

# What Works Clearinghouse



## ALAS

**Program description** *ALAS* (Spanish for “wings”) is an intervention for middle and high school students that is designed to address student, school, family, and community factors that affect dropping out. Each student is assigned a counselor/mentor who monitors attendance, behavior, and academic achievement. The counselor/mentor provides feedback and coordinates interventions and resources to

students, families, and teachers. Counselors/mentors also serve as advocates for students and intervene when problems are identified. Students are trained in problem-solving, self-control, and assertiveness skills. Parents are trained in parent-child problem solving, how to participate in school activities, and how to contact teachers and school administrators to address issues.

**Research** One study of *ALAS* met the What Works Clearinghouse (WWC) evidence standards. This study included 94 high-risk Latino students entering seventh grade in one urban junior high school in California. The study examined the program’s effects on

whether students stayed in school and progressed in school. These outcomes were measured at the end of the intervention (ninth grade) and two years after the intervention had ended (11th grade).<sup>1</sup>

**Effectiveness** *ALAS* was found to have potentially positive effects on staying in school and potentially positive effects on progressing in school at the end of the intervention (ninth grade).

	<i>Staying in school</i>	<i>Progressing in school</i>	<i>Completing school</i>
<b>Rating of effectiveness</b>	Potentially positive effects	Potentially positive effects	Not reported
<b>Improvement index</b>	+42 percentile points	+19 percentile points	Not reported

1. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.

## Additional program information

### Developer and contact

ALAS was developed by Katherine Larson and Russell Rumberger at the University of California, Santa Barbara in partnership with the U.S. Department of Education. Additional program information can be obtained from the developers. Address: ALAS Dropout Prevention, 3875-A Telegraph Rd. #155, Ventura, CA 93003. Email: support@alasd DropoutPrevention.com. Website: www.alasd DropoutPrevention.com. Phone: 805-765-5385.

### Scope of use

ALAS was originally implemented in 1990 at a junior high school in the Los Angeles Unified School District. More recently, the ALAS model has been implemented at public schools in the Glendale Unified School District in Los Angeles County.

### Description of intervention

ALAS serves students identified as at risk of dropping out because of low academic performance and behavior problems. The intervention consists of six related strategies:

- *Monitor attendance.* Student attendance is monitored period-by-period, and students are required to make up missed school time. Parents are contacted daily about student truancy or extended absences.
- *Improve student social and task-related problem-solving skills.* During the first year of participation, ALAS students receive 10 weeks of instruction in problem-solving and self-control skills using the *ALAS Resilience Builder*<sup>®</sup> curriculum. After the first year, participants receive follow-up instruction on behavior change.

- *Provide feedback from teachers to parents and students.* Teachers provide weekly and, if needed, daily feedback through the counselor/mentor to students and parents about how students are doing with classroom behavior, assignments, and homework.
- *Teach parents how to participate in schools and how to manage their child's behavior.* Parents are trained in parent-child problem solving and parent participation in schools. Parents receive instruction on how to reduce their child's inappropriate behavior and promote desirable behavior.
- *Provide recognition and bonding activities.* ALAS students participate in social events set up by the program, and staff talk with parents to let them know their child met goals or improved behavior.
- *Connect students and families with community services.* ALAS staff helps students and parents use community and social services such as psychiatric and mental health services and alcohol and drug counseling.

ALAS is delivered on the school campus by a team of supervisors, counselors/mentors, volunteers, and clerical staff.<sup>2</sup> The intervention is intended to provide students with support and follow-up as needed across multiple years of program participation.

### Cost

The intervention cost \$1,185 per participant a year (expressed in 2005 dollars).<sup>3</sup> The bulk of costs are for ongoing activities—mostly salaries of supervisors, counselors, and clerical staff. Some startup costs are associated with training ALAS staff and teachers to deliver the problem solving skills curriculum to students.

2. Gándara, Larson, Mehan, and Rumberger (1998) reported that an ALAS program serving 107 students was implemented by a half-time supervisor, three counselors, and a half-time clerk.

3. The Consumer Price Index was used to convert the cost estimates expressed in 1990 dollars to 2005 dollars. Cost estimates from Gándara et al. (1998).

