

**Missouri Department of Elementary and Secondary Education
Division of Special Education**

COMPARISON OF GRADUATION AND DROPOUT RATE CALCULATIONS

Purpose:

To explain the difference in calculation methods of graduation rates and dropout rates utilized by the United States Office of Special Education Program (OSEP), the Missouri Division of Special Education (DSE) and the Missouri Department of Elementary and Secondary Education (DESE) for comparative analysis and interpretation.

GRADUATION RATES:

Graduation rates are expressed as percentages. As with any numerical or statistical representation, caution should be exercised with regard to interpretation. As such, for purposes of interpreting and for comparing OSEP's rates with Missouri's, an understanding of how each is calculated is integral for understanding what each rate represents. Calculation methods and what the resultant rate represents are as follows:

Entity	Calculation Method	Rate Represents
OSEP	<u>Graduation Rate of Students with Disabilities</u> = $\frac{\text{[Number of Graduates Receiving A Regular High School Diploma (02}^1\text{) } \div \text{(Number Graduates (02) + Number Received Certificate (03) + Number Reached Maximum Age (04) + Number Died (05) + Number Moved, Not Known To Be Continuing (07) + Number Dropouts (08))]} \times 100$	The number of graduates as a percent of the number of exiters ages 14-22
DSE	<u>Graduation Rate of Students with Disabilities</u> = $\frac{\text{[Number of Graduates Receiving A Regular High School Diploma (02) } \div \text{(Number Graduates (02) + Number Received Certificate (03) + Number Reached Maximum Age (04) + Number Moved, Not Known To Be Continuing (07) + Number Dropouts (08))]} \times 100$	The number of graduates as a percent of the number of exiters ages 14-22
DESE	<u>Graduation Rate of All Students</u> = $\frac{\text{[Number of Graduates } \div \text{(9-12 Cohort}^2\text{ Dropouts + Graduates)]} \times 100$	The number of graduates as a percent of the sum of graduates and dropouts in grades 9 – 12.

¹ Numbers in parentheses represent exit codes (02, 03, 04, 05, 07 and 08). Descriptive information concerning these codes can be found in the *Missouri Core Data Collection System Manual*, Exhibit 20.

² 9-12 Cohort=A cohort of students that started ninth grade together.

Comments:

- All three graduation rate calculations compare the number of graduates to the number of students leaving school (the sum of graduates and dropouts).
- The key difference between the calculations is the definition of a "dropout." Prior to 2004-2005, DSE's calculation method yielded a lower rate as compared to OSEP's as the denominator represented a larger value due to the inclusion of Moved, Not Known to Be Continuing. The number of students counted as Moved, Not Known to Be Continuing was significant enough to reduce Missouri's calculated rate by 5%. Beginning 2004-2005, OSEP included Moved, Not Known to be continuing in the denominator thus significantly improving comparability. The inclusion of the number of students that died in OSEP's calculation is insignificant in altering the graduation rate as it is (thankfully) a relatively small value.
- Both OSEP's and DSE's dropout number represents the number of students who dropped out in that year, while DESE's dropout number represents the number of cohort dropouts over a four year time period.

DROPOUT RATES:

Dropout rates are expressed as percentages. As with any numerical or statistical representation, caution should be exercised with regard to interpretation. As such, for purposes of interpreting and for comparing OSEP's rates with Missouri's, an understanding of how each is calculated is integral for understanding what each rate represents. Calculation methods and what the resultant rate represents are as follows:

Entity	Calculation Method	Rate Represents
OSEP	<u>Dropout Rate of Students with Disabilities</u> = [Number Moved, Not Known To Be Continuing (07) + Number of Dropouts (08) ÷ (Number Graduates (02) + Number Received Certificate (03) + Number Reached Maximum Age (04) + Number Died (05) + Number Moved, Not Known To Be Continuing (07) + Number Dropouts (08))] × 100	The number of dropouts as a percent of the number of exiters ages 14-22.
DSE	<u>Dropout Rate of Students with Disabilities</u> = [(Number Received Certificate (03) + Number Reached Maximum Age (04) + Number Moved, Not Known To Be Continuing (07) + Number Dropouts (08)) ÷ Child Count Ages 14-22] × 100	The number of dropouts (students leaving school without a diploma) as a percent of students age 14-22 in school at that time.
DESE	<u>Dropout Rate of All Students</u> = [Number of Dropouts ÷ ((Total September Enrollment + (Transfers In – Transfers Out)) ÷ 2)]	The number of dropouts (students leaving school without a diploma) as a percent of average enrollment.

Comments:

- OSEP's dropout rate differs significantly from DSE's. OSEP is comparing the number of dropouts to the number of students exiting school thus producing a percent of exiters. DSE is comparing the number of dropouts to the total number of students age 14-22 in school during that school year, thus producing a percent of the student population. DSE's calculation method yields a lower rate. Given these differences, these two rates should not be compared for equivalency.
- DSE's and DESE's rates are more closely aligned in methodology. The main difference is in the denominator where DSE uses the age 14-22 child count as of December 1, and DESE uses the average enrollment for grades 9-12.