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The Effects of Students' Middle-School and High-School Experiences on Completion of the Bachelor's Degree: How Can School Counselors Make a Difference?

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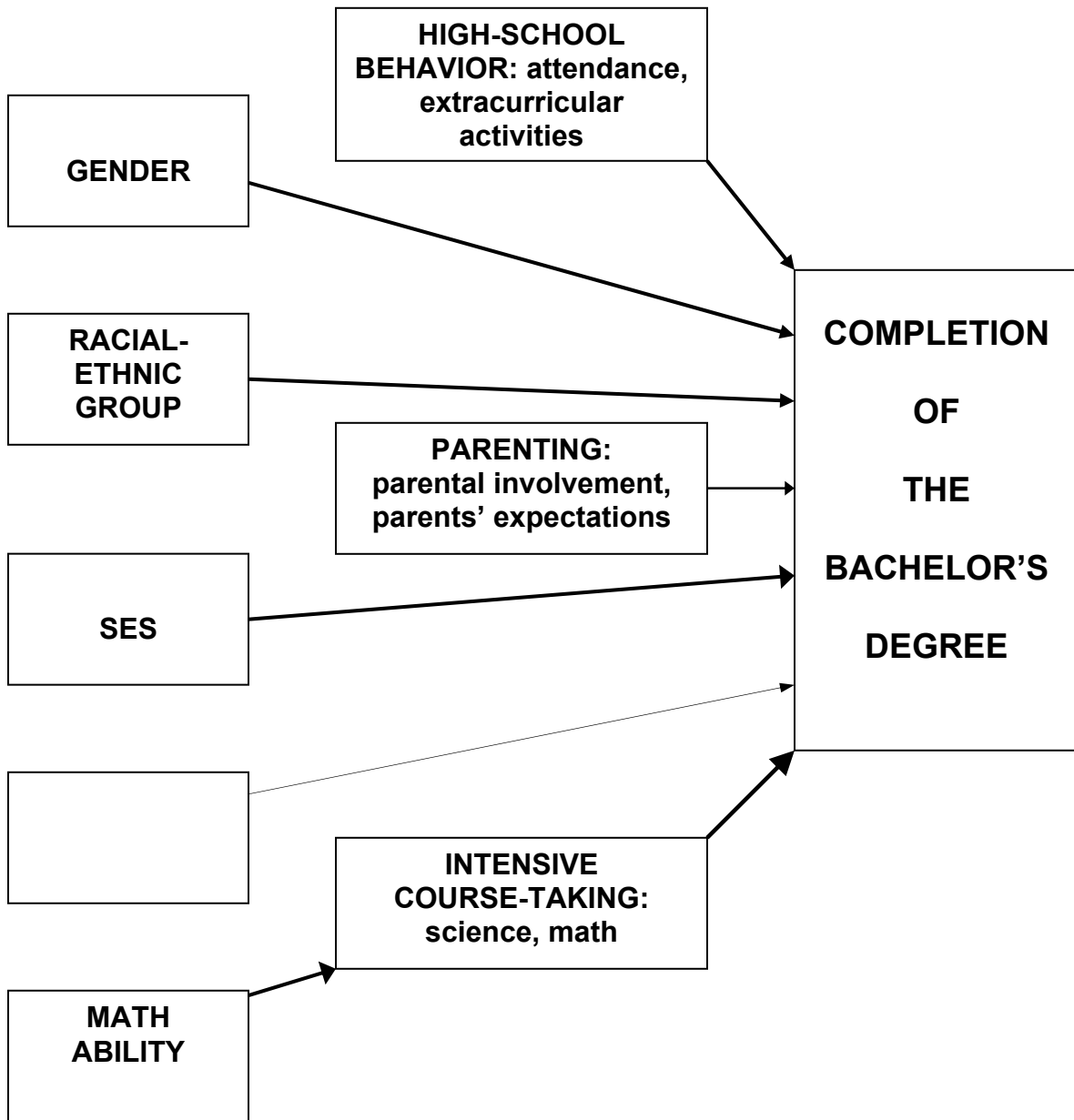
Trusty (2004) used NELS:88 data (National Education Longitudinal Study: 1988-2000, 2002) to examine the effects of several middle-school and high-school variables on completion versus non-completion of the bachelor's degree. Data spanned across a 12-year time period—from when students were in the eighth grade to when they were eight years out of high school. All 5,257 young people in Trusty's study had attended college soon after high school, and all were pursuing the bachelor's. Eight years after their senior year of high school, 53% of participants had realized their goals of completing the bachelors and 47% had not.