**Research** One study reviewed by the WWC investigated the effects of ALAS. The study (Larson & Rumberger, 1995) was a randomized controlled trial that met WWC evidence standards.<sup>4</sup>

Larson and Rumberger (1995) included 94 high-risk students who entered junior high school in Los Angeles as seventh

graders in 1990, with 46 students randomly assigned to ALAS and 48 assigned to the control group. The study measured outcomes at the end of ninth grade (the last year of the intervention) and the end of 11th grade (two years after the intervention ended).<sup>5</sup>

## **Effectiveness Findings**

The WWC review of interventions for dropout prevention addresses student outcomes in three domains: staying in school, progressing in school, and completing school.<sup>6</sup>

*Staying in school.* For staying in school, the study showed statistically significant positive effects on some outcomes and no statistically significant negative effects. Larson and Rumberger (1995) reported that, at the end of the intervention (the end of ninth grade), ALAS students were significantly more likely than control students to be enrolled in school (98% compared with 83%). Two years after the intervention had ended (the end of 11th grade), a larger fraction of ALAS students than control students were enrolled in school (75% compared with 67%), but the difference was not statistically significant. For the subgroup analyzed in Gándara, Larson, Mehan, and Rumberger (1998), ALAS students were more likely than control students to be enrolled at the end of 10th grade (86% compared with 69%), but the difference was not statistically significant.

*Progressing in school.* For progressing in school, the study showed statistically significant positive effects on some outcomes and no statistically significant negative effects. Larson and Rumberger (1995) reported that, for students who remained in a district school (did not drop out or transfer out of district), ALAS students were more likely than control students to be on track to graduate on time at the end of ninth grade (72% compared with 53%). The difference was statistically significant. Two years after the intervention had ended, and for students who remained in a district school, more ALAS students than control students were on track to graduate on time at the end of 11th grade (33% compared with 26%), but the difference was not statistically significant. For the subgroup analyzed in Gándara et al. (1998), a statistically larger proportion of ALAS students had earned enough credits to graduate from high school on time, measured at the end of ninth grade (75% compared with 44%) and at the end of tenth grade (44% compared with 22%).

4. An additional analysis in Gándara et al. (1998) focused on outcomes in grades 9–12 for a subsample of the initially randomly assigned sample (81 of 94 students). The analysis meets WWC standards with reservations because different rules were used to exclude students from the treatment group and the control group. Here, these results are treated as a subgroup analysis, which does not bear on the intervention's rating of effectiveness.
5. The outcomes for progressing in school were collected only for students who continued to be enrolled in the district, which depends on whether students dropped out. Therefore, the analysis of these outcomes meets WWC standards with reservations.
6. Throughout this report, findings are first presented for the lead study, Larson & Rumberger (1995), which includes the full study sample. Follow-up findings are presented for the subgroup analyzed in the additional study, Gándara et al. (1998).

## Effectiveness *(continued)*

*Completing school.* For the subgroup analyzed in Gándara et al. (1998), ALAS students had higher graduation rates at the end of 12th grade (32% compared with 27% of the control group), but the difference was not statistically significant.<sup>7</sup>

### Rating of effectiveness<sup>8</sup>

The WWC rates interventions as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.

## The WWC found ALAS to have potentially positive effects for staying in school and progressing in school

### Improvement index

The WWC computes an improvement index for each individual finding. In addition, within each outcome domain, the WWC computes an average improvement index for each study and an average improvement index across studies (see Technical Details of WWC-Conducted Computations). The improvement index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement index is entirely based on the size of the effect, regardless of the statistical significance of the effect, the study design, or the analysis. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.

The rating of effectiveness takes into account four factors: the quality of the research design, the statistical significance<sup>9</sup> of the findings, the size of the difference between participants in the intervention condition versus the comparison condition, and the consistency in findings across studies (see the WWC Intervention Rating Scheme).

The improvement index for staying in school is +42 percentile points (at the end of the intervention, ninth grade). The improvement index for progressing in school is +19 percentile points (at the end of the intervention, ninth grade).

