DESIGNING & IMPLEMENTING EVIDENCE-BASED ACADEMIC TEXT ALERTS FOR PARENTS (A-TAP) TO IMPROVE STUDENT OUTCOMES

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This guide is written for Student Information Systems (SIS) and Learning Management Systems (LMS) which are interested in offering a parental communication module aligned with the evidence-based standards for Academic Text Alerts for Parents[1] (A-TAP) to client districts.

A-TAP OVERVIEW

⑦ The Challenge: Academic Information Gaps and Parental Engagement

The fundamental causes of student challenges such as academic disengagement and low learning levels are diverse, but research has identified informational frictions between schools and students' families as an exacerbating factor.[2] When students' academic struggles manifest as chronic absenteeism, course failure, and missed assignments, parental engagement can be a resource and safety net to complement what happens in the classroom.

However, parents may have trouble making informed decisions about how to engage in their child's education because of a lack of, or inaccurate, understanding of the child's academic performance and engagement. This mismatch in information makes it difficult for parents who might otherwise take action to identify and help address a student's poor academic performance.

Even when this information is accessible, there may be logistical and behavioral barriers to accessing it. Research has shown that on average, **only about one-third to one-fourth of parents access information about their child's school performance when it is accessible via a parent portal.** This is especially true in schools serving lower-income and lower-achieving students, where parents may face additional barriers such as reduced internet access.[3]

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1   "Parent" should be viewed as a shorthand for "caregiver" more broadly; we recognize that many students do not live with their parents and may instead reside with extended family or other members of their support network. We use the term parent throughout this document to remain consistent with the terminology most commonly used in the academic literature underpinning evidence based notification texts to support student outcomes.

2   Bergman, Peter, and Eric Chan. 2021 "Leveraging Parents Through Low-Cost Technology: The Impact of High-Frequency Information on Student Achievement." *Journal of Human Resources* 56, no. 1: 125-158. https://www.povertyactionlab.org/sites/default/files/research-paper/Leveraging-Parent-through-Low-Cost-Technology_Bergman-Chan_January2019.pdf.

3   Bergman, Peter. 2016. "Technology Adoption in Education: Usage, Spillovers and Student Achievement," *CESifo* Working Paper Series 6101. https://www.cesifo.org/en/publications/2016/working-paper/technology-adoption-education-usage-spillovers-and-student.

💡 The Solution: Timely, Actionable Academic Information

By receiving timely and actionable information through opt-out only text alerts, parents are better able to engage with their child to address performance in real-time. Take-up of this information via text alerts is particularly robust because the pervasiveness and high use of phones and text messaging across parents of all socioeconomic backgrounds means lower overall barriers to access.[4,5]

Rigorous evidence shows that texting middle and high schoolers' parents to keep them updated on their students' performance can induce significant improvements in measures of academic engagement and achievement. **An evidence review that examined experimental studies on using text messaging-based interventions to improve parent-school information flows found that 9 out of 10 interventions demonstrated positive effects on student GPAs, test scores, assignment scores, and/or attendance.**[6]

While there is a broad evidence base demonstrating the high promise of parental text alert programs, the A-TAP standards featured in this guide were co-developed by academic researchers in partnership with school districts and tested in Los Angeles, Washington, D.C., and Kanawha County, West Virginia. Program models aligned with these standards have been featured in press coverage from CNN, NPR, the New York Times, and the Hechinger Report.[7]

4. Pew Research Center. 2019. "Mobile Fact Sheet." Pew Research Center. www.pewresearch.org/internet/fact-sheet/mobile/.

5. Cheng, Hedy, Joanna Smith, and Peter Bergman, 2020. "Effective Attendance Messaging and Interventions: Nudging Students and Parents to Engage." Webinar form *edWeb.net*, July 7. https://home.edweb.net/webinar/leadership20200707/.

