U.S. Department of Education
Office of Planning, Evaluation and Policy Development
Policy and Program Studies Service

Issue Brief: Personalized Learning Plans

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Introduction

In 2015–16, the high school graduation rate reached a record high of 84 percent (U.S. Department of Education 2017). Despite the gains, over half a million students still drop out of high school each year (U.S. Department of Education 2015). High schools have adopted various strategies designed to keep students who are at risk of not graduating in school and on track for earning the credits required to graduate. "At-risk" students are defined as those failing to achieve basic proficiency in key subjects or exhibiting behaviors that can lead to failure and/or dropping out of school. Dropout prevention strategies are diverse; they vary in type of program, services offered, frequency, intensity, and duration of contact with target students.

The U.S. Department of Education (Department) sponsored the **National Survey on High School Strategies Designed to Help At-Risk Students Graduate (HSS),** which aimed to provide descriptive information on the prevalence and characteristics of dropout prevention strategies for at-risk students. The survey collected data in the 2014–15 school year from a nationally representative sample of 2,142 public high schools and focused on 13 specific high school improvement strategies[1] identified by a panel of external experts and senior Department officials. All findings are based on self-reported data from school principals. This brief on **personalized learning plans** is the eleventh in a series of briefs with key findings about these high school improvement strategies.

Definition of Personalized Learning Plans

The HSS focused on high schools and defined a **personalized learning plan**[2] as a formalized process that involves high school students setting learning goals based on personal, academic and career interests with the close support of school personnel or other individuals that can include teachers, school counselors, and parents. Personalized learning plans are developed in a way that identifies the types of skills students need to pursue their academic and career interests and the steps required to build those skills, which may be attained through traditional educational pathways or through other innovative delivery mechanisms. The HSS focused on one aspect of personalized learning—the development of personalized learning *plans*—rather than on specific "personalized learning" models or interventions such as personalized learning curricula, learning environment, or blended learning strategies.

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[1] The survey examined 13 strategies that are designed to improve high school outcomes for at-risk students. These strategies are: (1) academic support classes, (2) academic tutoring, (3) career-themed curriculum, (4) case management services, (5) college-level coursework, (6) competency-based advancement, (7) credit recovery, (8) early warning systems, (9) high school transition activities, (10) mentoring, (11) personalized learning plans, (12) social services, and (13) student support teams. See http://www2.ed.gov/about/offices/list/opepd/ppss/reports-high-school.html for the series of briefs. Researchers may request access to a restricted-use data file by completing an application with the Institute of Education Science's National Center for Education Statistics. Information about the process is also available at this website.

[2] Pane, J.F., Steiner, E.D., Baird, M.D., Hamilton, L.S., and Pane, J.D. 2017. *Informing Progress: Insights on Personalized Learning Implementation and Effects.* Santa Monica, CA: RAND Corporation.

Research on Personalized Learning Plans

Studies that examine the outcomes of high school students who developed personalized learning plans have primarily used correlational research designs or described key implementation strategies for helping students create their own plans. For example, a recent correlational study suggests that personalized learning plans are associated with higher student motivation, sense of belonging and connectedness to school (Solberg et al. 2014). These outcomes were particularly pronounced for students who developed plans with challenging academic goals, engaged in career exploration activities, participated in leadership development opportunities, and had high levels of parental involvement in the planning process. While these results seem promising, more research is needed to establish the causal effects of personalized learning plans, particularly the effects on academic and graduation outcomes. Most of the literature on personalized learning plans focuses on qualitative information such as implementation "lessons" or guides (Missouri Department of Elementary and Secondary Education 2015; New Jersey Department of Education 2014; and Yonezawa et al. 2012).

Survey Findings on Personalized Learning Plans

This survey does not examine the effectiveness of personalized learning plans but instead describes the kinds of schools that offer personalized learning plans and their approaches to implementing the strategy. All findings are based on self-reported data from school principals. This analysis included an examination of four school characteristics: (1) size, (2) poverty, (3) locale, and (4) graduation rate. Only statistically significant differences within a school characteristic (at $p < .05$) are discussed; non-statistically significant differences are not reported. School characteristics were defined in the following ways.