### Summary

The WWC reviewed one study on ALAS that met WWC standards. This study found potentially positive effects on staying in school and potentially positive effects on progressing in school. The WWC reviewed an additional study based on a subgroup of ALAS students from the Larson and Rumberger study. The evidence presented in this report is limited and may change as new research emerges.

7. Because these findings are based on a subgroup, they are not included in the rating of effectiveness.
8. Ratings are based on the results for the full sample (Larson & Rumberger, 1995) at the end of the intervention, ninth grade.
9. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation, see the WWC Tutorial on Mismatch. See Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate the statistical significance. In the case of ALAS, no corrections were necessary.

## References **Met WWC evidence standards**

Larson, K. A., & Rumberger, R. W. (1995). ALAS: Achievement for Latinos through Academic Success. In H. Thornton (Ed.), *Staying in school. A technical report of three dropout prevention projects for junior high school students with learning and emotional disabilities*. Minneapolis, MN: University of Minnesota, Institute on Community Integration.<sup>10</sup>

### **Additional sources:**

Gándara, P., Larson, K. A., Mehan, H., & Rumberger, R. W.

(1998). *Capturing Latino Students in the Academic Pipeline*. Berkeley, CA: Chicano/Latino Policy Project.<sup>11</sup>

Rumberger, R. W., & Larson, K. A. (1994). Keeping high-risk Chicano students in school: Lessons from a Los Angeles junior

high school dropout prevention program. In R. J. Rossi (Ed.), *Educational Reforms for At-Risk Students* (pp. 141–162). New York: Teachers College Press.

Larson, K. A., & Rumberger, R. W. (1995). Doubling school success in highest-risk Latino youth: Results from a middle school intervention study. In R. F. Macías and R. G. García Ramos (Eds.), *Changing Schools for Changing Students*. Santa Barbara: University of California Linguistic Minority Research Institute.

Larson, K. A. (1989). Task-related and interpersonal problem-solving training for increasing school success in high-risk young adolescents. *Remedial and Special Education*, 10(5), 32–42.

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**For more information about specific studies and WWC calculations, please see the WWC ALAS Technical Appendices.**

10. The study also analyzed students served by ALAS who had learning disabilities or who were classified as emotionally disturbed. This analysis did not meet WWC standards because it was a quasi-experimental design with pretest differences between the participant and comparison groups that were not controlled in the analysis.
11. This analysis focused on a subsample of the initially randomly assigned sample (81 of 94 students). It meets WWC standards with reservations because different rules were used to exclude students from the treatment group and the control group. Here, the additional study is treated as a subgroup analysis, which does not affect the intervention rating of effectiveness.

