ISSUES&ANSWERS REL 2012–No. 134

REL MIDWEST
Regional Educational Laboratory

Using the freshman on-track indicator to predict graduation in two urban districts in the Midwest Region

Summary

ies NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE
Institute of Education Sciences

ISSUES & ANSWERS REL 2012–No. 134

REL MIDWEST
Regional Educational Laboratory

Using the freshman on-track indicator to predict graduation in two urban districts in the Midwest Region

Summary

April 2012

Prepared by

Heather Norbury
American Institutes for Research

Kelly Reese
American Institutes for Research

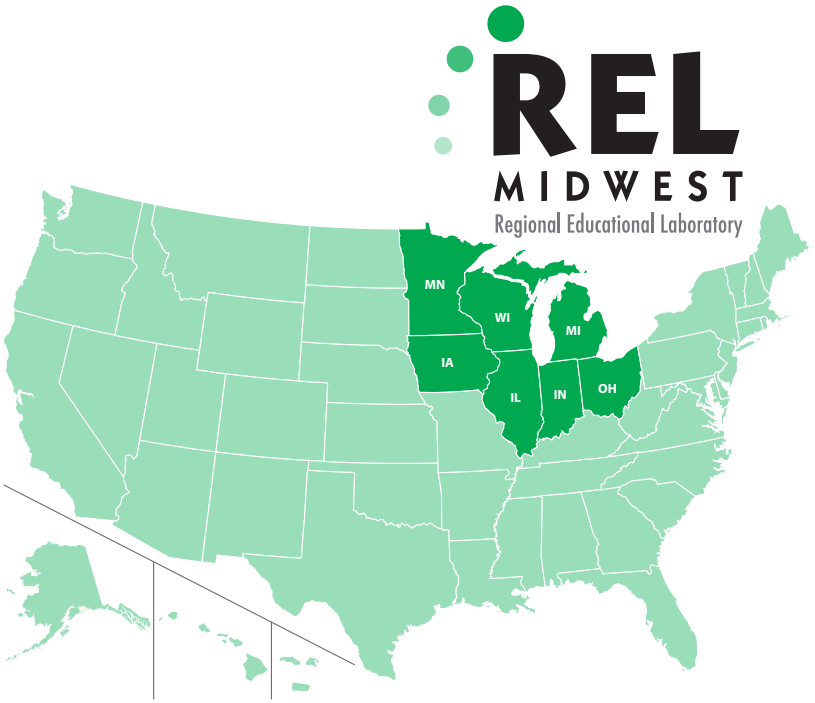
Manyee Wong
American Institutes for Research

Sonica Dhillon
American Institutes for Research

Yinmei Wan
American Institutes for Research

R. Dean Gerdeman
American Institutes for Research

ies NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE
Institute of Education Sciences



Issues & Answers is an ongoing series of reports from short-term Fast Response Projects conducted by the regional educational laboratories on current education issues of importance at local, state, and regional levels. Fast Response Project topics change to reflect new issues, as identified through lab outreach and requests for assistance from policymakers and educators at state and local levels and from communities, businesses, parents, families, and youth. All Issues & Answers reports meet Institute of Education Sciences standards for scientifically valid research.

April 2012

This report was prepared for the Institute of Education Sciences (IES) under Contract ED-06-CO-0019 by Regional Educational Laboratory Midwest administered by Learning Point Associates, an affiliate of the American Institutes for Research. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

Norbury, H., Wong, M., Wan, M., Reese, K., Dhillon, S., and Gerdeman, R. (2012). *Using the freshman on-track indicator to predict graduation in two urban districts in the Midwest Region.* (Issues & Answers Report, REL 2012–No.134). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. Retrieved from http://ies.ed.gov/ncee/edlabs.

This report is available on the Regional Educational Laboratory website at http://ies.ed.gov/ncee/edlabs.

Summary

REL 2012–No. 134

Using the freshman on-track indicator to predict graduation in two urban districts in the Midwest Region

This study uses a measure based on grade 9 course credits earned and failures to examine four-year high school graduation rates for students classified as "on track" and "off track" to graduate in two urban Midwest Region districts. For both districts, the on-track indicator was a significant predictor of on-time high school graduation, even after controlling for student background characteristics and grade 8 assessment test scores.

Recent estimates suggest that of U.S. public high school freshmen in the fall of 2005 24.5 percent did not graduate on time in 2008/09 (Stillwell, Sable, and Plotts 2011).[1] As states and school districts attempt to boost graduation rates, they face the challenge of identifying which students are at risk of not graduating on time. Early warning indicators based on measurable student outcomes and behaviors could help identify students at risk while there is still time to redirect their trajectory away from dropping out or falling behind.

The current study focuses on the freshman on-track indicator developed by the Consortium on Chicago School Research (CCSR). This indicator identifies a student at the end of the first year of high school as on track to graduate if:

- The student has accumulated the necessary course credits in grade 9 to move to grade 10, as defined by district policy.
- The student has no more than one semester failure in any English, math, science, or social studies course.

The CCSR found that of the Chicago freshman class of 1999, 81 percent of students who were on track graduated from high school within four years compared with 22 percent of students who were off track (Allensworth and Easton 2005).

Educators want to know how consistently indicators predict graduation across districts. In a recent study, Regional Educational Laboratory (REL) Southwest found that in five Texas districts, a greater percentage of on-track than off-track students graduated within four years (Hartman et al. 2011).[2] However, across Chicago and the five Texas districts studied by Hartman et al., the difference in on-time graduation rates for on-track and off-track students varied considerably, ranging from 18.4 percentage points to 59.0 percentage points. This report adds to this body of research by applying the CCSR model to two additional districts (referred to as District A and District B), both in the Midwest Region.