School size. School size categories consisted of small schools (fewer than 500 students), medium schools (500–1,199 students), and large schools (1,200 or more students) based on 2013–14 Common Core of Data (CCD) student enrollment data.

School poverty. Poverty levels were based on 2013–14 free or reduced-price lunch (FRPL) and total CCD school enrollment data. The poverty categories were low-poverty schools (below 35 percent students with FRPL), medium-poverty schools (35–49 percent students with FRPL), and high-poverty schools (50 percent or more students with FRPL).

School locale. School locale included three mutually exclusive locales from the CCD: rural schools, suburban/town schools, and city schools.

Graduation rate. School classification by graduation rate was based on three categories: low-graduation rate (67 percent or lower graduation rate), medium-graduation rate (68 to 89 percent graduation rate), and high-graduation rate (90 percent or higher graduation rate).

Summary of Key Findings

- In 2014–15, 65 percent of high schools nationwide developed personalized learning plans with students; an estimated 45 percent of all high school students[3] developed a personalized learning plan, according to school principals.
- High-poverty schools were more likely than low-poverty schools to develop personalized learning plans with students; low-graduation-rate schools were more likely than high-graduation-rate schools to develop personalized learning plans with students.

[3] HSS survey of high school administrators, 2015 (Question 99).

- Among high schools that developed personalized learning plans, schools most commonly targeted students for the development of these plans based on poor academic performance (65 percent), followed by discipline or behavioral issues (52 percent), attendance issues (51 percent), and students at a particular grade level (50 percent) among others.
- The type of information most commonly included in personalized learning plans were students' postsecondary goals (85 percent) and career goals (85 percent), followed by identification of courses or programs required to achieve their educational and aspirational goals while also fulfilling course requirements for graduation (82 percent) among others.
- High schools can involve different school personnel or other individuals in the development of personalized learning plans. The more common school personnel or other individuals involved in the development of personalized learning plans were school counselors (84 percent), followed by students (72 percent), teachers (72 percent), and parents (66 percent) among others.

What was the prevalence of personalized learning plans in high schools?

In 2014–15, 65 percent of high schools nationwide developed personalized learning plans with students; an estimated 45 percent of all high school students[4] developed a personalized learning plan, according to school principals. The prevalence of personalized learning plans differed by school poverty and graduation rate; there were no significant differences by school size or school locale (Exhibit 1).

Exhibit 1. Percentage of high schools that developed personalized learning plans with students by selected school characteristics, 2014–15

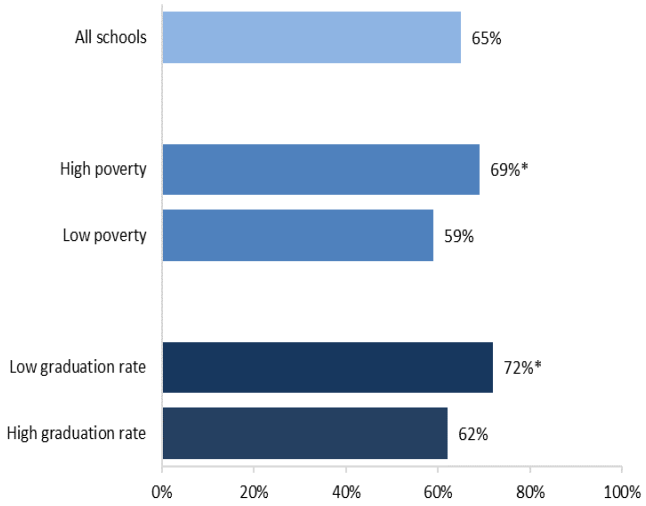

Exhibit reads: In 2014–15, 65 percent of high schools nationwide developed personalized learning plans with students.