# Appendix

## Appendix A1 Study characteristics: Larson & Rumberger, 1995 (randomized controlled trial)

Characteristic	Description
<b>Study citation</b>	<p>Larson, K. A., &amp; Rumberger, R. W. (1995). ALAS: Achievement for Latinos through Academic Success. In H. Thornton (Ed.), <i>Staying in school. A technical report of three drop-out prevention projects for junior high school students with learning and emotional disabilities</i>. Minneapolis, MN: University of Minnesota, Institute on Community Integration.</p> <p>Additional analysis            Gándara, P., Larson, K. A., Mehan, H., &amp; Rumberger, R. W. (1998). <i>Capturing Latino Students in the Academic Pipeline</i>. Berkeley, CA: Chicano/Latino Policy Project.</p>
<b>Participants</b>	<p>The study focuses on a group of 94 high-risk students who entered seventh grade in 1990. Students were identified as high risk if their sixth-grade teacher rated them below the classroom average on a rating scale. Almost all the high-risk students who participated in the study were Latino (96%); most were males (65%); and almost all participated in the free or reduced-price lunch program (91%). About 23% were limited English proficient (LEP), about 33% were fluent English proficient, and the rest were English only students. On average, students were 12 years 7 months old when they entered the seventh grade. Students who spoke no English were excluded because the intervention was not designed to accommodate them. The program also included a sample of students with learning disabilities or who were classified as emotionally disturbed. The WWC does not report on this sample because that analysis did not meet WWC standards.</p> <p>Additional analysis            This analysis focuses on a subsample of 81 out of 94 students who had entered seventh grade in 1990 and remained in the target school (treatment group) or transferred to a junior high school in the same district (control group).</p>
<b>Setting</b>	The study was conducted in a large junior high school in the Los Angeles Unified School District.
<b>Intervention</b>	<p>From the pool of 94 high-risk seventh graders, 46 students were randomly assigned to the intervention group. Treatment students received the <i>ALAS</i> intervention during the three years of junior high school (seventh through ninth grade) or until they left the junior high school. Each student was assigned a counselor who monitored the student continuously, worked as case manager, and ensured that all components of the intervention were provided. <i>ALAS</i> students received 10 weeks of problem-solving skills instruction and two years of follow-up problem-solving prompting and counseling. Student period-by-period attendance was monitored, and they were required to make up missed time. Parents were contacted about student truancy or extended absence. <i>ALAS</i> provided weekly and, if needed, daily feedback reports to students and parents regarding classroom comportment and missed assignments. Parents were trained in problem solving and participation in school. <i>ALAS</i> staff helped to directly facilitate youth and parents' use of such community services as mental health services and social services.</p> <p>Additional analysis            The treatment group includes only students who stayed in the <i>ALAS</i> junior high during all three years (36 students).</p>
<b>Comparison</b>	<p>Forty-eight students were randomly assigned to the comparison group. They received the regular school program offered by the target school.</p> <p>Additional analysis            The comparison group for this study (45 students) includes students who were randomly assigned to be control students at the beginning of seventh grade and either did not transfer from the school or transferred to a school within the district.</p>

(continued)

## Appendix A1 Study characteristics: Larson & Rumberger, 1995 (randomized controlled trial) (continued)

Characteristic	Description
<b>Primary outcomes and measurement</b>	<p>Two outcomes relevant for the WWC review were examined: the percentage of students enrolled at the end of the school year (staying in school domain) as measured at two points, grades 9 and 11, and the percentage of students on track to graduate from high school on time conditional on being enrolled in the district (progressing in school domain) as measured at two points, grades 9 and 11. (See Appendices A2.1 and A2.2 for more detailed descriptions of outcome measures.)</p> <p>Additional analysis</p> <p>Three outcomes relevant for the WWC review were examined for this subgroup: the percentage of students enrolled at the end of the school year (staying in school domain) as measured at two points, grades 9 and 10; the percentage of students on track to graduate from high school on time (progressing in school domain) as measured at two points, grades 9 and 10; and the percentage of students who graduated from high school on time, at the end of grade 12 (completing school domain). (See Appendices A2.1–2.3 for more detailed descriptions of outcome measures.)</p>
<b>Teacher training</b>	<p><i>ALAS</i> was delivered by a supervisor, counselors, and clerical staff housed full-time on the school campus. The supervisor, who was an experienced teacher, counselor, or social worker, provided on-going training to <i>ALAS</i> counselors and worked to coordinate services among the school, the family, and the community. <i>ALAS</i> staff and teachers were trained to deliver the social problem-solving skills curriculum. The supervisor may or may not have received training depending on prior experience.</p>

## Appendix A2.1 Outcome measures in the staying in school domain

Outcome measure	Description
<b>Enrolled at end of ninth grade</b>	The percentage of students who were enrolled at the end of ninth grade (spring 1993). A student was considered enrolled if he or she was enrolled in a district school no later than 20 days before the end of the semester; transferred to another school out of district or out of state as confirmed by a request for student records from the receiving district; or was institutionalized in a government or private mental health facility (as cited in Larson & Rumberger, 1995).
<b>Enrolled at the end of 11th grade</b>	The percentage of students who were enrolled at the end of 11th grade (spring 1995). A student was considered enrolled if he or she was enrolled in a district school no later than 20 days before the end of the semester; transferred to another school out of district or out of state as confirmed by a request for student records from the receiving district; or was institutionalized in a government or private mental health facility (as cited in Larson & Rumberger, 1995).
<b>Enrolled at the end of ninth grade</b>	The percentage of students who were enrolled at the end of ninth grade (spring 1993). A student was considered enrolled if he or she was enrolled in a district school no later than 20 days before the end of the semester (as cited in Gándara et al., 1998).
<b>Enrolled at the end of 10th grade</b>	The percentage of students who were enrolled at the end of 10th grade (spring 1994). A student was considered enrolled if he or she was enrolled in a district school no later than 20 days before the end of the semester (Gándara et al., 1998).

