



Equity by Design:

Deconstructing Summer Learning Loss— Moving Away from Summer School and Toward Valuing Informal Learning

M. Nickie Coomer

Tiffany S. Kyser

Kathleen A. K. Thorius

Seena M. Skelton

Summer — A Vacation from Learning? A Critical View

The final bell rings and students empty out their desks and lockers for the summer.

In the United States (U.S.), most K-12 students will not return to school for 10 weeks or more, and in many of those same schools and districts, a cry of concern rises up: How can we prevent summer learning loss? (Chen, Kigamwa, Macey, Phelps, Simon, Skelton, & Thorius, 2013).

Some researchers believe that the academic performance gap begins with and is maintained by the loss of learning by students from economically, racially, and ethnically marginalized populations over the summer break peers (Alexander, Entwisle, & Olson, 2007; Chen et al., 2013; Verachtert, Van Damme, Onghena, & Ghesquière, 2009). In contrast to the notion that students of color and students from

economically marginalized neighborhoods lose learning over the summer, many researchers, professionals, and policymakers assume that White, middle and upper middle class students continue to learn over the break, and that this learning comes as the result of access to presumably rich summer learning experiences (Chen et al., 2013; Von Drehle, 2010). A general assumption persists that students who have access to enriching activities (e.g., travel, camp, libraries) perform better on their fall assessment than their spring assessment due to participation in summer enrichment activities that either builds on previous learned schema, or creates new schema as students are exposed to and learn about new environments, subjects, and

KEY TERMS

Summer Learning Loss - The loss or lack of retention of learned academic skills over the summer, measured by comparing performance on spring and fall assessments.

Summer School - A summer program traditionally provided by school districts that includes extended education opportunities in an attempt to either remedy student skills that are below grade level, or provide extended learning opportunities to retain skills.

Summer Enrichment Programs - Summer programs, not typically provided by a school district, focused on multiple areas of development and health including, academic improvement, physical activity, nutrition, and social-emotional learning.

Historically Underserved Populations - Populations that have not historically been considered part of the dominant culture in the United States

Achievement Gap - The disparity in performance on a variety of measures- including standardized tests scores, and high school and college completion rates- between populations typically defined by socioeconomic status, race, ethnicity and gender.

Opportunity Gap - The inequitable distribution of resources and opportunities between populations: mainly referencing that students from low socioeconomic backgrounds or historically underserved racial and ethnic populations are not privileged to the types of resources and opportunities their White, middle-high income peers are.

Formal Learning- Learning characterized by a mediated, didactic interaction between teacher and student, often in a school setting (Eshach, 2007; Reznick, 1987; Artiles, et al. 2011).

experiences (Raudenbush & Eschmann, 2015; Lareau, 2011). The logic then follows that students without access to and participation in specific types of summer activities—namely students marginalized by economics, race, and ethnicity—perform lower on their fall assessments than their spring assessments because they cannot access these enriching activities or formal approaches to learning, and are instead left without adult supervision, organized activity, and the presumably academically negligible or even detrimental influences of their families (Von Drehle, 2010).



Accordingly, the response to these assumptions are policies that prescribe formal learning experiences for populations of students who are largely already members of historically marginalized economic, racial, and ethnic groups (Addy & Wight, 2012). Formal learning experiences, contrasted with the informal or out-of-school learning experiences of summer, are characterized by “mediated” (Eshach, 2007, p. 173), “didactic” (Artiles, Thorius, Bal, Neal, Waitoller, and Hernandez, 2011, p. 170) interactions between teacher and student in a “tertiary institution, highly structured in its curriculum, learner’s activities, and assessment (Lai, Khaddage, & Knezek, 2013, p. 415) focused on

individual work, generality, and power of transfer (Reznick, 1987).

In this brief, we outline the rhetorical history and rationale of summer learning loss, challenge the traditional logic of it, and finally discuss policy implications and approaches toward centering the lived experiences of students from working class, poor, and historically underserved racial and ethnic backgrounds in summer learning. Then, we assert a need to shift from deficit-oriented prescriptions for exclusively more formal learning to how we can value, use, and complement the summer learning in which students engage by centering students’ home experiences throughout the school year.