6. Escueta, Maya, Vincent Quan, Andre Joshua Nickow, and Philip Oreopoulos. 2017. "Education Technology: An Evidence-Based Review." *NBER* Working Paper No. 23744. https://www.nber.org/papers/w23744.; Bergman, Peter, Jessica Lasky-Fink, and Todd Rogers. 2019. "Simplification and Defaults Affect Adoption and Impact of Technology, but Decision Makers Do Not Realize It". *Organizational Behavior and Human Decision Processes*. https://doi.org/10.1016/j.Obhdp.2019.04.001.; Bergman, Peter. 2021. "Parent-Child Information Frictions and Human Capital Investment: Evidence from a Field Experiment." *Journal of Political Economy* 129, no.1. https://www.journals.uchicago.edu/doi/full/10.1086/711410.

7. Mathewson, Tara. 2017. "Sending Parents Useful Information About Attendance, Course Progress has Big Effects, Social Scientists Find." *The Hechinger Report*, September 27, 2017. https://hechingerreport.org/sending-parents-useful-information-attendance-course-progress-big-effects-social-scientists-find/.; Rogers,Todd, Lucas Coffman and Peter Bergman. 2014. "Parental Involvement Overrated? Don't Buy It." *CNN*, May 5, 2014 https://www.cnn.com/2014/05/05/opinion/rogers-coffman-bergman-education-kids.; Kamenetz, Anya, and Cory Turner. 2017. "Parent Alert! Your Child Just Skipped Class." *NPR Ed*, March 2, 2017 https://www.npr.org/sections/ed/2017/03/02/517757199/parent-alert-your-child-just-skipped-class.; Susan Dynarski. 2015. "Helping the Poor in Education: The Power of a Simple Nudge." *The New York Times*, January 17, 2015. https://www.nytimes.com/2015/01/18/upshot/helping-the-poor-in-higher-education-the-power-of-a-simple-nudge.html.

8. Bergman, Peter, and Eric Chan. 2021 "Leveraging Parents Through Low-Cost Technology: The Impact of High-Frequency Information on Student Achievement." *Journal of Human Resources* 56, no. 1: 125-158. https://www.povertyactionlab.org/sites/default/files/research-paper/Leveraging-Parent-through-Low-Cost-Technology_Bergman-Chan_January2019.pdf.

Researchers Peter Bergman and Eric Chan worked with the Kanawha County school district in West Virginia to test the impact of implementing a messaging program meeting A-TAP standards. In that district, roughly 75% of parents reported talking with their child at least 2-3 times per week about schoolwork, yet 48% of parents believed their child did not share enough information about their academic performance for them to be involved in their education. This negatively correlated with GPA, meaning that the more likely a parent was to feel that they did not have enough information, the more likely their child was to have low performance.[8]

Bergman and Chan implemented a randomized evaluation to test the impact of implementing an A-TAP standardized program on 1,137 households in 22 middle and high schools. They found that **the A-TAP program reduced course failures by nearly 30% and increased class attendance by nearly 15%**. It also reduced the number of missed assignments and increased overall student retention. Notably, these effects were greater on average for students with lower GPAs.[9] Because the A-TAP program could be integrated with the district's existing web-based gradebook system, **the total direct cost of sending 32,000 text messages was just $63, making the program extraordinarily cost-effective**.[10]

Peter Bergman has conducted two additional studies in other contexts as part of the iterative development of the A-TAP standards. Both studies find that providing parents with tailored and detailed information about their student's academic performance can lead to increased academic achievement.[11]

9. Bergman, Peter, and Eric Chan. 2021 "Leveraging Parents Through Low-Cost Technology: The Impact of High-Frequency Information on Student Achievement." *Journal of Human Resources* 56, no. 1: 125-158. https://www.povertyactionlab.org/sites/default/files/research-paper/Leveraging-Parent-through-Low-Cost-Technology_Bergman-Chan_January2019.pdf.

