



THE BENEFITS OF ACCELERATION: BACCALAUREATE ADVANTAGES

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EXECUTIVE SUMMARY

Early college opportunities for high school students, hereinafter referred to as “acceleration”, are growing in both the number of opportunities provided and the number of students enrolled in these courses. This analysis studied the educational benefits of student participation in accelerated programs at North Iowa Area Community College.

The major finding of this analysis is:

- NIACC accelerated students graduated earlier with a baccalaureate degree from four-year colleges and universities than non-accelerated students. Accelerated students when compared with non-accelerated students graduated on average 140 days earlier.

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Introduction

Early college opportunities for high school students, hereinafter referred to as “acceleration”, are growing in both the number of opportunities provided and the number of students enrolled in these courses. These trend lines coincide with numerous recommendations from national organizations. For an extensive summary of these recommendations see Morrison (2007).

Simultaneously, research dealing with academic outcomes of accelerated programs is growing. For an extensive summary of these research findings see Morrison (2007B).

State policymakers are also interested in the economic impact of accelerated programs. Siegelman and Otto (2008), studying students enrolled in community college accelerated programs in Iowa, found that these students:

- saved the State the equivalent of \$21.7 million in future assistance at more costly educational institutions
- saved their families the equivalent of \$30.7 million in future college-related expenses
- generated a 535% return on the program’s investment ($\$21.7 \text{ million} + \$30.7 \text{ million} = \$52.4 \text{ million} \div \$9.8 \text{ million} = 5.3469$)

This study adds to the growing body of research with a focus on the differences in days to complete the baccalaureate degree for accelerated and non-accelerated students.

RESEARCH HYPOTHESES

The following null and research hypotheses were tested:

TABLE 1 RESEARCH HYPOTHESES	
DAYS TO BACCALAUREATE DEGREE COMPLETION	
H ₀	- Accelerated and non-accelerated students take the same amount of days for baccalaureate degree completion at four-year colleges and universities
H ₁	- Accelerated and non-accelerated students are not equal in the days for baccalaureate degree completion at four-year colleges and universities

DATA

The data for this study was obtained from student records at North Iowa Area Community College and the National Student Clearinghouse. The National Student Clearinghouse, a non-profit organization, is the nation's source for post-secondary and secondary student degree, diploma and enrollment verification.

NIACC students from 1996 to 2005 who subsequently attained a baccalaureate degree were identified utilizing records from the National Student Clearinghouse data on baccalaureate attainment. A total of 1,207 former non-accelerated NIACC students were identified in the Clearinghouse dataset along with 305 former accelerated NIACC students.

The focus of this analysis is to determine if there is a significant difference in the time to attain a baccalaureate degree for accelerated and non-accelerated students. Days to attainment were calculated by subtracting the date of high school graduation from the graduation date for the baccalaureate degree.

FINDINGS

DAYS TO BACCALAUREATE DEGREE COMPLETION:

A two-sample t-test was utilized to test the following null and research hypotheses related to "Days to Baccalaureate Degree Completion" for accelerated and non-accelerated students:

H_0 - Accelerated and non-accelerated students have equal average "Days to Baccalaureate Degree Completion"

H_1 - Accelerated and non-accelerated students are not equal in "Days to Baccalaureate Degree Completion"

Graph 1 depicts the "Days to Baccalaureate Degree Completion" advantage that accelerated students enjoy over their non-accelerated counterparts.

