THE SCHOOL CALENDAR:
AN EXAMINATION OF ITS PAST, PRESENT, AND POTENTIAL

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Table of Contents

“School’s out for summer! School’s out for-ever!” - Alice Cooper

Summer vacation is embedded in the bedrock of American culture, from songs like “Summer Lovin’” and “The Lazy, Hazy, Crazy Days of Summer,” to cult summer films like *American Graffiti*, *Dazed and Confused*, and *Wet Hot American Summer*. The long, sundrenched days of summer are bound up in the collective mythos of the U.S. It encapsulates the freedom and traditions of childhood - baseball, summer camp, the Fourth of July - and differentiates the adult, working world from the world of the young. There is something deeply resonant about the care-free, sunny days of youth that binds generations together. And yet, all of these traditions and happy, easy memories are distinctly middle and upper-class experiences. For those students outside of those socioeconomic classes, summer vacation can mean weeks of idleness and shiftlessness - weeks where the ecosystems of poverty and inner-city drudgery can take their toll on disadvantaged students.

The 9-month school calendar is as much of a staple of schools as desks and textbooks. It has a feeling of permanency and immutability, of intention and rightness. It is eerily similar from

state to state, despite widespread differences in educational policy between the states. Its 180 days of school, set in nine months from September to June, are one of the few pieces of the educational landscape that has remained stable for an extended period of time. But is this thirty-two week system, including the traditional summer vacation, the best option for our educational system? What does this extended break in instruction and structure do to students' learning? Additionally, how did this thirty-two week system, including the traditional summer vacation, come into being and spread across the fifty, self-governing states? Who shaped what has now come to be perhaps the most prolific educational tradition, and what exactly were their intentions? Looking toward the future, what educational theories, if any, did the creators utilize in creating the calendar, and how have those theories held up over time? Are we perhaps holding onto a system that was designed for a different era? If the educational community has taken on reform in almost all areas, why has there been so little attention paid to such a staple of the American education system?

The topic is of particular interest as the school calendar is a policy that has remained virtually unchanged or unchallenged for over a century, yet its creation and effectiveness have been little researched compared to other prominent school foundations. This lack of scholarship may simply be an acceptance of the calendar as utilitarian and well-conceived, or it may represent the intransigence of popular tradition. As the assessment and accountability reform movement has reached its recent ascendancy – for better or for worse – it has revealed to the general population what most people in education already knew: poverty and income disparity are directly tied to the failings of our educational system. Rich kids generally do well in school. Poor kids do not (Reardon, 2013). Yet there are few educational reforms that deal with this emerging theme. Reforming the school calendar may have the potential to at least address the

problem, even if it proves not to be a panacea. Either way, the subject is in sore need of further exploration. As Jane Roland-Martin (1985) warned, "Those who do not know the past run the risk not only of repeating its mistakes, but of taking as givens their society's most fundamental – yet not necessarily valid — educational assumptions" (176). This is not to say that there is a better system that should be adopted, but, rather, this paper will attempt to understand where the calendar originated, how it has changed over time, and to assess what its merits and deficiencies may be in our modern school system.

I. Context

The use of school time has had several moments in the spotlight recently, but none have resulted in much more than hand wringing and some quickly abandoned policy proposals. The first contemporary call for additional in-class time came in *A Nation at Risk* (National Commission of Excellence in Education (NCEE), 1983). The damning report found that, "In England and other industrialized countries, it is not unusual for academic high school students to spend 8 hours a day at school, 220 days per year. In the United States, by contrast, the typical school day lasts 6 hours and the school year is 180 days" (p. 20). The report was followed a decade later by the National Education Commission on Time and Learning's (NECTL) report, *Prisoners of Time* (1994), which decried not only the amount of instructional time U.S. students received, but also noted the inflexibility of the calendar and school day. The commission pointed out the disparate time needs of advanced and remedial students, the profound difference between learning-time and time spent in the physical school building, and the a need to reshape the basic schedule of schooling.

Jump forward another decade and we have renewed calls for changing school time, now in the form of extending the school year or school day being advocated by President Obama and

Education Secretary Arne Duncan (Thomma, 2009; Shulte, 2009). This renewed interest in how much time our students spend in school, and how that time is spent, has been spurred by the continued stagnation of the U.S. system in international comparisons. Many reformers see the difference in school time between the U.S. and its contemporaries as a primary reason for decline; however, as the NECTL discovered, decoding how time and learning are tied together is a tricky proposition.

This thesis is primarily informed by a number of studies that found significant learning loss for students of low socioeconomic status (SES) during the summer months (Heyns, 1978; Alexander, et al. 2001, 2007; Cooper, et al., 1996; Downey, et al., 2004). Alexander, et al. (2001) perhaps best describe this annual divergence of skills, saying:

> School-year gains year by year are not very different across SES levels. Indeed, in the early years the comparisons sometimes favor lower and middle SES children over upper. The summer pattern is strikingly different though, especially across the SES extremes. In the verbal area, then, lower SES youth essentially tread water, some summers gaining a few points, some summers losing a few, while in the quantitative domain losses predominate and are especially large over the first two summers. This means that lower SES children generally start the new school year about where they had been the previous spring or even behind their spring levels of performance. Upper SES children's scores, on the other hand, improve over the summer months in both domains, which means that they begin the new school year ahead of where they had been the previous spring (177).

Their findings hint that it may not simply be the number of school days that determines success, but how the calendar is structured. They emphasize the dramatic differences between the learning opportunities between classes in America. It is inspiring that this learning gap is usually negated within the first school year, with low SES students generally making the same educational gains as their peers (Alexander, et al., 2001). Unfortunately, this equitable learning does not continue once summer vacation begins. Summer learning loss is directly tied to the achievement gap, and thus warrants an in-depth examination of flaws in the existing system and

alternatives that may remedy the situation. While this is clearly an area that has an impact on student learning, disproportionately so for poor, minority and ELL students, it has yet to find a foothold in policy practice.

The months away from the school site can cause regression in learning gains for low SES students, but the break also favors students who have the resources for enrichment activities during summer vacation. Thus, wealthy students generally make learning gains in the summer months, while poor students, deprived of environments that foster academic learning or at least the retention of learned material, return to school behind where they left off the previous year. Alexander, et al. (2007) discovered that these effects build over time, routinely placing low SES students in remediation classes, tracked below their wealthy peers, and in need of refresher lessons at the start of each school year. Each year this gap between rich and poor students increases, creating an insurmountable knowledge and ability debt for low SES students.

II. Statement of Purpose

This paper will review the existing research and literature on the school calendar – its history, purpose, contemporary issues, and potential alternatives – and will analyze the feasibility of altering the calendar model as an educational reform. In the first chapter, it will address the formation and endurance of the standard school calendar, looking specifically at the intentions behind its origins. It will also offer examples of the occasional attempts at modifying that calendar throughout the decades. The second chapter examines the contemporary research on the effects of summer vacation on learning rates, the role of time in schools, and international comparisons of time use. The third chapter offers an explanation of alternative calendar models, such as year-round education (YRE) and extended year systems (EY), along with a literature review of the effectiveness of the various calendars. The fourth chapter attempts a policy

analysis of the three calendar options – maintaining the traditional calendar, extended year calendars, and redesigned calendars – including a discussion of their marginal benefits and deficiencies, and their political feasibility. The conclusion of the paper will attempt to contextualize these four aspects - the origins of the school calendar, the contemporary research on its effects, alternative models, and the effects and potential the various models – and balance those aspects (Green, 1994) in terms of public versus private good (Labaree, 1997). It will also offer suggestions for further research that may lead to more informed policy in the future.

A caveat, before moving into the heart of this thesis: the rhetoric of modern reform puts a premium on economy and measurable learning gains. It values academic learning and mainstream educational capital over social, experiential and emotional capital. In this vein, I have couched much of the discussion in this middle- and upper-class value system. It is to the detriment of poor students that their lived experiences and social capital are not as valued as their wealthier peers. That conversation, however, is beyond the scope of this paper. Instead, for argument's sake, this paper relies on the normed values of mainstream educational policy, and the distinctions used in the research literature – predominantly delineating the differences between high and low SES in terms of academic gains. There is a great pool of social wealth that low SES students bring to schools, and a bounty of skills and learning that happens outside of the schoolyard, but, from a policy audience standpoint, we must argue using the currency valued by the mainstream – in this case, academic learning over experiential or social learning.

There are four tentative conclusions that can be drawn from this study: 1) The traditional school calendar came about through early compromises between rural and urban districts, standardization, and fiscal and health concerns, rather than being designed for educational purposes. 2) Summer learning loss is a symptom of an inegalitarian social structure that is

reproduced in the schools, adversely affecting low socioeconomic (SES) students to a greater degree than those from advantaged homes. 3) The current system is ill suited to the task of creating both equity and providing the greatest amount of flexibility in instruction, harming both the public and private goals of education, and 4) alternative calendar models may be a small positive step toward those dual goals of education, although the research can offer no guarantees on the subject. These conclusions are tentative because this paper argues that there is considerable need for further systematic research in order to determine the most educative structure of school time.

From a historical perspective, the calendar seems to have been designed without educational philosophies in mind. Rather, it emerged piecemeal from attempts to bring the diverse districts throughout the states and territories into a standard model. It was influenced by the different needs of rural and urban schools, their incongruence in school days, and economic concerns. While the standardization movement claimed educative motives, the ensuing birth of the summer break was more efficiency minded than it was academic; however, this model has endured through the decades without much contention, despite being outmoded and lacking in educative intention. As Cooper, Nye, Charlton, Lindsay and Greathouse (1996) contend, “The present 9-month calendar, under which schools are closed in summer, emerged as the norm when 85% of Americans were involved in agriculture. Today, about 3% of Americans' livelihood is tied to the agricultural cycle, but the school calendar has not changed" (p. 228). Today’s society hardly resembles that of the turn of the 20th century, yet it retains the same structure for the school year. It may be time, considering the advances in educational research, to re-imagine that structure, to find a calendar that is designed on educational principles rather than fiscal.

Contemporary research has shown that the long summer vacation negatively affects

academic progress for students from all social classes, and is decidedly harmful to the learning of low SES students. The general effect of the summer recess is known as summer slowdown, wherein all students' learning slows considerably compared to their in-school rate; however, that slowing is far more pronounced in disadvantaged students, leading to summer setback or summer learning loss. This is not to say that a break from school is a complete waste for students, but instead, that testable learning gains – which are highly prized in today's accountability environment – suffer pointedly. Cooper, et al. (1996) argue that educators and reformers have known about summer learning loss for more than a century, tracing studies of the phenomenon back to 1906. We have known, at least anecdotally, that a summer away from school alters the learning trajectories of poorer students. As Heyns (1987), noting her own research on summer learning rates, observes, "These data strongly support the existence of differential summer learning. During the summer, the vast majority of children learn less rapidly than during the school year. Moreover, during the summer, socioeconomic and racial inequality increases dramatically" (p. 1156). Summer learning loss is a result of unequal home environments, and grows each year, leaving disadvantaged students further and further behind their classmates.

The school system cannot hope to eliminate socioeconomic inequalities, but it has been shown to shrink the gap between rich and poor. Regrettably, the standard calendar may exacerbate those inequalities, undoing the commeasuring force of the schools. This is especially troubling because a substantial portion of the achievement gap is associated with socioeconomic status (SES). As Reardon (2011) reports, "The achievement gap between children from high- and low-income families is roughly 30 to 40 percent larger among children born in 2001 than among those born twenty-five years earlier" (p. 2). The increase in inequality over the last 25 years has only added to the negative effects of the summer setback. Advocates of calendar reform have

created several alternative models that attempt to eliminate summer learning loss, by either rearranging the 180 days in the school year into a more balanced system, or by adding time or days to the existing calendar. Supposedly, these adjustments will create an evenly keeled instructional year or additional learning time, respectively, but will also allow for individualized and flexible learning. The research on the effects of alternative calendars is lacking in size, scope, and methodology, but it does report small improvements in academic achievement for Year-Round Education (YRE) and Extended Year (EY) programs, especially for at-risk students.

The traditional calendar has been in place for over a century. It is a policy that was adopted for a different era, and is known to have a rather large design flaw in the summer recess. As Green (1994) posits, "Policies are impermanent. We expect them to change. Often they are not very durable" (p. 7). This calendar has proved intensely durable, but altering it may offer some in-roads toward a more egalitarian school system. A different calendar structure cannot hope to solve all of the problems of the U.S. education system, but it has the conceivable ability to impact one major factor in the achievement gap.

Chapter 1: History of the School Calendar

I. The Formation

The current scholarship on the creation of the traditional school calendar focuses on the transitions that rural and urban districts underwent during the mid to late 1800s and into the early 1900s. The claims about adapting existing school calendars into the standard model are well documented, but the reasons for the adoption of the model are diverse and contested. It is clear that between 1840 and 1890 the urban districts gradually diminished their school year, and that the rural district school year steadily increased. Kenneth M. Gold's *School's In* (2002) documents the shrinking school days in New York City and Detroit from more than 245 to under 200 (p. 48). The rural districts were conversely moving from sporadic attendance of three to four months to a mandated six month minimum (pp. 18-34). The adjustments made by both types of school districts represent a combining of national and local priorities, even if many of the changes were mandates from state boards of education.

The urban systems in the mid-1800s ran for a considerable portion of the year - upward of 250 days in some cities (Gold, 2002; Ballinger & Kneese, 2006). They had a large pool of students to draw from, many of whom had no other claim to their time than roaming the city streets, and gave a large portion of their time in acculturation of the immigrant masses, lending urgency to their educative mission. The common school movement had already established public funding of schools in the larger townships and cities, and the private and religious schools competed for influence and for pupils. The large pool of students, and competition for attendance, spurred schools to keep their doors open as often as possible.

The rural districts were a different story. As late as the 1840s, rural schools generally only ran an eight to ten week session in the summer and equally long session in the winter

(Kaestle, 1983, p. 111). By 1865 they had increased to an average of 31 weeks per year, but still lagged behind city schools (Gold, 2002, p. 11). Funding for common schools was more difficult to procure in rural districts (Kaestle, 1983, p. 21-22), and there was a much smaller pool of students to draw from, most of whom had work that needed doing at home on the farm. The relatively small immigrant population did not necessitate the citizenship curriculum of the urban districts, nor did the rural taxpayers feel as keenly the pressure to homogenize their population. With little support, small pupil populations, and demands on students' time coming from outside of the schoolroom, there was little impetus to keep the schools open for longer than absolutely needed. This meant that while urban districts were open upward of eleven months a year, their rural counterparts were often open for less than seven.

Irregular attendance was a common factor in both urban and rural schools. Students attended when they were able, depending on when the school was open, but there were few laws in place that mandated attendance. Students in urban districts had more opportunity to attend school, but that did not mean that daily attendance was consistent. As Don Glines (1995b) describes the system, "It could be said that the public schools of early American cities (with their time in school, the curriculum, and the method of teaching in un-graded classes, all being adapted to the needs of the individual and the changing needs of society) were flexible all-year schools. The rural schools were also flexible, but not all-year, due only to the prevailing need to work on the farm" (p. 52). The standardization movement sought to eliminate this flexibility in favor of the rigorous Prussian model.

The common school movement relied on standardization and regulation in order to create a unified system, and the calendar was a clear starting point. As Gold (2002) states, "Extending and standardizing the school year was a key element of the common school reform movement"

(p. 9). Bringing the rural districts in line with the urban districts then required adjustment on both sides. The summer break emerged out of those standardization attempts.

The calendar was standardized by adaptation of the rural and urban systems, combining the two value sets without the elimination of one or the other. It was not that the urban districts made a sweeping decision to shorten their school year, or that the rural districts suddenly became educational pioneers, but rather, there was a steady influencing power of each side over the other. William Fischel (2003) describes this dual change, stating, "The convergence of rural and city schools on a uniform calendar apparently occurred gradually and without any central direction. City schools shortened their school year by eliminating summer, and rural districts lengthened their calendar by eliminating summer and adding spring and fall. By the 1920s, the September-to-June school year seems to have become the dominant if not the invariable norm" (p. 4). Therefore, the influencing factors seem to have interplayed between the two camps, rather than one obscuring the other.

The consequence of this interplay was a move toward standardization that adopted ideals from both sides. The reform leaders, generally concentrated in the urban centers, used several tools to achieve their desired ends – a unified and commensurate school year - but they understood the recalcitrance of the rural districts to change. As Gold (2002) states, "Most often, New York superintendents used term length mandates, state taxation systems, and new organizational structures to lengthen and simultaneously reshape the public school year" (p. 19). A bit of the stick and a bit of the carrot worked to adjust rural districts into a longer school year, yet simultaneously there was a decline in urban school days in order to accommodate the needs of rural districts for farm labor. School-term mandates were tied to state funds, and the slowly expanding power of state Departments of Education exerted some control into the previously

independent district schools. The intention of the reformers was to create an ordered, efficient system. The mandating of rural calendar expansion was accompanied by a shortening of the urban school year - conjoining of the two systems. Thus, the Boston school calendar, as described by assistant superintendent W.B. Snow (1927), had settled into a near mirror image of its current incarnation by the late 1920s (pp. 134-136).

Compulsory attendance laws played a prominent role in adapting the two systems into a unified calendar. Compulsory attendance was born predominantly out of economic necessity. The growing population of the 1800s outstripped the manufacturing and commercial job market, but the cheaper child laborers still accounted for a substantial portion of the workforce. In order to get more adults into the workforce it was necessary to get children out of it. So, along with moral argument against child labor, mandatory attendance laws began removing children from the labor force and putting them into desks. As Rakoff (2002) illustrates, "The earliest compulsory education statute, a Massachusetts law of 1852 - the only such statute passed before the Civil War - required children aged 8 through 14 to go to school 12 weeks a year. Perhaps reflecting the fact that in some districts the school year was broken up, or that children did not attend with great regularity, the statute mandated that only 6 of the required weeks had to be consecutive" (p. 105). Allowing for irregular attendance in the rural districts demonstrates the collaborative nature of the calendar debate, but Rakoff (2002) also notes that, as the daily attendance numbers increased, urban districts may have found they did not need the lengthy school year.

Moral and civic arguments were voiced concurrently with the economic concerns. Reformers railed against the academic and economic waste created by low attendance rates – reports contended that between a fourth to a third of students were absent each day (Barnard,

1971) - going so far as to suggest that voting rights should require citizens to demonstrate "the lowest evidence of school attendance and proficiency" (Barnard, 1971, p. 13). Absenteeism hindered academic progress, leaving truant students lagging behind their peers, and, at the same time, wasted the costs of building schools and teacher salaries. Truancy led to vice and neglect, especially in urban environs, and was ultimately harmful to the greater population. An 1871 report to the Board of Public Charities of the State of Pennsylvania ("Compulsory Education," 1971) stated: "To furnish the needful education, therefore, to her neglected children, is what the state owes to them – is what the state owes to herself. Charity requires it; prudence and statesmanship command it" (p. 66). Compulsory attendance was thus both a civic necessity and a moral obligation – not to mention an economic consideration. It would remove children from the streets, generate greater numbers of educated citizens, and acculturate the immigrant masses.

By 1890, Massachusetts had extended compulsory attendance to 30 weeks, but, in a nod to farming needs, allowed for two weeks of unexcused absence; whereas, New York's statute of 1894 lengthened the school year, but mandated attendance between Oct 1 and June 1 (Rakoff, 2002, pp. 106-109). The calendar that compulsory attendance created was far shorter than the urban schools' previous forty-eight week system, but far longer than rural districts' fragmented winter and summer sessions. This expansion of the rural calendar and shrinking of the urban coincides with the creation of the summer holiday, but neither calendar change actually accounts for why summer break came into existence.