Several variables had practically significant effects on degree completion:

- The strongest effects were from the academically intensive science and math courses that participants took in high school. For example, when students added one high-school unit in intensive math (Algebra 2, trigonometry, pre-calculus, or calculus), their likelihood of completing the bachelor's increased by 73%. Adding one unit in intensive science (biology, chemistry, or physics) increased the likelihood of completing the degree by 45%.
- The effects of intensive course-taking extended well beyond the effects of eighth-grade reading and math ability. That is, the intensive science and math courses that students completed in high school were more important to degree completion than the levels of ability they brought to high school.
- Socioeconomic status (SES) had a strong effect. A one-standard-deviation increase in SES increased the likelihood of degree completion by 62%.
- Students' good attendance behavior in high school (not skipping school or classes) had a positive effect on degree completion.
- When students participated more in school-sponsored extracurricular activities, they were more likely to complete the bachelor's degree.
- There was a moderate gender effect. Women were more likely than men to complete the bachelor's degree.
- Asian Americans and White Americans were more likely than Latinos or African Americans to complete the bachelor's.
- When parents were more involved in their children's education and when parents had higher postsecondary educational expectations for their children, young people were more likely to complete the bachelor's.
- Eighth-grade reading ability had a modest, positive effect on degree completion.

The findings demonstrate that young people’s experiences in middle school and high school are extremely important to their experiences in college. The Long-Term Educational Development model (LTED model) was formulated from the findings. This model is depicted in the figure below:

LONG-TERM EDUCATIONAL DEVELOPMENT MODEL



The variables in the left column are background variables from the eighth grade; variables in the center column are from high school; and the outcome (bachelor’s degree

completion vs. non-completion) is to the right of the figure. Note that larger and darker arrows represent stronger effects. There was only one practically significant indirect effect in the model. That is, eighth-grade math ability affected degree completion indirectly via students' high-school science and math course-taking.

Applicability of the LTED Model for Racial-Ethnic Groups

Trusty (2004) tested the applicability of the LTED model for U.S. racial-ethnic groups by performing separate analyses for Asian Americans, Latinos, African Americans, and White Americans. These separate analyses revealed the following similarities and differences across groups:

- Across all racial-ethnic groups, math (early math ability and course-taking in science and math) mattered most to degree completion.
- SES effects were strong for all groups, but comparatively weaker for Asian Americans.
- The positive effects of high-school attendance were consistent across racial-ethnic groups.
- Participation in extracurricular activities had stronger effects on degree completion for Latinos and African Americans than for Asian Americans and Whites.
- The effects of reading ability were strongest for Asian Americans and Latinos—groups for whom English is more often a second language.
- The parental involvement effect was strongest for Asian Americans, and effects of parents' expectations were consistent across groups.
- For all racial-ethnic groups, girls-women were more likely than boys-men to complete the bachelor's.

Although there were some racial-ethnic differences in the effects of middle-school and high-school variables on bachelor's degree completion, the LTED model is applicable to the larger U.S. racial-ethnic groups.

Best Practices and Suggestions for School Counselors

Based on Trusty's (2004) findings, the following are best practices and suggestions for professional school counselors in helping students in their long-term educational development. Because the strongest effects on bachelor's degree completion were from intensive course-taking, the major implications of findings are concerned with students' individual education-career planning. Along with each recommended practice, we offer suggestions for assessment, evaluation, and accountability. Readers should consult the monograph for information on implementing the practices outlined below.