10. Bergman, Peter, and Eric Chan. 2021 "Leveraging Parents Through Low-Cost Technology: The Impact of High-Frequency Information on Student Achievement." *Journal of Human Resources* 56, no. 1: 125-158. https://www.povertyactionlab.org/sites/default/files/research-paper/Leveraging-Parent-through-Low-Cost-Technology_Bergman-Chan_January2019.pdf.
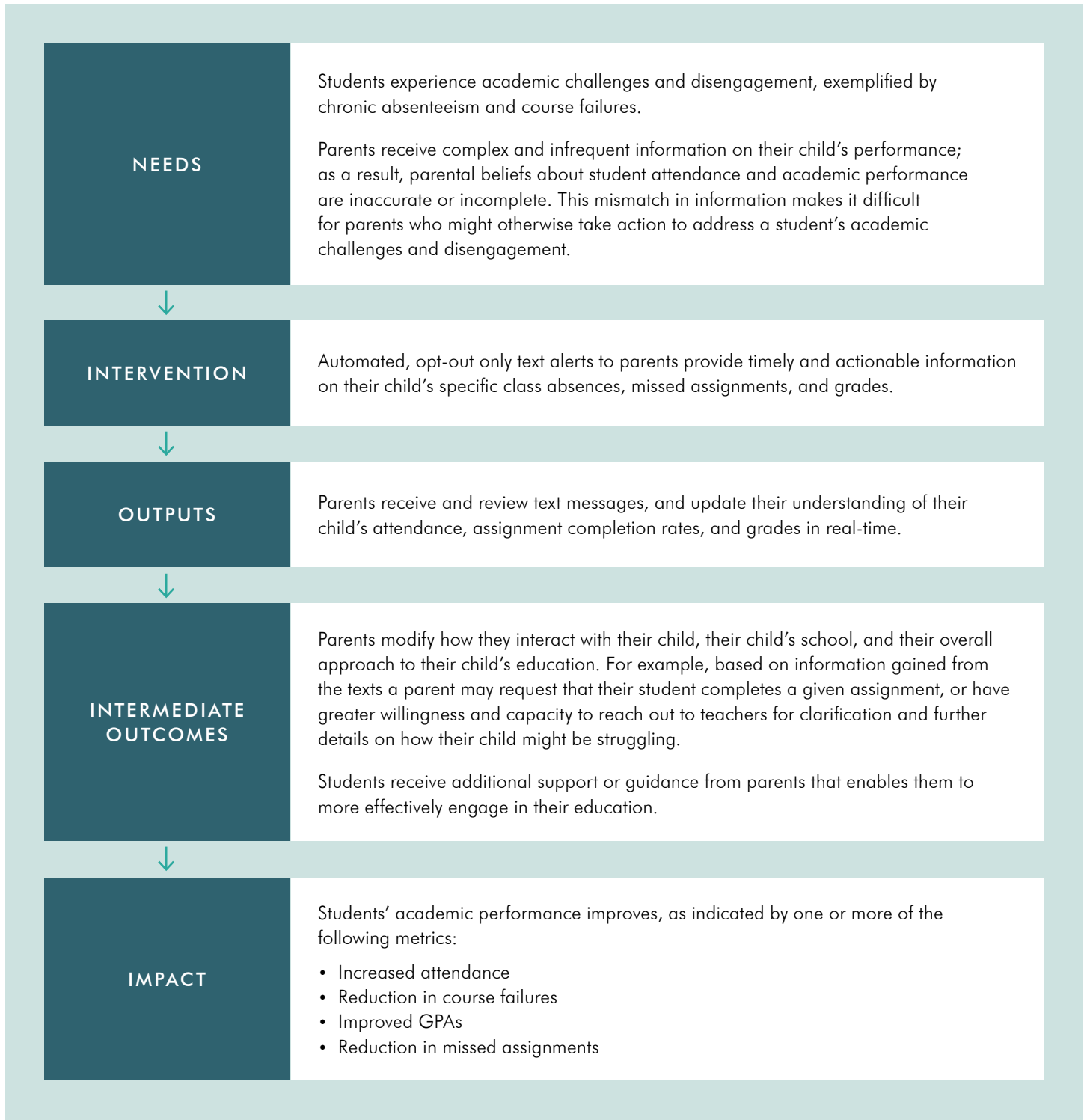
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The theory of change in Figure 1 outlines how a comprehensive text alert program can provide meaningful input for improvising academic performance outcomes.