The advent of summer vacation is generally seen as a product of America's farming background. As Gold (2002) states: "Assumptions about summer vacation tend to congregate around one simple persistent belief – that it has always existed due to long-standing agricultural labor patters" (p. 8). However, Gold goes onto dispute this myth, citing the existence and

preponderance of summer sessions in both urban and rural settings. The summer was an ideal time for both systems to hold classes. The country youth were not needed on the farm as much during the summer, and the city youth were kept off the streets during the heat. The agrarian mythos does not hold up to the realities of the planting and harvesting schedule. Fischel (2003) explains the situation thus: “Rural New England schools in fact responded to the seasonal rhythms of agriculture. For almost the entire nineteenth century, rural New Englanders held school in the winter and in the summer, with fall and spring off for harvesting and planting” (p. 3). So, while the creation of the calendar and summer breaks is well documented, the reasons for having summers off are much harder to extrapolate from the existing record.

There are several different theories espoused as to why the summer session was gradually abandoned over several decades. Gold (2002) cites increased standardization, the lowly status of the summer session, desire for leisure time by upper class families, and a fear of the potential health risks as reasons for eliminating August and July as instructional time. The feminization of the summer teaching staffs, the predominant attendance of only younger students, marginal funding, and low overall daily attendance all created a stigma around the summer sessions that may have made it an easy target when restructuring the school year (Gold, 2002, p. 13, 19, 46). Summer sessions were generally staffed by women, who were less expensive to pay than their male counterparts, were attended mostly by students too young to be helpful with the major farm projects of the warm summer months, and spottily attended, probably due to the fine weather. The summer session may have begun to appear eliminable as it lost academic and social legitimacy over the years.

The increased use of country manors and extended trips abroad by the expanding middle and upper classes during the summer months meant a significant decrease in attendance and

support for summer sessions. As Gold (2002) states, “The August recess reflected the precedent of some colonial schools as well as longstanding vacation practices of the wealthy PSS patrons – who typically escaped to their country estates during the hottest or plague-ridden portions of the summer” (p. 53). The escape into the country by the rich also corresponded with the widespread belief in the health risks of summer’s heat. As Ballinger and Kneese (2006) state, “ City schools began reducing the length of their school year to 10 months, in partial response to affluent parents’ request for more time for their children to travel or engage in outside-of-school experiences” (p. 34).

It was also believed that children were especially at risk when they were grouped together in poorly ventilated schoolrooms, or over taxed with school work. As Gold (2002) states, “The removal of the summer from the urban school year stemmed from a powerful belief about the nature and frailty of the human mind and body” (p. 72). The parents of the students, many working in stifling, crowded factories may also have looked to vacation away from the heat, and taken their children with them, away from the schoolroom (Rakoff, 2001, p. 109). Heat waves that could cause “fetid air,” and fears that overstudy could cause insanity in young students probably contributed to the lowly image of summer sessions.

The emergence of vacation schools, the precursor to the modern summer school, happened almost immediately after the adoption of the ten month calendar, filling the void left by the public schools. Cities found themselves filled with indigent children, running loose in the summer heat. Gold (2002b) describes the results of summer breaks on poorer neighborhoods in the 1890s: “As a result, the cityscape swarmed with children on the streets-tenements were hot and uncomfortable while green spaces remained few and somewhat inaccessible for children inclined to stay in their own neighborhoods or street” (p. 23). Private and charity vacation

schools were created in order to get these children off of the street, but were quickly taken over by the public schools (Gold, 2002b; Glines, 2009). The immediacy of this adoption of a summer program may have encouraged later calendar reformers to reexamine the summer break.

The vacation schools were wildly popular, for their role as holding tanks and child care, and their hands-on curriculum. As Gold (2002b) discovered, "One site, with space for 500 children, was overwhelmed with 2,000 applicants on opening day in 1894. In 1895, 5,000 children showed up for 2,500 places in vacation schools" (p. 26). The vacation schools' curriculum was based on the notion that summer learning should be non-academic. They emphasized physical activity, crafts, and industrial and vocational education, and worked to acculturate immigrant children into middle-class American society (Gold, 2002b). As the years passed, the vacation schools slowly integrated academic work into their curriculum, expanded their student population to include middle and upper class students, and were absorbed into the public school system – simultaneously expanding standardization into the summer recess.

William Fischel agrees with Gold on only one main reason for summer recess: standardization. Fischel (2003) dismisses Gold's assertions about the lowly status, the health risks, and the flight of wealthy families in the summer by citing Gold's own figures about the prevalence of summer sessions, their attendance, and their economic benefits (pp. 1-4). However, he agrees wholeheartedly with Gold's assertion that the standardization movement, specifically graded schooling, spelled the end of summer sessions. Quite simply, graded schools required standardized starting and ending dates (Fischel, 2003). As Fischel (2003) states, "In order for graded instruction to work over a period of years, school calendars had to be regularized" (p. 8). The summer break represented a break between grade years, and established clear beginning and ending dates across districts. Uniformity of calendar also allowed the

transfer of students between districts while retaining the graded system, and Fischel claims that this opportunity for mobility was predominantly important for a standardized system.

The increased mobility of the populace in the late 1800s and early 1900s prompted waves of job seekers to venture into new towns and frontiers. Fischel (2003) argues that this mobility demanded time for families to uproot and move, and the summer months provided the optimal time for transitions. He states, "I propose that it was the intermetropolitan mobility of American workers, which was perfected early in the twentieth century, that made summer vacation with a September beginning the inevitable choice all over the nation" (p. 9). The lengthy time needed to move, combined with the new demands of a graded system would have necessitated a lengthy period of free time for families. The increased financial opportunity and competition at the end of the 19th century may have provided a mandate for student release time, not to mention the transition time that new normal school graduates would have required as they headed to their posts.

Whatever the reason for the elimination of the summer session, its demise shaped the majority of U.S. school calendars in the 20th century. It is clear, however, that the primary design principles behind the calendar had little to nothing to do with education. Uniformity, standardization, and economic considerations were the driving forces, and, since then, there have been few attempts to create a calendar that is based on educational principles; however, there are a handful of cases where districts or individual schools sought to repossess the summer months for their students. These schools and districts represent an understudied subset. The main research available on their programs comes from within, and their outlier status made them a target for adherents of the traditional school calendar. Their motivation, calendar models, demographics and locale vary widely, but they represent attempts to find a better way of

structuring the school year, even if they were few and far between.

II. Early Alternative Models

Even as the standardization movement was in full swing, there were schools and districts that attempted alternative calendar models, with varying success. These schools could not replicate the flexibly attended urban schools, due to mandatory attendance laws, but they could attempt to compose a calendar that fit their specific community needs better than the standard model. The earliest example may be in Bluffton, Indiana, in 1904. Superintendent William Wirt, faced with a rapidly growing community, attempted to deal with school overcrowding by creating a quarter-system, with 12 weeks per quarter, and August off. Three quarters equaled one normal year, and a voluntary option to take summer quarter allowed students to advance through their schooling in a shorter time period. Theoretically, this meant that the schools would graduate students faster, thus lowering the total enrollment. The model failed quickly because of lack of interest in summer term, and was abandoned in 1908 (Glines, 1995b).

Wirt moved from Bluffton to Gary, IN, where he established the noted “Platoon System,” wherein each half of school day had half of the students in academic classes, and the other half in non-academics. The platoon system allowed for continuous use of the schoolhouse, and kept the facilities open throughout the year. Wirt was a firm believer in vocational training, physical activity, and self-sufficiency, and considered the schools as much a property of the public as hospitals or town halls. He argued that people would be up in arms if the hospitals closed for three months of the year, so why should the schools not offer up their facilities in the same vein. Wirt stated his philosophy thus: "Nationally, thirty million American children are locked out of their schools for over half of the time that they want to use them. Thirty million American adults who want to use the schools are locked out practically all of the time" (Glines, 1995b, p. 29). The

"Gary System" thrived for nearly three decades, and its platoon organizational system was imitated across the country during the 1920s; however, the great depression spelled the end of the system as budget shortfalls shortened the school year, ended night classes, and eliminated many of the vocational programs (Glines, 1995b).

Interest in the academic effects of the school calendar emerged right along with these early alternatives. In 1906, William White, a professor of mathematics at the Normal School in New Paltz, New York, conducted the earliest known study of summer learning loss. It was followed by 10 more studies between 1919 and 1930. All relied heavily on qualitative data and used questionable research models, so their findings are something of a mixed bag (Cooper, Nye, Charlton, Lindsay, and Greathouse, 1996). These early studies do indicate, however, that educators were aware of the potential summer slowdown even in the early days of the 9-month calendar.

Newark, NJ, embarked on a year-round calendar in 1912. The district had both normal schools with vacation schools, and an all-year option, which: " included 19,586 students, or one fourth of the total district enrollment, ranging from 4 year old kindergartners to 12th graders" (Glines, 1995b, p. 4). The plan, like Bluffton's, was based on student acceleration. Advanced students could complete eight years of traditional studies in just six, and slower students would gain from the added summer time, hopefully achieving higher grade levels before leaving at the legal age of 14. *The Elementary School Journal* (1924) noted that the school district had altered the calendar for non-economic reasons:

> According to Dr. Corson, the purpose of the establishment of all-year schools was educational rather than economic. The objects were to save time in completing the elementary curriculum, to reduce the waste of time and energy occasioned by the long break of the school year in July and August, and to prove that pupils are not injured by study under proper conditions in the summer…… Dr. Corson is convinced that the work of Americanization is considerably furthered by keeping

> the children off the streets and thus preventing the forming of habits and associations during a long vacation which would interfere with school work (p. 410).

The ideals expressed by Corson mirror many of the goals of the standardization movement – nationalization, cohesive instruction, social control – but the Newark model does not seem to have been taken up by many other districts.

Changing demographics in the 1920s hindered the accelerated interests of the plan, and the school board sought to close the All-Year schools. As Glines (1995b) stated: "There were numerous changes in principals, superintendents, school board members, and other community leaders, with the result that the original objectives were often forgotten or ignored with advancing their individual preferences" (p. 3); however, in an incredibly complex study of the district, Wilson Farrand and M.V. O'Shea (1927) found: "While [All-Year schools] do not do what was originally claimed for them… they do advance their pupils more rapidly and give them greater educational attainment than pupils of similar ability, heredity and social background in the Traditional Schools" (p. 13). The All-Year schools were not advancing many students at a quicker pace, but they were serving particularly well "children of foreign parentage and unfavorable home conditions" (p. 13). The All-Year model was reported to be a boon to low social status students, due to its elongated pace and curricular design. Despite the study's findings, the All-Year schools were only able to remain open until 1931, when economic concerns overrode the social good of the programs.

The 1920 *Elementary School Journal* noted several other schools, from Cleveland to Seattle, that were opting for a year-round calendar, or had large populations that were utilizing summer school for either advancement or remediation (pp. 10-12). In 1924, superintendent Henri Carlton Weber, of Nashville, TN, created perhaps the most progressive of the alternative

calendar models. Weber despised the traditional graded system, and abandoned it in favor of a continuous learning model. Weber described his calendar plan in individualistic terms: “All men are born equal only in their right to equal privileges, and this very right demands that these privileges be available as each individual is ready for them. Repression of the bright does not help the dull" (Glines, 1995b, p. 12). He broke the school year into quarters, allowing advanced students to earn rapid promotion, while slower student would only have to repeat a quarter of the year, rather than half, in order to catch up. As Glines (1995b) described the system, "Segmentation of the curriculum into three month time blocks introduced students to 48 steps over 12 years, instead of the traditional 12 with annual promotions, or 24 with semi-annual promotions. This facilitated movement of students up or down a quarter, if not properly classified" (p. 14). Additionally, one of the original program objectives was to dignify the teaching profession by making faculty full-time; however, this level of professionalism and individual scheduling proved to be too costly to sustain, and the program was canceled after eight years.

Another noted year-round system was implemented in Aliquippa, PA, from 1928 to 1938. In what may be the first example of a multi-track system, the Aliquippa plan emerged after a large increase in district population, which would have necessitated the building of new school buildings if the district remained on the ten month calendar. Thus, economic concerns, ever the shaper of educational policy, prompted calendar reform. Superintendent H. R. Vanderslice (1930) described it thus: “The main characteristic of the Aliquippa plan is the distribution of the school enrollment so that three-fourths of the children are in school and one-fourth are on vacation during each quarter of the year” (577). This plan allowed 33% more students to use the existing facilities, thus avoiding the construction costs for new schools. Additionally, the district

noted several other cost cutting benefits of the plan. Citing one of the economic benefits of the quarter-system, Vanderslice (1933) stated: “in Aliquippa the cost of reteaching failures is reduced one-third” (p. 262), as failing students only needed a single quarter of remediation rather than a full semester.

Vanderslice (1930) also promoted the social benefits of the calendar restructuring: “Incidentally, high-school boys find it much easier to secure jobs during vacation periods when only one-fourth of the boys are on vacation. In the case of younger children, the problem of unoccupied time in the home and the community is minimized by the arrangement that sets free but one-fourth of the children during any given period” (p. 581). It was one of the few year-round education (YRE) plans that was K-12, and the first to mandate when students would be on vacation - although the vacations were designed so that students would have time off during two seasons (Glines, 1995b, p. 18). The Aliquippa model was in use for a full decade, but the advent of WWII reaffirmed standardization needs, and the district returned to the standard calendar (Ballinger and Kneese, 2006, p. 35).

There were at least 40 districts that operated on one form or another of a year-round calendar during the early 1900s, notably Omaha, NE, Minot, ND, and Ambridge, PA, and over 100 feasibility studies were commissioned in cities like Cleveland, Minneapolis, Detroit, and NYC (Glines, 1995b, p. 24). Unfortunately the data on the reasons behind the calendars and their designs is limited, and is generally self-reported. While the existing reports offer some argument against the pervasiveness of the standard model in favor of alternative models, there is a risk that their claims of success and intention may lack warrant. The authors of the reports or those interviewed about the districts were heavily involved with the district. Therefore, there may be serious prejudices within the reports themselves. Revis (1931) noted the conflicting reports and

arguments by both sides of the calendar debate, stating, “The literature on the effectiveness of the all-year school consists chiefly of opinions of advocates and opponents of the plan, many of which indicate strong bias. The factual data are limited in scope and very meager in amount” (p. 195). The quantitative evidence that Vanderslice offers, while demonstrating the economic benefits of their model, was reported by the district itself, and the qualitative anecdotes lacked documentation. Dr. Carson offers up the theory of the district’s calendar reform, but offers little in the way of evidence to support the claims. And the Farrand-O’Shea study (1927) complained that both sides of the debate about the Newark All-Year schools had supplied evidence that supported only their position, saying: “In consequence of these conflicting data and convictions, we found it impossible to arrive at any final conclusion respecting the validity of either the data, the conclusions, or the opinions” (p. 4). The possibility of prejudices mars these claims, but also invites further investigation. A clearer picture of calendar history and design may emerge by examining these districts — with an eye toward possible bias.

What is clear is that the Great Depression, with its economic strife and enlarged compulsory attendance and child labor laws, such as the federal Fair Labor Standards Act, spelled the end of these early alternative calendar models – only Aliquippa survived into the second half of the 1930s. Even research into summer vacation’s utility slowed considerably, with only six studies conducted between 1930 and 1944 (Copper, et al., 1996). By the start of WWII, the average length of the school calendar was 160 days, and summer break was an established tradition. The 9-month calendar was so entrenched that there would not even be a study about summer learning conducted again until 1962 (Copper, et al. 1996). The added focus on standardization and nationalization during the 1940s and 50s seems to have stifled any new efforts to alter the calendar, as no districts attempted an alternative calendar until 1968 (Ballinger

& Kneese, 2006, p.35).

III. The Modern Era

The 1950s saw feasibility studies of alternative calendars in Royal Oak, MI, Minneapolis, MN, and Los Angeles, but the relative economic prosperity, civil rights battles, and the focus on educational homogeneity of the time period meant there was little movement away from the traditional calendar model; however, the late 60s and early 70s were a time of educational experimentation - including open classrooms, flexible scheduling, and non-graded schools - and YRE reemerged as a plausible alternative model. Glines (1995b) described the move away from in-seat, textbook driven instruction thus: "The 1960s change agents were trying to return to the individualized, self-directed, self-paced philosophy of the early years in rural America" (p.81). The loosely regulated rural model that spurred calls for standardization in the late 1800s found new life in the radical 60s, as it offered freedom of movement and intellectual exploration. Even usually conservative governmental entities endorsed changes to the rigid structure of the calendar, and tracked and graded system. The 1965 Educational Policies Commission report recommended:

> The school should be so arranged that each child moves ahead at his own best rate, without fixed standards holding him back in learning or convincing him that he is retarded. Educators realize full well that no two children can be expected to learn the same things in equal time, but few schools have been structured to correspond with this fact. This failure has worked to the detriment of the disadvantaged children in particular, in part because of the individual comparisons made, in part because of the stiffness and formality of the typical school structure and expectations (Glines, 1995b, p. 58).

Although some reformers were calling on re-imagining school structures, there were few districts or schools that appeared willing to make these sweeping changes.

For instance, in 1963, the New York State Department received a mandate from the legislature to design demonstration programs and conduct experiments about the impact of

rescheduling the school year. Few districts were willing to adopt the changes needed to execute the studies, despite $300,000 being allocated for the research, and the mandate was quickly shelved (Glines, 1995b, p. 78). The Ohio legislature followed suit in 1968, but with the same results - demonstrating the power of tradition and habit even in a time of radicalism. The 60s also brought renewed interest in the subject of summer learning. Cooper, et al. (1996) note, “When summer loss did reemerge as a topic of study, measurement instruments were dramatically improved, sample sizes were considerably larger, and the use of inferential statistics was commonplace. However, the central themes of research remained the same: Did summer loss occur, and, if so, did it have different impacts for different grade levels, different subject areas, or students with different abilities or backgrounds?” (p. 9). Research methods had improved, but the complexity of summer learning remained a hindrance to compiling conclusive evidence. The lack of absolute proof did not, however, stop districts from experimenting with modifying their calendars.

The same year as the Ohio study, 1968, Park Elementary School in Hayward, CA became the first school since the 1930s to attempt YRE, embarking on a 50-15 schedule that balanced the calendar and adding 20 days to the school year. A year later the Wilson Campus School, the lab school for Mankato State University in Minnesota, designed its own YRE. Directed by Don Glines, they created the first "Personalized Continuous Year Calendar." The model was designed specifically with educational philosophies in mind, as Glines (1995b) pointed out, "Wilson did not adopt year-round because of space: there was enough room; nor did the school embrace YRE for financial reasons, as it was funded the same as all other sites in the district; and they did not do it to increase test scores, for students were already doing as well as other programs. Wilson embraced the year-round concept because of a philosophy; staff believed that learning should be

available throughout the year - that schools, like hospitals, should never close" (p.63). The 1970s saw a rapid expansion of YRE schools, but the Wilson Campus School would prove to be in the minority when it came to justification for YRE.

Financial constraints and exploding student populations spurred the expansion of YRE during the 1970s. Most YRE schools were multi-tracked, much like the Aliquippa model, which allowed the school facilities to be utilized throughout the year while housing a third more students. Ken Hermansen, in describing Valley View School District in Illinois' decision to move to a 45-15 calendar, stated, "Evaluation studies of the Valley View District demonstrated conclusively that the per pupil operating costs for the district were not affected by the change to 45-15. However, approximately $12 million for the cost of otherwise necessary additional construction was avoided because of the increased capacity of the existing buildings when used year-round" (Glines, 1995b, p. 65). The number of schools using YRE rose throughout the decade, from just Park Elementary in 1968 to 48 schools in 1972, and then to 539 schools in 28 states by 1976 (Vouga, 1976, p. 2). VA, CO, IL, MI, AZ, OR, WA, MS, MN, NH, NJ, FL, OH, SC, PN and IN all had one or more YRE school, and CA, with its rapidly expanding Hispanic community, lead the nation with 56 districts utilizing YRE; however, many of these schools experimented with YRE for a very short time, or with just one or two alternative schools using the calendar (Glines, 1995, p. 116).