The Research Foundations of Summer Learning Loss

In 1978, Barbara Heyns was the first to study what was later to become known as the “schooling effect” (Bryk & Raudenbush, 1988) by comparing spring test scores with fall and end-of-year scores (Raudenbush & Eschmann, 2015). Heyns found that “dramatically higher” growth rates occurred during the school year as compared to summer, particularly in math (Heyns, 1978; Raudenbush & Eschmann, 2015). Using a similar research design, Alexander, Entwisle, and Olson (2007) published the *Baltimore Beginning School Study*, a longitudinal study of Baltimore students from elementary school through age 22 that examined “the long-term educational consequences of summer learning differences...” (p. 167). These researchers found that while low-income children performed as well as their middle and upper middle class peers in reading during the school year, their performance waned after



the summer months. In their article, “Does Schooling Increase or Reduce Social Inequality?” (2015), Raudenbush and Eshmann assert that “these results provided evidence that low-socioeconomic status (SES) children gained more from schooling than high SES children did” (p. 460). The researchers reasoned that two-thirds of the 9th grade reading achievement gap (between students from historically underserved economic, racial, and ethnic groups and students from White, middle-upper income families) can be explained by unequal access to summer learning opportunities during elementary school (Smith, 2012). Downey, Broh, and von Hippel (2004) performed a study similar to the *Baltimore Beginning School Study*, finding that similar results can be generalized to a broader sample population (Raudenbush & Eschmann, 2015). Their findings echo the reasoning that “attending school during the summer accelerated and equalized learning as a function of SES” (Jacob and Lefgren, 2004; Raudenbush & Eschmann, 2015). By measuring the effect of summer school for students performing below a certain benchmark during the school year, these studies found that formal learning in a summer school program had a direct impact on increasing student test scores (Jacob & Lefgren, 2004; Raudenbush & Eschmann, 2015).

Subsequently, policies advocating for formal summer learning opportunities for students from low-income families and neighborhoods rely on the rationale of studies like those listed above to explain why students who are economically marginalized fail to meet certain benchmarks. As White, middle to upper middle class students’ tend to score higher

on fall measurements than students from historically marginalized groups, the underlying assumption of these studies is that a poorer performance on fall measurements by economically, racially, and ethnically marginalized students indicates that no learning took place during their time out of school. (Alexander, et al., 2007; Chen, et al., 2013; Lareau, 2011; Raudenbush & Eschmann, 2015; Verachtert et al., 2009). Because there is also a high representation of racial and ethnically marginalized students in low-income neighborhoods (Addy & White, 2012), policies calling for institutionalized, formal summer learning experiences, tend to target and disproportionately effect non-White, non-middle and upper class students.

Traditional Views of Summer Learning Loss in Policy and Practice

“Summer learning loss has been part of educational discourse in the U.S. for several decades” (Chen et al., 2013, p.2; Borman, Benson, and Overman, 2005; Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996; Cooper, Charlton, & Melson, 2003; Heyns, 1987). Researchers and policymakers have problematically concluded not only that children learn more and better when in school (Alexander et al., 2001, p. 177; Heyns, 1987; Bryk & Raudenbush, 1988), but also that they are otherwise left without supervision and without cognitively enriching activities (Von Drehle, 2010, p. 36) when they are not in school. The rationale then follows that these “disadvantaged children need year-round, supplemental programming to counter the continuing press of family and

community conditions that hold them back” (Alexander et al., 2007, p. 176).

Studies that attempt to assess and account for learning attrition throughout the summer due to lack of formal learning opportunities through structured schooling assert that students from families of low socioeconomic status and high-poverty neighborhoods need to be rescued from their families and backgrounds, be provided year-round schooling, and kept from what they assume to be not only lives devoid of academic stimulation and learning opportunity, but “families and conditions that hold them back” (Alexander et al., 2011, p. 176; Bryk & Raudenbush, 1988; Chen et al., 2013; Cooper et al., 1996; Heyns, 1987; Lareau, 2011; Raudenbush & Eschmann, 2015). Much of what exists promoting summer school policy not only discounts what historically marginalized families may offer their children over the summer, but also champions the school’s ability to counteract or, as Heyns asserts, “equalize” whatever their influence may be (as cited in Borman et al., 2005, pg. 132).