## Appendix A2.2 Outcome measures in the progressing in school domain

Outcome measure	Description
<b>On track to graduate on time at the end of ninth grade</b>	The percentage of students who were on track to graduate on time. This measure was derived from the total number of credits earned by the student at the end of ninth grade summer inclusive. Students were on track to graduate on time at ninth grade if they had completed at least one quarter of their high school graduation requirements (220 credits) by the end of ninth grade (summer 1993) (as cited in Larson & Rumberger, 1995).
<b>On track to graduate on time at the end of 11th grade</b>	The percentage of students who were on track to graduate on time. This measure was derived from the total number of credits earned by the student at the end of 11th grade summer inclusive. Students were on track to graduate on time at 11th grade if they had completed at least three quarters of their high school graduation requirements (220 credits) by the end of 11th grade (summer 1995) (as cited in Larson & Rumberger, 1995).
<b>On track to graduate on time at the end of ninth grade</b>	The percentage of students who were on track to graduate on time. This measure was derived from the total number of credits earned by the student at the end of ninth grade summer inclusive. Students were on track to graduate on time at ninth grade if they had completed at least one quarter of their high school graduation requirements (220 credits) by the end of ninth grade (summer 1993) (as cited in Gándara et al., 1998).
<b>On track to graduate on time at the end of 10th grade</b>	The percentage of students who were on track to graduate on time. This measure was derived from the total number of credits earned by the student at the end of 10th grade summer inclusive. Students were on track to graduate on time at 10th grade if they had completed at least one half of their high school graduation requirements (220 credits) by the end of 10th grade (summer 1994) (as cited in Gándara et al., 1998).

## Appendix A2.3 Outcome measure in the completing school domain

Outcome measure	Description
<b>Completed high school on time</b>	The percentage of students who completed high school on time by the end of 12th grade (summer 1996) (as cited in Gándara et al., 1998).



## Appendix A3.1 Summary of study findings included in the rating for the staying in school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (schools/ students)	Author's findings from the study		WWC calculations			
			Mean outcome <sup>2</sup> (standard deviation <sup>3</sup> )		Mean difference <sup>4</sup> (ALAS – comparison)	Effect size <sup>5</sup>	Statistical significance <sup>6</sup> (at $\alpha = 0.05$ )	Improvement index <sup>7</sup>
			ALAS group	Comparison group				
Larson & Rumberger, 1995 (randomized controlled trial) <sup>8</sup>								
Enrolled at end of ninth grade (%)	Full sample	94	98 (14)	83 (38)	15	1.39	Statistically significant	42
Domain average <sup>9</sup> for staying in school						1.39	Statistically significant	42

1. This appendix reports findings considered for the effectiveness rating and the improvement index. Subgroup and follow-up findings from the same study are not included in these ratings, but are reported in Appendix A4.1.
2. The outcomes are binary, so means represent percentages.
3. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes. Standard deviations were derived from binary outcomes in this study.
4. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
5. Effect sizes were calculated using the Cox index for binary outcomes. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
6. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.
8. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. See Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate statistical significance. In the case of ALAS, no corrections were necessary.
9. This row provides the study average, which in this case is also the domain average. The WWC-computed domain average effect size is a simple average rounded to two decimal places. The domain improvement index is calculated from the average effect size.