A few districts in the 1970s adopted YRE for educational reasons. Realizing that the summer school program was not offering as rigorous a course of study as was offered during the school year, Atlanta took on a quarter-system in the 1970s. It was described as: "a way of organizing high school calendars to provide year-round educational opportunities with a flexible schedule, for a school operation on the plan could offer to every student a program designed to

meet his or her individual needs by providing regular instruction, enrichment provisions, remedial work, and exploratory opportunities" (Glines, 1995b, p. 47). San Diego implemented multi-tracking in 1972 for overcrowding, but schools that were not overcrowded could implement single-track system for educative purposes (Alcorn, 1992, p.12).

The late 1970s and 1980s saw education reform focused on a return to the basics and away from the liberal innovation of the 60s and 70s. The war on poverty and Great Society initiatives looked to schools as a potential solution to the country's economic woes, hoping that the weak force of education could overcome the crippling effects of social inequity and poverty. As Heyns (1978) noted, "Revamping public education seemed far less risky than tinkering with the economic system" (p. 7). Schools were seen as bastions for policy reform, as they were self-contained and composed of apolitical members - children. A back-to-basics movement seemed apt, as there was a sense that the country had strayed from its wholesome, agrarian roots at some point along the way, and needed resetting.

There was a renewed interest in the 3 Rs, economic concerns encouraged unified curriculum and assessment programs, and reports of failing international standings - like *A Nation at Risk* - galvanized reformers against the radical educational freedoms that were experimented with in the 1970s. Prop. 13 in California reduced funding and killed many of the beneficial portions of the young YRE programs, such as intersessions, as well as summer school in regular districts. School enrollment also fell, and with the election of Reagan, the educational pendulum swung back toward conformity and uniformity (Glines, 1995b, p. 84). YRE managed to hang on in several districts, mostly thanks to its financial benefits, and the advent of the computer age began helping districts to more easily implement multi-track systems.

By the early 1990s, YRE had expanded to 2,000 schools, in 33 states, and by the turn of

the century YRE schools enrolled more than 2 million students (Pepper & Ballinger, 2009). The alternative calendar movement has benefited from the expansion of charter schools, increased digital access to calendar models, a community of alternative calendar schools on the Internet, and the ease of scheduling created by advances in computers and software. Sexton (2003) deftly lays out the steady increase in YRE since the mid-1980s: "The numbers have increased tremendously over the fifteen-year period. The breakdown gives a clear picture of a movement toward a nation that is interested in embracing year round education. From 1985-2001, the number of states that have year round education increased from 16 to 44 (364%), year round education schools in the nation increased from 411 to 3,059 (1,344%), districts have gone from 63 to 651 (986%), and students in year round education have climbed from 354,087 to 2,162,120 (1,638%)" (p. 30). Nearly 3% of the nation's schools - 3,059 public, charter and private schools - are now operating on an alternative calendar. This is strong growth, but it is hardly the start of a sea change in educational policy.

IV. Warrant and Conclusions

The history of the school calendar is patchy, and under researched. Gold (2002) does a fine job laying out the timeline and reasoning behind the rural/urban compromise, but he does not venture past 1890 in his discussion of the calendar creation - although he does examine vacation schools into their contemporary context. Unfortunately, while Gold's claims about the origins of the calendar are well documented, his theories about the strategy used in the calendar's design, the intent of the creators, and the influencing factors all lack some warrant. For instance, many of his claims about the elimination of summer sessions contradict his earlier documentation about the importance of the summer session to the early schools. His factual work is very strong, but his theories lack supporting documentation – which may be simply a lack of

recorded evidence, or may signal a need for further exploration.

While Fischel's (2003) claims are sound, he does not have a solid base of evidence to back them up. His research relies exclusively on secondary sources, and puts a premium on theory rather than proof. This makes his warrant fairly weak, despite the compelling nature of his argument. The difficulty that his thesis runs into is in the type of evidence that would be needed to qualify his claims. He is making broad assumptions about population movements, organizational decisions based on those movements, and an expectation that the organizations were aware of or cared about the movements.

Along with issues of warrant is the small scope of Gold and Fischel's work. Gold spends most of his book in the late 1800s and early 1900s. He examines only New York and Michigan in any detail, offering a few examples from Virginia and Massachusetts. He addresses the last seventy years of schooling in less than fifty pages, and is focused only on Detroit for most of those. Fischel, while making much broader geographical claims (based predominantly on Gold's work), jumps straight from the early 1900s to modern day, with only a cursory mention of the intervening century (p. 50). This limited scope leaves a broad swath of the country and the twentieth century unexamined. As Gaddis (2002) states: "A simple chronicle of details, however graphic, locks you into a particular time and place. You move beyond it by abstracting, but abstracting is an artificial exercise, involving an oversimplification of complex realities" (p. 14). There is a definite worry that the current scholarship has neglected the complexity of the situation in terms of locale and time periods.

Glines picks up something of the narrative in the 20th century, but is far more interested in alternative calendars than he seems to be in uncovering any debate about the calendar. He does a valiant job of cataloging the alternative models, and offering glimpses into their

formation, logistics and ideologies, but he is clearly biased toward YRE. This bias skews much of his analysis, and his choice to write in vignettes does little to set forth a historiographical frame for the continued use of the standard calendar.

The best conclusions that can be gleaned from the history of the school calendar are that it came about through a combination of factors that had little to nothing to do with education, and that it has persisted through the years. The 9-month calendar was designed to encourage standardization, and the summer break allowed for domestic travel time and escape from the heat of the cities. All schools could open and close their doors at the same point, allowing for age-defined grades and texts. Families that wanted to move could use the summer months without risking their children falling behind academically. The wealthy could vacation in the country, or take trips abroad, and the health risks associated with congregating in the heat of summer could be avoided.

None of these factors has any relationship whatsoever with improving academic outcomes - except, perhaps, vacations providing educative experiences for the affluent. Ballinger (1995) notes that the 9-month calendar was: "designed to foster economic objectives, it has little educational validity" (p. 28). The modern world has eliminated most of the espoused reasons for the summer break. Moving between states no longer takes months of travel; “fetid-air” has been debunked, and air-conditioning allows classrooms to be bastions against the summer sun; and the variety of travel and vacation options has expanded beyond the summer season. The calendar remains, yet its founding principles have been disabused by the passage of time. The alternative calendar movement has gained support and momentum in recent decades, and may prove to be a better option than the outmoded calendar of the standardization era.

Chapter 2: Contemporary Context

I. Introduction to the Problem

The predominant calendar used today is a reflection of those early moves toward standardization. Nearly every school in the nation works on a nine-month, September to June, system. Millions of U.S. students have attended school only during fall, winter and spring. For most students, summer is a total break from academic work, but summer school remediation is the punitive response for those students who failed to keep up with their classmates. What kind of message does this use of the year send to students? Does this long break imply that learning has end points, or that summer break is a reward for surviving the learning period? Summer school, even when used to complete credits early or for enrichment, is rarely thought of as a positive experience compared to the freedom enjoyed by most students. Summer activities have their own merit and learning potential, but they do not foster the same learning gains as the school year (Heyns, 1983). It is a system that may be wasting several months of positive growth and experience, and is especially harmful to low income students.

Research dealing with school time has indicated that schools act as social equalizers (Downey, et al., 2004), and that all children, regardless of social standing, benefit from their time in school (Heyns, 1983). Additionally, the organization of the school calendar, specifically the long summer recess, has been shown to slow learning in all students. The learning rates of students from lower social strata slow considerably more than their upper-class peers, resulting in comparative learning loss during the break from school (Alexander, et al. 2001; Cooper et al.; Downey, et al. 2004; Frazier and Morrison, 1998; Heyns, 1987). This phenomena, known variously as summer setback or summer learning loss, has inspired a group of calendar reform advocates to recommend moving to a balanced school calendar, one that eliminates the long

summer break. They argue that a system with shorter, more regular breaks would eliminate the summer setback, and, in so doing, close the achievement gap. Yet few districts have embraced a balanced calendar. In fact, a strong oppositional group has formed around the subject - advocating for saving the summer holiday.

II. Summer Setback

The summer learning gap or summer setback, as described in studies by Alexander et al. (2001, 2007) and Barbara Heyns (1978), is the loss of learning gains that low SES students experience in comparison to their high SES peers. It represents the different summer lifestyles of the two groups. Low SES students are generally left to their own devices in the summer months, and while unstructured play has been shown to have positive developmental effects, the lack of structure means that there is little to no academic learning going on during July and August for low SES students. In comparison, high SES students may spend summers going on trips to museums, taking enrichment classes, going to camps, etc. The disparity in resources leads to inequalities in the value of summer experiences to such an extent that it is debilitating to the educational progress of low SES students, especially at a young age. As Alexander et al. (2007) explain, "In point of fact, the [Baltimore School Study] conclusion is that *practically the entire gap increase across socio-economic lines* traces to summer learning differentials" (p. 174). Their study, comparing CAT scores from Spring to Fall, showed that while high SES students experience learning gains during the summer months, low SES students showed no gains in math skills, and actually regressed in their reading skills. Some would argue that this flat-lining during the summer is representative of differing learning abilities, but studies show that winter learning gains - those made during the school year - are consistent across all SES groups, with low SES students often showing stronger comparative learning gains than their fellows.

All students' learning, regardless of their economic status, slows in the summer months. As Heyns (1987) states, "For every cohort, in both reading and math, the rate of learning is substantially less month for month during the summer than during the school year" (p. 1153). This summer slowdown clearly is related to the elimination of organized and intentional school activities. The learning gains fostered by school activities and structure cannot be reproduced to the same extent through camps and summer programs - even though there are some definite benefits to these summer learning environments. Regular breaks in formal instruction are a developmental boon, allowing young minds a chance to sift through new material and focus on nonacademic learning, but the lengthy summer recess stagnates the learning process, slowing the development of even the most affluent students (Heyns, 1978, p. 47).

The achievement gap is directly related to the external influences in a student's life. The schools are succeeding in their yearly mission, but the calendar design may be impairing their overarching, long-term effectiveness. As Alexander et al. (2001) state: "Children, it is reassuring to see, *learn more* and *learn more efficiently* when they are in school" (177); however, the majority of a student's life is spent outside of school. Summer is a time when there are no academic influences on many students' environments, enhancing the effects of their home environments. While it has been proven that schools have a positive effect on all students, regardless of SES, the lack of school has been shown to have a negative effect on only one group - low SES students (Alexander, et al., 2001).

The power of schools ends with the last day of school and the start of summer break. The equity gained during the school year is quickly replaced by non-equitable social environments (Alexander, Entwisle, & Olson, 2007; Heyns, 1987; Downey, et al., 2004; Frazier and Morrison, 1998). Like the achievement gap, the summer learning gap is a symptom of the different home

lives of high SES and low SES students. While low SES students tend to be equally successful during the school year, their summer months are spent outside of the positive influence of the classroom. Their assessment scores upon returning the next fall reflect this lack of educational opportunity. As Alexander et al. (2001) notes:

> The powerful role of schools in fostering achievement of *all* children is one lesson informed by a seasonal perspective on learning. A second is that disadvantaged children, on the whole, are capable learners. They keep up during the school year, but before they start first grade and in summers between grades the out-of-school resources available to them are not sufficient to support their achievement. When our study group started school their pre-reading and pre-math skills reflected their uneven family situations, and these initial differences were magnified across the primary grades because of summer setback *despite the equalizing effect of their school experiences* (p. 183).

Students are left to their own devices when compulsory attendance is suspended for the summer. For wealthy students this usually means a move from the structure of school to the structure of a camp, family trips, private lessons, or some other organized - costly - activity. For poor students the summer is more likely unsupervised, unorganized, and academically uninvested. This is not due to lack of parental care or love in low SES families, but simply the unequal distribution of resources that would allow those students to attend the camps, trips, and activities that their upper SES peers benefit from.

The activities and environmental support of upper SES students gives them the chance to make academic gains in the summer months - albeit not at the same rate as when in school - while their lower SES peers actually lose some of their learning. As Heyns (1987) notes:

> Children learn at a slower pace during the summer, month by month, than during the school year Moreover, the effects of family background and race increase substantially The gaps in achievement between advantaged and disadvantaged children are exacerbated far more dramatically when schools are closed than during the regular year The effects of schooling, measured as the pattern of differential learning during the regular term compared to the summer, are both to accelerate cognitive growth as well as to attenuate the impact of family circumstances (p. 1156).

Most elementary learning skills require rehearsal at home, and academic skills require continual practice in order to be maintained. Summer activities provide the opportunity for rehearsal and practice, acting as an alternative version of the classroom. Low income families often do not have access to these alternative learning laboratories. Upper SES students work on their academic and social skills throughout the summers, returning to schools in the fall with reinforced skills and expanded knowledge bases; whereas low SES students often lack the opportunity to engage in academic and socially beneficial activities, returning to school having stagnated academically and without the reinforced social skills to navigate schools' hierarchy (Graves, 2011; Alexander, et al., 2001, 2007; Downey, et al., 2007; Heyns, 1987; Frazier and Morrison, 1998). As Alexander et al. (2001) state, "That the out-of-school social context directs children's academic development before they get to 'real school' seems self-evident; yet the same life circumstances that undercut school readiness are ever present in young people's lives" (p. 172). In this way, each summer works to advance advantaged students and stymie or setback disadvantaged students.

Recent research by Downey, et al. (2004) and Cooper, et al. (1996, 2003) surmises that the previous summer setback research may have underestimated the detrimental effects of the long recess. They postulate that using the fall and spring test dates overestimated summer gains by ignoring the weeks of school before and after the tests, stating:

> Most previous researchers have estimated summer learning simply by subtracting a spring test score from a fall test score. Such estimates are usually contaminated, because the time between spring and fall tests may contain weeks or months of school as well as summer. Using our estimates of school-year learning rates, we attempt to remove this contamination. Removing the contamination greatly reduces our estimates of summer learning rates - suggesting that previous research may have overestimated summer learning and underestimated how much learning increased during school" (p. 617).

The two to four weeks before the fall tests and after the spring tests were generally lumped into summer, meaning any learning done during those weeks was attributed to the summer. The findings of Heyns (1978, 1987) and Alexander, et al. (2001, 2007) already paint a negative picture of summer's effect on low SES students' learning. Correcting for the learning gains of those fall and spring weeks makes the picture of summer learning loss even grimmer.

Academic progress is not the only victim of the calendar structure. The summer break also means a break from the positive social and physical effects of schools. Physical education stops abruptly with the last day of school, as does access to free and reduced lunch for many children.[1] These programs are particularly important to low SES students, providing nutrition and exercise for communities lacking means and facilities. Hollar, et al. (2008), reporting on the effects of obesity-prevention programs, find: "School-based obesity-prevention interventions have been shown to improve health measures of children during the school year. However, recent studies report children lose health benefits during summer… While HOPS showed health improvements during the school year, repeated measures analysis showed summer vacation significantly increased [z-scored Body Mass Index] scores in both genders and in both intervention and control groups" (p. A-12). Low SES students are left without the structural supports and programs of the school system, leaving them to the negative influences of poverty on both their intellectual advancement, and their social and physical wellbeing.

Lastly, it is impossible to talk about the learning gap and not discuss race. Racial factors account for an alarmingly high portion of the achievement gap, yet the degree of influence of socioeconomic status is equally pronounced. Heyns (1978) noted: "The most dramatic socioeconomic differential implies that between half and two-thirds of the annual learning gap

[1] The Free and Reduced Lunch program does run through the summer months, but families must find transportation to receive the service and there must be a provider within their community ("Summer food service," 2013).

among children accrues during the summer months" (p. 49). Race is responsible for much of the rest of the learning gap, but it is difficult to separate SES from race. The history of segregation, latent racism, and decades of second-class citizenship for blacks and Hispanics have rendered the two factors almost inseparable. While race has a clear role in the achievement gap, it is also exacerbated by socioeconomic levels. The pattern is eerily predictable, as noted by Frazier and Morrison (1998): “Further, low-income children of both races consistently lost academic ground during the summer, whereas middle-income children fluctuated around maintenance levels. Only high-income children consistently gained during the summer months” (p. 497). While reasons for the racial achievement gap remain elusive, social-class learning gaps can be laid predominantly at the feet of the summer break. The summer months highlight inequitable social backgrounds of students, regardless of race. Perhaps most disturbing, is that this summer setback accrues each year, further widening the SES achievement divide.

III. Long-term Effects on Low SES Students

The cumulative effect of the summer setback extends beyond the return to the classroom each fall. Each summer of learning losses leaves low SES students further and further behind. In a study of learning differences between economic groups, The New York State Board of Regents found: “advantaged students gained 1 year and 4 months during the school year and summer, whereas disadvantaged students gained only 7-8 months during the same time period” (Alcorn, 1992, p. 13). Advantaged students, using the summer to advance nearly six months past their peers, begin tracking away from their lower SES classmates. Each summer setback adds to this differential, steadily pushing low SES students into lower tiers of their classes, perpetuating smaller learning outcomes each year even before summer break. It is not surprising that the dropout rate for students in poverty is five times higher than that of affluent students (Chapman,

Laird & Kewal Ramani, 2011) when the poorer students are consistently missing out on six to seven months of academic gains every year. Age-defined grades, ability tracking, and social promotion continue and intensify this accrued education debt.

Age-defined grades, created during the standardization movement, make the erroneous assumption that age equals preparedness. The graded model is defective because it divides students by arbitrary birthdates, rather than by ability and mental preparedness. As NEC (1994) notes: "Fixing the design flaw means that grouping children by age should become a thing of the past" (p. 31). Age-defined grades adversely affect low SES students in the same manner as summer setback. The home environments of poor students are all they have known up until their first day of school, meaning that two five year olds from different socioeconomic backgrounds will be entering school with two distinct levels of preparedness.

While skilled teachers can negate some of the entrance gap that non-preschool, low SES students bring to the educational system, they are powerless to affect the continued differences in home lives between high SES and low SES students. Alexander et al. (2001) describes the growth of inequality thus: "At the end of 5 years, the performance of lower SES children lags far behind… During the school year these children keep up, but they begin first grade already behind and during the summer months, when they are not in school, their skills register very little improvement" (p. 177). To group disadvantaged and affluent students together by age rather than ability is a recipe for unequal results. As the NECTL (1994) notes, "Struggling students are forced to move with the class and receive less time than they need to master the material. They are penalized with poor grades. They are pushed on to the next task before they are ready. They fall further and further behind and begin living with a powerful dynamic of school failure that is reinforced as long as they remain enrolled or until they drop out" (p. 13).

Year by year, summer setback compounds upon itself, and is exacerbated by social promotion to maintain age-defined grades. Those grades are even further divided into advanced, regular and remedial tracks, further differentiating the opportunities, gains, and outcomes of the social groups.

The system of ability tracking, with high performing students taking a more advanced set of courses than low performing students, is rooted in this education debt and perpetuated by the summer learning gap. Tracking serves to differentiate students within a grade cohort, segregating the upper-level, college track students from their low-level, vocational peers. It relies heavily on standardized testing done early in children's schooling for placement, so young students from advantaged households are more likely to test into the upper tracks. As Heyns (1978) stated: "Relatively advantaged children enjoy cognitive gains whether or not schools are open, presumably because their home environments foster intellectual achievement and growth independent of school influences" (p. 48). Upper SES students reap the intellectual advantages of their homes before they even step foot into a school. This unearned advantage foreshadows early placement in the advanced track. This will have a profound influence on the extent and quality of instruction that the students will receive throughout their school years. As Alexander, et al. (2007) explain,

> Achievement scores and the competencies they signal are used in making curricular placement decisions; they inform parents', teachers'', and counselors' thinking about students' academic prospects; and they are used in a self-referential way to inform a student's own sense of self in the student role. It is a familiar pattern of educational stratification that disadvantaged social origins anticipate disadvantaged social destinations (p. 172-173).

Students' home environments likely determine tracking before schooling even begins, but summer learning loss almost guarantees tracking based on SES - with each summer of loss further expanding the learning gap between rich and poor.

The conflict between education's potential for equality and the realities of the tracked and graded school system are born outside of the school doors, and thus generally outside of the current system's control. The process of tracking begins early in schooling, but its initial, informal structure is informed predominantly by the SES of its students, not on potential ability. As Alexander et al (2001) state, "The out-of-school context necessarily explains the lag in achievement levels of low-income and minority youth over the preschool period" (p. 171). This initial achievement gap represents what Ladson-Billings (2006) describes as the educational debt. The lack of early education represents generations of inequitable situations and educational outcomes. It is no surprise that low SES students do not fare well at the start of their educational careers; they have had no training, and start at an immediate disadvantage to their higher SES peers.