In their article, “Lasting Consequences of the Summer Learning Gap,” Alexander, Entwisle, and Olson (2007) conclude that because standardized testing evidences parity in the learning between low-income and middle-high income students during the school year, the achievement gap starts in the summer when the summer experiences of economically marginalized students do not bear the academic value of their middle and upper income peers. Without examining other means of measuring learning over the summer (Chen et al., 2013), these authors claim that “children...learn more and learn more efficiently when they are in school” (Alexander et al., 2001, p. 177).The

widely accepted assertion that the summer learning loss of students from historically underserved economic, racial, and ethnic groups accumulates over time has fueled an argument that the accumulated learning gap contributes to lower entrance into college preparatory programs, lower achievement in high school, and higher drop-out rates (Alexander et al., p. 175).

The rhetoric leads to a belief that if the families of these students had the resources to access quality summer programming, or if these students even had adequate supervision, their performance would match that of their White, middle to high income counterparts, and their long-term outcomes would improve. Correspondingly, this deficit-oriented thinking leads to policy-related conclusions that the only way for students from ethnically, racially, and economically marginalized communities to improve their chances of succeeding through high school and beyond is through formal learning in school. As Chen et al. (2013, p.2) assert, policy and practice both presume that while “children with access to high-quality experiences keep exercising their minds and bodies at camp, on family vacations, in museums, libraries and enrichment classes, children without these resources languish on street corners or in front of glowing screens” (Von Drehle, 2001, p. 36). Prescribing formal summer learning experiences in school is meant to act as an antidote to the presumed incapability of economically, racially, and ethnically marginalized families to provide any type of valuable learning (Chen et al., 2013; Cooper, Valentine, Charlton, & Melson, 2003; Schulte B., 2009). Furthermore, these policies presume that the family and social lives of economically, racially, and ethnically underserved students are detrimental factors



to their academic lives, and schooling an effective compensatory measure to equalize that deficit (Bryk & Raudenbush, 1988; Heyns, 1987). As a result of this deficit-focused orientation, policy enactment mandating summer school strips students' out-of-school summer experiences of any value as they may relate to formal learning. Currently, policies asserting that proper adult supervision, nutrition, and physical activity provided through prescribed, institutionalized summer programming, will

help decrease at-risk activity and increase test scores are taking form across the country (Fairchild, McLaughlin, & Costigan, 2007, p.1). Moving beyond these dangerous deficit assumptions is necessary in advancing equitable educational policy for marginalized students by instead valuing the multiple literacies (Hull & Schultz, 2001) and the presumably informal learning experiences they have outside of school (Artiles et al., 2011; Hull & Schultz, 2001; Marsick & Schultz, 2001).

Disrupting Traditional Notions of Summer Learning Loss

While arguments such as Heyns's (1987) and Alexander, Entwisle, and Olson's (2001) use standardized test score data to measure the effect of educational programming, and have been able to show an accumulated achievement gap due to the presumed effects of extended time off (Alexander et al., 2007; Bryk & Raudenbush, 1988; Downey, et al., 2016; Jacob & Lefgren, 2004), the current rhetoric on summer learning loss negates the historical, cultural, and linguistic experiences students from historically underserved populations have to offer (Chen, et al., 2013). The assumptions about these presumed academically valueless experiences require "critical reflection, lest they reinforce or contribute to problematic conclusions about the nature of learning, about particular families and communities, and about the steps policymakers, educators, and community members should take to address

achievement disparities" (Chen et al., 2013).

Assuming that students do not engage in learning within their families and neighborhoods ignores a great deal about what we know about how children learn. Theories of formal learning as they apply to school settings tend to focus on cognitive and behavioral functioning, assessed through the presumed performance of cognitive tasks (Artiles et al., 2011). Such narrow characterizations of learning neglect the multi-directional influence of culture on cognition: the psychological processes of making meaning as it relates to context (Lee, 2012). Neglecting the constructive influence of culture on learning serves to further marginalize historically underserved children by privileging formal learning experiences through "didactic teaching and learning" (Artiles et al., 2011) over "learning complexities (beyond cognition) across

formal and informal learning environments” (Artiles et al., 2011) including the “intricate (and unavoidable)” influence of culture on learning (Artiles et al., 2011).

