



Using a Balanced School Year to Improve Student Achievement



Table of Contents

- 3** Introduction: Framing the Discussion
- 4** Keeping the Faucet Flowing: Can a Balanced School Year Sustain Student Achievement?
- 6** What Does the Research Really Tell Us?
- 8** End Notes



Introduction: Framing the Discussion

Within the context of this paper, a balanced, or year-round, school year calendar¹ is not one that necessarily increases either the length or number of school days. It is one that provides for “more continuous learning” by dividing up the traditional summer break into shorter intersessions during the year.

It might seem to be a common-sense proposition that such a schedule would counter the so-called “summer slide” where students fail to retain much of what they learned during the previous nine months. “Not so”, say many experts like Paul T. von Hippel from the LBJ School of Public Affairs at the University of Texas Austin. In looking at test scores, he notes:

Once thought to be positive, these effects now appear to be neutral at best. Although year-round calendars do increase summer learning, they reduce learning at other times of year, so that the total amount learned over a 12-month period is no greater under a year-round calendar than under a nine-month calendar.²

Von Hippel’s conclusions are mimicked by other scholars, many of whom conclude that results, at best, are mixed. Yet, others find positive impacts. In a recent study, David Hornack, the 2016 Morphet Dissertation Award Winner, found that “...regardless of economic status and gender, children who attend a balanced school calendar with a summer recess of six-weeks retain more mathematical knowledge than their counterparts who attend school on the traditional school calendar with a 12- week summer recess.”³

Who then to believe?

The issue may not be so much about results, but rather about what results – literally how student achievement is measured. Von Hippel, for instance, looked at data for kindergarten and first grade from

the Early Childhood Longitudinal Study (ECLS) for 748 public schools and 244 private schools from around the country. Of these, only 27 could be classed as year-round, or balanced, calendar schools. Results from these schools were compared to standard calendar schools. While students tended to be poorer than average, their poverty was moderate and not severe. Schools were primarily from the West. By comparison, Hornack looked at a relatively small sample of 275 students from selected midwestern schools, but over half were on free or reduced lunch.

Additionally, Hornack did something many previous studies had not done. He used a pre and post-test with the same students. As he pointed out:

Previous research regarding the balanced school calendar and its effects on the summer learning loss has been somewhat inconclusive and dated. In the majority of cases, previous research focused on state assessment data. While working with a secondary data set such as state assessment data has benefits, there are flaws to using a secondary data set to study the impact that summer recess has on mathematics learning retention. Two common concerns include the fact that state assessment questions and the participants change annually. By using a pre-test/post-test comparison study, the participants and the test remain constant...⁴

Consequently, if a study looks at results from one year to the next using standardized assessments with different, or even the same, participants, the

limitations of such an approach need to be recognized. Further, there is the question of how to interpret such scores. For example, a good deal of literature supports the notion that poor students have gains proportionately the same as their wealthier counterparts during the school year. They just start at a different place. As Entwisle, Alexander and Olson (2001) in their landmark John Hopkins study of the Baltimore Schools pointed out:

This seasonal pattern is not obvious because most schools give standardized tests once a year, and spring-to-spring comparisons convey the distinct, but wrong, impression that middle-class children learn more over the entire year than poorer

children. Thus, it looks as though home resources help year-round — and as though schools are failing poor children. The seasonal scores, however, show that home resources matter mainly — or only — in summer.⁵

Following their lead, the issue then is not one of growth. It is how to bring all students to the same starting point, then how to sustain achievement from one year to the next. Here is where the so-called “summer slide” presents the greatest risk. To counter that slide, Entwisle, Alexander and Olson would argue that it is necessary to keep the learning resource “faucet flowing”.



Keeping the Faucet Flowing: Can a Balanced School Year Sustain Student Achievement?

Given all that has been said about the strong correlation between parents’ resources and school performance, it is astonishing that resources of Baltimore parents—both financial and psychological—did not predict how much children learned in winters when school was open. – Entwisle, Alexander and Olson⁶

Proponents of a balanced, or year-long school calendar, often cite the “faucet theory” to support their claims that such an approach is needed to improve or sustain student achievement. Here the operant term is “sustain”, not improve, for believers in the faucet theory would argue that both disadvantaged and advantage students gain equally during the school year. Inversely, by sustaining, relative scores will show improvement.