For the majority of low SES students, the summer learning gap combined with age-defined grades, social promotion, and ability tracking create a foundation of failure, one that will follow them into their later schooling and post-school lives. The end product of the system are maligned groups wallowing in academic holding tanks -- precipitating drop-outs, low-income jobs, and cyclical poverty -- and privileged students advancing onto higher education. Alexander et al. (2007) conclude, "It is a familiar pattern of educational stratification that disadvantaged social origins anticipate disadvantaged social destinations" (pp. 172-173). There are few options within the education sphere that address the underlying causes of educational stratification, but the research on the equalizing effects of schooling offer a glimmer of hope that schools do have some power to shrink the socioeconomic divide, and, by extension, the achievement gap.

IV. Goals of Education

When examining the effects of school time, we need to also examine the outcomes that

are expected from schooling. The most obvious outcome is reproducing or imparting the accumulated knowledge of our past, allowing society to continue from one generation to the next. Dewey (1916) described these basic educative processes as "transmission" of "habits of doing, thinking, and feeling from the older to the younger" (p.3), a process that takes place in even the most basic of tribes. Modern schools accomplish this task through a variety of curricular models, from math to social studies to P.E., but, in many ways, this transmission of ideas and traditions is only one part of what we expect schools to do. Modern schools are also supposed to socialize students, but theorists disagree as to what form this socialization takes. Downey, von Hippel, and Broh (2004) describe the function of schools as either reproducing the existing social structure, or reducing the effects of social class, serving as a "Great Equalizer" (p. 615).

Reproductionists believe that, as we live in a fairly unequal social and economic society, schools will produce sets of students who will fit in that structure. Some will be low achieving, while others will excel, thus maintaining the structure when they graduate into the adult workforce. Downey, et al (2004), state: "Reproductionist theorists have argued that schooling plays an important role in reproducing and even exacerbating existing disparities. But seasonal comparison research has shown that gaps in reading and math skills grow primarily during summer vacation, suggesting that non-school factors (e.g., family and neighborhood) are the main source of inequality" (p. 613). The current calendar model fits nicely with the reproductionist belief. Students from low SES households will likely fall behind their privileged peers as they experience learning loss each summer. They will be tracked into lower level classes as they progress through school. They will be less likely to attend college and more likely to drop out altogether. The cumulative effect of those summers creates a school system that effectively reproduces society - some high, some middle, some low. Alexander, et al. (2007) describes the

long term effect thus:

> Here, then, is the argument in propositional form: (1) if the achievement gap by family SES during the elementary school years traces substantially to summer learning differences, and (2) if achievement scores are highly correlated across stages of young people's schooling, and (3) if academic placements and attainments at the upper grades are selected on the basis of achievement scores, then (4) summer learning differences during the foundational early grades help explain achievement-dependent outcome differences across social lines in the upper grades, including the transition out of high school and, for some, into college (p. 168).

This is the reproductionist model in a nutshell. The schools are merely instruments of maintaining social hierarchy, and, albeit unwittingly, the school calendar may be part of that process.

On the other hand, many theorists see education as the great equalizer. They claim that the school system provides an equitable arena for learning, thereby working to level the social playing-field as all children are given the tools to advance and thrive. Downey, et al. (2004) state, "We find not only that schools reduce inequality across socioeconomic status, but that schools reduce the much greater inequality that cannot be explained in terms of obvious ascribed characteristics. Schools generally do serve as great equalizers" (p. 632). This viewpoint may seem naive or overly optimistic to anyone who has ever slogged through the nightmarish social-ladder that is junior high school, but the research weighs heavily in favor of the idea of school as an equalizing force. School does not generate equality, but it does work to, as Downey, et al. (2004) continue, "reduce the rate at which inequality grows, compared to the rate when school is out of session" (p. 632). We know that an achievement gap exists between low and high SES students, meaning that familial economic standing has a direct influence on achievement. What is more difficult to quantify is how large an effect school time has on students, regardless of SES.

Barbara Heyns (1978) argues that school has a profound, if transitory, egalitarian effect on students. She used school time as a constant in her research on learning, arguing that attending school was one of the very few commonalities in all children's' lives. Using summer break as a time outside of schools' influence, she could compare students' in-school and out-of-school cognitive gains in order to identify patterns in achievement. She finds: "For almost every subject tested, the influence of family socioeconomic status is attenuated during the school year relative to the summer" (p. 32). While schools do not equalize in an absolute sense, they shrink the achievement gaps created by their varied backgrounds (Downey, et al., 2004).

The implication that time in school produces concrete learning gains in all students, regardless of SES, is damning when examining the effects of the summer learning gap. If all SES student groups learn at essentially the same rate during in-school time, then a hefty portion of the disparity in educational attainment between rich and poor lies in the months that they are out of the classroom, months that are decidedly unequal based on familial status. The welfare state is clearly not up to the task of mitigating the disparity, therefore the only option open to SES students seems to be the educational system. As Alexander et al. (2001) conclude:

> Families and communities indeed shape children's academic development. Their power is evident in the large learning differences across family SES levels seen in the present results for the summer months; but schooling, too, is a powerful force behind children's academic development… The near parity of school-year learning across social lines establishes that schools play an important compensatory role, carrying along disadvantaged children at a pace close to that of their more advantaged classmates. Schools *do matter,* and they matter the most when support for academic learning outside school is weak (p. 183).

Schools have been criticized time and again for failing their students, but it more likely that forces outside of the schools are fostering failure in the neediest students. Schools are, in fact, working more as equalizing agents than as reproductionists.

Socioeconomic stratification is sustained by a calendar structure that rewards the rich and

hinders the poor. In this way, the traditional calendar reproduces the existing system. Although the research is limited, modifying the calendar to eliminate summer setback may offer a chance for schools to expand their ability to equalize across social station. Differences in economic and social backgrounds are a much greater determinant of school success than time in school. It is possible that no amount of tinkering with school-time would affect the achievement gap; however, modifying the traditional calendar is, at the least, an attempt to find a solution to the predetermination in educational attainment created by social-class inequality.

Chapter 3: Calendar Models and Literature Reviews of Their Effectiveness

There are three main calendar models: 1) the traditional, 9-month calendar, 2) Extended-Year calendars, and 3) Year-Round Education or balanced calendars. Both YRE and EY are considered alternative calendars, although their designs are distinct. Extended-Year adds days to the calendar, while Year-Round models tend to retain the 180-day guideline while restructuring in-school days and breaks. Both alternative calendars are often lumped together in the research literature, making it difficult to determine effectiveness and purpose.

The 180 days of school in YRE can be arranged in a variety of models, aimed at providing flexibility of scheduling and facilities usage options. Their intentions range from pedagogical to practical – some designed to fight summer setback, others as cost saving mechanisms. Additionally, YRE is divided between single and multi-track systems, further confusing the terminology and research. What follows is a brief explanation of the alternative calendars, and their several models, including some pros and cons.[2]

I. Extended Year

Extending the school year is currently the major reform agenda in the calendar debate. Combating the learning gap through added time is hardly a new concept, as evident by the early use of vacation schools in urban districts, but it has garnered renewed attention due to reports like *A Nation at Risk* (1983) and *Prisoners of Time* (1994). Both reports argue for EY based on international comparisons of required school days, coupled with fears of the U.S. falling behind its educational contemporaries. Extended Year or Extended Day programs rest on the assumption

[2] The traditional calendar is has been described in previous sections, and should be well known to anyone familiar with the U.S. school system. Summer Setback, discussed earlier, encompasses the majority of the research literature on the traditional calendar. Considering this attention already paid to the traditional calendar in this paper, it does not necessitate its own section.

that more time in school will equate to more learning. Thus, if U.S. schools are not performing as well as Korean schools, it most likely has to do with the extra 40 days that Korean students spend in school per year. There are a number of causal factors that are ignored in this assessment, but there is also some merit to the idea that more is better than less, however simple that may sound.

Efficiency and accountability are the current buzz words of educational reform, yet somehow, the calendar has avoided the scrutiny and overhaul of this most recent reform agenda. Despite decades of business-minded reforms, schools utilize far fewer available hours than almost any other industry in the nation. Schools are open, on average, 180 days out of a possible 250 - after subtracting the 104 weekend days and 11 holidays from the calendar - and for only seven hours a day. As the National Education Commission on Time and Learning (NECTL) (1994) explain, "With few exceptions, schools open and close their doors at fixed times in the morning and early afternoon—a school in one district might open at 7:30 a.m. and close at 2:15 p.m.; in another, the school day might run from 8:00 in the morning until 3:00 in the afternoon… schools typically offer a six-period day, with about 5.6 hours of classroom time a day" (p. 5). This is not to say that students should be forced to attend at all hours of the day, 365 days a year, but it is of note that, in an era of business-minded reform, schools operate on a schedule that is decidedly nonbusiness-like.

Noting this difference in time use, President Obama, in 2009, called for a longer school year for America's students. He cited international competitiveness, stagnating tests scores, the growing achievement gap, and wasted employment opportunities as reasons for expanding the school year (Thomma, 2009). His education secretary, Arne Duncan, echoed this call, noting potential negative reaction: "Go ahead and boo me, I think schools should be open six, seven

days a week, eleven, twelve months a year" (Shulte, 2009). Their stance is far from new or novel. In 1983, *A Nation at Risk* advocated for extending the school year from 180 days to 200 or 220 (NCEE, 1983, p. 20), and there have been several independent districts that have attempted to create a longer school year since the general adoption of the current calendar model (Ballinger and Kneese, 2006). Altering the school calendar may not be an original idea, but, seeing as we currently have two of the most influential men in the United States using the bully pulpit to advance a reform policy, it may have more traction that in years past. Recent polls have indicated that for the first time in several decades a small majority of Americans favor expanding the school year, either through longer school days or more days in the school-year (NECTL, 1994, p. 11). Neither the President or Mr. Duncan have the power to actually force a longer school year onto the school system, but their influence and prominence may have ramifications in the policy setting and goals of states and districts in the coming years.

EY seeks to temper summer learning loss by shortening students' out-of-school time. For instance, adding 30 days to the school calendar would shorten summer break by six weeks, thus limiting summer slowdown while simultaneously adding instructional minutes. Frazier and Morrison (1998) found: "extended-year students did maintain a significantly higher level of cognitive competence over the 'summer' than did traditional students" (p. 514). In its simplest form, the shorter recess coupled with additional school time produces intellectual gains, but EY also offers curricular and enrichment opportunities.

EY schools can restructure their existing programs to take advantage of the longer time in school. They can alter the distribution of time per subject, expanding instructional time on subjects that may need more emphasis. Mathematics, which receives less time than reading in elementary grades, is a prime example (Frazier and Morrison, 1998). The NECTL (1994)

suggests that schools can, “extend classes in core academic subjects to up to 120 minutes per day, especially in language arts and math; build in one-on-one tutoring sessions; offer a broad array of enrichment activities (e.g., music, drama, sports and science projects); and embed professional development and planning into teachers’ daily schedules” (p.9). This restructuring allows for deeper exploration of all subjects, yet can hone in on specific academic needs with extra time.

As teachers take advantage of the extra time available they can add content and new pedagogies to courses, so that the quality and breadth of instruction expands right along with the calendar (Frazier and Morrison, 1998). In this way, adding in-school time has tremendous potential to increase learning time; however, detractors of extending school time doubt that more time would predicate new instruction or content. As Glass (2002) states, “It is unlikely that an increase in the length of the school year of a few days (five or ten, for example) would prompt any important changes in the school curriculum. Most likely, teachers used the same textbooks and activities in the lengthened school year that they used in the shorter school year; more reviewing likely took place, and so on” (p. 4.8). Teachers rarely fully embrace reforms, instead they find ways to incorporate new material or techniques into their existing repertoire, or simply continue on as before and hope that no one notices. The hope would be that EY would improve pedagogy, but there is no guarantee that would be the case.

i. International Comparisons

Much of the renewed discussion of the school calendar have stemmed from international comparisons - stridently voiced in *A Nation at Risk* (NCEE, 1983) - which claim that U.S. students spend fewer days in school than their international peers. With the U.S. lagging in international comparison tests, extending the school year is an easy reform calculation. If other

countries are keeping their students in school for more of the year and are scoring higher on international tests, then more days must equal higher scores; however, this is a causation fallacy, as there are a plethora of reasons for the U.S.' poor performance on international tests that go beyond simply counting school days. Comparisons of school time have proved to be confounding, as many countries have shortened their school year without adversely affecting test scores, countries structures and utilize their school time differently, and the assessment measurements can be unequal or misleading.

While many countries do have longer school years in terms of school days, there are few countries with more mandated instructional hours than the U.S. It is difficult to determine a precise average number of instructional hours for the U.S., as each state has different requirements and measures, but it appears that most states fall between 900 and 1050 instructional hours per year (Mikulecky, 2013), whereas the OECD averages 829 hours per year (OECD, 2012). As Heyns (1978) notes, several year before *A Nation at Risk*, "In fact, American students spend a larger portion of their lives in school than do their European peers, and there is evidence that they spend more hours annually as well" (p. 12). U.S. students are in school a substantial number of hours more than their international peers, but that added time does not seem to be having a noticeable effect on their comparative academic achievement. For instance, Finland, a top international performer, averages only 720 hours of instructional time per year (OECD, 2012), yet they outperform the U.S. on nearly every international comparison.

On the other hand, many of those countries reporting low instructional hours may be underreporting how much time their students spend in the school day. Germany and Japan both divide their school day into distinct academic and non-academic sections. As the NECTL (1994) reports, "Schools abroad protect academic time by distinguishing between the 'academic day'

and the ‘school day’,” and “Many of our economic competitors supplement formal education with significant out-of-school learning time” (p.23). Korean and Japanese students supplement their school day with intensive tutoring, and the international tests are used to determine graduation and college placement, so the students have a tangible reason to take the tests seriously. The institutional separation of the academic day and the school day, and the use of auxiliary activities mean that the instructional hours being reported do not necessarily reflect the time international students are in school or engaged in learning activities. While the U.S. reports all of the hours that students are in school as instructional time, other nations are only reporting the academic day. As Rakoff (2002) states, "International measures of achievement often do not correlate closely with hours spent on a given subject" (p. 112). Our students may be spending more hours on campus, but those hours are not showing up on international comparisons. That being said, while they may bite into academic time, assemblies, music programs, and even pep-rallies do create a social good, community and traditions that are not measured on international tests.

It should also be noted that the U.S. has never done particularly well on international comparisons (Ravitch, 2012). International testing procedure, age differences in testing groups, and our heterogeneous demographics and relatively high poverty level have consistently brought down our scores, so using time as a comparative unit may be impractical. As Glass (2002) states, “In most cases, the differences between allocated time in the U.S. and in other nations are small and statistically insignificant. But more important, the assessments of achievement are undertaken in such non-standardized ways as to render any conclusions suspect, or patently invalid” (p. 4.6). One-to-one comparisons of international achievement, school days, and even instructional hours are insufficient to draw any conclusions about school time or the potential of

extending the U.S. school year. Different cultures, school structures, pedagogies, and instructional emphasis all impact student outcomes, so claims that we are falling behind out international peers because of a shorter school year are rendered rather impotent.

Simply adding time may not be an adequate fix to problems facing schools. For one, time is a very tricky thing to quantify when it comes to learning. Simply being physically in school does not guarantee learning or improvement in test scores. Second, adding days to the school calendar or expanding the school day would be incredibly expensive. With budgets being slashed, there is really no feasible way of increasing school time. Finally, there is little evidence that expanding the current use of time, both in the structure of the school day or in the number of days per year, would lead to educational gains.

History has also not looked favorably on extending the school year. Aaronson, et al. (1998) note that 37 states have proposed lengthening the school year since 1983, but none have approved the legislation. While public opinion may have shifted toward accepting more days in the school year, the political will remains weak. Cooper, et, al. (1996) note, “The number of Americans who think children should be spending more time in school has recently been on the increase” (p. 228), but concerns over cost, and teacher and student burnout have kept the reform from moving forward. So perhaps it is not merely adding days, but rather finding a more suitable way of using the ones already available.

II. Extended-Year Literature Review

The research on the effects of EY, as with all research on school time, is bound up in a host of confounding factors - curriculum, student demographics, teacher quality, cost, etc. The initial assessments seem to be positive, arguing that adding days to the calendar produces learning gains ("Massachusetts expanded learning," 2011), but the research seems to be mostly

self-reporting and limited in scope. Aronson, Zimmerman, and Carlos (1998) argue: “There has yet to be a controlled study, employing an experimental design, that directly measures the impact of significantly extending the school year on student achievement outcomes”(p.2). Yet, in a study of students in EY programs versus those in traditional calendar systems, where EY added 30 instructional days to kindergarten classes, Julie Frazier and Frederick Morrison (1998) found “significant impact on math and reading achievement” (p. 515) in the EY programs, especially for low-income students. They also noted that the cumulative gains could be substantial, as 30 extra days per year would amount to an entire extra year (180 days) of schooling by the end of elementary school (p. 516). This cumulative effect would be a foil to the previously noted amassed effect of summer setback.

Extended Year research is difficult to come by, perhaps because so few districts and schools can afford the added cost of EY. The clearest evidence of academic improvement using EY comes from the experiences of the Knowledge is Power Program (KIPP) and the Massachusetts 2020 program. KIPP students attend school from 7:30 to 5:00 during the school week and for four hours on Saturdays (NECTL, 1994, p. 18), and Massachusetts 2020 adds 300 school hours to its schools (Mass2020, 2011).

Both programs report that they are highly successful, but both are also well funded, with high student and teacher demand. KIPP touts that 94% its 8th graders outperform their peers in reading, and 96% in math (KIPP Foundation, 2011), while Massachusetts 2020 has shown improvement of between 8% and 19% in all three of their testing areas (Math, ELA, and Science) ("Massachusetts expanded learning," 2011). While these results are impressive, there is no way to tie them directly to extended school time. Both programs include curricular and pedagogical adjustments that accompany the extended time. The demanding schedules and

success stories have attracted highly motivated students and teachers to the schools, skewing some of the comparisons with the schools' previous scores. EY appear to be highly successful, but exactly how much of the credit can rest solely on added time is unclear.

More importantly, time spent in school does not necessarily mean time spent on learning, so arguments in favor of extending the school year may be resting on faulty assumptions. While it is easy to measure the number of hours a student attends school, it becomes problematic for researchers when trying to extricate the exact amount of time students spend actually learning. Aronson, Zimmerman, and Carlos (1998), in their review of three decades of study on the relationship of time to learning, perhaps best sum up the conundrum that is school time:

> Education time as researchers view it is perhaps best understood as a vertical continuum of sorts. Picture an inverted pyramid. At the top is time most broadly described, most easily measured and most easily mandated: the number of hours in a school day and days in a school year. At the bottom is time most narrowly focused; most difficult to measure and most difficult for policymakers to influence: those moments when learning is actually taking place (p.2).

Total hours spent on campus is an easy equation, but moments of insight and growth are far harder to measure.

School time breaks down into three definable categories: allocated or in-school time, engaged time, and learning time (Aronson, et al., 1998). Allocated time, the easiest to measure, is simply the number of hours students are required to be in school. Engaged time or time-on-task is the time spent in class or working on subject matter. Learning time, which is the most difficult to measure, is the time where students are actively learning.

Allocated time deals with the mandated hours that students are on school grounds. It includes not only class time, but non-academic periods such as lunch, passing periods, study hall, assemblies, field trips, emergency drills, and meetings. Measuring this allocated time is easy, however, Alexander, et al. (1998) find, "There is little or no relationship between allocated time

and student achievement" (p.3). The basic seven hour school day, 8:00AM to 3:00PM, might have six 5-minute passing periods, a 35-minute lunch period, and a 45-minute assembly or study hall all counted as in-school time. That is nearly two hours of non-academic activity that is counted toward the allocated time of each student. Even within class periods there is non-academic time – attendance, daily announcements, homework collection – that is still tallied toward students' in-school time. The NECTL (1994) notes that there is an assumption in American education that, "academic time can be used for nonacademic purposes with no effect on learning" (p. 6). Being physically present on school grounds is not a guarantee of academic gains, and measuring the in-school hours of students does not necessarily measure their learning potential.