## Appendix A3.2 Summary of study findings included in the rating for the progressing in school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (schools/students)	Author's findings from the study		WWC calculations			
			Mean outcome <sup>2</sup> (standard deviation <sup>3</sup> )		Mean difference <sup>4</sup> (ALAS – comparison)	Effect size <sup>5</sup>	Statistical significance <sup>6</sup> (at $\alpha = 0.05$ )	Improvement index <sup>7</sup>
			ALAS group	Comparison group				
Larson & Rumberger, 1995 (randomized controlled trial) <sup>8</sup>								
On track to graduate on time at the end of ninth grade (%)	Conditional on being in a district school	81	72 (45)	53 (51)	19	0.49	Statistically significant	19
Domain average <sup>9</sup> for progressing in school						0.49	Statistically significant	19

1. This appendix reports findings considered for the effectiveness rating and the improvement index. Subgroup findings from the same study are not included in these ratings, but are reported in Appendix A4.2.
2. The outcomes are binary, so means represent percentages.
3. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes. Standard deviations were derived from binary outcomes in this study.
4. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
5. Effect sizes were calculated using the Cox index for binary outcomes. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
6. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.
8. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. See Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate statistical significance. In the case of ALAS, no corrections were necessary.
9. This row provides the study average, which in this case is also the domain average. The WWC-computed domain average effect size is a simple average rounded to two decimal places. The domain improvement index is calculated from the average effect size.

## Appendix A4.1 Summary of follow-up and subgroup findings for the staying in school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (schools/students)	Author's findings from the study					
			Mean outcome <sup>2</sup> (standard deviation <sup>3</sup> )		Mean difference <sup>4</sup> (ALAS – comparison)	WWC calculations		
			ALAS group	Comparison group		Effect size <sup>5</sup>	Statistical significance <sup>6</sup> (at $\alpha = 0.05$ )	Improvement index <sup>7</sup>
Larson & Rumberger, 1995 (randomized controlled trial) <sup>8</sup>								
Enrolled at end of 11th grade (%)	Full sample	89	75 (44)	67 (48)	8	0.24	ns	10
Gándara et al., 1998 (randomized controlled trial with non-randomized data collection) <sup>8</sup>								
Enrolled at end of ninth grade (%)	Subsample	81	97 (17)	82 (39)	15	1.18	Statistically significant	38
Enrolled at end of 10th grade (%)	Subsample	81	86 (35)	69 (47)	17	0.61	ns	23

ns = not statistically significant

1. This appendix presents subgroup and follow-up findings for outcomes related to staying in school. Outcomes related to the full sample are used for rating purposes and are presented in Appendix A3.1.
2. The outcomes are binary, so means represent percentages.
3. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes. Standard deviations were derived from binary outcomes in this study.
4. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
5. Effect sizes were calculated using the Cox index for binary outcomes. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
6. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.
8. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools (corrections for multiple comparisons were not done for findings not included in the overall intervention rating). For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. See Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate statistical significance. In the case of ALAS, no corrections were necessary.

## Appendix A4.2 Summary of follow-up and subgroup findings for the progressing in school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (schools/ students)	Author's findings from the study		WWC calculations			
			Mean outcome <sup>2</sup> (standard deviation <sup>3</sup> )		Mean difference <sup>4</sup> (ALAS – comparison)	Effect size <sup>5</sup>	Statistical significance <sup>6</sup> (at $\alpha = 0.05$ )	Improvement index <sup>7</sup>
			ALAS group	Comparison group				
<b>Larson &amp; Rumberger, 1995 (randomized controlled trial)<sup>8</sup></b>								
On track to graduate on time at the end of 11th grade (%)	Conditional on being in a district school	60	33 (48)	26 (45)	7	0.21	ns	8
<b>Gándara et al., 1998 (randomized controlled trial with non-randomized data collection)<sup>8</sup></b>								
On track to graduate on time at the end of ninth grade (%)	Subsample	81	75 (44)	44 (50)	31	0.80	Statistically significant	29
On track to graduate on time at the end of 10th grade (%)	Subsample	81	44 (50)	22 (42)	22	0.61	Statistically significant	23

ns = not statistically significant

1. This appendix presents subgroup and follow-up findings for outcomes related to progressing in school. Outcomes related to the full sample are used for rating purposes and are presented in Appendix A3.2.
2. The outcomes are binary, so means represent percentages.
3. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes. Standard deviations were derived from binary outcomes in this study.
4. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
5. Effect sizes were calculated using the Cox index for binary outcomes. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
6. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.
8. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools (corrections for multiple comparisons were not done for findings not included in the overall intervention rating). For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. See Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate statistical significance. In the case of ALAS, no corrections were necessary.