The faucet theory emerged from the long-term study of the Baltimore City Schools where Entwisle, Alexander and Olson randomly selected

790 students from 20 inner city and middle class schools to follow through their school years and beyond. Counter to prevalent thinking about the achievement of impoverished students, they found “...the increasing gap in test scores between the two groups of children over the first five years in elementary school accrued entirely from the fact that relatively affluent children continued to gain when school was closed whereas poor children stopped gaining or even lost ground.”⁷

As the researchers noted, “We think a ‘faucet theory’ makes sense of these seasonal patterns.

“That is, when school was in session, the resource faucet was turned on for all children, and all gained equally; when school was not in session, the school resource faucet was turned off.”⁸

What should it look like if the faucet were left on? The fact that less affluent children lose ground when school is not in session is not necessarily an argument supporting a balanced, or year-round school calendar. As recently as 2016, in response to a policy-maker’s information request, the Education Commission of the States (ECS) stated, “research on the effects of year-round education is sporadic and limited, particularly in recent years, and the results appear neutral or mixed.”⁹ Similarly, the Congressional Research Service (CRS 2014) has said, “the research on the extent to which year-round schools affect student achievement has generally been found to be inconclusive and lacking in methodological rigor.”¹⁰ This is reinforced through a meta-analysis by Cooper et al. (2003) noting that effects were so marginal as to be close to chance.¹¹ However, the research cited by ECS and CRS remains dated and generally from 2001 to 2010.

Is there anything more current? Much of the research conducted in recent years has been at the dissertation level. Hornack’s 2016 dissertation, for instance, producing positive results in mathematics has already been cited. Abakwue (2011) in a study of Tennessee students found that those who attended year-round calendar schools scored significantly higher on their TCAP scores in reading comprehension and fluency due to more time allotted for reading remediation. Regular education and minority students differed significantly in math.¹²

In another dissertation study, Huffman (2013) looked at teacher perceptions on the impact of a year-round calendar on student achievement, student behavior and teacher efficacy. Huffman found a strong positive correlation between teacher perceptions of year-round school calendars and improved student achievement and positive student behavior.¹³

Mitchell-Hoefer (2013) looked at the state results from the third through fifth grade in a traditional versus year-round school in the southeastern United States from 2005 to 2007. She found minimal differences in English language arts but a significant difference in math achievement between the two schools in favor of the year-round school in 2007.¹⁴

Not all research has been at the dissertation level. In 2012, a Virginia Joint Legislative Committee looking at state-wide test scores concluded:

*The Standards of Learning (SOL) test scores for the general student population at year-round schools improved at similar rates to students at traditional calendar schools between 2001 and 2009. Consequently, it does not appear that a year-round calendar is associated with higher test scores for all students. However, analysis of SOL test scores at year-round schools found that black, Hispanic, limited English proficient, and economically disadvantaged students improved at a faster rate than their peers at traditional calendar schools. Black students, in particular, were far more likely to improve their English SOL scores at a faster rate if they attended a year-round school. These student subgroups also more often exceeded their predicted 2009 SOL test scores, and scored lower less often, than the general student population. A likely contributing factor to this improvement for certain student groups is the additional instructional time provided to year-round school students during intersessions, as well as reduced summer learning loss. Other educational best practices also likely impact student performance in addition to a year-round calendar.*¹⁵

In response to these findings, the Virginia Department of Education makes available planning grants of up to \$50,000 for schools looking to convert to year-long calendars. Additionally, implementing schools can receive up to \$300,000 to \$400,000.¹⁶

While not research in itself, groups influencing public policy, such as Washington State’s

Expanded Learning Opportunities Council, include balanced calendars as viable strategies, despite the paucity of research on test scores. As the council notes in a recent report to the governor, state superintendent and legislature:

*Above and beyond test scores, balanced school year calendars provide more consistent schedules for students by reducing summer break, and providing intersessions throughout the year. Intersessions can be used as vacation or utilized as instructional remediation and enrichment. This stability benefits all students, and especially benefits low-income students, students with special needs, and English language learners.*¹⁷