Engaged time, or "time-on-task" (Aronson, et al., 1998), shrinks allocated time down to the portion of class time where learning activities are taking place, where students are actually engaged in subject matter. This should be the time that is devoted to subject matter content, lesson plans, and engaged activities. Aronson, Zimmerman, Carlos (1998) state, "Another [study] calculated that only 38 percent of a typical school day was devoted to "engaged time" in the schools it studied. Studies have shown that the proportion of allocated school time in which students are engaged in learning activities varies by state, by district, *and* by classroom" (p. 3). There is a stronger relationship between engaged time and student achievement than for allocated time alone (p. 3); however, even the content specific time in classes does not necessarily coincide with learning. Within engaged time there will be subsets of students who are either unprepared for learning, bored because they are too advanced, frustrated because they have fallen behind, or even hostile to the learning environment.

Finally, embedded within engaged time is academic learning time. Measuring learning

time requires individual attention and measurement parameters, as it records: "*that precise period when an instructional activity is perfectly aligned with a student's readiness and learning occurs"* (Aronson, et al. 1998, p. 3, italic in original). These are the golden moments in the school day where students are situated in an engaged setting, have an understanding of all needed previous concepts, are not distracted by their environments, are willing to make intellectual advances, and, finally, the instruction adds to their learning. If engaged time takes up only a fraction of allocated time, then academic learning time is a fraction of that fraction, but this tiny fraction of time has been proven to be by far the most important for academic gains.

It is important to remember that time in school, even crudely measured allocated time, produces learning gains. This basic concept is at the heart of the EY movement: add more time, get more learning. EY treats in-school time and learning as a one-to-one equation, but EY's detractors argue that equation is unrealistic. They advocate for improved pedagogy and better use of the existing time. As Glass (2002) states: "Within reason, the productivity of the schools is not a matter of the time allocated to them as much as it is a matter of how they use the time they already have" (p. 4.0). The argument follows that high performing schools utilize their time better than low performing schools, but, as the research on learning time has shown, the use of time is influenced by a multitude of factors - not the least of which are the socio-economic level of students and the school as a whole.

While it is true that there is a glut of non-academic learning time in the allocated time of the school day, there is no guarantee that streamlined or hyper efficient school days would produce additional learning time. Students may simply need a break from instruction now and again. Rest tends to improve performance, so non-engaged time may be necessary for students' daily academic endurance.

The arguments in favor of EY are seriously hindered by the research literature, which points to the difficulty of generating engaged time and learning time, faulty international comparisons, and the self-selection of students and teachers into prestigious EY programs. EY has been proven to be very expensive, but it has not proven that adding days to the calendar adds a commiserate amount of learning. Generating more learning time is a complicated process; however, all things being equal, increasing in-school time would most likely increase engaged time and learning time. It might not be an exact ratio, but any increase in actual time in classes would necessitate an increase in engaged time, even if increased time was "more of the same." The question is then: is it more efficient to add all types of time in order to create more learning time, or more efficient to train teachers to create more engaged time within the time they already have? Perhaps there is already enough time in the school year, but it is arranged in such a way as to hinder learning time, or erase the positive academic effects of learning time.

III. Year-Round Education

Year-round education (YRE) offers a way to retain the existing number of days, but in a form that may remedy the effects of summer setback. YRE calendars are often called balanced calendars because they attempt to organize in-school days and breaks in a symmetrical way. They do away with both the lengthy summer break and the grueling length of the traditional 90-day semesters. These models range from simple quarter-systems to free-form, individualized programs. There is room for some variation within all of the models, but they generally keep the typical 180 days of in-school and 60 days of break (not including holidays and weekends). This is an important distinction from Extended-Year programs, as balanced calendars do not increase the operating costs of schools with extra paid-time for staff.

i. 45-15

The most common YRE structure is the 45-15 model: 45 days of school followed by a 15 day break. This quarter-system fits the seasons, and allows for breaks between seasons as well as the traditional Christmas holiday. It eliminates the ten week summer vacation in favor of evenly spaced breaks, hopefully limiting summer setback and the lengthy review that is needed at the start of a new school year. The 45-day quarters allow more focused unit-based instruction, and their shorter length, as compared with the semester system, alleviates teacher and student burnout.

ii. 45-10

The 45-10 model is a slight variation on the 45-15, with 45 days of school followed by a 10 day break, but it also has a 30 day summer recess (one of the 10 day breaks combined with the 20 left over days). This model retains the benefits of the quarter-system and intersession programs, but more closely resembles the traditional calendar. The six week summer recess would allow for extended family vacations, but should still help to reduce summer learning loss.

iii. 60-20 and 60-15

The 60-20 model is a trimester plan, but works the same in the same fashion as the 45-15 plan - 60 days in school followed by 20 days of break. The 60-15 follows the same pattern, but creates a longer summer recess (much like the 45-10 plan) with the trimmed days of break.

iv. 90-30

The 90-30 plan most closely resembles the traditional, semester-based calendar, but breaks the summer recess into two 30 day breaks between the semesters. It still manages to reduce the long summer recess, and theoretically the associated learning loss, but it also has the benefit of retaining the semester model, minimizing redesigning of curriculum and planning for staffs (Ballinger & Kneese, 2006, p. 57).

v. Flexible All-Year and Personalized Calendars

Along with balanced calendar models, some adventurous schools have tried individualized calendar options. Flexible plans break the curriculum into 3-week blocks, and students can take breaks of any length between blocks throughout the year. The students simply pick up on the next block when they return, and carry on from there. Flexible plans require the students to plan their own year, as they are still required to meet the state mandated 180 days of school, but allows families to design the year in a multitude of ways.

Personalized calendar schools are open for 230-250 days a year, and students come and go as they please, so long as they accumulate their 180 required days. All teaching and learning is individualized, creating an intensely personalized school experience. As Ballinger and Kneese (2006) state: "The plan is based on the premise that education can and should be totally individualized, both in time and methods" (p. 58). Most privately tutored students are on a personalized calendar, but there have been example of schools, such as the Wilson Campus School, that have attempted larger scale implementation in order to foster some group learning within the personalized model.

There are a variety of other models, such as 25-10, 30-10, Quintmester, Concept 6, Concept 8, Octamester, Variable Term Plans, etc., so conducting research on the effects of alternative calendars and YRE as a whole is hindered by the plethora of options. While most alternative calendars attempt to erase the detrimental summer recess, the variation between models makes definitive claims about effectiveness difficult. Each calendar could prove effective or non-effective depending on the district it is implemented in, and sifting through the variety of options would be a research nightmare. And that is even before the added methodological headache of differentiating the effects of single-track, dual-track, and multi-track systems - all of

which have their own variations.

vi. Multi vs. Single Track

Single-track YRE means that all students are on the same calendar schedule. They are in school and take breaks together just like a traditional calendar school. Dual-track programs have students on both traditional and YRE schedules. This may be a function of a particular program choosing YRE and existing within the larger school structure, or schools offering calendar choice as a pedagogic tool. Either way, the YRE cohort begins their school year earlier, and has breaks staggered differently throughout the year than their traditional peers. Dual-track programs can create scheduling headaches, but they also mean that there are distinct portions of the school year where the facilities have smaller enrollments, allowing for expanded use of special use rooms, such as gyms, music and art rooms, playgrounds, etc. Finally, multiple-track programs create four or five groups of students who rotate into school and onto breaks on a staggered schedule. For instance, a 45-15 multi-track program would have group A start school on their own; group B would begin 15 days later; group C would begin 15 days after that; and group D would begin 15 days after group C; at the same time group A would have finished their 45 day in-school time and would be heading onto break. This system uses the school building every possible day of the year, and, by always having one group of students on break, can enroll 33% more students than a traditional calendar school.

Just like single track plans, multi-track programs can be organized in a variety of ways. The most common are four and five track programs, built around the 45-45, 60-20, and 60-15 calendars (Shields and Oberg, 2000, . P. 216). Other models may break the year into blocks, with each student electing to take the necessary number of blocks when they want (Concept 8), or even break each class into five groups and have students rotate in and out of the class (Orchard

Plan). However it is arranged, the goal is usually to add capacity to school facilities, although there is some hope that students, especially at-risk students, will benefit from the academic theories of YRE as well.

Research on the academic effects of YRE suffers from the conjoining of single and multi-track programs. Generally, single-track programs are put in place for academic or pedagogic reasons, i.e. balancing the calendar, offering more timely remediation, creating more flexibility; whereas multi-track systems are used to deal with fiscal hardships or expanding enrollment. It is therefore difficult to conduct research on the academic effects of YRE, since both systems fall under the auspices of YRE despite their differing raison-d'etre. Districts or schools implementing a multi-track system are seeking to save money by not building new buildings, not necessarily create better learning environments, but their test scores are generally lumped together with single-track programs that were intentionally designed to foster academic growth. The research is spotty, as discussed later, but single-track programs tend to perform as well or better than traditional calendars, while multi-track programs tend to perform marginally worse. The net effect is a slightly negative picture of YRE, but the results may be skewed by researchers failing to address the demographics and structural problem of multi-track programs, and simply lumping the two systems together. As Graves (2011) points out: “There must be something specific to multi-track year-round calendars that make them worse for academic achievement of various student subgroups than single-track year-round calendars” (p. 1296).

Multi-track systems can also pose structural and organizational problems. The rotating breaks mean that students may miss out on activities and sport seasons. Siblings may find themselves on different tracks, meaning they have different breaks; although, this is a known issue, and is usually dealt with by the schools. The constant rotating in and out of students can

strain support staff and administrators (Ballinger & Kneese, 2006, pp. 22-28). Teachers have to deal with sharing rooms, and changing locations on a regular basis (Sexton, 2003, p. 40). Holding faculty meetings, and creating a sense of community within the school are also more difficult with staff and students on multiple schedules (Rakoff, 2002, p. 117). Some of these structural problems - access to programs, room sharing, lack of community - are endemic of poorer schools, whether traditional calendar or multi-track.

Multi-track schools, because of their usefulness in saving capital allotments on new schools and dealing with enlarged enrollments, tend to be situated in poorer or predominantly immigrant communities. As Graves (2011) reports, "Both types of year-round schools have higher proportions African Americans and Hispanic/Latinos and lower proportions of Asian and White students. Multi-track year-round schools have the most Hispanic/Latino students and the least White and Asian students" (p. 1288). The schools were probably bursting at the seams before tracked YRE, and most likely faring poorly by academic estimates. They were serving historically marginalized groups, and were situated in districts that were already dealing with economic hardships - including the staffing and structural problems that come with monetary shortfalls (Kneese, 2000). Graves (2011) continues: "Multi-track year-round calendars have the highest percent of students eligible for reduced price and free meals, followed by single-track, and with traditional calendar schools quite a bit lower. With some exceptions, differences in teacher and school variables across calendars also show a pattern of multi-track year-round schools being most disadvantaged, followed by single-track year-round and lastly traditional calendar schools being most advantaged based on expected correlations between teacher and school characteristics and student achievement" (p. 1288). Multi-tracking appears to be more of a band-aid than a targeted reform, so it is of little surprise that multi-track schools under perform

when compared to single-track and traditional calendars.

vii. Intersession Programs

The regular breaks in YRE, known as intersessions, may be the most interesting aspect of the balanced calendars. While offering the chance for nearly immediate remediation if a student is falling behind, they also present the opportunity for a plethora of curricular and non-curricular activities, as well as a way to better ensure that allotted time is spent on academics. As Huebner (2010) 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” (p. 83). While the summer recess tends to be given over to a haphazard collection of activities, few of which are connected to the schools, intersessions can be utilized regularly and specifically for school sponsored activities.

With intersession, remediation is not simply available as summer school – programs that Heyns (1987) notes are of limited duration and "not particularly intensive treatments" (p. 84, 1157). Instead, remediation can take the forms of targeted assistance programs which can focus on specific skills from one quarter of work. Students who fall behind early in the year in a traditional calendar model can waste an entire semester, or, in most cases, an entire year waiting for a chance to re-take the class in summer school. The quarter-system shrinks that waiting period to, at most, five weeks. Students then have the chance to review the content in a smaller, more focused intersession class. Students can receive almost immediate attention on skills they struggled with during the quarter, keeping them on pace with their peers, potentially staving off

discouragement and failure - and their associated classroom disturbances.

Remediation can also be reimagined as a time of discovery, rather than drudging through already covered material in the same manner. As Gismondi Haser (2009) suggests: “The intersession classes also give struggling students remediation opportunities with another teacher who can present the curriculum in a different way or an alternative style” (p. 47). Perhaps a new angle or perspective can clarify subject matter, and far better to receive that new perspective within weeks instead of months.

Second, intersessions can offer students and staff chances to prepare for standardized tests and state mandated assessments. There has been much written about teaching to the test becoming the predominant pedagogy, especially in at-risk and struggling schools - like those that tend to adopt YRE as a potential solution. Intersessions could provide out-of-class time for test prep. This could come in the form of targeted help for struggling students in preparing for state assessments or graduation tests, or in more general test taking skills classes geared toward the SATs or ACTs (Ballinger & Kneese, 2006, p.72). Either way, teachers could feel more comfortable designing their curriculum without a focus on standardized tests. Students, both advanced and struggling, would benefit from less regimented and standardized lessons.

Third, intersessions can act as opportunities for enrichment and advancement without interfering with core academic time. Field trips can be organized, extra practices and rehearsals can be held during intersession. The innumerable appointments that students deal with, from counseling to trips to the dentist, can be scheduled outside of class time. Teachers can even experiment with short, introductory or intensive courses that may fall outside of the regular curriculum. For example, art teachers can offer students a day or two of introductory lessons to entice new students into taking the instructors regularly scheduled classes. Sports teams and

music groups can offer workshops or auditions during the intersessions. Film and theatre classes can take advantage of the days off to watch and critique full length features, rather than piecemeal them together over several short class periods. Clubs and community service groups can organize events. The possibilities are nearly endless, and every activity would fall outside of the schools' allocated time, yet would be nearly concurrent with regular school sessions.

IV. Year-Round Education Literature Review

The literature on the academic effects of YRE is far from conclusive. There are a limited number of studies that have been done on the topic, and those that have made comparisons of academic achievement between YRE and traditional calendars have suffered from design and implementation issues (Cooper, et al., 2003; Wu and Stone, 2010). In the last two decades there have been several meta-analyses that have attempted to make sense of the haphazard research that has been done, yet even these larger studies have struggled to find conclusive evidence about the effects of modified calendars. The inconsistency in the research methods and comparison groups used make many of the outcomes and conclusions suspect. Still, there may be value in examining the data to look for patterns. As Cooper et al (2003) state:

> Because of the weak research designs, it is simply not possible to make strong inferences about the effects of modified calendars. The question may arise, then, whether it makes sense to assay the research evidence at all. Our rationale for doing so is twofold. First, although the synthesis of results across studies will not cancel out consistent and pervasive design flaws, nevertheless, clear patterns that emerge across flawed bodies of evidence can be informative to the extent that the strengths of some studies compensate for the weaknesses of others. Second, we believe that poor data, if properly placed in context and carefully qualified, can be better than no data at all (p. 37).

In other words, we must make do with the available information, even if flawed, until better data is available.

Several factors have led to the dearth of research on the effects of the school calendar.

First, the research requires comparison groups. As there are few schools that utilize alternative calendars, there is a relatively small potential research pool from which to draw. The alternative calendar schools are geographically clustered, limiting access, as well as inhibiting research interest.

Second, there is the lengthy time period needed for the research. To see the effects of summer break or alternative calendar designs requires at least one full year of study. Cooper, et al. (2003) state, "Proponents also might assert that most studies looked at the impact of school calendars for only a single academic year. If the causal mechanism underlying the impact of the modified calendar is that it mitigates summer learning loss, then it is reasonable to expect that the effect would be cumulative over multiple years of exposure" (p. 39). Barbara Merino (1983) believed that it would take no less than four years of study to see the actual results of alternative calendars.

There are also multiple alternative models, and differing reasons for schools and districts to utilize YRE. Many of the studies have lumped single-track and multi-track schools together in the YRE study group (Palmer and Bemis, 2002; Graves, 2011; Cooper, et al., 2003; Merino, 1983; Kneese, 1996), despite the different reasons for using each model. Most multi-track programs are instituted for fiscal reasons, or to alleviate overcrowding, whereas the original intent of the single-track movement was educational improvement. There are far more multi-track schools than single-track, meaning that most of the research has been attempted in districts that were more concerned with costs than educational issues. This is not to say that those districts were in the wrong or that their models are inferior, but rather that researching the educational effects of YRE is difficult when most YRE was not implemented with educational goals at the forefront.

The research that has been done so far has also been fairly scatter-shot, of limited scope or duration, and often of questionable methodology (Palmer and Bemis, 2002; Graves, 2011; Cooper, et al., 2003; Merino, 1983; Kneese, 1996). As Palmer and Bemis (2002) point out: "most of the research to date has been incomplete or poorly designed, leaving educators at a loss for solid data upon which to draw conclusions" (p. 1). There are so many factors at play when examining the school calendar that it is difficult to design research models and protocols that are free from contamination by influences outside of the calendar. Along with the pedagogical differences between multi-track and single-track, districts that have moved to YRE may have also changed curriculum; changed assessment models; changed staff, leading to challenges in training and adjustment; and even the demographics of YRE or their comparison schools can change drastically during the lengthy research period. It is challenging to find research that is uncontaminated by at least one of these factors.

Most of the research seems to focus on educational attainment between traditional calendars and alternative models (Palmer and Bemis, 2002), but there are a host of other variables that are encapsulated in YRE that have also been examined. These include teacher, student, parent, and administrator attitudes to YRE; implementation strategies, successes, and failures; effects of YRE on language acquisition, and ESL students; and absenteeism and burnout comparisons, to name a few. The diversity of researchable variables means that much of the research is more qualitative or speculative than quantitative. There has also been little systematic examination that connects all of the variables. For instance, findings regarding administrator attitudes about YRE may shed very little light on YRE's effectiveness, but is useful in developing a broader picture of YRE. The existing research cannot, however, conclusively say whether YRE is superior or inferior to the traditional calendar.

Methodological problems aside, the conclusions drawn from the research are inconclusive. At best, it can be shown that alternative calendars do not negatively affect student achievement compared to their traditional counterpart. That is not much of a ringing endorsement, but it is about as definitive a conclusion as the studies can provide. Most of the studies have found a very small - statistically insignificant - positive correlation between alternative models and student achievement (Palmer and Bemis, 2002; Cooper, et al, 2003; Kneese, 1996). Extended year programs show larger positive gains than single or multi-track balanced calendars, but, again, the multiplicity of student achievement factors at play make EY and YRE comparisons nearly impossible. At-risk and low-income students had the most evidence of improved performance, but the central argument for alternative calendars - that they eliminate or reduce summer setback - is in no way validated by the existing research (Cooper, et al. 2003).

There is another school of thought that continuous learning time may be preferable to staggered breaks. YRE's numerous recesses could impair the continuity of the longer semester system. As Graves (2011) states:

> It must be that the length of continuous time spent in school versus out of school matters. If there are non-linearities in learning loss that accelerate more with time spent out of school, then year-round schools could potentially mitigate this loss by breaking up the long summer break, while non-linearities in learning that accelerate with more time spent in-school would favor a traditional calendar since year-round schooling would disrupt the flow of learning with more frequent breaks" (p. 1282).

If the logic of summer learning loss relies on the assumption that a long break from school is detrimental to learning, then the reverse, regular breaks in instruction, would be equally detrimental. If continuous exposure to school encourages learning gains, as has been shown, then YRE would interrupt that exposure, likely resulting in slowing of learning (Graves, 2011).