## Appendix A4.3 Summary of subgroup findings for the completing school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (schools/ students)	Author's findings from the study		WWC calculations			
			ALAS group	Comparison group	Mean difference <sup>4</sup> (ALAS – comparison)	Effect size <sup>5</sup>	Statistical significance <sup>6</sup> (at $\alpha = 0.05$ )	Improvement index <sup>7</sup>
Gándara et al., 1998 (randomized controlled trial with non-randomized data collection) <sup>8</sup>								
Graduated at the end of 12th grade	Subsample	79	32 (47)	27 (45)	5	0.14	ns	6

ns = not statistically significant

1. This appendix presents subgroup and follow-up findings for outcomes related to completing school. Outcomes related to the full sample are used for rating purposes, but no rating is given in this report because results for the full sample are not available.
2. The outcomes are binary, so means represent percentages.
3. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes. Standard deviations were derived from binary outcomes in this study.
4. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
5. Effect sizes were calculated using the Cox index for binary outcomes. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
6. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.
8. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools (corrections for multiple comparisons were not done for findings not included in the overall intervention rating). For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. See Technical Details of WWC-Conducted Computations for the formulas the WWC used to calculate statistical significance. In the case of ALAS, no corrections were necessary.

## Appendix A5.1 ALAS rating for the staying in school domain

The WWC rates an intervention's effects for a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.<sup>1</sup>

For the outcome domain of staying in school, the WWC rated *ALAS* as having potentially positive effects. It did not meet the criteria for positive effects, because it had only one study. The remaining ratings (mixed, no discernible effects, potentially negative, and negative) were not considered because *ALAS* received a higher applicable rating.

### Rating received

**Potentially positive effects:** Evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect.

**Met.** *ALAS* has one study meeting WWC evidence standards reporting a statistically significant positive effect on the staying in school domain.

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect and fewer or the same number of studies showing *indeterminate* effects than showing statistically significant or substantively important *positive* effects.

**Met.** There were no *ALAS* studies identified as having negative or indeterminate effects on the staying in school domain.

### Other ratings considered

**Positive effects:** Strong evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *positive* effects, at least one of which met WWC evidence standards for a strong design.

**Not met.** *ALAS* has only one study meeting WWC evidence standards.

- Criterion 2: No studies showing statistically significant or substantively important *negative* effects.

**Met.** The WWC analysis found no negative effects in this domain.

1. For rating purposes, the WWC considers the statistical significance of individual outcomes and the domain level effects. The WWC also considers the size of the domain level effects for ratings of potentially positive or potentially negative effects. See the WWC Intervention Rating Scheme for a complete description.

## Appendix A5.2 ALAS rating for the progressing in school domain

The WWC rates an intervention's effects for a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.<sup>1</sup>

For the outcome domain of progressing in school, the WWC rated ALAS as having potentially positive effects. It did not meet the criteria for positive effects because it had only one study. The remaining ratings (mixed, no discernible effects, potentially negative, and negative) were not considered because ALAS received a higher applicable rating.

### Rating received

**Potentially positive effects:** Evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect.

**Met.** ALAS has one study that found a statistically significant positive effect on the progressing in school domain.

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect and fewer or the same number of studies showing *indeterminate* effects than showing statistically significant or substantively important *positive* effects.

**Met.** There were no ALAS studies identified as having negative or indeterminate effects on the progressing in school domain.

### Other ratings considered

**Positive effects:** Strong evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *positive* effects, at least one of which met WWC evidence standards for a strong design.

**Not met.** ALAS has only one study meeting WWC evidence standards.

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect.

**Met.** The WWC analysis found no negative effects in this domain.

1. For rating purposes, the WWC considers the statistical significance of individual outcomes and the domain level effects. The WWC also considers the size of the domain level effects for ratings of potentially positive or potentially negative effects. See the WWC Intervention Rating Scheme for a complete description.