.000 | | |

[1] First Gen = First-Generation
[2] ACC = Accelerated College Credit Hours

ACC and sex were statistically significant and the most important predictors of the outcome. In other words, one might predict that entering college with ACC and being female will positively affect graduation GPA. For every hour of ACC completed, students could expect to receive a 0.007 boost to their GPA.

When testing for the assumption of intercorrelation for hypothesis there, there was a correlation between accelerated college credits and total hours completed, and all the variables had a tolerance greater than $1 - R^2$; therefore, multicollinearity was considered a problem. Model 1, without accelerated college credits as a variable, yielded the following result, $F(3,2813) = 1.76$, $p = 0.152$, $R^2 = 0.002$, $R^2_{adj} = 0.001$. Consequently, the null hypothesis was retained. Since model one was not statistically significant, model two was not completed. A summary of the regression model is presented in Table 6.

**TABLE 6 ➤ Model Predicting Total Hours Completed**

| Model 1 | SS | df | MS | F | p |
|---|---|---|---|---|---|
| Regression | 857.50 | 3 | 285.83 | 1.76 | 0.152 |
| Residual | 456069.95 | 2813 | 162.13 | | |
| Total | 456927.45 | | | | |

**TABLE 7 ➤ Summary of *p* Values**

| Model Variables | Hypotheses | | |
|---|---|---|---|
| | H1 | H2 | H3 |
| **Model 1** | **0.000** | **0.000** | **0.152** |
| FAFSA EFC[1] | 0.000 | — | — |
| Sex | 0.000 | 0.000 | — |
| First-Gen[2] | 0.367 | 0.000 | — |
| **Model 2** | **0.000** | **0.000** | **—** |
| FAFSA EFC[1] | 0.000 | — | — |
| Sex | 0.000 | 0.000 | — |
| First-Gen[2] | 0.417 | 0.000 | — |
| ACC[3] | 0.000 | 0.000 | — |

[1] FAFSA EFC = Free Application for Federal Student Aid Expected Family Contribution index number
[2] First Gen = First-Generation
[3] ACC = Accelerated College Credit Hours

When total hours completed were regressed on the covariant variables, model one showed no clear relationship between the predictor and outcome variables. Therefore, the criterion variables could not be used to predict the total number of hours completed.

## Conclusions

The results of the hierarchical multiple linear regression analyses indicate that when controlling for covariate variables, FAFSA EFC index number, sex, and first-generation status, accelerated college credits were a significant predictor of years to completion and total GPA but were not a predictive factor in total hours completed after enrollment. The summary of the results is displayed in Table 7.

The analysis revealed a positive connection between accelerated college credits and reduced time to degree completion. The outcome supported the findings of several researchers. The medium effect size for years to completion was somewhat surprising considering researchers have reported the majority of freshmen entering college for the first time have already completed some college credit (Troutman, *et al.* 2018). The expectation would have been a more substantial effect size because the anticipation associated with the value of accelerated college credits was that they saved students time and money. Possible explanations for there not being a more significant effect size are that students took accelerated college credits that did not pertain to the degree program they ultimately completed.

The role of the FAFSA EFC index number was also interesting. Current research is inconclusive regarding the effect of financial aid on degree attainment with some researchers who find a correlation and others

who do not. However, An (2013) disclosed that while students from wealthy households were more likely to complete a degree, students who participated in ACC programs increased their likelihood of degree attainment. The results from the analysis appear to validate An's conclusion. ACC benefited students more than having financial aid harm them. Additionally, the outcome concurs with Inghram's (2018) result that students who were Pell Grant eligible and had accelerated college credits were more likely to persist and reach completion. Students' being financial aid eligible was a slight disadvantage that was bolstered by their participation in accelerated college credits.