It appears as though there is next to no difference between traditional and alternative calendars. Individual studies have shown both positive and negative student achievement when comparing YRE and traditional calendars. Contemporary meta-analyses, conducted in the last two decades, have attempted to sift through the hodgepodge of individual studies with varying degrees of success. They report only a slight tendency toward YRE having a positive influence.

Carolyn Kneese (1996) examined 15 studies that spanned between 1 and 4 years, finding: "a positive, but very small effect on academic achievement" (p. 67) for YRE; however, 6 of the 13 studies that were usable had effects in favor of traditional schools, meaning that the chances of YRE being a positive change from the traditional calendar are just slightly better than 50%. She did note that single-track programs recorded better results than multi-track programs. This is most likely because multi-track programs were implemented in high-poverty, inner-city areas, whereas single-track was used as an educational reform to combat summer setback (p. 61).

Bradley McMillen (2001), in an analysis of 106 North Carolina YRE schools compared to traditional calendar schools, found insignificant differences between the calendars. He noted several demographic differences between the two types of schools, mainly that the traditional schools tended to have more Caucasian (p. 69) and that the YRE schools tended to be “schools of choice” (p. 73). This implies that the homogeneous achievement results could be an effect of student composition rather than model design. He also noted that “lower achieving students” performed slightly better in YRE schools, but the difference was statistically insignificant (approximately .05 SD) (p. 72).

Elizabeth Palmer and Amy Bemis (2002), in a report on alternative calendars for the Minnesota legislature, examined 75 analyses of student achievement. Reporting on their meta-analysis’ major findings, they stated:

> Many studies on the effects of YRE suffer from inadequate research designs or incomplete reporting of data making it difficult to draw conclusions. Still, in 75 analyses of student achievement, 42 revealed no significant effect on achievement for students attending year-round schools (YRS) while 27 indicated significant positive effects… it is reasonable to conclude that students attending YRS are likely to perform as well as if not better than their peers in traditional nine-month programs, especially at the upper elementary school level (p. 1).

Their results were slightly more positive for alternative calendars than previous studies. They also included several other performance indicators, such as student and teacher attendance and burnout, and professional development time. Their conclusion was that YRE was as effective, if not more so, than the traditional calendar.

Cooper, Valentine, Charlton, and Melson (2003) compiled the largest and most rigorous meta-analysis to date, including most of the studies used by Kneese, McMillen, and Palmer and Bemis. Yet, even with the larger data set and refined protocols, they also reported "ambiguous results" (p. 38). Echoing the results of Kneese (1996), Cooper, et al. (2003) state, "First, school districts have slightly better than a 50% chance of finding that students in modified calendar schools outperform their counterparts in other schools. Second, the improvement in achievement scores is unlikely to be greater than .10 standard deviation, relative to the scores that would be expected had the students attended traditional calendar schools" (p. 38). Even if YRE does outperform traditional calendars, it does so by such a small margin as to be practically indistinguishable by academic performance measures. Like the previous meta-analyses, their study did suggest that modified calendars have the greatest impact on at-risk students and struggling schools (p. 41).

This lack of definitive research may not actually be a barrier to making a policy decision. Policy decisions must often be made without conclusive evidence, as the length of research time needed for academia is impractical for policy work (Green, 1994). Policy makers

are looking to create a purposeful course of action to influence immediate needs. They cannot wait to receive all of the information attainable on a given subject. As Green (1994) states, "Answers to policy questions may be improved by better information and better analyses only in the sense that such gains will make our answers rationally more persuasive" (p. 4). Better information may create better arguments, but a lack of concrete proof is of little hindrance when policy is being formed and decided upon. Therefore, the relatively insubstantial data and conclusions about the academic effects of the school calendar may not be a hindrance to creating policy.

The literature reviewed consistently found that YRE created nearly identical academic outcomes as traditional calendar schools. This hamstrings the major argument by YRE advocates that alternative calendars disrupt summer learning loss. The arrangement of the school year seems to have little to no positive effect on student achievement. If both alternative calendars and the traditional calendar produce similar learning outcomes, then the arguments for and against alternative calendars must rely on non-academic factors.

It should be noted that, just as there is scant academic evidence in favor of YRE, there is little, if any, research that shows the academic benefits of the traditional calendar. The only conclusive evidence about the effects of the traditional calendar is that summer break has inequitable outcomes. If a policy maker was starting from scratch, with no preconceived ideas of how a calendar is structured, the research on effectiveness would not favor any of the models. It would, however, have discovered a glaring design flaw in the traditional summer recess.

The positive take-aways from the research on YRE and EY show that both models are at least as good as the traditional calendar, meaning that changing from a traditional model to an alternative model poses little academic risk. Additionally, the research uniformly found that

modified calendars are particularly positive for low-income, at-risk students and struggling schools. The positive effects were small, but notable enough to be reported by all of the reviewed studies. These at-risk students are increasingly important because, as Kneese (2000) states, “The effect of the traditional calendar schedule on the learning retention of at risk students is of particular concern to educators, for at least one third of elementary and secondary students in the United States can be identified as high-risk“ (p. 91). That is a substantial portion of the school population that could see potential gains with alternative calendars, and are responsible for much of the achievement gap. YRE may not have a significant effect on summer slowdown for all students, but it does appear to reduce some of the learning gap for low SES students. If equity is indeed being sought as an educational good, then YRE has at least the potential to improve the learning of those most in need of help.

Chapter 4: Policy Analysis and Political Feasibility

I. Policy Analysis

The preceding chapters have laid out the origins of the traditional calendar, the contextual reasons for redesigning the school calendar, the three main designs – traditional, EY, YRE – and their comparative academic merit. As the research is unable to reach clear conclusions about which calendar best encourages learning, further policy analysis is needed to assess the designs based on other metrics. Green (1994) defines policy analysis as: "Setting forth the marginal costs and benefits of a range of choices" (p. 10). In the choices between traditional, EY, and YRE calendars, policy makers must examine a wide range of costs, from economic considerations, to student attitudes, to familial needs. In a time of budgets cuts and belt tightening in districts across the country dollars and cents are clearly at the top of the list of costs, but factors such as student achievement, equity, tradition, and staff, community and student attitudes and benefits must also be calculated. We would be remiss in not looking at the totality of factors, at least in the analysis phase - even if many factors will be deemed less important or impractical in the policy formation. While most of these issues can be quantitatively or qualitatively measured, they must also be examined as a set of social goods.

In this way, the policy analysis attempts to find the optimal balance of goods to meet the diverse demands of the stakeholders. There will always be tensions between these competing needs. Green (1994) notes that there is little chance of solving the policy issue: "Neither the most efficient action nor the most technically proficient analysis is likely to resolve the central discord among the social aims in which policy questions are rooted" (p. 3). A thorough policy analysis, weighing the marginal benefits of each factor, attempts to find a solution that balances that discord. It creates neither winners nor losers, but aims for a policy that best distributes goods to

all stakeholders.

The calendar debate has starkly defined camps advocating their own needs and wants, so finding a policy that meets the needs of all will be impossible. The best that can be hoped for is to find common ground in those needs, and a policy that distributes its goods in those common areas. There is not one best calendar option, but policy analysis may discover a calendar design that best fits the needs of all stakeholders.

Before embarking on a policy analysis of the calendar models, it is possible to eliminate one calendar based solely on feasibility: Extended-Year. While there are positive aspects to EY, its added costs in times of budget shortfalls make it indefensible. There is substantial cost associated with adding time in any form - extra days or extended hours - to the calendar. Salaries for teachers, staff and administrators all expand with extra time. Each day adds instructional costs, which vary by state, from $2.8 million to $206 million per day (Griffith, 2008; Aaronson, et al., 1998). There are also additional costs for building maintenance, transportation, and supplies. These added costs may not even equate to corresponding learning gains, as added allocated time does not guarantee learning-time. Despite federal calls for added days, there is no economically viable way to implement the policy. As such, including it in the broader policy analysis would be a futile gesture.

This policy analysis will therefore limit itself to a cost/benefit comparison of the traditional calendar and YRE. Advocates and opponents of modifying the calendar have a host of arguments and counter arguments with which to make their respective points. The limited qualitative research that has been done seems to favor YRE. Unfortunately, many of the arguments, on both sides of the issue, are based on assumption, hypothesis, and conjecture rather than on evidence. Those in favor of modified calendars generally cite its potential as a learning

tool, and its positive influence on teachers, students, families, and administrators; whereas those against altering the calendar cite administrative and community hardships, cost, and the economic importance and variegated learning opportunities of the summer recess (Palmer and Bemis, 2002; Shields and Oberg, 2000). The advantages and disadvantages of alternative models, and inversely the traditional calendar, break into four main categories: cost; student issues; teacher and administrator issues; and parent and community concerns. This paper will address each category individually, including examining the support for and satisfaction with YRE as reported by its participants.

i. Student Considerations

To begin with, advocates of YRE see alternative calendars offering greater flexibility and individualization of schooling - improving the academic potential of schooling, even if not dramatically impacting test scores (Ballinger, 1995). YRE encourages differentiated instruction. The quarter-system allows for a greater assortment of classes to be offered. Students have the opportunity to change teachers and instructional styles regularly. Intersession classes offer even greater variety of subjects, and chances to learn in new ways. In this way the schools have the ability to fit a program to the child, not a child to the program. Flexibility of timing offers greater options for each type of student (Glines, 1995b).

Many of the original YRE models were created to allow advanced students to progress through school at a faster than regular rate. Modern alternative calendars can offer the same accelerated option. The flexibility offered by a quarter-system allows students to jump ahead more fluidly, or for accelerated programs to be designed alongside regular tracks. As Aronson, et al. (1998), decrying the one-size-fits-all model's inefficiency of classroom time, state, "Research has demonstrated that it is a waste of time to have students repeatedly go over materials they

have already mastered and, equally so, to present materials to students that they are not prepared to learn" (p. 5). The ability to move forward a quarter allows students to remain truly challenged at all points in their schooling, rather than languishing in classes they have intellectually moved beyond.

The quarter-system also lends itself to more adaptable and concise blocks of learning. Rather than creating a variety of unit plans to span a full semester, teachers have the flexibility to design curriculum in a more focused time frame, allowing them to refine concepts, standards, and skills. The NECTL (1994) points out the confining and confounding nature of the end of the school year, stating: "as time runs out on them, frustrated teachers face the task of cramming large portions of required material into a fraction of the time intended for it. As time runs out on the teacher, perceptive students are left to wonder about the integrity of an instructional system that behaves, year-in and year-out, as though the last chapters of their textbooks are not important" (p. 6). Unlike the full-stop created by the end of the traditional school year, the short intersessions roll each quarter directly into the next. Instead of hasty attempts to read textbooks from cover to cover, YRE encourages unit-based learning.

With YRE instruction can be more finely tuned, and course offerings made more specific. Imagine that, instead of requiring two years of science, students could take eight quarters of science, spanning a variety of sciences sub disciplines. The skill sets and standards would still be taught, but the subject matter could be individualized to meet teacher strengths and student interests.

The emotional and motivational peaks and valleys that emerge in during the long semesters are smoothed over in YRE models. The shorter quarters have an easily understood trajectory, with a break from instruction always on the horizon (Glines, 1995a, p. 162). Students

of YRE reported returning from the shorter breaks refreshed and rejuvenated for study (Palmer and Bemis, 2002; Opheim, 1995), quite unlike the doldrums of summer and the anxiety of returning to school into an entirely new grade.

Supporters of YRE also argue that it promotes continual learning, and maintains student interest in school better than the fragmented graded system (Kneese, 2000). Learning is more contiguous without the long summer break, and, as such, promotes the idea that learning does not end on the last day of school (Glines, 2009). Ballinger (1988) offers insightful criticism of the traditional calendar's psychological effect on students' perception of how to learn, stating: "Today, when we announce that formal instruction is over in June and that 'real' learning will not be available again until September, what subliminal messages are we sending to students" (p. 57)? If the traditional calendar implies that learning can only happen during the school year, then graduation indicates an end-stop for mental development.

The balanced schedule also helps students maintain their skills, rather than regressing in the summer and being retaught in the fall. There is some quantitative data from Alcorn's (1992) study of San Diego schools utilizing YRE to support this claim. Alcorn (1992) states: "In all instances, year-round schools registered a higher percent of schools that maintained or improved test score objectives [maintain or improve the percentage of students above the fiftieth percentile] in reading and mathematics" (p. 13). Continuous learning should require less remediation and create steady learning gains; however, as has been discussed, it is also possible that breaking up the continuous instructional period of the semester system could prove just as detrimental as the summer setback.

Continuity of instruction is necessary when learning a foreign language. YRE is particularly helpful for ESL students, who, not coincidently, suffer disproportionately from the

learning gap. As Ballinger (1988) notes, "Three months away from formal instruction is not helpful to students learning a new language, whether they are English-speaking students learning Spanish or Spanish-speaking students learning English, or any student learning any new language" (p. 59). Immersion programs are often touted as being the best way to learn languages, yet the summer recess is the antithesis of immersion, locking language learners out of the schools for weeks. Summer school ESL programs lack the length and broader school community of native speakers to mediate the weeks away from formal instruction. Cynthia Opheim (1995) offers qualitative evidence of administrator attitudes toward YRE's effect on ESL students, stating: "Principals were most enthusiastic of the effect that YRS has on bilingual and special education and in the value of enrichment programs allowed by a YRS schedule" (p. 119).

As mentioned before, a strong argument in favor of YRE is the plethora of academic and extra-curricular options during intersession periods. Intersession classes offer immediate and year-round remediation and enrichment. Intersession also offers a place to add days to the school year as demands on student achievement grow beyond math and ELA. Intersessions can also serve as extra time for clubs, sports, community service, job shadowing, and arts programs. As the NECTL (1994) notes: "In the constrained school day and year, many students lose out on the value of the arts and fail to receive adequate instruction in citizenship and civic participation. An educational program that offers the broadest curriculum is ultimately the most challenging and valuable" (p. 2). Extracurricular activities can take place throughout the year, adding a fourth sports season, more opportunities for performances, and summer recreational clubs that cannot exist in the traditional calendar.

YRE advocates also claim improved student attendance (Roby, 2009, p. 71; Sexton, 2003) and reduced discipline problems (Palmer and Bemis, 2002; Sexton, 2003). Students appear

to attend school on a more regular basis because of the sustained motivation that YRE instills, as well as the lower burn-out rate provided by the regular breaks (Shields and Oberg, 2000, p. 83). Both vandalism of school property and discipline problems are reduced in YRE schools. The near continual use of the school reduces time when vandals can access the buildings, and the evenly spaced breaks in instruction allow students a chance to get away from conflicts and provide relief from the stresses of school.

Students in YRE systems are generally favorable about the YRE calendar (Cooper, et al. 2003), although the sentiment is not as strong from students in multi-track systems. It is unlikely that students who were not enrolled in a YRE would have the same positive feelings about changing to an alternative calendar. It would mean giving up summer break. But, it is important to note that students who are already in YRE report favorable attitudes toward the schedule and academics in general (Schmidt, 2011, p. 16). Multi-track students are a more ambivalent to the calendar model, for fairly obvious reasons: they are separated from friends and miss events when off track (Gandara and Fish, 1994). Despite this, Gandara and Fish (1994) note,

> Interestingly, however, this played out in several ways. Teachers consistently commented that students were so anxious to return to school (to see their friends) after breaks, that every 3 weeks began with a new burst of enthusiasm in the classroom. Students were more openly conscious of wanting to be in school. It was also interesting to note that both teachers and students commented that off-track breaks occasionally brought welcome relief from personalities with whom they did not get along well (p. 83).

Students may not leap to endorse YRE, but students rarely support the long moths of the traditional calendar either. YRE students do, however, report more positive attitudes toward academic subjects and school as a whole than their traditional calendar peers (Schmidt, 2011).

ii. Summer School and Summer Learning

Advocates of the traditional calendar argue that summer school can and does act to offset

summer setback, and offers all of the advancement and remediation opportunities that YRE claims to create. Summer schools have been operating for nearly as long as the summer break has been around, although their original incarnations as vacations schools were usually private and offered a curriculum of arts, crafts, recreation, and vocational and industrial skills rather than academic subjects (Gold, 2002b). The modern summer school can be broken into five program types: remediation, retaking of failed classes, special-needs programs, advancement or enrichment, and Title-1 funded courses (Cooper, et al. 2000).

Minimum competency and graduation requirements make up a large portion of the summer school classes offered. Students who are falling behind their peers on standardized tests for advancement can use the summer session to get back on their grade's track. Students also have the chance to retake courses they failed, although this option tends to be utilized more in secondary schools than elementary and middle schools.

As a tool to fight skill loss over the summer, the Individuals with Disabilities Education Act (IDEA) provides for summer programs for special-needs students. The Title-1 funded courses were originally funded under the Elementary and Secondary Education Act as programs that met national interests. Their purpose is now aimed at combating the achievement gap between socioeconomic groups. Cooper, et al. (2000) state, "This federal mandate, along with others created by state and local education agencies, has led to the use of Title I funds to establish summer programs for disadvantaged youth. These summer programs focus on both the prevention and/or remediation of learning deficiencies" (p. 5). National interests are still at the heart of the courses, but have shifted from subject matter to skills based. Advanced students, inversely, can take extra courses or credits to enrich their schedules or make room for classes during the regular school year (Cooper, et al. 2000).

Unfortunately, the research on the effects of summer school is just as thin and methodologically unsound as that dealing with YRE. There is a dearth of research on summer schools' effectiveness, mixed methodologies in quantifying effectiveness, and most studies fail to categorize the various programs according to type and purpose (Heyns, 1987). Much of the existing research has used percentage-mastery criteria in evaluating the summer school programs, but the mastery levels are generally set by the programs themselves, leading to inflated success rates and benchmarks that change from year to year (Cooper, et al. 2000).

The research, while not ideal, does report positive results from both programs designed to limit learning deficiencies and programs for student advancement. That is not to say that these programs are as effective as regular schooling, but they do seem to help with retention - especially in math - and student attitudes toward school (Cooper, et al. 2000). There are some caveats to the positive results. First, as students return to their school-year tracks and communities, there is some concern that the achievement gains may diminish over time. Second, summer school programs show greater positive effects on middle and upper-class students than they do for disadvantaged students. This is somewhat disheartening, as it implies a further widening of the summer learning gap. Cooper, et al. (2000), searching for reasons for the disparity in gains, state: "We might speculate that the availability of more resources for middleclass families supplements and supports the activities occurring in the classroom in ways that may augment the impact of the summer program... Alternatively, summer programs in middle-class school districts may have better resources available, leading to smaller classes or more parent involvement" (pp. 91-92). It appears that the same class distinctions that exist during the regular school year, in both quality of instruction and quality of home life, persist into the summer programs.

The logic of summer schools as tools for shrinking the achievement gap is somewhat spurious. It is a much shorter session than the established 18 week semesters, generally between 4-8 weeks of half days, and rarely as rigorous as classes during the school year. As Heyns (1987) notes, "Summer schools do not, it should be stressed, remedy the situation, however, the summer programs in Atlanta were not, in general, intended to promote growth. Programs were short, voluntary, and devoted to fun as much as to educational compensation" (p. 1156). There is little to no chance that four weeks of cramming can equal an entire semester of instruction. The entirety of the course material cannot be adequately covered in such a short time period. Summer school programs that exist for remediation purposes are an attempt to keep students in their age-defined grades, but substitute mastery of skills for a punitive summer spent in a desk. Summer school students can advance to the next grade with a quarter of the effort and time of their grade-mates, yet there is no guarantee of academic progress or skill development. This is especially true for at-risk students. As Heyns (1987) states, "As a compensatory education program, summer school is a very large and costly educational intervention, over one-third of the summer programs in elementary schools are funded by Tide I/Chapter I The second major finding of the Sustaining Effects Study is that summer programs do not promote significant summer growth, compensatory education students attending summer school do not show significantly greater growth than those not attending" (p. 1157). Summer school may seem like a positive academic use of the summer months, but the research shows that it is ineffective in reducing the summer learning gap, and inappropriate as a compensatory program.

