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INFORMATIVE

TO: Members, Board of Education
Austin Beutner, Superintendent

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SUBJECT: EXISTING RESEARCH ON EXTENDED SCHOOL YEAR

A proposal to extend the 2020-2021 school year by ten days to help students recover pandemic-related learning loss is on the agenda for the February 9, 2021 meeting of the Board of Education. To help inform the Board's deliberations on this issue, the Independent Analysis Unit (IAU) synthesized research on the effects of lengthened school years. Though such research is limited, the evidence points to a positive impact of an extended school year, particularly for students in the lower grade levels, in lower socioeconomic status schools, or for students with high academic risk, including special education students. Of course, adding time alone will not mitigate learning loss; the quality of instruction and the coordination of efforts during extended time are also important.

The IAU reviewed several relevant peer-reviewed research studies. Most of these studies suggest a **positive impact of an extended school year.** Important findings include:

- **Positive outcomes such as higher tested achievement, lower retainment in grade in subsequent years, and higher likelihood of obtaining higher-status jobs and higher incomes after graduation come as the result of more time in school.**

  Redd, Boccanfuso, Walker, Princiotta, Knewstub and Moore (2012) conducted an extensive review of more than 80 evaluation studies of different models for increasing learning time, several of which are categorized as extended school year (ESY) models that add more days to the school year. Findings from various ESY evaluation studies suggest that attending a school with a longer school year is associated with at least one positive achievement outcome, usually as measured through test scores.

  Research by Hansen (2007) involved the impact of instructional days on student performance. The researcher estimated the causal impact of school year length through two quasi-experiments that exploited different independent sources of variation in instructional days. The first identified school year length's effect through weather-related cancellations in Colorado and Maryland. Weather-related cancellations are made up at the end of school years, allowing relatively large fluctuations in instructional days within school districts prior to test administration. The second identification strategy took advantage of state-mandated changes in test-date administration in Minnesota, which moved five times in five years. The results were similar for either source of instructional day variation: **more instructional time prior to test administration increased student performance**. The effects are consistent across various thresholds of performance and grade levels.

One study of note examined the effects of a longer school year on educational and employment outcomes. It is based on the experience of Indonesia in extending the school year during 1978-79. The study allowed for a long period for tracking career outcomes, and it is one of the few available studies on extended school years rather than shortened school years or time between school start and testing. The investigator found that the longer school year decreases the probability of grade repetition and increases educational attainment. The lengthened schools year also increased the probability of working in formal sectors and wages later in life (Parinduri, 2014).

- **Students in the lower grades tend to show greater positive effects of an extended school year** (or negative effects of a shortened year).

  Redd, et. al. (2012), in their review of 80 studies, found that extended year programs may be more effective when targeting elementary school students rather than secondary school students. With regards to the effects of a shortened school year on younger students, Pischke (2003) studied West German short school years in 1966-67, which exposed some students to a total of about two thirds of a year less of schooling while enrolled. The study showed that the short school years led indeed to shorter schooling for affected students. Using comparisons across cohorts, states, and secondary school tracks, the researcher found that the short school years increased grade repetition in primary school, but had no adverse effect on the number of students attending the highest secondary school track or earnings later in life.

- With one exception, most studies note a **stronger effect in lower socioeconomic status schools or for students with higher academic risk,** which suggests a positive role for extended years in addressing equity.

  The review by Redd et al. (2012) also found that ESY programs tend to be more effective in young people with higher levels of academic risk as compared with students with lower levels of academic risk. More specifically, studies show that schools operating using extended year-round models may be more effective when they make use of intercession time to target students who need the extra time the most.

  For students with disabilities, ESY programs are any special education services occurring beyond the regular school year and are part of a free appropriate public education (FAPE). Using a nationally representative data set, Barnard-Brak and Stevens (2019) found that students with disabilities who participated in ESY programs experienced a "significantly" lower degree of academic regression than students with disabilities who were not included in ESY programs.

  The exception to findings about students at high academic risk benefiting the most from extended school time was a study conducted in Mexico, in which researchers found that having more days of instruction prior to examination slightly improved student performance but with diminishing marginal returns (Agüeroa & Beleche, 2013). The effects varied along the distribution of resources as determined by a poverty index, with lower improvements in poorer schools. These findings imply a weak net benefit of policies expanding the length of the school year as they could widen the achievement gap by socioeconomic status. This study used variation among states in school start dates and testing dates to identify an effect. This method

is weaker than the other studies that look at districts or individual schools instead of states since diversity among states may be an uncontrolled factor.

- The **quality of instruction matters**, perhaps more than the length of the school year.

  Patall, Cooper, and Allen (2010) noted in their review of literature that proponents argue that extending time will have learning and nonacademic benefits, while opponents suggest increased time is not guaranteed to lead to more effective instruction and suggest other costs. Despite limitations in the research noted by the authors, past reviewers have argued that any positive relation between allocated time and achievement is tentative and instructional quality needs to be addressed first. That said, findings suggest that extending school time can be an effective way to support student learning, particularly (a) for students most at risk of school failure and (b) when considerations are made for how time is used.

- The sense of **order, coordination, and continuity in the school and classroom** may be an important mediating factor.

  Goodman (2014) found that individual absences harmed achievement more than school closures. The author suggests that the disorder and discontinuity/disruption in learning when many students are absent, in a pattern that is irregular among students, may explain lower achievement. School closures do not harm achievement in the same way because there is greater coordination by schools and teachers, and a greater sense of order and continuity when all students are out at the same time and all return at the same time. Although this is a conjecture rather than a research result, orderly coordination of a planned extension may be an important point to keep in mind.

The available literature about the effects of extended school year is somewhat limited. There are few available examples of school systems that have changed the length of their school years and can compare the outcome data of shorter and longer years. Most of the papers we reviewed use samples of shortened school years, or shortened days between starting school and testing, rather than samples of lengthened school years. Patall et al. (2010), in their review of multiple studies, recognize this difficulty in available data, and focus primarily on the school day instead of the school year. The papers that use shortened time between starting school and testing are the strongest research designs showing that the calendar length of time spent in instruction makes a positive difference.

Despite the limited nature of available research, most results suggest a positive impact of additional school days. The base of research also indicates that certain groups of students receive greater benefits from an extended school year. These groups include younger, elementary-age students and students with higher academic risk, including students with disabilities. Some of the benefits can also be longer-term, such as a better educational and economic outcomes later in life. Additionally, the research suggests that there are several other factors involved in the perceived effectiveness of extended school years, including quality of instruction, continuity in the school and classroom, and number of students whose learning is disrupted.

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