Incidental and informal learning experiences are characterized through the social sharing of meaning construction and the direct engagement of the learner with objects and situations (Resnick, 1987). The speculation that this learning and discovery stops outside school walls conflicts with one of the most basic tenets of child development theory: the idea that children are actively discovering and learning about their environment and surroundings (Wintre, 1986) both through formal education and within their own informal learning experiences. Children construct knowledge themselves as “they engage with the world and with one another” (Chen et al., 2013, p. 2; Nasir, Rosebery, Warren, & Lee, 2006). They develop relational skills as they engage in play, and many experience high levels of challenge, motivation, and concentration during out-of-school activities (Chen et al., 2013; Larson, 2001). “[S]tudents are always learning—in the context of their families and communities and in the classroom” (Chen et al., 2013, p. 3). As “what has been learned out of school can help shape what is learned in school” (Barron, 2006; Lai, Khaddage, & Knezek, 2013), we have to recognize and avail how their summer experiences supplement what they have learned and will be learning in school. Students do not exist and develop separately from their cultures, but instead develop through interacting with their cultures in a bi [or multi]-directionally influential system (Rogoff, 2003). “Learning is not merely the act of filling vessels [Rodriguez, 2012] that may leak over two

short months, it is a socio-cultural process that takes place in both informal and formal settings, with students constructing knowledge across and through many diverse experiences in their life course (Bransford et al, 2006; Chen et al., 2013, p.2; Freire, 2000; Rogoff, 2003; Sawyer, 2006).”



Some research suggests a relationship between these students’ scores and a lack of engagement in institutionalized instruction within school (Chen et al., 2013), concluding that they must be experiencing increased exposure to negative influences in their home life (Alexander, Entwisle, & Olson, 2007). The reasoning then follows that removing students from their families and placing them in summer school will lessen the negative impact of their home life, increase learning retention, and improve fall assessment scores, thus eventually improving high school and post-high school outcomes. However, prescribed formal learning opportunities in school settings away from their families, social lives, and neighborhoods may not be the best answer for addressing learning loss for students in historically underserved communities. While current research focuses almost entirely on the socioeconomic status of the family, it



neglects to consider the possibility that low test scores may be due to the fact that these students are also not receiving the same quality education as their middle-high income peers (Gorski, 2007) for the years leading up to, and including, high school. Prescribing more in-school opportunities to engage with a curriculum that privileges White, middle to upper class lived experiences in overcrowded, under-funded classrooms, while ignoring the enrichment of their own summer experience is not likely to increase learning (Cooper et al., 2003; Larson, 2001).

We have to move away from deficit-grounded policy toward families and consider a better metric for gauging summer learning than fall and spring standardized tests, as well as develop more effective summer programming than prescribed formal learning in summer school (Chen et al., 2013). Effective summer programming involves opportunities for experiential learning that is more readily committed to a child's long-term memory and overall health and well-being (Chen et al., 2013; Fairchild et al., 2007). Summer school, often stigmatized by remediation or used as a punitive measure (Sawchuck, 2011), is not the entire answer when addressing summer learning through policy. Compulsory summer school programs focused on remediation, retention, and achievement gaps result in the two following outcomes:

- 1) assumed generalized academic learning

loss without considering the wide variety of informal learning students engage in over summer (Chen et al., 2013; Delpit, 2006; see also, Artiles et al., 2011) through “fundamentally social processes” (Crowley & Jacobs, 2002, p. 334; Hull & Schultz, 2001; Wintre, 2001) and 2) the failure to address the enrichment all students possess. Instead of negating family involvement, researcher, educators, and policymakers can value the many literacies children cultivate through their experiences, and also empower families to conduct their own summer learning experiences by developing policies that facilitate families' access to quality summer-based programs within the community (Mitchell & Begny, 2014).

Empowering, educating, and working with parents/caregivers and families allow schools to address summer enrichment, without negating or overlooking the value of the many ways youth develop literacies and problem-solve throughout their environment (Chen et al., 2013; Hull & Schultz, 2001) as well as the intergenerational learning students experience while engaging with their adult family members (Chen et al., 2013; Moll, Amanti, & Neff, 1992).

Rethinking Summer Learning

Moving toward centering the lived experiences of historically underserved economic, racial, and ethnic people engenders policy making and

implementation that values the historical, cultural, and linguistic assets of all learners (Chen et al., 2013). By failing to value the incidental and informal learning (Marsick &

Watkins, 2001) students experience through interacting with their natural social environments and cultures, “summer learning loss rhetoric can lead to deficit assumptions about the home and community experiences that all students- but especially students of color and students from low socio-economic backgrounds- engage in while out of school” (Chen et al., 2013, p. 3).

A paradigmatic shift in conceptualizing what summer learning looks like is necessary in policy-making that seeks to value the lived experiences and learning in which students engage outside of the classroom (Chen et al., 2013).