Several summer school programs have emerged to take on the summer learning gap in ways beyond the typical remediation programs. These alternative programs seek to alter the delivery method and activities of summer school. Instead of in-seat memorization and repetition

of subject matter, they emphasize thinking and experiential learning (David and Cambell-McFee, 1988). Using alternative teaching methods can help to break students out of the cycle of failed instruction (Gold, 2002). As Alexander, et al. (2001) note: "summer programs for disadvantaged children should supplement academics with a heavy dose of physical activity and enrichment experiences. Such an expanded agenda is important for another reason also: to make summer school fun. Learning works best when children feel they are partners in the enterprise. To realize their potential, summer programs should be engaging and non-punitive" (184). The National Summer Learning Association, an offshoot of John Hopkins University, has seen recent success by blending academic learning and enrichment activities; encourages attendance by offering meals, trips, and recreation; and increases the duration and intensity of the summer session (NSLA, 2013).

There are of course many other options for summer activities and learning, from sports camps, to private lessons, to internships. Lamentably, the use of non-school sponsored summer programs is also divided along social lines. Well off students spend their summers going to museums and parks, vacationing abroad, and taking swimming or dance lessons. They are enrolled in summer science camps, or participate in summer sports leagues (Alexander, et al., 2001). All of these activities provide wonderful educative opportunities outside of traditional academics, but most of these activities are out of the price range of low SES families.

Non-academic learning runs into the same demographic problems as formal schooling. Well-off students reap the benefits of personal growth in environments that foster positive outcomes, while disadvantaged students spend their summers languishing in distressed neighborhoods and potentially dangerous communities. The solution to this social and physical divide lies far beyond the scope of the schools, but access to equal summer programs is a

necessity. As Rakoff (2002) states, "What we need to work on is providing all children with worthwhile activities in the summer - which probably will require us to move beyond relying as much as we do on the private provision of opportunities - rather than doing away with this texture of time" (p. 124). Equitable opportunity to engage in favorable summer programs would be a start, but can hardly be expected to eliminate the education debt or social stratification.

Regardless of SES, alternative forms of learning are a tremendous boon to young students. Getting outside of the classroom and simply exploring the world provides uncountable developmental opportunities. Summer learning outside of the schoolyard facilitates multiple types of learning, encourages self-directed learning, and helps develop social skills. Whenever debating school time, it is important to remember that free time is not necessarily wasted time. There is also a strong argument to be made that children deserve some time to just be children. Perhaps summer setback of academic gains is acceptable if it is ameliorated by gains in non-academic skills - skills that do not show up on tests. Dewey and Rousseau would both probably argue that this exploratory, self-guided, experiential learning is far superior to anything that could be found on an achievement test.

On the other hand, YRE advocates question why these out-of-school forms of learning have to happen only during the summer months. The type of learning that happens in the summer is developmentally valuable, but that same learning could take place at any point in the year. The breaks in the balanced calendar offer the same total time off from school. Vacations, clubs, camps, and lessons can all still be taken advantage of as growth activities. The modern world offers activity in all seasons, with the added bonus of a seasonal variety of experience. As Ballinger (1988) states, "Why can't students 'grow' with personalized experiences in October or February, as well as in July or August" (p. 58)? In fact, the diversity of experiences grows by

adding in breaks in different seasons - for example, skiing or snow shoeing trips in the winter, apple picking and foliage hikes in fall camps, or the chance to vacation to the Southern hemisphere's summer during our spring. There is no correct way to encourage non-academic development. Perhaps summer vacation is simply the known option, as opposed to being the best option.

iii. Teacher and Administrator Considerations

Teachers note many benefits from YRE, and report extremely high levels of satisfaction with the programs. The alternative calendar offers teachers the chance to engage in professional development, and attend conferences and workshops throughout the school year, rather than trying to squeeze them into in-service days and summer break. The NECTL (1994), noting the current state of affairs, argues,

> U.S. teachers have less time to plan, collaborate and perform research. Flexible time also would enable teachers to interact professionally, observe one another's teaching, and experience productive staff development. Calls for accountability must be accompanied by assurance that teachers' work life includes sufficient time for personal and professional development. Abundant evidence demonstrates that focused professional development can result in improved student performance (p. 3).

The increased pressure on teachers to meet standards has not been combined with increased preparation time. YRE would offer a chance to keep teachers up to speed on new standards, teaching methods, and pedagogies during intersession. It thus avoids shoehorning professional development into overburdened prep periods and rushed staff meetings, which can diminish the effectiveness and importance of the work.

As with students, teachers show less absenteeism and less burnout in YRE models (Roby, 2009). As Gismondi Haser (2009) indicates, "The breaks throughout the twelve months are a tremendous assistance in relieving the ongoing stress and burnout some teachers face when they

work with a population of students with great and varied needs" (p. 45). Teachers return from breaks having had time to assess their own teaching and outcomes. They have the opportunity to make immediate pedagogic changes - a tricky thing to accomplish in the continual momentum of the traditional calendar. New teachers have time to recover from the pressure of the classroom, and time to work with master teachers and administrators.

Multi-track systems may prove more difficult for teachers and administrators to manage. Changing of rooms in multi-track systems may be inconvenient for teachers (Graves, 2011), scheduling department and staff meetings is difficult, and the changing student groups of the 4 and 5-track systems and shifting students of the Orchard model can prove confusing and burdensome (Shields and Oberg, 2000; Palmer and Bemis, 2002). Gandara and Fish (1994), however, found that teachers in the Orchard model actually relished the way rotating the student population forced them to be more creative, aware, and communicative. They also noted that the students took more responsibility for their work, were more social, and participated more often (p. 83). One final consideration for teachers on multi-track systems is their ability to substitute teach when they are on break This allows for higher quality guest teachers and extra income for staff members (Cooper, et al, 2003, p. 4).

Administrators and their staffs face the greatest potential burnout from multi-track models. Gandara and Fish (1994) state, "Principals in 9-month schools already work nearly year round; adding the extra months to the school calendar, and the extra students to the campus, can put an enormous burden on the principal" (p. 83). They must deal with scheduling of the various student tracks, monitoring a greater number of students and teachers, and finding ways to perform building maintenance with the school open at all times (Sexton, 2003). Additional communication with parents is a necessity. Staffing can be difficult, as many teachers are wary

of the unknowns of YRE (Palmer and Bemis, 2002). Administrators in multi-track systems are always at the whims of the calendar, making it increasingly difficult to schedule parent teacher conferences, staff meetings, department head meetings, and extra-curricular activities. Despite these hardships, Opheim (1995) finds, "that both year-round and traditional elementary school principals see no major obstacles in the implementation of year-round education. Rather their experience or perception has convinced them there are positive consequences" (p. 120). Overall, administrators show positive attitudes about YRE.

Teacher attitudes toward YRE are also very positive (Cooper, et al., 2003; Shields and Oberg, 2000). They speak to the effectiveness of modified calendars in fostering student ability and character. "While teachers may at first be reluctant to try a year-round schedule, most teachers who have taught in a year-round school prefer it over the traditional calendar" (p. 80), state Gandara and Fish (1994). They add that, by the third year of their YRE program, 98% of teachers in their survey claimed to be moderately or very satisfied (p. 80). The rhythm of YRE seems to agree with most teachers. Replacing the long slog through the traditional school year with evenly spaced breaks may foster a greater appreciation for the profession, and encourage continual participation in school activities, building a stronger sense of community.

iv. Parent and Community Considerations

Parent and community concerns about YRE tend to be based on non-academic issues, and reflect a predisposition to the traditional calendar. Any proposed change to the educational system is bound to garner reactions from the public. It is especially true of reform that has ramifications to daily life beyond the school walls. Parents and students act as street-level bureaucrats (Lipsky, 2010) in these reform debates. They make up the constituencies

immediately affected by reform, and thus most able to affect said reform's actual implementation. This prompted Merino (1983) to state, "The most important predictor of whether or not a district followed through and implemented the year-round schedule was attitude" (p. 309). Street level bureaucrats can stymie reform in many ways, not the least of which is opting out of the system altogether.

Merino (1983) found that parents who had no experience with YRE were negatively disposed to it. Those who had experienced YRE spoke favorably of it. Robert Vouga (1976) found that 83% of parents with children in YRE responded favorably to the system. Gandara and Fish (1994) noted that substantially more than 60% of parents in multi-track YRE expressed satisfaction (p. 79), adding, "Among the reasons that parents most commonly cite for liking the program were (a) increased flexibility, (b) the belief that their children retain more of what they learn, and (c) liking the spaced vacations. The most common reasons that parents cited for being unhappy were (a) scheduling conflicts with other siblings who are on traditional school schedules and (b) child-care problems" (p. 80). Despite the positive reviews of YRE, the majority of parents have had no exposure to the model, and thus favor retaining the traditional calendar.

Parents, especially from the upper and middle classes, may see YRE as impinging on their family time and vacations, or disruptive to their established schedules. They cite difficulties in arranging daycare, the problems that would be created if siblings were on different attendance tracks (Palmer and Bemis, 2002), and the inconvenience of having one child in a year-round school and another in a traditional school (Opheim, 1995). These concerns are all valid, but YRE advocates point out that scheduling conflicts and childcare issues exist in the current model. Time conflicts may even become more pronounced in coming years. As Cooper, et al., (2000)

note, “The changes in American families suggest that the years ahead will bring increasing demands for government-sponsored, school-based services for children when regular classes are not in session… The growing number of middleclass families in which no adult is home during the day suggests that these families may increase their reliance on organized summer programs offered by schools, be they free or tuition-based” (p. 8). Childcare is especially troublesome. Two-thirds of students are now living in families with either two working parents or single parent households (Hess, 2009). With the majority of children lacking a stay at home parent, the long summer break poses as much of a scheduling headache as YRE’s staggered breaks. YRE does require rethinking schedules and tinkering with family norms, but not to such an extent as to render it a burden or impractical.

The summer break does provide an ideal time for family vacations, whether they be a road trip to a family members house or a backpacking exploration of Europe. Travel has been found to be a positive learning tool in all levels of SES (Heyns, 1978). Completely eliminating vacation options would negatively affect all student groups; however, YRE’s scheduled breaks provide four distinct three-week windows for families to take vacations. Opheim (1995) states, “YRS advocates claim that the notion of a long summer vacation is dated; most families no longer spend their summer vacations on long family outings. Rather, long summer vacations have become a problem for families that must make child-care arrangements” (p. 117). Families might not be able to take 5-week trips to the Bahamas, but families that can afford such lavish vacations make up a very small portion of the school population.

Along with potential street-level opposition to YRE, many business groups have a vested interest in fighting calendar reform. As Kirst and Wirt (2009) note, “A pattern of *conflict between dominant groups* is visible where a diversified economic base generates differences that

the two-party system expresses, for example, manufacturers versus trade unions" (p. 262). In the battle over the school calendar there are a multitude of competing economic interests that have gotten involved. The tourism industry, summer recreation organizations, and low-wage businesses all stand to lose out on business if the school calendar is modified. They have all lined up to sustain the traditional calendar.

Businesses that employ a large number of teenagers, like the retail and service industries, stand to lose business and workforce if the school year is extended or altered. As Patall, et al. (2010) notes: "Opposition also comes from industries, including transportation, child care, food service, and tourism, whose profitability depends on the long summer break and afternoon hours during which students are free" (p. 404). They are joined in opposing alternative calendars by parents and students who endorse summer jobs as character building, financially provident, and providing work experience. As Rakoff (2002) states, "At that age [high school], we need to balance our desire to keep high schoolers out of the full-time work force with our desire that they start to acquire the various disciplines of working" (p. 113). Compulsory attendance already limits students' access to jobs, and modifying the calendar or school day further limits that access.

Alternative calendar advocates counter that the percentage of students available for work is minuscule compared to the whole school-age population, and that the job-skills most student jobs offer are not exactly high-level or career oriented. They also argue that this small portion of the economy does not claim enough weight to be included in the educational debate. Recent downturns in the job market have left a large portion of recent high school and college grads out of work. The argument follows that the jobs available should be reserved for the adult population in much the same way that compulsory attendance laws shrunk the workforce at the turn of the

20th century.

The summer recreation industry, embedded within the larger low-wage business group, is one of the most vocal supporters of the traditional calendar. Youth camps, amusement parks, and sports clinics would see their profit margins decrease precipitously with the loss of the summer recess. Not only would they lose daily attendance with students in school during the summer, but much of their workforce is composed of seasonal student employees. YRE supporters counter that 99% of K-12 students are not even eligible to be employed by the summer recreation industry (Ballinger and Kneese, 2006), negating the industry's fear that its pool of workers will dry up. Nevertheless, to combat altering the calendar they have formed interest groups around the topic, such as Time To Learn, an anti-alternative calendar which is partially funded by the International Association of Amusement Parks and Attractions (Cooper, et al., 2003). As Opheim (1995) notes, "These opponents have organized themselves into groups such as Save Our Summers (SOS), made up of individuals and organizations like the Boy Scouts, YMCA, Campfire Girls, and others that have a financial stake in organized summer activities" (p. 117). Their rhetoric is as impassioned as the YRE supporters, but suffers from the same dearth of research on the effects of summer. It should be noted that nearly all of the SOS groups are located in the South (SOS website, 2007), a region that has deep economic interests in maintaining summer as a time of travel and leisure.

Furthermore, the tourism industry is highly profitable and can exert quite a bit of lobbying power at the state and federal level. This is especially true in states that rely on tourism or summer holidays as a large portion of their revenue stream. As the VDE (1992) notes, "Given the importance of the summer vacation for travel, it is not surprising to observe the travel and tourism industry's increasing influence over the school calendar"" (p. 3). Considering that there

are few financially consequential interest groups that are proponents of YRE, the sway of business and industry must hold special prominence in the debate.

Finally, tradition plays a large part in maintaining the 9-month calendar. Summer break is a staple of Americana, and as such has an aura of permanence and purpose that is difficult for many people to imagine changing. Popular culture has immortalized the joys and experiences of summer break. Students, teachers, and parents all look forward to the long break, and it has been an effective model for over a century - even if it does have negative educational implications. The NECTL (1994) notes the way the calendar is habitual across generations, "Next is the pretense that because yesterday's calendar was good enough for us, it should be good enough for our children—despite major changes in the larger society" (p. 6). While there is something to be said for maintaining the connective good of tradition, it is hardly a decisive argument against change. YRE advocates hope to establish new traditions to replace the summer recess. Park Elementary proves that YRE can be sustained just as well as the traditional calendar. The school has stuck by its 1968 decision to change calendars, and has been operating year-round ever since.

v. Cost

As with every contemporary reform effort, cost is paramount in determining the direction of the school calendar. Economic troubles are pervasive in today's educational environment. Budgets across the nation are being cut and school districts tightening their belts. The need for public revenue conversely calls for an increasingly educated workforce, which costs more money. The basic dollars and cents of the debate tend to point toward leaving well enough alone, but the wider view of school costs needs to take into account the long-term economic impact along with the immediate outlay of funds. This forecasting is tricky, but it is a necessary component in a cost/benefit analysis of calendar models.

We can do a fairly accurate accounting of the costs, both current and projected, of the standard school calendar, but the alternative models require quite a bit of speculation. The standard calendar model has well documented budgets, and we can adequately assess the future economics of the calendar based on its past performance. The handy part of a century long policy is its wealth of data. We can compile hypothetical budgets for the alternative models, but their future costs are purely speculative. Decisions on the calendar cannot rest simply on current costs, but must also account for future expenses in both the public and private spheres.

The added cost of YRE seems to be negligible. The teacher contracts, the main driver of education costs, remain unchanged. Facilities use and administrative contracts would need to be revamped, but the overall expense would not change significantly. There would also be implementation costs associated with a change of calendars - information campaigns, scheduling and planning costs, staff development, etc. - but they would be one-time expenditures (Palmer and Bemis, 2002). In total, the difference in cost between running schools on the traditional calendar and YRE models is relatively small - not zero, but not expensive compared to other reforms.

Multi-track YRE, on the other hand, has the potential to save districts quite a bit compared to the 9-month calendar. Schools begin to see savings on facility costs with multi-track YRE when overcrowding reaches 115% of capacity. There are added operating costs to multi-track models, but they are more than offset with the capital savings in not having to build new buildings or portables to handle the expanded enrollment (Pepper, 2009; Brekke, 1984; Palmer and Bemis, 2002). Multi-track YRE requires additional staff for the 12-month schedule, additional maintenance due to expanded usage, and continual scheduling infrastructure (Cooper, et al. 2003). These costs pale in comparison to the millions of dollars required for new

construction. Additionally, each new building requires a full administrative and support staff, whereas multi-track schools need only hire a few new staffers to deal with larger enrollment (Pepper, 2009). Operating budgets may expand under multi-track YRE, but reduction in capital costs makes it a fiscally sound solution for growing districts.

The marginal costs of a poorly educated populace should also be addressed along with the calculable costs of calendar models. The achievement gap proves economically devastating. Condron's (2011) research concludes that inegalitarian education systems are not as economically beneficial as egalitarian ones. To achieve the strongest economic output, school systems should work to reduce the effects of social class as much as possible. If we are truly in an innovation economy, then we are best served by training as many people to be deeply knowledgeable and creative as possible. In turn, that means tempering the social barriers to learning to the greatest extent possible. Schools have been shown to do just that. The summer break does just the opposite. Disadvantaged students and marginalized groups enter the workforce unprepared for high-skill/wage jobs. The modern knowledge economy runs on these high-skill job sectors, but a large portion of modern students - predominantly poor and minority students - are ill equipped with the skills needed for these careers. More equitable schooling works to produce a more educated workforce, resulting in higher levels of employment, increased individual wages, and larger national GDP and tax revenue. The egalitarianism of the school system leads directly to egalitarian outcomes, and equal educational outcomes, in turn, lead to economic equality (Condron, 2011). The U.S. now has the largest income disparity in its history, and that disparity is played out in the inequitable educational attainment of its students.

The socio-economic stratification of the U.S. has increased immensely since the 1970s, and attempts to solve social ills through the school system rather than welfare programs have

increased right along with the income gap. As Condron (2011) describes the U.S. economy: "It is the most *economically unequal*. That is, income and wealth are more unevenly distributed in the United States than in any other affluent society" (p. 47). This fact leads directly to his next conclusion: "the impact of students' economic background on achievement is stronger in the United States than it is in many of the top-performing countries" (p. 54). The U.S., through its tax code, deregulation and inequitable monetary policy, has managed to create the largest disparity in wealth in the modern world, and in so doing has created unequal opportunities for its students. This economic inequality has widespread ramifications on the type of education various students receive, their potential for learning, and their educational outcomes. Ultimately, reproducing the existing inequitable economic model and stagnating the economy.

This inegalitarian system is detrimental to the whole of the U.S. Rampant economic freedom creates a society of "haves" and "have-nots," a society that is incompatible with the democratic ideal (Labaree, 1997). We have designed and inherited a system that espouses a goal of equality, but whose very capitalist structures deny that possibility. In many ways, capitalism requires that the low SES student fail. The free market cannot bear competition by all of its participants; however, democracy requires informed participation by all of its citizens. This paradox is played out in the dual nature and goals of the educational system. At one time education claims to be egalitarian, yet at the same time it is designed to separate and define skill levels. The inequality built into the system is contradictory to the aims of education, and the goal, as Labaree (1997) states, "prepar[ing] all of its young with equal care to take on the full responsibilities of citizenship in a competent manner" (p. 42). YRE cannot hope to address all of the socio-economic issues inherent in U.S. schooling, but it does offer opportunities to begin deconstructing the frameworks that allow inequality to persist.

II. Political Feasibility

Alternative calendars may show quite a bit of promise, at least according to advocates, but the likelihood of seeing sweeping changes to the calendar is slim. The political potential of modifying the calendar is hindered by a variety of issues: the lobbying power of interest groups, disadvantaged groups' lack of political power, inertia in educational reform, and a general distrust of radical reform. There is simply not enough political capital in calendar reform to elicit widespread interest. State or federal mandates are unlikely, so the best hope for policy action is at the school and district level.