Finally, it should be noted that while the number of balanced calendar schools in the United States has fluctuated over the years, elsewhere such calendars are the norm:

*In Europe, the school year generally ends between the end of May and the second half of July. Mid-June is the time when the summer break begins in most countries. The length of the summer holidays varies significantly between countries: from 6 weeks in some German Länder, the Netherlands, in the United Kingdom (England and Wales) and Liechtenstein up to 13 weeks in Latvia, Italy and Turkey. The summer holidays are usually shorter in those countries where students have more frequent and longer holidays during the school year.*¹⁸

Interestingly, Germany, Great Britain, and the Netherlands had scores exceeding the United States in science, mathematics, and reading in the 2015 cross-national tests in the Programme for International Student Assessment (PISA).¹⁹



What Does the Research Really Tell Us?

As is often the case in education (and other fields), a study or two emerges that seems to dominate the research landscape. Everybody starts citing these same studies, giving them a kind of super-legitimacy, and as a result, researchers move on to other subjects. In the case of balanced, or year-round school calendars and their impact on student achievement, two such studies have had this kind of impact.

The first was the meta-analysis by Cooper and associates that found achievement effects to be minimal at best, and the second was von Hippel's review of ECLS data that, in essence, supported the same claim. These researchers quickly became the experts in the field. Consequently, most research after 2010 has come at the dissertation level. While

this is not to discount the value of dissertation-level research, it indicates that, unlike in the case of von Hippel's study, most have relatively small sample sizes.

Yet, summer learning slide, or loss, is a very real and highly supported phenomenon. Even Cooper and associates (1996) in their original meta-analysis found that achievement test scores declined over the summer, with the greatest loss being in math.²⁰

Why then do the "expert" studies seem to indicate that the impact of balanced, or year-round, calendars is minimal, and dissertation studies often display significant impact? It may be that a balanced school year calendar should be thought of as an instructional tool. Meaning that in the hands

of skilled educators, balanced calendars produce results. Patall, Cooper, and Allen (2009), while lamenting the shortage of rigorous research, arrived at this conclusion when they said, “it would seem that alongside other well-designed initiatives to support student learning and development, extending school time may be a powerful tool.”²¹ Further, dissertation-based studies are generally field-based, meaning they are conducted by practitioners who have the most immediate or current views and sense of what really happens in the classroom.

As with many educational strategies, the research on balanced calendars in actuality is very sparse. As the Education Commission of the States (ECS) said, “Research on the effects of year-round education is sporadic and limited, particularly in recent years...”²² For instance, operating on the premise that a balanced calendar is a tool, how do skilled teachers reconfigure their lesson plans? Do they teach more in a balanced calendar format? Is there more, or better, time to grasp key concepts and

practice math skills? Questions like these still need to be answered. There is, however, a very old hint. ASCD in citing McMillen (2001) notes:

*The research also indicates that when year-round schooling has resulted in higher academic achievement, the schools in question are usually doing more than just rearranging the school calendar. These schools are also providing remediation and enrichment for students during the breaks so that students have opportunities to relearn material, practice skills, catch up, or experience nonacademic enrichment activities continuously throughout the year.*²³

It may be more than just programming over the breaks that is accounting for results. The instructional stance of teachers, schools, and districts may be fundamentally transformed by a balanced calendar approach. At the very least, the adaptation of a balanced calendar indicates that these districts are serious about reform.