Graph 1 - Days to Baccalaureate Degree Completion Accelerated versus Non-Accelerated Students

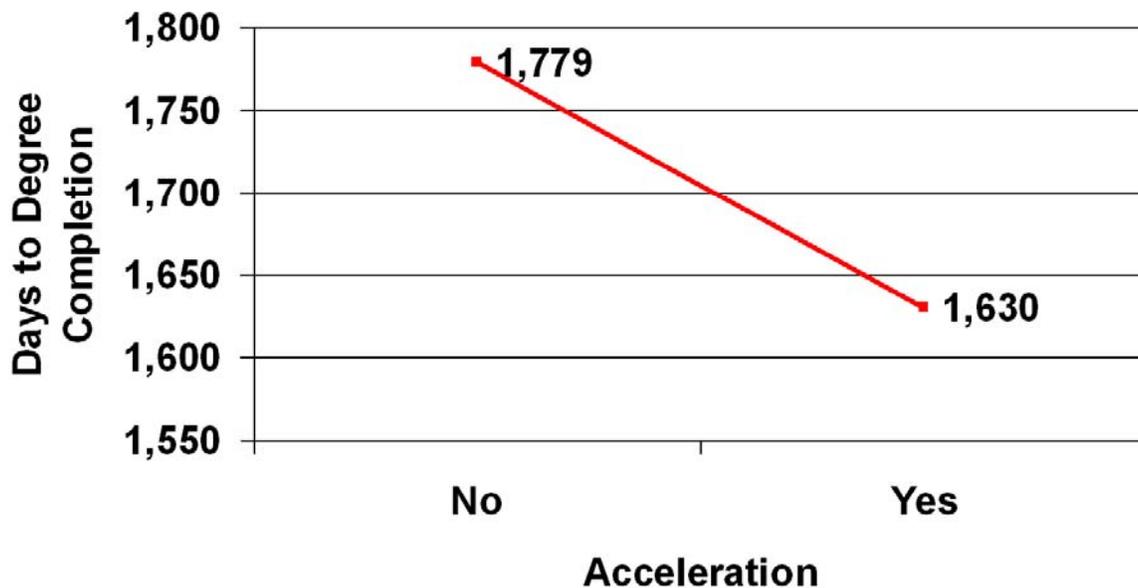


Table 2 reveals a mean “Days to Degree Completion” difference favoring accelerated students over non-accelerated students.

TABLE 2 DAYS TO BACCALAUREATE DEGREE COMPLETION: ACCELERATED AND NON-ACCELERATED STUDENTS			
Group	N	Mean	Standard Deviation
Non-Accelerated	1,207	1,770.21	402.90
Accelerated	305	1,629.91	348.70

Table 3 depicts a significant 140 “Days to Baccalaureate Degree Completion” difference between accelerated and non-accelerated students.

TABLE 3 TWO-SAMPLE T-TEST – DAYS TO DEGREE COMPLETION	
Difference in Means	140.30
95% Confidence Interval	90.95 to 189.65
t	5.58
df	1,510
p-value	0.000

It is concluded that the “Days to Baccalaureate Degree Completion” mean advantage of accelerated students is significant.

CONCLUSION

The major finding of this analysis is that acceleration significantly reduces time to complete the baccalaureate degree. This study adds to the growing body of research suggesting positive educational outcomes associated with acceleration.

LIMITATIONS

As this analysis included only NIACC accelerated students the study’s findings are not generalizable to other populations. In addition, there are many other variables that could influence days to degree attainment. Also, the study did not examine other suggested benefits of acceleration. Some people suggest that accelerated students may decide to take a reduced course load to focus their academic attention and improve performance. Other people have observed that accelerated students enroll in more rigorous courses and/or attain more than one associate or baccalaureate degree. These observations are certainly ripe fruit for future research.

DISCUSSION

I will repeat here what I’ve written elsewhere (Morrison, 2007, 2008). “It’s clear that acceleration has important and significant effects on educational attainment. It also appears that acceleration can not in itself explain the observed benefits. My personal observations, albeit untested, suggest that successful acceleration raises student/family expectations for both high school and college performance. Early success in college courses for high school students is a powerful motivator and it provides an enhanced self-concept. Family support systems and expectations are mobilized in reinforcing cycles of success. It is probably these increased expectations, enhanced self-concepts and reinforcing success support systems that yield the incredible outcomes observed in this study. These hypotheses point the way to future research.”

REFERENCES

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