1. Inform students, teachers, parents, and administrators of the salient influences on students' long-term educational development (i.e., teach the LTED model).

Evaluation: Frequencies of stakeholders informed through various means (e.g., guidance, PTO presentations, printed materials, program web-sites).

2. Develop and use an effective system for individual education-career planning. *Evaluation: Frequencies of student advising, counseling sessions, guidance lessons, and other activities focusing on students' education-career planning.*
 - a. Help every student develop an appropriate, written (electronic or printed) education-career plan. In schools where student-to-counselor ratios are high, use guidance as a format for developing plans. *Evaluation: Frequencies of students with completed plans appropriate to their abilities and goals.*
 - b. Pay particular attention to students' long-term education-career goals and the degree of consistency between goals and academic effort. *Evaluation: Frequencies of students who are exhibiting effort (e.g., intensive course-taking, other course-taking) and completing tasks consistent with goals; number of students who dropped intensive courses.*
 - c. Inform students of various postsecondary education-career options; and when appropriate, help students develop back-up plans (alternative plans). *Evaluation: Students' indicated knowledge of various postsecondary options (evaluated through guidance); frequencies of students with appropriate back-up plans.*
 - d. Include parent and teacher input into education-career planning. *Evaluation: Percentage of plans with parent and teacher input; levels of agreement among parties on students' plans and goals (student-parent-counselor-teacher consistency regarding students' plans and goals).*
 - e. Use students' education-career plans as a means for helping them become involved in rewarding extracurricular activities. *Evaluation: Students' levels of involvement in extracurricular activities and adherence to plans.*
3. Provide leadership and advocacy for an intensive school curriculum and effective instruction. *Evaluation: Time-task analysis of leadership and advocacy efforts in school curriculum development and efforts promoting effective instruction.*
4. Provide leadership, advocacy, and counseling in promoting good school attendance. *Evaluation: Time-task analysis of efforts aimed at increasing attendance; school attendance data, including class attendance.*
5. Engage in leadership and advocacy for students' participation in school-sponsored extracurricular activities (for all students, and for African American and Latino students in particular). *Evaluation: Frequencies of students' participation in extracurricular activities.*
 - a. Help create engaging extracurricular activities for students. *Evaluation: Extracurricular activities initiated and continuing.*
 - b. Encourage students' participation through counseling, advising, guidance, and individual planning. *Evaluation: Time-task analysis of counselor efforts targeting increases in participation in extracurricular activities; frequencies of students' participation.*

All the above practices involve high-school counselors, and many involve middle-school counselors. Education-career planning, for example, is especially important at the middle-school level. The evaluation activities enumerated above are not time-consuming or difficult, and they do provide important data. These data would be informative for students, administrators, teachers, parents, and school board members.

The practices listed above target the variables over which school counselors have direct influence and control (e.g., students' individual planning, counselors' leadership and advocacy). Other variables in the LTED model point school counselors toward target populations. For example, many students from lower SES groups and some Latino and African American students will need high levels of attention to develop the resilience needed to attain high postsecondary educational goals.

Conclusion

Trusty's (2004) study and the LTED model resulting from the study demonstrate that student engagement is salient to students' long-term educational development.

Important forms of student engagement are:

- Academic engagement through taking intensive courses
- Engagement through good school attendance
- Engagement through participating in extracurricular activities
- Parental engagement through parental involvement and holding high expectations for children

When students and parents are engaged in the above ways, students are much more likely to realize their high educational goals. When they are not engaged, the likelihood of reaching their goals is diminished. The social and economic consequences of engagement-disengagement are pervasive and lasting.

Reference

National Education Longitudinal Study: 1988-2000 Data Files and Electronic Codebook System (2002) (NCES 2002-322). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

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