* $p < .05$

NOTE: An asterisk indicates statistical significance. The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups.

Unweighted n = 1,925 high schools.

SOURCE: HSS survey of high school administrators, 2015 (Question 98).

[4] Ibid. 3.

Differences by school poverty. High-poverty schools were more likely than low-poverty schools to develop personalized learning plans with students (69 percent versus schools 59 percent).

Differences by graduation rate. Low-graduation-rate schools were more likely than high-graduation-rate schools to develop personalized learning plans with students (72 percent versus 62 percent).

How did high schools target students to develop personalized learning plans?

High schools most frequently targeted specific students to develop personalized learning plans based on poor academic performance (65 percent), followed by discipline or behavioral issues (52 percent), attendance issues (51 percent), and grade level (50 percent) among others. There were significant differences by school size, school poverty level, school locale, and graduation rates in the subgroups of students that were targeted to develop personalized learning plans (Exhibit 2).

Exhibit 2. Percentage of high schools that targeted student subgroups or issues to develop personalized learning plans, 2014–15

	All schools with learning plans	Size		Poverty		Locale			Graduation rate	
Student subgroups targeted		Large	Small	High	Low	City	Suburban	Rural	Low	High
Performing below standards/grade level	65%	61%	69%	66%	59%	70%	66%	62%	72%*	60%
Discipline or behavioral issues	52%	53%	55%	54%	46%	59%*	53%	46%	62%*	46%
Attendance issues	51%	52%	53%	53%	46%	59%*	53%	46%	63%*	47%
Particular grade level	50%	53%	51%	52%*	42%	51%	51%	48%	52%	48%
Recommended by high school staff	49%	51%	50%	49%	43%	53%	47%	46%	56%*	47%
Performing above standards/grade level	37%	40%	39%	38%	33%	44%*	36%	33%	45%*	36%
English learners	31%	42%*	30%	32%	27%	40%*	33%	23%	37%	29%
Reentry students	29%	35%	29%	30%	25%	37%*	29%	23%	42%*	23%

Exhibit reads: Among high schools that developed personalized learning plans with students in 2014–15, 65 percent targeted students performing below standards or grade level.

*$p < .05$

NOTE: An asterisk indicates statistical significance. The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.

Unweighted n = 1,117 high schools.

SOURCE: HSS survey of high school administrators, 2015 (Question 100).

Differences by school size. Large schools were more likely than small schools to target English learners (ELs) to develop personalized learning plans (42 percent versus 30 percent).

Differences by school poverty. High-poverty schools were more likely than low-poverty schools to target students in a particular grade level to develop personalized learning plans (52 percent versus 42 percent).

Differences by school locale. More city schools than suburban or rural schools targeted students with discipline or behavioral issues (59 percent of city schools versus 53 percent of suburban schools and 46 percent of rural schools); attendance issues (59 percent of city schools versus 53 percent of suburban schools and 46 percent of rural schools); students who performed above standards (44 percent of city schools versus 36 percent of suburban schools and 33 percent of rural schools); ELs (40 percent of city schools versus 33 percent of suburban schools and 23 percent of rural schools); and reentry[5] students (37 percent of city schools versus 29 percent of suburban schools and 23 percent of rural schools) to develop personalized learning plans.

Differences by graduation rate. Low-graduation-rate schools were more likely than high-graduation-rate schools to target students who performed below standards (72 percent versus 60 percent); students with attendance issues (63 percent versus 47 percent); discipline or behavioral issues (62 percent versus 46 percent); students recommended by staff (56 percent versus 47 percent); students who performed above standards (45 percent versus 36 percent); and reentry students (42 percent versus 23 percent) to develop personalized learning plans.

What type of information was most commonly included in personalized learning plans?