End Notes

- ¹ Sometimes these terms are used interchangeably.
- ² Von Hippel, Paul T., Year-Round School Calendars: Effects on Summer Learning, Achievement, Parents, Teachers, and Property Values (December 2, 2015). Chapter 13 in Alexander, K., Pitcock, S. & Boulay, M. (eds.). *The Summer Slide: What We Know and Can Do About Summer Learning Loss*. New York: Teachers College Press, 2016. . Available at SSRN: <https://ssrn.com/abstract=2766106>
- ³ Impact of Summer Recess on Mathematics Learning Retention, NCPEA Education Leadership Review of Doctoral Research, Vol. 3, No. 1 – Spring 2016 ISSN: 1532-0723, Available at: <http://files.eric.ed.gov/fulltext/EJ1116885.pdf>
- ⁴ Ibid, p. 51.
- ⁵ Entwisle, Doris R., Alexander, Karl L., and Steffel Olson, Linda (2001) in Keep the Faucet Flowing, an article by the American Federation of Teachers. This article is adapted from "Summer Learning and Home Environment" in *A Notion At Risk, Preserving Public Education as an Engine for Social Mobility* edited by Richard D. Kahlenberg at: <http://www.aft.org/periodical/american-educator/fall-2001/keep-faucet-flowing#sthash.fsvumGly.dpuf>
- ⁶ Ibid
- ⁷ Ibid
- ⁸ Ibid
- ⁹ Education Commission of the States, Response to information request on year-round schooling policies Prepared July 7, 2016 by Micah Ann Wixom
- ¹⁰ Congressional Research Bureau, Year-Round Schools: In Brief by Rebecca R. Skinner Specialist in Education Policy June 9, 2014, p.4.
- ¹¹ Harris Cooper, Jeffrey C. Valentine, and Kelly Charlton, et al., "The Effects of Modified School Calendars on Student Achievement and on School and Community Attitudes," *Review of Educational Research*, vol. 73, no. 1 (Spring 2003). Cooper, Patall, and Allen. (2010). *Extending the School Day or School Year: A Systematic Review of Research (1985-2009)*. *Review of Educational Research*, 80(3): 401
- ¹² Abakwue, C. I. (2011). *Analysis of Math and Reading Achievement Scores of Students Attending Year-Round Calendar Schools and Traditional Calendar Schools in Tennessee* Dissertation, Union University ERIC Identification Number: ED539270.
- ¹³ Huffman, G.E. (2013). *Teacher Perceptions Regarding the Relationship of Modified Year-Round School Calendars with Student Achievement, Student Behavior, and Teacher Efficacy*, Ph.D. Dissertation, The University of Southern Mississippi ERIC Identifier Number: ED556378
- ¹⁴ The Effects of a Year-Round School Calendar in a High-Risk Elementary School: A Comparative Study Mitchell-Hoefer, Megan D. (2013). Ph.D. Dissertation, University of South Carolina ERIC Identifier Number: ED522521
- ¹⁵ Joint Legislative Audit and Review Commission (2012). *Review of Year-Round Schools: Report to the Governor and the General Assembly of Virginia*, P. 15. Available at: <http://jlarc.virginia.gov/pdfs/reports/Rpt430.pdf>
- ¹⁶ See: Virginia Department of Education Year Round and Extended Schools at: <http://doe.virginia.gov/instruction/year-round/index.shtml>
- ¹⁷ Expanded Learning Opportunities Council (2016). *Time to Learn: The 2016 Report to the Legislature, Office of the Superintendent of Public Instruction and the Governor*. Olympia: Office of Public Instruction. pp. 25-6.
- ¹⁸ The European Commission. *Organization of School Time in Europe: Primary and Secondary General Education 2014/15 school year*. Eurodyce-Facts and Figures, p.1.
- ¹⁹ Fact Tank. (February 15, 2017). U.S. students' academic achievement still lags that of their peers in many other countries, by Drew Desilver, Available at: <http://www.pewresearch.org/fact-tank/2017/02/15/u-s-students-internationally-math-science/>
- ²⁰ *The effects of summer vacation on achievement test scores: A narrative and meta-analytic review*. Cooper, Harris; Nye, Barbara; Charlton, Kelly; Lindsay, James; Greathouse, Scott. *Review of Educational Research*; Fall 1996; 66.
- ²¹ Patall, A., Cooper, H. & Batts Allen, A. (2010). *Extending the School Day or School Year: A Systematic Review of Research (1985–2009)*. *Review of Educational Research* September 2010, Vol. 80, No. 3, pp. 401–436 , P.432
- ²² ECS, op cit., p.1.
- ²³ Huebner, T. (April 2010). *What Research Says About... / Year-Round Schooling*. Educational Leadership, Volume 67 | Number 7 Reimagining School Pages 83-84. Available at: http://www.ascd.org/publications/educational_leadership/apr10/vol67/num07/Year-Round_Schooling.aspx