The fact that females benefited over males in the use of accelerated college credits was expected. Pierson, Hodara, and Luke (2017) previously revealed that males do not participate in college-level courses in high school at the same rate as females. Additionally, McFarland's (2019) group demonstrated that females are outpacing males in earning postsecondary credentials. On the other hand, when adding ACC into the model, there is a slight benefit for male students.

The analysis revealed a positive correlation between accelerated college credits and graduation GPA. One of the values associated with ACC is the preparation for college-level work with an increased rigor that is supposed to translate into a higher postsecondary GPA. However, with the widespread popularity of accelerated college credits and the internal motivation of the students who complete these courses, the expectation would be that the regression would have indicated a more significant effect size for students who had completed college-level credit in high school on their college GPA. While the link between accelerated college credits and a higher postsecondary GPA exists, the fact that students benefit so little from the connection is troubling.

Additionally, a positive connection was discovered between females and graduation GPA. Several scholars have documented how females outperform males in their postsecondary academic endeavors, so the advantage to females was not unexpected (Birnbaum and Yakaboski 2011; Conger and Dickerson 2017; Conger and Long 2010, McFarland, *et al*. 2019). Once again, when adding ACC into the model, there was a slight benefit to male students.

The negative correlation between first-generation students and graduation GPA was disappointing. However, the result is in keeping with Chen and Simone (2016), who have found that first-generation students often need more remedial coursework or tutoring compared to their peers. The analysis supported the deduction of Pike and Kuh (2005), who concluded that first-generation students often had lower GPAs. When accelerated college credits are introduced into the model, there is a slight change, thus indicating a positive relationship for first-generation students.

The fact that the multiple regression did not lead the researcher to find a predictive effect between the covariate variables and the total number of hours completed after enrollment was perplexing. The expectation was that since there was a positive result in hypothesis one for a reduction in time to degree completion that a similar outcome would manifest here as well.

The result seemed to imply that students who completed college-level work in high school did not graduate from the postsecondary institution with fewer hours than their peers who did not have accelerated college credits. The analysis did not permit the researcher to determine if the result was because students elected to take additional courses or if the critics of ACC programs are correct that students often take unnecessary courses (Miller, *et al*. 2017).

The outcome may be the consequence of the academic tenacity of students who complete college-level work in high school, who tend to be highly motivated, engaged, and willing to work hard (An 2015; Dougherty, *et al*. 2006; Jackson 2010; Pierson, *et al*. 2017). Therefore, students who completed accelerated college credits may have taken additional hours at the institution but also were able to experience a reduction in years to completion.

## Implications for Practice/ Recommendations

This study probed the predictive effects of accelerated college credits over and above the predictive effects

of FAFSA EFC index number, sex, and first-generation status. The researcher discovered that accelerated college credits were significant predictors of the time to completion and the graduation GPA. The following recommendations underscore the benefit derived from accelerated college credits.

First, high schools and colleges should be more purposeful in recruiting male and first-generation college students to participate in programs offering college-level credit during high school. Targeted recruitment of males will assist higher education institutions in addressing the disparity between male and female students among their ranks. Moreover, the targeting of first-generation college students will enable institutions to provide critical academic support to this cohort and allow them to begin to experience what it is like to navigate the inner workings of higher education. Both of these groups could benefit more from ACC programs, even if those courses ultimately do not reduce the time to degree completion or raise their graduation GPA. The experience of completing college-level work in high school, with the proper academic support, could help both males and first-generation students gain confidence in their academic abilities and put them more at ease with the college experience.

Second, secondary and postsecondary institutions need to do a better job of understanding how offering college-level credit to high school students ultimately affects their degree attainment. There is enough evidence available that demonstrates that not all the purported benefits of accelerated college credits are furthering students' baccalaureate degree outcomes. Many colleges use ACC programs to boost their headcounts without considering the long-term implications of students having these courses on their transcripts.