Although the CCSR study of Chicago students found that the on-track indicator had predictive value after accounting for student background characteristics (Allensworth and Easton 2005), that study cannot predict whether this is the case in other districts. The current study

examines the extent to which the CCSR on-track indicator predicts on-time graduation in two other districts after controlling for student background characteristics and prior achievement.

The current study examined three research questions for two urban districts in the Midwest Region:

- What were the freshman on-track and off-track rates for recent cohorts, overall and by student background subgroup?
- How did four-year in-district graduation rates compare for on-track and off-track freshmen in recent cohorts, overall and by student background subgroup?
- To what extent does the on-track indicator predict four-year graduation rates for recent cohorts in each district, after accounting for baseline student background characteristics?

The main results of the study are the following:

- For both districts, students who were on track at the end of grade 9 graduated on time at a higher rate than did students who were off track. This was the case both overall and for every student background subgroup examined in each district.
    - In District A, the graduation rate was 80.7 percent for on-track students and 30.2 percent for off-track students in the 2005/06 cohort and 77.7 percent and 30.0 percent in the 2006/07 cohort.
    - In District B, the graduation rate was 90.6 percent for on-track students and 46.1 percent for off-track students in the 2005/06 cohort and 90.5 percent and 44.7 percent in the 2006/07 cohort.[3]
- For both districts, the on-track indicator was a significant predictor of on-time high school graduation, even after controlling for student background characteristics and for student assessment test scores in grade 8. The odds of on-time graduation for students who were on track at the end of their freshman year was estimated to be 6.6 times that of students who had similar characteristics but were off track at the end of their freshman year for District A and 5.5 times for District B.
- For both districts, the effect size of being on track compared with being off track (as measured by increases in the odds of graduating) was larger than the effect size for every student background characteristic and for grade 8 assessment test scores.
    - In District A, the percentage of students who were on track at the end of grade 9 ranged from 41.1 percent to 51.5 percent across four cohorts. The on-track and off-track rates varied with subgroup classifications based on gender, race/ethnicity, individualized education program (IEP) status, age, and grade 8 proficiency level on the state math and reading assessments. The on-track rate for individual subgroups ranged from 25.3 percent to 73.9 percent.
    - In District B, the percentage of students who were on track at the end of grade 9 ranged from 84.6 percent to 86.8 percent across five cohorts.

The on-track and off-track rate varied with subgroup classifications based on gender, race/ethnicity, IEP status, free or reduced-price lunch status, age, and grade 8 proficiency level on the state math and reading assessments. The on-track rates for individual subgroups ranged from 67.2 percent to 97.6 percent.

The pattern of results in this study is similar to that of prior studies (Allensworth and Easton 2005; Hartman et al. 2011), with some differences in overall on-track rates, on-track rates for particular student subgroups, and the degree to which the on-track indicator differentiates between graduates and nongraduates.

Notes

1. Stillwell, Sable, and Plotts (2011) applied the averaged freshman graduation rate, a method used by the National Center for Education Statistics to estimate the percentage of public high school freshmen who graduate with a regular diploma four years after starting grade 9 (Seastrom et al. 2006a, 2006b). Under this method, the rate for 2008/09 (the freshman class in the fall of 2005) equals the total number of diploma recipients in 2008/09 divided by the average enrollment of grade 8 students in 2004/05, grade 9 students in 2005/06, and grade 10 students in 2006/07.

2. Both Allensworth and Easton (2005) and Hartman et al. (2011) calculated graduation rates by tallying the number of on-track and off-track freshmen in each district who went on to graduate on time. Students who left the district during grade 9 or who transferred into the district after grade 9 were not included in these calculations. The same method was used in this report.

3. The findings for the first two research questions show that on-track rates and on-time graduation rates were higher for District B than for District A. It is not within the scope of this study to compare the two districts, however, or to explain the underlying reasons for the on-track rates or graduation rates in either district.

April 2012

References

Allensworth, E. M., and Easton, J. Q. (2005). *The on-track indicator as a predictor of high school graduation*. Chicago: Consortium on Chicago School Research. Retrieved September 14, 2011, from http://ccsr.uchicago.edu/publications/p78.pdf.

Hartman, J., Wilkins, C., Gregory, L., Gould, L. F., and D'Souza, S. (2011). *Applying an on-track indicator for high school graduation: adapting the Consortium on Chicago School Research indicator for five Texas districts.* (Issues & Answers Report, REL 2011–No. 100). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved September 14, 2011, from http://ies.ed.gov/ncee/edlabs/regions/southwest/pdf/REL_2011100.pdf.

Seastrom, M. M., Chapman, C. Stillwell, R., McGrath, D., Peltola, P., Dinkes, R., et al. (2006a). *User's guide to computing high school graduation rates, vol. 1, Review of current and proposed graduation indicators* (NCES 2006-604). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. Retrieved September 14, 2011, from http://inpathways.net/userguide_grad1.pdf.

Seastrom, M. M., Chapman, C. Stillwell, R., McGrath, D., Peltola, P., Dinkes, R., et al. (2006b). *User's guide to computing high school graduation rates, vol. 2, Technical evaluation of proxy graduation indicators* (NCES 2006-605). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. Retrieved September 14, 2011, from http://inpathways.net/userguide_grad2.pdf.

Stillwell, R., Sable, J., and Plotts, C. (2011). Public school graduates and dropouts from the Common Core of Data: School year 2008/09 (NCES 2011-312). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.