Action Steps

Moving forward, policymakers and educators alike need to consider other forms of learning that all students experience, so as not to lead to deficit assumptions about home and community practices (Paris & Allim, 2012). Using what we know about child development and cognition, we can conclude that students are learning with/in their communities during the summer (Lai, Khaddage, & Knezek, 2013; Marsick & Watkins, 2001; Wintre, 1986).

Understanding that informal learning occurs

for students through interaction with their own cultures (Rogoff, 2003) can help educators more effectively measure and consider the learning that took place over summer when students return in the fall. Many families would welcome support during summer months- “this can be accomplished without removing the locus of control for out-of-school experiences from families” (Chen et al., 2013, p. 3). Therefore, educators and policymakers can redress traditional powers of sole decision-making and collaborate with families to ensure that all students have programs and resources both in and out of school that meet their needs (Fairchild et al., 2007). Educators and policymakers can also address common barriers, including registration fees and ancillary costs, family awareness of existing programs, adequate transportation and stereotypical beliefs about who can or should engage in particular kinds of programs in order to promote greater access (Pittman, Yohalem, & Wilson-Ahlstrom, 2004)” (Chen et al., 2013, p. 3).

“Finally, school staff can and should provide information and planning resources to families, collaborating with them as they select summer experiences (Sleeter, 2008), promoting counter-stereotypical programs (e.g., encouraging girls to attend STEM summer programs or boys to participate in a dance class)” (Chen et al., 2013, p. 3) and providing parents training and access to structured, but “non-formal” (Eshach, 2007) learning materials throughout the summer (Mitchell & Begny, 2014). Educators can provide parents/caregivers and families with information and access to local community resources, while policymakers focus on securing funding for quality summer learning



programs: programs that model successful summer learning opportunities by intertwining academic learning with recreation, social emotional learning, and physical health (Fairchild et al., 2007).

Conclusion

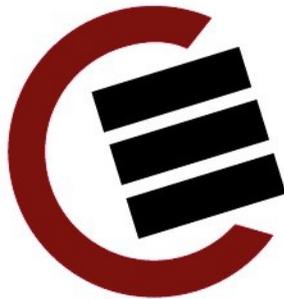
Prescribing formal learning experiences in the context of summer school calls for an examination of why we, as members of the educational community, presume that students not only cease learning outside of school, but somehow regress (Artiles et al., 2011; Alexander et al., 2007; Heyns, 1978; Bryk & Raudenbush, 1988; Raudenbush & Eschmann, 2015). Without centering students' lived experiences both inside and outside of school walls we fail to further understand how children make meaning of the world around them, and how this meaning-making may actually supplement formal education during the school year if we know how to access and value it (Artiles et al., 2001; Lee, 2012).

Being aware of the deficit-oriented assumptions put forth by the research that call for more formal learning experiences may help us better foreground equity for historically marginalized students by recognizing the limitations of the research and building on strengths already present in homes, families, and communities.

Additionally, through the development of, funding of, and increased access to summer programming that fosters the opportunity for both formal and informal experiential learning opportunities (Chen et al., 2013), policymakers are better able to center and value the informal learning students experience both in and out of school.

As Chen, et al. (2013, p. 4) assert, *Our deepest held vision for our students is that they are equipped and empowered to participate in a society that recognizes and values their unique abilities and contributions. While success in mathematics and literacy are undoubtedly an integral part of this vision, these are not the only forms of learning we should consider. In fact, by centering the learning experiences students have daily in their family and community contexts, we will be more likely to effectively address actual gaps in performance. Promoting greater opportunities for students, families, and communities to determine for themselves how time should be distributed across formal and informal learning experiences is important.*

Learning and culture are related: not entities that exist and develop separately from one other. Understanding the interrelatedness of how learning and development take place not in spite of culture, but through it (Marsick & Schultz, 2001; Hull & Schultz, 2001; Rogoff, 2003), is imperative in understanding the informal learning processes that take place over summer breaks, and further advancing equitable practices in policy-making and pedagogy.



About the Great Lakes Equity Center

The mission of the Great Lakes Equity Center is to ensure equity in student access to and participation in high quality, research-based education by expanding states' and school systems' capacity to provide robust, effective opportunities to learn for all students, regardless of and responsive to race, sex, and national origin, and to reduce disparities in educational outcomes among and between groups. The Equity by Design briefs series is intended to provide vital background information and action steps to support educators and other equity advocates as they work to create positive educational environments for all children. For more information, visit <http://www.greatlakesequitycenter.org>.