Some educators may view personalized learning plans as a roadmap to the future and the type of information they include as critical. The type of information most commonly included in personalized learning plans were students' postsecondary goals and aspirations (85 percent) and career and employment goals (85 percent), followed by identification of courses or programs required to achieve their educational and career goals while also fulfilling course requirements for graduation (82 percent); personal goals (73 percent); personal enrichment interests (68 percent); students' self-assessment of learning strengths and weaknesses, such as areas where the student excels or struggles (62 percent); and specific knowledge or skills that should be addressed, such as the identification of learning gaps (56 percent). The type of information least commonly included in personalized learning plans was documentation of the student's major learning accomplishments or milestones (38 percent). There were significant differences in the information included in personalized learning plans by school size, school locale, and graduation rates (Exhibit 3). There were no significant differences by school poverty.

Differences by school size. Large schools were more likely than small schools to include students' postsecondary goals (92 percent versus 83 percent) in personalized learning plans. Small schools were more likely than large schools to include a self-assessment of students' learning strengths and weaknesses (63 percent versus 54 percent) and specific knowledge or skills that should be addressed (62 percent versus 42 percent) in personalized learning plans.

Differences by school locale. More city schools than suburban or rural schools included information about students' personal goals (79 percent of city schools versus 71 percent of suburban schools and 71 percent of rural schools); personal interests (73 percent of city schools versus 64 percent of suburban schools and 67 percent of rural schools); a self-assessment of the students' learning strengths and weaknesses (69 percent of city schools versus 60 percent of suburban schools and 59 percent of rural schools); the specific knowledge skills that the student should address to achieve the specified goals (65 percent of city schools versus 50 percent of suburban schools and 56 percent of rural schools); and the student's major learning milestones (44 percent of city schools versus 36 percent of suburban schools and 34 percent of rural schools) in personalized learning plans.

[5] Reentry students are those who dropped out of high school and then re-enrolled, as defined by the HSS.

Differences by graduation rate. High-graduation-rate schools were more likely than low-graduation-rate schools to include students' postsecondary goals in personalized learning plans (88 percent versus 81 percent).

Exhibit 3. Among high schools with personalized learning plans, the percentage of schools reporting the types of information included in the plans, by selected school characteristics, 2014–15

	All schools with learning plans	Size		Locale			Graduation rate	
Information included		Large	Small	City	Suburban	Rural	Low	High
Postsecondary goals	85%	92%*	83%	86%	84%	84%	81%*	88%
Career goals	85%	87%	85%	83%	86%	84%	83%	86%
Courses/programs required to achieve goals and fulfill graduation requirements	82%	86%	82%	81%	81%	84%	80%	84%
Personal goals	73%	71%	75%	79%*	71%	71%	78%	72%
Personal interests	68%	67%	67%	73%*	64%	67%	66%	68%
Self-assessment of students' learning strengths and weaknesses	62%	54%*	63%	69%*	60%	59%	65%	60%
Specific knowledge or skills that should be addressed	56%	42%*	62%	65%*	50%	56%	63%	55%
Documentation of major learning milestones	38%	33%	40%	44%*	36%	34%	41%	34%

Exhibit reads: Among high schools that developed personalized learning plans with students in 2014–15, 85 percent of schools reported that these plans included students' postsecondary goals.

*$p < .05$

NOTE: An asterisk indicates statistical significance. The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.

Unweighted n = 1,226 high schools.

SOURCE: HSS survey of high school administrators, 2015 (Question 102).

Who was involved in the development of personalized learning plans?

High schools can involve different school personnel or other individuals in the development of personalized learning plans. The more common school personnel or other individuals involved in the development of personalized learning plans were school counselors (84 percent), followed by students (72 percent), teachers (72 percent), and parents (66 percent) among others (Exhibit 4). There were significant differences by school size, school locale, and graduation rate in the types of school personnel or other individuals involved in the development of personalized learning plans (Exhibit 4). There were no significant differences by school poverty.

Differences by school size. Small schools were more likely than large schools to involve teachers (78 percent versus 52 percent), administrative staff (66 percent versus 45 percent), district-employed staff (10 percent versus 5 percent), and community-based agency staff (10 percent versus 4 percent) in the development of personalized learning plans. Large schools were more likely than small schools to involve school counselors (95 percent versus 78 percent) in the development of personalized learning plans.