Figure 1. Theory of Change

NEEDS	Students experience academic challenges and disengagement, exemplified by chronic absenteeism and course failures. Parents receive complex and infrequent information on their child's performance; as a result, parental beliefs about student attendance and academic performance are inaccurate or incomplete. This mismatch in information makes it difficult for parents who might otherwise take action to address a student's academic challenges and disengagement.
↓	
INTERVENTION	Automated, opt-out only text alerts to parents provide timely and actionable information on their child's specific class absences, missed assignments, and grades.
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OUTPUTS	Parents receive and review text messages, and update their understanding of their child's attendance, assignment completion rates, and grades in real-time.
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INTERMEDIATE OUTCOMES	Parents modify how they interact with their child, their child's school, and their overall approach to their child's education. For example, based on information gained from the texts a parent may request that their student completes a given assignment, or have greater willingness and capacity to reach out to teachers for clarification and further details on how their child might be struggling. Students receive additional support or guidance from parents that enables them to more effectively engage in their education.
↓	
IMPACT	Students' academic performance improves, as indicated by one or more of the following metrics: • Increased attendance • Reduction in course failures • Improved GPAs • Reduction in missed assignments

THE BUSINESS CASE FOR OFFERING AN A-TAP MODULE

Research has shown that evidence-based text alert programs, despite their small costs, can achieve impacts similar to much more expensive education programs.[12] Given their low price and high impact, as well as alignment with federal funding standards, these programs present a cost-effective tool for addressing student performance and attendance at scale.

Low-Barrier Product and Technical Requirements

Evidence-based text messages are a relatively easy module to add to existing SIS or LMS because much of the infrastructure needed to meet product and technical requirements already exists. Many SIS and LMS have text-messaging capabilities that could be adapted or configured to meet the best practices outlined in this report. For those that do not yet support text messages, text services such as Twilio or Plivo can be easily integrated via an application programming interface (API). Most SIS or LMS also have access to the necessary data or at a minimum a foundational subset of data that will support attendance, assignments, or low grade notifications.

Minimal Costs

Implementing a text alert program to improve academic performance is relatively inexpensive, averaging less than $0.50 per year per student, with some programs able to send thousands of alerts for a few dollars.[13] As described above, adding a texting capability or improving an additional offering is a relatively inexpensive effort for engineering teams, especially when the relative student impact is considered. The greatest ongoing cost associated with an A-TAP program is staff time necessary for ongoing management, which might be roughly 25% of a full-time role.[14]

Compelling Outcomes

The strong evidence base underlying A-TAP standards also suggests clear implementation and outcome metrics for tracking the efficacy of A-TAP aligned programs. This is particularly useful because attendance improvements can be directly correlated to funding for districts. System implementers may cite the research studies and impacts found in marketing conforming products such that the module provides a unique, ongoing touch point for sales and support teams. In a survey we conducted of about 200 educators, 68% said that if those in charge of their school's budget knew about research on text message-based interventions,

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they would prioritize purchasing an education technology platform that automatically texts parents regularly about students' missed assignments and absences.

Aligned with Federal Funding Guidelines

While an upfront investment may be needed to launch these service modules, multiple provisions of the Every Student Succeeds Act (ESSA) authorize the use of funds for activities that are aligned with module usage, including training teachers in the use of student data; advancing the effective use of technology; and fostering family engagement.[15] ESSA provides non-regulatory guidance on "evidence-based" interventions and encourages, or even in some cases requires, schools to use funds for evidence-based interventions.[16]

In addition, the US Department of Education highlights districts sharing data and resources with families to support student learning as a core strategy for using American Rescue Plan funding to address lost instructional time due to the COVID 12 pandemic.[17] In fact, a $54 billion package was approved in December 2020 as part of recovery funding that specifically allocates funds for "tracking attendance" and "improving student engagement."[18]

[12] Bergman, Peter, and Eric Chan. 2021 "Leveraging Parents Through Low-Cost Technology: The Impact of High-Frequency Information on Student Achievement." *Journal of Human Resources* 56, no. 1: 125-158. https://www.povertyactionlab.org/sites/default/files/research-paper/Leveraging-Parent-through-Low-Cost-Technology_Bergman-Chan_January2019.pdf.