Copyright © 2016 by Great Lakes Equity Center

Recommended Citation: Coomer, N.M., Kyser, T.S., Thorius, K.A.K., and Skelton, S.M. (2016). Summer—A Vacation from Learning? A Critical View. Equity by Design. The Great Lakes Equity Center (GLEC). Retrieved from: http://glec.education.iupui.edu/images/briefs/2016_07_13_summer_learning_loss.pdf

Disclaimer

Great Lakes Equity Center is committed to the sharing of information regarding issues of equity in education. The contents of this practitioner brief were developed under a grant from the U.S. Department of Education. However, these contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the federal government.

References

- Addy, S. & Wight, V. National Center for Children in Poverty, Mailman School of Public Health Columbia University. (2012). *Basic facts about low-income children, 2010: Children aged 12 through 17*. New York, NY. Retrieved from www.nccp.org.
- Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2001). Schools, achievement, and inequality: A seasonal perspective. *Educational Evaluation and Policy Analysis*, 23, 171-191.
- Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. *American Sociological Review*, 72, 167-180.
- Artiles, A., Thorius, K. K., Bal, A., Neal, R., Waitoller, F. R., & Hernandez-Saca, D. (2011). Beyond culture as group traits: Future learning disabilities ontology, epistemology, and inquiry on research knowledge use. *Learning Disability Quarterly*, 34, 167-179.
- Barron, B. (2006). Interest and self-sustained learning as catalysts of development: A learning ecology perspective. *Human Development*, 49, 193-224.
- Borman, G.D., Benson, J., & Overman, L.T. (2005). Families, schools, and summer learning. *The Elementary School Journal*, 106, 131-150.
- Bransford, J. D., Barron, B., Pea, R. D., Meltzoff, A., Kuhl, P., & Bell, P. (2006). Foundations and opportunities for an interdisciplinary science of learning. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 19-34). New York, NY: Cambridge University Press.
- Bryk, A.S. & Raudenbush, S.W. (1988). Toward a more appropriate conceptualization of research on school effects: A three-level hierarchical linear model. *American Journal of Education*, 97(1), 65-108.
- Chen, K., Kigamwa, J., Macey, E., Phelps, J., Simon, M., Skelton, S., & Thoriu, K. K. (2013, July) Summer: A vacation from learning? A critical view. *Equity Dispatch*, 1-4.
- Cooper, H., Nye, B., Charlton, K., Lindsay, J., & Greathouse, S. The effects of summer vacation on achievement test scores: A Narrative and Meta-Analytic Review. *Review of Educational Research*, 66(3), 227-268.
- Cooper, H., Valentine, J. C., Charlton, K., & Melson, A. (2003). The effects of modified school calendars on student achievement and on school and community attitudes. *Review of Educational Research*, 73, 1-52.
- Crowley, K. & Jacobs, M. (2011) In Taylor and Francis e-Library (Ed.), *Learning conversations in museums*. (pp. 333-353). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Delpit, L. (2006). Lessons from teachers. *Journal of Teacher Education*, 57, 220-231.
- Duffett, A., Johnson, J., Farkas, S., King, S., & Ott, A. (2004). *All work and no play: Listening to what kids and parents really want from out-of-school time*. Washington, DC: Public Agenda.
- Downey, D. B., von Hippel, P. T., & Broh, B. A. (2004). Are schools the equalizer? Cognitive inequality during the summer months and the school year. *American Sociological Review*, 69(5), 613-635.
- Eshach, H. (2007). Bridging in-school and out-of-school learning: Formal, non-formal, and informal education. *Journal of Science Education and Technology*, 16(2), 171-190.
- Fairchild, R., McLaughlin, B., & Costigan, B. (2007). How did you spend your summer vacation? What public policies do (and don't do) to support summer learning opportunities for all youth. *Afterschool Matter Occasional Paper Series*, 8, 1-25.
- Farkas, G., Sheehan, D., Grobe, R., & Shuan, Y. (1990). Cultural resources and school success: Gender, ethnicity, and poverty groups within an urban school district. *American Sociological Review*, 55, 127-142.
- Freire, P. (2000). *Pedagogy of the oppressed*. New York, NY: Continuum International Publishing Group.
- Gorski, P. (2007, Spring). The question of class. *Teaching Tolerance*. Retrieved June 28, 2013 from <http://www.tolerance.org/magazine/number-31-spring-2007/feature/question-class>
- Heyns, B. (1987). School and cognitive development: Is there a season for learning? *Child Development*, 58 (5), 1151-1160.
- Hull, G. & Schultz, K. (2001). Literacy and learning out of school: A review of theory and research. *Review of Educational Research*, 71(4), 575-611.