Differences by school locale. More city schools than suburban or rural schools involved social workers in the development of personalized learning plans (27 percent of city schools versus 21 percent of suburban schools and 14 percent of rural schools).

Differences by graduation rate. Low-graduation-rate schools were more likely than high-graduation rate schools to involve teachers (85 percent versus 68 percent), administrative staff (67 percent versus 57 percent), social workers (26 percent versus 14 percent), and community-based agency staff (15 percent versus 5 percent) in the development of personalized learning plans. High-graduation-rate schools were more likely than low-graduation-rate schools to involve school counselors (91 percent versus 66 percent) in the development of personalized learning plans.

Exhibit 4. Percentage of high schools that reported involving the types of school personnel or other individuals in the development of personalized learning plans, by selected school characteristics, 2014–15

Personnel or other individuals involved	All schools with learning plans	Size		Locale			Graduation rate	
		Large	Small	City	Suburban	Rural	Low	High
School counselors	84%	95%*	78%	82%	84%	85%	66%*	91%
Students	72%	69%	72%	73%	72%	70%	75%	74%
Teachers	72%	52%*	78%	74%	68%	74%	85%*	68%
Parents	66%	66%	67%	62%	66%	70%	64%	68%
Administrative staff	60%	45%*	66%	62%	57%	61%	67%*	57%
School psychologists	23%	23%	22%	26%	23%	20%	21%	21%
Social workers	20%	17%	20%	27%*	21%	14%	26%*	14%
District-employed staff whose job is to mentor	9%	5%*	10%	9%	9%	9%	11%	8%
Community-based agency staff	8%	4%*	10%	11%	8%	7%	15%*	5%

Exhibit reads: Among high schools that developed personalized learning plans with students in 2014–15, 84 percent of schools reported that school counselors were involved in the development of these plans.

*$p < .05$

NOTE: An asterisk indicates statistical significance. The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.

Unweighted n = 1,231 high schools.

SOURCE: HSS survey of high school administrators, 2015 (Question 101).

Methodology

The **National Survey on High School Strategies Designed to Help At-Risk Students Graduate** was a survey of 13 high school strategies designed to improve graduation rates among students at risk of dropping out and was administered in the 2014–15 school year. The 13 strategies are: (1) academic support classes, (2) academic tutoring, (3) career-themed curriculum, (4) case management, (5) college-level coursework, (6) competency-based advancement, (7) credit recovery, (8) early warning systems, (9) high school transition activities, (10) mentoring, (11) personalized learning plans, (12) social services, and (13) student support teams.

The purpose of the survey was to inform education practitioners and policymakers about the prevalence, characteristics, and students served by these strategies in U.S. public high schools. The descriptive study did not measure the effectiveness of particular strategies but instead examined implementation factors in high schools across the country. The study team identified the 13 strategies and designed survey items for each strategy with input from a panel of external experts in the field and senior Department officials. All findings are based on self-reported data from school principals.

The researchers selected a nationally representative sample of high schools[6] using a random sampling approach, stratifying high schools based on graduation rate (from ED*Facts*)[7] and locale code (from NCES 2013–14 Common Core of Data). The survey collected data from high school principals (or designees knowledgeable about programs and strategies) at sampled schools. The survey response rate was 90 percent. The survey responses, after cleaning and processing, were analyzed in SAS and Stata using descriptive techniques that apply the appropriate statistical population weights to account for stratification by graduation rate and locale.

Results reported in this brief reflect the full survey sample unless otherwise noted and are representative of U.S. public high schools nationwide. References in the text to differences between subgroups based on sample data refer only to differences that are statistically significant using a significance level of 0.05.