Green (1994) describes political analysis in functional terms: "Unlike policy analysis, political analysis is concerned not with determining the net benefits of a given course of action, but with measuring their political weight" (p. 11), or "Performing the market analysis" (p. 10). If the policy analysis is interested in the cost/benefits of the policy, then the political analysis asks, "Will anyone be willing to try it?" It is a much more pragmatic analysis, and as such reveals more about the political landscape of reform - its players, demands, and decision systems - than it does the policy's pros and cons. Jenkins (1993) describes this political analysis as a: "separation of *policy content,* the substance of policy, from *policy process,* the given set of methods, strategies and techniques by which a policy is made" (p. 35). The greatest policy in the world can find itself stifled by the political process, while policies "of the moment" find themselves quickly passed through committees and into practice. It all depends on how well the policy fits the political environment, the demands of various constituencies, and the authorizing power of the decision system. Thus, the feasibility of calendar modification may have less to do with its merits as a policy, than it does with the political atmosphere.

The reform environment dictates much of the policy process. As Jenkins (1993) states,

"As usually defined, the environment surrounds the whole process, influencing anything and everything" (p. 41). The environment is composed of the demands, supports, and resources that inform the political process. The environment may in fact prove to be both the catalyst and the suppressor of calendar reform. There is a dualism that exists in educational reform: the system is broken, but do not tinker too greatly with it. The public is aware and angry about the current state of American education, but there is little political will or capital associated with re-imagining the system. Thus, many reforms tend to stagnate in the concept stage, or wallow in think tanks or college classrooms. Calendar reform presents an opportunity to strike at a broken portion of the system. It is conjointly a major restructuring of a known and cherished piece of the system.

The demands on the system are coming from a general sense that American schools are failing, both domestically and abroad. There is a real sense among both lawmakers and the public that there should be a clear solution, a way to adjust the system to fix the problems. Alternative calendars are an attractive option for supporters because they can be quickly implemented, and do not drastically alter the delivery of education. The costs are transparent, i.e. each school day costs a certain amount, as opposed to investing in teacher training or curriculum development that have indistinct outputs. The demand for calendar change has seen federal support, but there has been little to no movement on the policy front. State and local lawmakers, constrained by existing budget situations, give precedence to reforms with proven effectiveness and cost savings – two things conspicuously absent in alternative calendar research.

This federal demand and support has not been matched on the state or district level – or with federal resources. The subject has been debated at the state and local level, but rarely has it been adopted. As Patall, et al. (2010) states, "By 1985, about two thirds of states considered adopting measures to change the amount or scheduling of school time, although few measures

were enacted" (p. 402). As with many federal initiatives, there is hesitancy to implement costly programs at the state level. The federal government is concerned with the competitiveness of the nation and its international standings, but has little legal power to enact reform. As such, it can propose any number of theoretical reforms without having to take concrete action. State lawmakers and district leaders, on the other hand, have to answer directly to their constituents, meaning that conservative, small step reform stands the best chance of being pursued. Calendar reform is a highly visible break from tradition, and would be politically dangerous for state and local level officials. Simpler, less-radical reform generates greater local support, while still fulfilling the demands for educational improvement. Calendar modification is faced with top-down demands and support, but a bottom-up lack of resources and support to meet that demand.

In the distribution of power in public education, local conditions and opinion wins out over federal appeals. As Kirst and Wirt (2009) note, "The federal government has always been a junior partner to state and local agencies in financing and operating American schools" (p. 285). The bully pulpits of the President and the Secretary of Education are fairly weak influences in implementing change. Without the resources to enact the policy there is little chance for the federal government to alter the school calendar. Ultimately, the decision making power rests in the hands of the state legislatures and school board. They hold the purse strings and implementation power. For them, there is little political worth in advancing costly or unproven policy like calendar reform. As Rasberry (1992) states, "In a time of severe budget cuts, education officials must determine the programs that will maximize academic achievement at minimal costs" (p. 4). Thus, the decisions about modifying the calendar will be based primarily on public opinion, budget constraints, and the influence of interest groups - the most powerful of which are in favor of the traditional model.

The political system in the calendar debate is complicated by the divergent interest groups involved. The lobbying power of business and tourism interests, along with their ties to state revenue and election contributions, profoundly shape the decision system. The groups who stand to gain the most from modifying the calendar, specifically at-risk students, have little to no political clout or economic influence. They may have the moral imperative, but they lack the agency to push for reform.

The public appears to be of two minds on calendar reform. The public rhetoric favors improving the school system for all students, and polls show increased support for calendar modification (Cooper, et al., 1996; NECTL, 1994), but, at a local level, few districts have voters who are willing to make sweeping changes to their own children's schools. Thus, the wider calls reform find little traction at the local level, as school boards are unwilling to take risks in their own districts. The decision makers are handcuffed between the potential good of calendar reform and the economic influence of interest groups, public demand for reform, and local fear of change. These conflicting forces slow reform efforts, maintaining the status quo.

When all is said and done, reform tends to move in incremental steps, and within existing school structures. Alternative calendars are therefore probably too radical and transformative as reform options, not to mention cost prohibitive. Furthermore, the interest groups lined up against eliminating summer break have a good deal more political power and influence than supporters of alternative calendars. Alternative calendars may find a place in districts that are looking for radical ways to deal with educational shortcomings - Chicago and Detroit come to mind - but there is little political will or public willingness to change tradition in districts that are not facing dire circumstances.

Chapter 5: Conclusion and Discussion

It is difficult to propose a course of action about the design of the school calendar, as much of the research is troubled with poor design, a restrictively sized pool of research subjects, and a limited scope of time. However, it is possible, with a sense of the historical and contemporary contexts of the school calendar, to lay out a few pieces of factual evidence upon which to offer a policy recommendation.

Green (1994) describes a policy question as: "a request for a fairly stable, but modifiable, line of action aimed at securing an optimal adjustment of the conflict between different goods, all of which must be pursued, but which, taken together, cannot all be maximized" (p. 2). The recommendation that emerges from such a request must attempt to rectify two things: the set of goods that is being sought – but which may be "mutually incompatible" (p. 2) – and a course of action that will secure the optimal outcomes for the stakeholders seeking those goods. It is a balancing act. An act that requires a defined set of goods and a plan to distribute those goods in the most commensurate way possible.

Defining the set of goods is perhaps the most difficult proposition. It requires delineating the goals of education and judging their merit in order to decide how to relieve the tension of the differing goals. The end result should not be one set of goals winning out entirely. Instead, the competing forces should find themselves satisfied that they have received some of the goods that they want. We accept that there are incompatibilities within the goods, and that if one is maximized it would be to the detriment of others (Green, 1994). Therefore, policy should attempt to allocate the goods in as level a fashion as possible.

The contemporary goods of education can be broken into three main categories, as described by David Labaree (1997): "democratic equality (schools should focus on preparing

citizens), social efficiency (they should focus on training workers), and social mobility (they should prepare individuals to compete for social positions)" (p. 2). Equality and efficiency fall under the domain of public goods. A focus on either is seen as benefiting the public as a whole, with equality creating social harmony and efficiency leading to economic prosperity. Social mobility, on the other hand, is a private good - aiming to create competition between skilled citizens.

Labaree (1994) sees the major conflict of goods between the public good and the private good. That conflict reflects the debate between whether schools are reproductionist or egalitarian. He describes this clash of values thus: "Schools, it seems, occupy an awkward position at the intersection between what we hope society will become and what we think it really is, between political ideals and economic realities" (p. 4). If schools serve to reproduce the existing social strata then they are most likely dominated by private values. Schools would encourage students to gain individual skills in order to be more marketable as workers - reflecting economic realities. However, if schools encourage equity they are pursuing public values - reflecting political ideals.

Policy recommendations for the optimal design of the school calendar must therefore contain both a public and private goods, but without either good overriding the good of the other. It should be a calendar that offers public goods, in the form of efficiency and equity, and private goods in the form of social mobility. With this as a guideline, it seems reasonable to conclude that a balanced, year-round calendar may be the optimal design, in both intention and outcomes. The traditional calendar, while retaining both public and private goods, was not designed to foster both goods, nor does it produce equal outcomes for both. It offers much more in the way of private goods than it does public. As such, it does not balance the tension between the goods

as well as YRE.

To begin with, the current school calendar traces its roots to economic and social needs rather than educational goals and purpose (Gold, 2002; Fischel, 2003). The summer break had more to do with the wealthy advocating for time out of school in which to vacation than it did with academic improvement. Second, all students benefit from being in school. Students across the socioeconomic spectrum register the greatest learning gains when they are in session. Third, the summer break creates an inequitable learning situation for low SES students. Summer setback has been thoroughly researched, and conclusively leads to the achievement gap between rich and poor (Heyns, 1978; Cooper, et al. 1996; Alexander, et al., 2001, 2007). In this way, the traditional calendar is far better at serving private interests than it is public. It works as a reproductionist model rather than the "great equalizer" it has proved it can be. Finally, alternative models, be it YRE or EY, have been shown to be at least as academically effective, if not more so, than the traditional model. Lamentably, EY is financially unsustainable as a widespread reform, leaving YRE as the more implementable option of the two, even if it is not as effective academically.

All of these factors indicate that a favorable course of action may be to move away from the 9-month calendar toward a balanced calendar. It is a policy that has the potential to improve schooling for low SES students, and to shrink the achievement gap. YRE has not been shown to be a perfect model, but, then again, neither has the traditional calendar. This is in no way saying that the traditional calendar is unusable or has failed as a model. In fact, the decades of graduating a strong majority of students ready for college or the workforce speaks well for the effectiveness of the 9-month model. However, there is no research to sanction the traditional calendar over other models. Balanced calendars, on the other hand, were designed with academic

goals in mind, and address a major flaw in the traditional calendar while not sacrificing academic performance or time for outside-of-school learning.

The modern school calendar is built on mid-1800s practicalities. As City, Elmore, Fiarman and Teitel (2009) state, "[School systems and schools] are composites and collections of previous, often long-forgotten 'solutions' to problems that other people thought were compelling at one time or another" (p. 40). For instance, the elimination of the open, flexible schools of the 1800s came about, at least in part, from wealthy families wanting the summer for recreation. Even the arrangement of the school day still reflects the agrarian "solutions" within the U.S. model. School days generally start at 7:00 AM, after morning chores would have been completed, and end at 3:00 PM, in time for students to get home to the farm for evening chores. The problem is that the U.S. no longer resembles the early-industrial society that created the school calendar. There is no longer a real need for summer vacations, yet the tradition still persists. If long summer months away from school produce inequitable learning outcomes, then the logical step is to adjust the inequitable model.

A main shortcoming of modern educational reform is its attempt to use the existing model to promote equity and social capital. Reform movements fail to account for the underlying inequities within the U.S. social structure, which are, in turn, manifested as inequities in student learning and outcomes. As Grubb and Lazerson (2004) state, "Education as the main avenue to equity cannot succeed because formal schooling cannot possibly meet the challenge – particularly not in a country where inequality is so great" (p. 235). Education is a relatively weak force compared to the broader social forces at work in students' lives. It is rendered even weaker when schools dismiss their wards for the summer. Heyns (1978) concludes, "Schools are not the only determinant of achievement, nor can schools be assumed to operate in isolation. The central

role of families in reinforcing, or perhaps subverting, the influence of education comes close to being a platitude for educational theorists; yet we expect education to reverse or overturn the patterns of socioeconomic inequality" (p. 10). The inequality in wealth and privilege in the U.S. accounts for much of the achievement gap, and corresponding broader social ills, yet the mantra of school reform is that the school system itself is failing.

Calendar reform, on the other hand, relies on the assumption that schools are in fact succeeding in teaching students, but they have been hampered by external constructs and outmoded traditions. The school calendar works swimmingly for middle and upper SES students. It was designed with them in mind. It does not work particularly well for disadvantaged students. Their abilities deteriorate during the times they are removed from the equitable power of the school. Students have little to no control over their home lives. Thus, if a goal of education is democratic equality, the educational system has a mandate to offer as much support and positive influence as possible. Taking two and a half months off in the summer is a far cry from this mandate.

The traditional calendar's reproductionist outcomes maintain the social structure by allowing affluent students to reap the advantages of a rich and meaningful summer recess. Simultaneously it relegates disadvantaged youths to their own devices for 10-12 weeks. Even summer school has been shown to favor upper-SES students, rather than helping to shrink the summer learning gap. Affluent students are thus far more socially mobile than their poorer classmates, better prepared for high-income jobs and social positioning. The 9-month structure does little to encourage democratic equity, and the comparative drop-out rate for at-risk groups hinders attempts at social efficiency and expanding the workforce.

Conversely, YRE specifically aims to be more egalitarian by balancing the calendar.

Democratic equality is best achieved by limiting the environmental effects that create inequality. In a YRE program that utilizes intersessions, students have the ability to attend school for nearly every week of the year. YRE allows students to take advantage of school services throughout the year, assuaging the negative effects of poverty. Schools cannot do much to alter the socioeconomic realities outside of their doors, but they can keep those doors open as long as possible in order to provide a haven for children who need one.

With respect to private goods, balanced calendars do not remove the goal of social mobility, but they do attempt to level the playing field. For example, intersessions allow for both remediation and enrichment. This allows struggling students a chance to master needed skills, and advanced students a chance to enjoy a variety of non-academic learning opportunities. Regular occasion for remediation serves the goal of social efficiency, and enrichment activities build skills that empower social mobility. In this way, YRE attempts to find an optimal distribution of public and private goods.

The arguments in favor of retaining the 9-month calendar are based mainly on outside economic interests, scheduling concerns, and maintaining tradition; whereas, the arguments in favor of YRE are predominantly about its educational benefits and cost effectiveness. Both sides of the debate rely heavily on rhetoric, educational assumptions, hyperbole, and hypothetical models. Each is equally rabid in support of their position. This clouds much of the analysis in speculation and theorizing rather than in facts and proof. As Cooper et al (2003) admit, “It would be difficult to argue with policymakers who choose to ignore the existent database because they feel that the research designs have been simply too flawed to be trusted (p. 43). However, the warrant for YRE stands on firmer educational principles than the historical foundation of the traditional calendar. Tradition, scheduling issues, and the financial interests of a small portion of

the nation's economy are poor arguments in favor of retaining a calendar that dramatically impairs a large portion of the student population. The decision comes down to a choice between the status quo, one wrapped in tradition and culture, and an alternative that was designed to alter, in some small way, the attainment forecast of underprivileged students.

One final consideration is the shift in the focus of educational reform toward efficiency and accountability over the last two decades. This movement has dominated the educational discussion, leaving little room for any programs or ideas that do not stress improved test scores and pinching pennies. The movement was spawned from the ideals of the free market and budget shortfalls at both the national and state level. All modern reform must find ways of addressing educational failings without adding cost or endangering performance. Much of the policy based on accountability and efficiency is seen as draconian. Strangely, despite its socially conscious intentions, altering the school calendar fits these requirements in many ways.

There is little added cost to YRE programs. Multi-track systems are actually a fiscal improvement over the traditional model. Academically, the research shows similar, if not slightly improved, outcomes. YRE will probably not lead to immediate large increases in assessment scores, but continued use of YRE may realize eventual solid gains as learning loss is dispelled. Calendar modification may also make way for further reform and instructional creativity. As Glines (1995b) suggests, "Even the advocates stated that YRE by itself was not that significant -- that the real payoff came when the concept was joined with many other needed reforms. They did cite that changing the calendar would be a major breakthrough toward the transition away from nine month schooling toward continuous lifelong learning" (p. 93). All said and done, there is relatively little risk in modifying the calendar, but definite potential for improvement.

The traditional calendar, on the other hand, has several inefficiencies. Foremost is the

underutilization of school facilities. Glines (1995a) points out, “It is indefensible to utilize tax-funded facilities only 6 hours a day, 5 days a week, 9 months a year in the United States” (p. 3). The 9-month model leaves schools sitting idle for half of the year, effectively wasting vast swaths of public space. The inequitable outcomes of low SES students in the traditional calendar lead to continued national economic hardships. They limit the workforce and, thereby, shrink the tax base, both of which perpetuate the underfunding of the school system. Test scores and accountability programs have shown mediocre results, especially in at-risk groups, which can at least be partially attributed to summer setback. Comparatively, the traditional calendar appears to be less efficient than YRE, although most research on the relative costs has focused solely on the practical budgets and expenditures of both models.

The proceeding comparison should not be taken as an endorsement of the efficiency and accountability movement, but simply a nod to the practicalities of the modern reform landscape. In the current policy climate, with such an emphasis on accountability and economy, it would be indefensible to ignore the cost/benefit analysis of a policy proposal. Also, as Green (1994) acknowledges, "In policy debate, moral argument is unlikely to pick out which policies are to be adopted. It is much more likely to aid in determining what alternative can be included among those available for choice" (p. 8). Arguments in favor of YRE rely heavily on the moral imperative toward equity. Those that stand to gain the most from YRE are also those with the least political capital and clout. Therefore, it is essential to point out any foreseeable non-moral considerations that may favor altering the calendar.

As noted earlier, there is a dearth of worthwhile research on the effects of YRE and EY. Additional research may not clarify the calendar debate. As Green (1994) notes, "In the case of policy, decisions have to be made within large limits of uncertainty. Some reduction in the

degree of uncertainty will be helpful, but the degree of reduction normally required for academic research is both improbably for policy decisions and would often be undesirable even if it were not improbable" (p. 7). Additional research may, however, provide districts considering modifying their calendar with clues as to how the reform would affect their students. If further studies are to be undertaken they should be designed with the following factors in mind. Future studies should:

1) Be longitudinal, with at least 4 years of comparison data (Merino, 1983).
2) Separate EY and YRE programs into distinct studies, and then further separate the different models within the two, i.e. 45-15 from 60-20, multi-track from single track, extended day from extended year.
3) Examine the use and effectiveness of intersession as both an enrichment and a remediation tool.
4) Better match comparison groups, both in terms of demographics and previous achievement.
5) Study the effects on advanced students and struggling students, to assess if the calendar is improving breadth and depth of learning, as well as equalizing gains.
6) Highlight differences in pedagogy between traditional and alternative models (Kneese, 1996).

These considerations should improve the usefulness and quality of the research, as well as differentiating effects between models. There is a chance that particular models will be more effective in different situations, which would allow districts to cater their calendar choice to their specific needs.

The research is constrained by the lack of alternative calendar schools. To reach an adequate number of subjects there is a need for more districts to adopt YRE or EY models. There are so few alternative calendar schools in the nation that it is impossible to make adequate claims about their effectiveness, nor is there a breadth of demographics to match design options with

districts looking for calendar reform models. It will take a few brave - or desperate - districts taking a chance on implementing calendar change before the research can fully take shape. No large, urban districts have attempted calendar modification, but the first district that risks breaking with tradition will be much studied - and possibly imitated if the results are promising.

There is no guarantee that an alternative calendar will have any positive influence, but we know for a fact that the summer break is harmful to low SES students. That alone should be an impetus for attempting a more equitable model. The traditional calendar has been tried for over a century at this point. While it has not failed - as is evident in the regular graduation and matriculation onto higher education of large numbers of students - it also cannot be considered a resounding success. It has, fairly consistently, acted in a reproductionist fashion - having a positive outcome for wealthy students, while failing to raise the status of those in poverty.

It has been shown that schools can act as "the great equalizer," working for the public good, but those equalizing effects lose their power once the school doors close, once students are shuffled back into their social divisions and home environs. There is strong evidence that the disconnect between the equitable power of schools and their ultimate outcomes can be laid at the feet of the summer recess and the unequal outcomes it produces. That is not to say that abandoning the traditional calendar will solve inequality and eliminate the achievement gap, but a course of action toward a balanced calendar does at least have the potential to affect change in a system that is failing a large portion of its constituency.

YRE offers the optimal adjustment of public and private goods. It promotes equity by attacking summer setback, yet it retains the curricular and competitive frameworks for social mobility. While not a panacea for the ills of the school system, it should be considered as a viable replacement for the traditional calendar.

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