- Jacob, B.A. & Lefgren, L. (2004). Remedial education and student achievement: A regression-discontinuity analysis. *The Review of Economics and Statistics*, 86(1), 226-244.
- Lai, K.-W., Khaddage, F., & Knezek, G. (2013). Blending student technology experiences in formal and informal learning. *Journal of Computer Assisted Learning*, 29, 414-425.
- Lareau, A. (2011). *Unequal childhoods: Class, race, and family life*. Berkeley, CA: University Press.
- Larson, R. W. (2001). How U.S. children and adolescents spend time: what it does (and doesn't) tell us about their development. *Current Directions in Psychological Science*, 5, 160-164.
- Lee, C.D. (2012). Conceptualizing cultural and racialized process in learning. *Human Development*, 55, 348-355.
- Marsick, V. J. & Watkins, K.E. (2001). Informal and incidental learning. *New Directions for Adult and Continuing Education*, 89, 25-34.
- Mitchell, C. & Begny J.C. (2014). Improving student reading through parents' implementation of a structured reading program. *School Psychology Review*, 43, 41-58.
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31, 132-141.
- Nasir, N. S. & McKinney de Royston, M. (2013). Power, identity, and mathematical practices outside and inside school. *Journal for Research in Mathematics Education*, 44, 264-287.
- Nasir, N. S., Rosebery, A. S., Warren, B., & Lee, C. D. (2006). Learning as a cultural process: Achievement equity through diversity. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning science* (pp. 489-504). New York, NY: Cambridge University Press.
- Paris, D., & Alim, H.S. (2014). What are we seeking to sustain through Culturally Sustaining Pedagogy? A loving critique forward. *Harvard Educational Review*, 84(1), 85-100.
- Pittman, K. J., Irby, M., Yohalem, N., & Wilson Ahlstrom, A. (2004). Blurring the Lines for learning: The role of out of school programs as complements to formal learning. *New Directions for Youth Development*, 2004(101), 19-41.
- Raudenbusch, S.W. & Eschmann, R. (2015). Does schooling increase or reduce social inequality? *Annual Review of Sociology*, 41, 443-470.
- Resnick, L.B. (1987). The 1987 presidential address: Learning in school and out. *Educational Researcher*, 13-20.
- Rogoff, B. (2003). *The cultural nature of human development*. New York, NY: Oxford University Press.
- Sawchuck, S. (2011, May 18). Quality of summer teachers examined. *Education Week*, 30, 1, 14.
- Sawyer, R. K. (2006). The new science of learning. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 1-18). New York, NY: Cambridge University Press.
- Schulte, B. (2009). Putting the brakes on 'summer slide': Modified school calendars build in time to enrich learning and sustain gains. *The Education Digest*, 17-22.
- Sleeter, C. (2008). Equity, democracy, and neoliberal assaults on teacher education. *Teaching and Teacher Education*, 24, 1947-1957.
- Smith, L. (2011/2012, December/January). Slowing the summer slide. *Educational Leadership*, 60-63.
- Smith, M. (2007). Stop summer academic loss: An education policy priority. *MetaMetrics, Inc.* Retrieved from http://www.lexile.com/m/uploads/whitepapers/StopSummerAcademicLoss_MetaMetricsWhitepaper.pdf
- Verachtert, P., Van Damme, J., Onghena, P., & Ghesquière, P. (2009). A seasonal perspective on school effectiveness: evidence from a Flemish longitudinal study in kindergarten and first grade. *School Effectiveness and School Improvement*, 20, 215-233.
- Von Drehle, D. (2010, August). The case against summer vacation. *Time Magazine*, 36-42.
- Wintre, M. G. (1986). Challenging the assumptions of generalized academic losses over summer. *Journal of Educational Research*, 79, 308-312.

GREAT LAKES
EQUITY
CENTER

IUPUI

ED.gov



INDIANA UNIVERSITY
SCHOOL OF EDUCATION
IUPUI