Institutions should provide students with a realistic assessment that the accelerated college credits they complete may be useful toward accomplishing academic goals. A best practice would be for postsecondary institutions to have at least one individual dedicated to help students and their parents navigate how these courses could potentially be used within a degree program. Ultimately, students should check with the postsecondary institution they plan to attend for official confirmation. If departments within institutions are going to insist that certain courses are non-transferable, this information should be plainly stated in the catalog, and admissions recruiters as well as advisors should communicate this to prospective students.

Third, students and parents need to be better educated about understanding postsecondary institutions' transfer policies and what accelerated college courses would be most beneficial to them. Students coming into a bachelor's degree program with as many college credits as possible already completed may not be advantageous to students. Current financial aid rules prevent the use of federal money to pay for non-program of study courses or courses that do not directly apply to students' degree programs. Therefore, students who arrive on campus with several college hours already completed that do not directly pertain to their degree program will have used up their elective hours and will be limited to only taking required courses. In these cases, advising will be key to helping students use ACC courses to their advantage.

Overall, the findings support evidence provided by other researchers who found positive benefits for students who completed college-level work in high school on their bachelor's degree outcomes. The results of this study are especially meaningful to private postsecondary institutions who are not obligated to conform to state mandates concerning the transferability of courses. The popularity of ACC programs only appears to be growing; therefore, policymakers and college administrators need to be more data informed on how to structure their programs to give students the best possible benefits.

## Future Research

Future research on the effects of ACC on bachelor's degrees may want to categorize how students receive these credits. Is there a difference in the application of accelerated college credits from exams versus college courses? Furthermore, it would be interesting to learn if there is a difference in the usefulness of ACC received from two-year schools compared to four-year schools.

Another variable to consider in future research would be race. It would be interesting to learn at what level underrepresented students are participating in accelerated college credit programs and bringing these credits to our institutions. Furthermore, researchers should study whether there is any disparity in the benefits from ACC among different races.

**EDITOR'S NOTE**

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## References


Adebayo, B. 2008. Gender gaps in college enrollment and degree attainment: An exploratory analysis. *College Student Journal*. 42(1): 232–237.

AACRAO. *See* American Association of Collegiate Registrars and Admissions Officers.

American Association of Collegiate Registrars and Admissions Officers. 2019. *Student Success: Results of the AACRAO March 2019 60-Second Survey*. Retrieved from: <aacrao.org/docs/default-source/research-docs/aacrao-march-2019-student-success.pdf>.

An, B. P. 2013. The impact of dual enrollment on college degree attainment: Do low-SES students benefit? *Educational Evaluation and Policy Analysis*. (1): 57–75.

Birnbaum, M., and T. Yakaboski. 2011. The legal and policy implications of male-benefiting admissions policies at public intuitions: Can there ever be considered affirmative action for men? *Journal of Student Affairs Research and Practice*. 48(1): 23–46.

Byrd, K., and G. MacDonald. 2005. Defining college readiness from the inside out: First-generation college student perspectives. *Community College Review*. 33(1): 22–37.

Castleman, B., and B. Long. 2013. *Looking Beyond Enrollment: The Casual Effect of Need-Based Grants on College Access, Persistence, and Graduation* (NBER Working Paper 19306). Cambridge, MA: National Bureau of Economic Research.

Cataldi, E., C. Bennett, and X. Chen. 2018. *First-Generation Students: College Access, Persistence, and Postbachelor's Outcomes* (Stats in brief, NCES 2018-421).

Chen, X., and S. Simone. 2016. *Remedial Course Taking at U.S. Public 2- and 4-Year Iinstitutions: Scope, Experiences, and Outcomes*. National Center for Education Statistics and RTI International.

Conger, D., and L. Dickson. 2017. Gender imbalance in higher education: Insights for college administrators and researchers. *Research in Higher Education*. 58(2): 214–230.

Conger, D., and M. Long. 2010. Why are men falling behind? Gender gaps in college performance and persistence. *Annals of the American Academy of Political and Social Sciences*. 627: 184–214.