[13] Sam Elhag (former VP Technical Product Management at McGraw-Hill) in discussion with authors, 10.14.2022

[14] Sam Elhag (former VP Technical Product Management at McGraw-Hill) in discussion with authors, 10.14.2022

[15] Jordan, Phyllis. 2018. "Tapping Federal Dollars to Reduce Chronic Absenteeism." *Future Ed*, September 7, 2018. https://live-fe-future-ed.pantheonsite.io/wp-content/uploads/2018/09/AbsentTable_v2.pdf.

[16] U.S. Department of Education. 2016. "Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments." *U.S. Department of Education*, 16 Sept. 2016, https://www2.ed.gov/policy/elsec/leg/essa/guidanceuseseinvestment.pdf.

[17] U.S. Department of Education. 2021. "Strategies for Using American Rescue Plan Funding to Address the Impact of Lost Instructional Time." *U.S. Department of Education*. August 2021. https://www2.ed.gov/documents/coronavirus/lost-instructional-time.pdf.

[18] Chang, Hedy, and Phyllis Jordan. 2021. "How Covid Relief Dollars Can Help Improve Attendance." *Attendance Works*, 24 June 2021, https://www.attendanceworks.org/how-covid-relief-dollars-can-help-improve-attendance/.

PRODUCT AND TECHNICAL REQUIREMENTS

In order to offer an effective A-TAP module, SIS or LMS should be able to meet the following product and technical requirements. Some of these will require guidance or support from the relevant district, and special considerations for each requirement are included under *Implementation Notes*.

INPUTS	IMPLEMENTATION NOTES
Roster information that includes class-student-teacher relationships	A reliable process for inputting and maintaining student data must be established within the school district. This should include:
Attendance and absences by course	• A clear definition of each metric being tracked. "Assignments" may be defined at the discretion of the school depending on what types of student work is updated most often in gradebooks. In evaluations, assignments as a category included homework, in-class work, projects, essays, and exams.[19]
Assignment completion status by course	• Designation of a responsible party (teachers, school administrators, etc.) for inputting and maintaining a given data point.
	• The frequency with which this data is entered and updated.
Course averages or GPAs	Setting expectations that data must be transparent and available to families at a high frequency will incentivize responsible parties to keep their information up to date and accurate.
Parent mobile phone information linked to the appropriate student record	This information can be maintained by parent users directly, or by a school administrator.
Parental consent to be contacted	The district will need to confirm whether and how they can obtain and maintain a record of parental consent for text messages in advance. **Preferably this should be done using an "opt-out" approach since this tends to reduce attrition in consent rates.**
Automated text message capability	The platform being used should have text-messaging capabilities that could be adapted or configured to send automatically when certain conditions are met (see below). For those that do not yet support text messages, text services such as Twilio or Plivo can be easily integrated via an application programming interface (API).

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[19] Bergman, Peter. 2021. "Parent-Child Information Frictions and Human Capital Investment: Evidence from a Field Experiment." *Journal of Political Economy* 129, no.1. https://www.journals.uchicago.edu/doi/full/10.1086/711410.

INPUTS	IMPLEMENTATION NOTES
District- or school-level trigger and frequency rules for automatic messaging that are configurable based on student data (district-level recommended) *Example: If [# of missing assignments > X] then send a message [Monday at 7 pm]*	The LMS or SIS should have a shared agreement with the district for how student data should be interpreted in order to inform message trigger and frequency rules, as well as message content. This means: • Establishing how the unique policies and practices of a school should influence messaging rules. For example, when should absences be recorded as excused or unexcused? How should that change the notification, or indeed should a notification be sent at all if an absence is excused? • Understanding how user error might influence messaging, and how unintended impacts should be mitigated. For example, what is the default messaging rule when a given data point is unclear, e.g. if a teacher forgets to record that a student was absent or present? • Understanding how The Telephone Consumer Protection Act of 1991 (TCPA) and Family Educational Rights and Privacy Act (FERPA) may create special parameters for tailored text messages
School and district-level reporting for messages of each type sent. Basic accuracy metrics to track include: • Number and type (content) of messages sent • Rate of messages delivered • Unsubscribe rates **Optional but recommended:** Ability to aggregate student data and track changes in core outcomes at the class and cohort level, such as: • Rate of assignment completion • Average course grade • Average days absent • Rate of chronic absenteeism (i.e. rate of students missing x or more number of days. Standard is set by the district.)	This information will enable ongoing monitoring and evaluation in order to engage in design modifications as needed, as well as provide districts with additional information on how their students are doing.