[6] All U.S. public high schools providing instruction to 12th grade students in the fall of 2010 were included in the sampling frame unless (1) the lowest offered grade was 11th grade or higher, (2) there were fewer than five students in grades 9 through 12, (3) the percentage of students enrolled in grades 9 through 12 was under 20 percent of the total school enrollment and the total number of students in grades 9 through 12 was fewer than 20, or (4) the school name contained one of nine keywords indicating juvenile detention center or hospital. Of the 103,813 total schools listed in the 2010–11 CCD, 22,447 high schools met the criteria to be included in the sampling frame.

[7] There were 3,302 schools without graduation rate information in the 2010–11 ED*Facts* public use data set. The researchers used an imputation approach to assign these schools to either the high- or low-graduation-rate stratum. The imputation process began by examining the distribution of the high/low graduation rate classification for 19,145 schools by sampling locale. The percentage of schools classified as high graduation rate was calculated separately for each locale sampling stratum; 68.4 percent of rural schools were classified as high graduation rate, 63.0 percent of suburban schools were classified as high graduation rate, and 41.0 percent of city schools were classified as high graduation rate. The research team randomly assigned each of the 3,302 schools with unknown graduation rates to the high graduation rate stratum with probability 68.4 if the school was classified as rural, with probability 63.0 if the school was classified as suburban, and with probability 41.0 if the school was classified as urban. The sample size was adjusted upwards to account for potential misclassification due to this method. In analysis, the researchers used the restricted-use 2013–14 ED*Facts* data and graduation rates published on school and district websites to fill in this missing data.

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Appendix: Personalized Learning Plans (Survey Excerpt)
National Survey on High School Strategies Designed to Help At-Risk Students Graduate

This section asks about **Personalized Learning Plans**. For the purposes of this survey, personalized learning plans are based on a student's academic and career objectives and personal interests. Plans sequence content and skill development to help students graduate on time, college- and career-ready, and are updated based on information about student performance toward goals.

98. In the 2014-15 school year, does your school develop personalized learning plans for students?
(Please select only one)
{Only allow one selection}

Yes	No
☐	☐

If the user responds "Yes" to Q98, ask Q99 through Q103. Otherwise, skip to Q104.

99. On average, approximately what percentage of high school students in your school receives a personalized learning plan in the 2014-15 school year? {Slide bar for 0% to 100%}

100. Are any of the following subsets of students targeted for receiving a personalized learning plan?
(Check all that apply)

- Students with attendance issues (e.g., truancy) ☐
- Students with discipline or behavioral issues ☐
- Students performing <u>below</u> standards or grade level ☐
- Students performing <u>above</u> standards or grade level ☐
- Students in a particular grade level, regardless of performance ☐
- Students recommended by high school staff (e.g., counselor or teacher) ☐
- Reentry students ☐
- English Language Learners ☐
- Other ☐

(Please Specify_____)

101. Who is involved in developing personalized learning plans?
(Check all that apply)

- Teachers ☐
- School/guidance counselors ☐
- School psychologists ☐
- Social workers ☐
- Administrative staff ☐
- Community-based agency staff ☐
- District-employed staff whose job is to mentor students ☐
- Parents ☐
- Students ☐
- Other ☐

(Please specify: _____)

102. What type of information is most commonly included in personalized learning plans?
(Check all that apply)

- Students' postsecondary/college goals ☐
- Students' career goals (including career exploration) ☐
- Students' personal goals ☐
- Self-assessment of students' learning strengths and weaknesses (e.g., areas where they excel or struggle, learning style) ☐
- Specific knowledge or skills that should be addressed (e.g., identification of learning gaps, interventions or supports required) ☐
- Students' personal interests (e.g., areas of interest, hobbies) ☐
- Identification of the courses/programs required to allow the student to achieve their educational and aspirational goals while also fulfilling school credit and course requirements for graduation ☐
- Documentation of major learning accomplishments or milestones ☐
- Other ☐

(Please specify: _____)

The full survey is available at: http://www2.ed.gov/about/offices/list/opepd/ppss/reports-high-school.html