Dougherty, C., L. Mellor, and S. Jian. 2006. *The Relationship Between Advanced Placement and College Graduation* (2005 AP study series, Report 1). Austin, TX: National Center for Educational Accountability.

Dynarski, S., and M. Wiederspan. 2012. *Student Aid Simplification: Looking Back and Looking Ahead* (NBER Working Paper 17834). Cambridge, MA: National Bureau of Economic Research.

Inghram, C. S. 2018. *Student Attributes Related to Dual Enrollment Baccalaureate Degree Outcomes in a Rural State* (doctoral dissertation). Marshall University, Huntington, WV.

Jackson, C. K. 2010. *The Effects of an Incentive-Based High-School Intervention of College Outcomes* (NBER WorkingPaper 15722). Cambridge, MA: National Bureau of Economic Research.

McFarland, J., B. Hussar., J. Zhang, X. Wang, K. Wang, H. Hein, and A. Barmer. 2019. *The Condition of Education 2019* (NCES 2019-144). Washington, D.C.: National Center for Education Statistics.

Miller, T., H. Kosiewicz, E. L. Wang, E. V. Marwah, S. Delhommer, and L. Daugherty. 2017. *Dual Credit Education in Texas: Interim Report*. Santa Monica, CA: RAND Corporation. Retrieved from: <rand.org/content/dam/rand/pubs/research_reports/RR2000/RR2043/RAND_RR2043.pdf>.

Mokher, G., and M. McLendon. 2009. United secondary and postsecondary education: An event history analysis of state adoption of dual enrollment policies. *American Journal of Education*. 115(2): 249–277.

Myers, C. B., and S. Myers. 2017. Dual enrollment policies and undergraduate rates in the United States: An institutional and cohort approach using the 2006–2014 IPEDS. *Research and Practice in Assessment*. 12: 5–17.

Pierson, A., M. Hodara, and J. Luke. 2017. *Earning College Credits in High School: Options, Participation, and Outcomes for Oregon Students* (REL 2017-216). Washington, D.C.: Institute of Education Sciences.

Pike, G., and G. Kuh. 2005. First- and second-generation college students: A comparison of their engagement and intellectual development. *Journal of Higher Education*. 76(3): 267.

Postsecondary National Policy Institute. 2018. *First-Generation Students* (Factsheet). Retrieved from: <pnpi.org/factsheets/first-generation-students/>. Washington, D.C.: Author.

Redford, J., and K. Hoyer. 2017. *First-Generation and Continuing-Generation College Students: A Comparison of High School and Postsecondary Experiences* (NCES 2018-009).Washington, D.C.: National Center for Education Statistics.

Speroni, C. 2011a. *Determinants of Students' Success: The Role of Advanced Placement and Dual Enrollment Programs*. New York: National Center for Postsecondary Research.

———. 2011b. *High School Accelerated College Credit Programs: Are We Fast-Tracking Students Too Fast?* (An NCPR Working Paper). New York: National Center for Postsecondary Research.

Toutkoushian, R., R. Stollberg, and K. Slaton. 2018. Talking 'bout my generation: Defining "first-generation college students" in higher education. *Teachers College Record*. 120(4).

Troutman, D., A. Hendrix-Soto, M. Creusere, and E. Mayer. 2018. *The University of Texas System Dual Credit Study. Dual Credit and Success in College*. Austin, TX: The University of Texas System. Retrieved from: <utsystem.edu/documents/docs/ut-system-reports/2018/dual-credit-and-success-college>.

United States Department of Education. 2019. *How Aid Is Calculated*. Washington, D.C.: Author. Retrieved from: <https://studentaid.gov/complete-aid-process/how-calculated#efc>.

———. 2020. *Staying Eligible.* Washington, D.C.: Author. Retrieved from: <studentaid.gov/understand-aid/eligibility/staying-eligible>.

## About the Author

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