By following these guidelines for the delivery and content of text alert programs, implementers can ensure their program is aligned with evidence for what works. Dr. Peter Bergman, one of the researchers involved in the design and evaluation of A-TAP standards, advised on the synthesis of these principles.

SETTING UP TEXT ALERTS

Automatically enroll all parents who have consented to be contacted

Take-up of "opt-in" messages is incredibly low, with one study showing that less than 1 percent of parents opt-in to receive messages. In contrast, this study also demonstrated that automatically enrolling all parents while allowing them to opt-out ensured widespread usage; 95 percent of parents continued to accept messages when enrolled automatically.[21] SIS and LMS should work with districts to assess relevant legal parameters for parental consent for texting.

HOW AND WHEN TO SEND TEXT ALERTS

Send alerts for missed assignments, grades, and attendance

An evidence-based text alert system should alert parents if their student has a low class average, missed a specific assignment, or if they are absent from class. These three metrics together provide parents with a comprehensive snapshot of both their students' academic engagement and overall performance.

- "Assignments" may be defined at the discretion of the school depending on what types of student work is updated most often in gradebooks. For example, in one evaluated program "assignments" included homework, in-class work, projects, essays and, exams.[22]

- The class average at which alerts were triggered in evaluated A-TAP programs was <70%.[23]

Send alerts in a timely manner

To respond to their child's needs in real-time, parents need to have an up-to-date sense of their child's academic progress. Depending on the metric and how often this data is updated, what is considered "timely" may vary.

Preferably, parents should receive text alerts about student absences on a weekly basis, although biweekly is also acceptable; Text alerts about class averages can be sent on a monthly basis.

Send no more than 3 to 4 alerts per week

Each of the three categories of alerts should be sent on a different designated day of the week. Too many messages may be overwhelming and increase the likelihood that parents opt-out. In one study, increasing the number of messages received from three to five a week doubled dropout rates among parents.

CONTENT OF TEXT ALERTS

Alerts are specific and individually personalized

Text alerts reference the student by name and provide specific, descriptive details about the relevant scenario. For example, parents are informed that their student has been absent from a specific class rather than simply being told that their student has missed school that week. This enables parents to take more targeted follow-up actions.

Alerts are simple and straightforward

Text alerts reference the student by name and provide specific, descriptive details about the relevant scenario. For example, parents are informed that their student has been absent from a specific class rather than simply being told that their student has missed school that week. This enables parents to take more targeted follow-up actions.

Alerts provide action steps so parents can learn more

Text alerts provide guidance for how parents may reach out to the school and gather more information, for example by providing a phone number to call or directing them to an online portal. This facilitates ongoing connection points between the parents and the school and enables them to dive more deeply into their child's education.

CONSIDERATIONS FOR ONGOING MANAGEMENT

SIS, LMS, and districts should be prepared to implement an A-TAP program for at least two years in order to maximize potential benefits.

There should be a designated "owner" of the A-TAP program who helps maintain parent phone numbers, educate teachers and parents on the program benefits, track related metrics, and present to district leadership. Typically, this might be roughly 25% of a full-time role. This individual might be employed by the LMS or SIS as a member of the client support team, or through the district as part of a broader parent engagement officer or system administrator role.

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[20] Peter Bergman in discussion with authors, 10/12/2022; Bergman, Peter, Jessica Lasky-Fink, and Todd Rogers. 2019. "Simplification and Defaults Affect Adoption and Impact of Technology, but Decision Makers Do Not Realize It". *Organizational Behavior and Human Decision Processes*. https://doi.org/10.1016/j.Obhdp.2019.04.001.

[21] Peter Bergman in discussion with authors, 10/12/2022; Bergman, Peter, Jessica Lasky-Fink, and Todd Rogers. 2019. "Simplification and Defaults Affect Adoption and Impact of Technology, but Decision Makers Do Not Realize It". *Organizational Behavior and Human Decision Process*s. https://doi.org/10.1016/j.Obhdp.2019.04.001.

[22] Bergman, Peter. 2021. "Parent-Child Information Frictions and Human Capital Investment: Evidence from a Field Experiment." *Journal of Political Economy* 129, no.1. https://www.journals.uchicago.edu/doi/full/10.1086/711410.

[23] Bergman, Peter and Chan, Eric. 2017. "Leveraging Technology to Engage Parents at Scale: Evidence from a Randomized Controlled Trial." *CESifo* Working Paper Series No. 6493. http://dx.doi.org/10.2139/ssrn.2989472.

[24] Fricke, H., Kalogrides, D., & Loeb, S. 2018. "It's Too Annoying: Who Drops Out of Educational Text Messaging Programs and Why." *Economic Letters*, 173, 39–43. https://annenberg.brown.edu/sites/default/files/TBT_Brief_Its_Too_Annoying.pdf.

Using the Design Standards in this guide and information provided by the district, the SIS or LMS should draft a detailed, district-specific plan for the configuration of the messages that will be sent and relevant triggering conditions with specific indicator variables for sign-off by the client district. The template below provides a starting point based on the text messages tested in randomized evaluations, but depending on the nature of the school district (for example, if academic performance info is tracked by individual course or overall, how frequently information is updated, languages spoken at home, etc.) some modifications may be needed and ideally would be configurable within the product.

Template Messaging Plan[25]

ABSENCE	MISSED ASSIGNMENT	LOW COURSE AVERAGE
Indicator Variable	**Indicator Variable**	**Indicator Variable**
Unexcused absence in a given course	Unexcused missing assignment	Course average falls below 70%
Conditions & Date of Send	**Conditions & Date of Send**	**Conditions & Date of Send**
1x a week on a pre-designated day if a student has one or more unexcused absences	1x a week if a student has one or more unexcused missing assignments	1x a month if a student's course average is below 70%
Text Message[26]	**Text Message**	**Text Message**
Parent Alert: [Student Name] has [X] missing assignment(s) in [Class Name]. For more information, log in to [domain]	Parent Alert: [Student Name] has [X] missing assignment(s) in [Class Name]. For more information, log in to [domain]	Parent Alert: [Student Name] has a [X]% average in [Class Name]. For more information, log in to [domain]

PLEASE NOTE, THESE EXAMPLE ALERTS ARE:

Timely
Sent at daily, weekly, or monthly intervals as appropriate to the subject and at a rate that will not overwhelm parents

Simple
Written using direct, fact-based language with a streamlined level of detail

Personalized
Sent with specific, descriptive information about the relevant class, assignment, or date of absence

Actionable
Written with guidance for parents on how to follow up and gather more information

[25] Bergman, Peter and Chan, Eric. 2017. "Leveraging Technology to Engage Parents at Scale: Evidence from a Randomized Controlled Trial." *CESifo* Working Paper Series No. 6493. http://dx.doi.org/10.2139/ssrn.2989472.; Bergman, Peter, Jessica Lasky-Fink, and Todd Rogers. 2019. "Simplification and Defaults Affect Adoption and Impact of Technology, but Decision Makers Do Not Realize It". *Organizational Behavior and Human Decision Processes*. https://doi.org/10.1016/j.Obhdp.2019.04.001.

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ABOUT J-PAL NORTH AMERICA

Founded by Nobel Laureates of Economics in 2003, the Abdul Latif Jameel Poverty Action Lab (J-PAL) is a global research center working to reduce poverty by ensuring that policy is informed by scientific evidence. J-PAL works alongside a global network of researchers who use randomized evaluations to answer critical policy questions in the fight against poverty. Within the North America region, the J-PAL North America team generates and disseminates rigorous evidence about which anti-poverty social policies work and why across a range of sectors.

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