SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS
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Project Thunderbird

Holiday World & Splashin' SAFARI®

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Project Description

Holiday World & Splashin' Safari Theme Park® in Spencer County, Indiana, relies heavily on visits during the summer months by families with school-age children and offers summer employment and "first job" experience to a significant number of teenagers and young adults. Holiday World® employs 2,100-2,300 employees each year, many of whom have few other employment opportunities in Spencer County and the surrounding area. Roughly 75% of these employees are college age or below and over 80% report using some or all of the money they earn toward college education. Holiday World® provides young employees and first time workers with training and mentoring on fundamental job skills and work habits.

In recent years, although the overall length of the primary- and secondary-school year in Indiana has remained (at least) 180 days, local school boards within the state have been setting individualized "back to school" start dates ranging from the last week of July to Labor Day or beyond. Both the earlier start dates and the wide disparity in start dates across school districts have substantial effects on attendance, employment, and employment-based professional skills development at warm weather-focused destinations and related businesses. Correspondingly, moving the start date back and making it uniform statewide may have significant effects on the state economy, tax revenue, and youth summer employment without adversely affecting educational opportunities for children, teens, and young adults.

This project aims to compare the economic and educational impact of the status quo with the impact of implementing a statewide uniform school start date to occur not before the third week in August, and evaluates the level of stakeholder support for such a change.

Executive Summary

The Capstone team set out to determine the economic and educational effects of implementing a statewide uniform school start date to occur not before the third week in August, and to evaluate the level of stakeholder support for such a change. Holiday World's identification of these issues guided our analysis.

The Capstone team utilized data from Holiday World and outside sources to create a series of statistical models, analyses, and surveys. Our research yields valuable results in four areas: economic and fiscal effects including school utility expenditures, workforce development, student educational attainment, and public support.

Our economic impact analysis confirms our hypothesis that a uniform school start date will yield relatively small positive economic effects to Indiana. Under a uniform start date on the second-to-last Monday in August, we estimate that the Indiana Gross Domestic Product will increase by $11.3 million, an additional 249 jobs will be created, and labor income will increase by $6.9 million. However, the results for utility cost savings to schools were insignificant. Our fiscal impact analysis confirms that a late-summer start results in an estimated $1,729,876 increase in state and local tax revenues.

The modest nature of these economic and fiscal effects suggest that while these positive impacts may contribute to an overall strategy for building support for a uniform later school start date, they are not likely to be strong drivers for change; this is consistent with survey results provided by Holiday World and conversations with the client suggesting that stakeholders are less interested in economic growth from enhanced tourism per se than in increased educational, internship and employment outcomes for students.

In that regard, a comprehensive literature review on workforce development concludes that youth who work during high school are likely to experience a 6% increase in post-graduation income and that summer work opportunities for youth increase soft skills, the probability of future fringe benefits, and the probability of future employment.

Our educational attainment analysis suggests that there is no apparent or meaningful correlation between a school district's starting date and students' educational achievement. Far more important to attainment levels are differences in demographic composition and school quality. Several limitations in study design and available data caution against overgeneralizing from these results, however, and further research is warranted. Research does suggest that knowledge retention improves with "spaced learning," e.g. if a late school start date results in final exams occurring after Winter break. Research also indicates that youth summer employment has a positive correlation with student achievement measures. These results can help respond to concerns that legislators or stakeholders may raise about later start dates undermining knowledge retention and academic success, or earlier start dates promoting success.

In efforts to better understand public opinion surrounding the proposed policy change and opportunities for alliance building, the team identified direct and indirect stakeholders and outlined 6 major ideological themes shaping their positions. Findings indicate that absent pending legislation, the majority of stakeholders would remain neutral to the suggestion for a standardized public school start date in Indiana. Those most engaged with the issue unsurprisingly come from the tourism industry and the educational sector. As Holiday World is aware from its earlier legislative efforts, the Indiana Office of Tourism Development and Indiana Tourism Association are likely to be the strongest allies. Additionally, businesses and attractions that serve as recreational destinations generally support a late summer start date unless they share service hours with educational markets (such as school field trips). There may also be an opportunity to partner with the advanced manufacturing industry, which may be interested in and in need of the "soft skills" development that young people obtain through summer work.

Meanwhile, educational sources oppose the measure most commonly based on support for local control over school calendar preparation. Indiana's larger union for public school teachers, the Indiana State Teachers Association, is a prominent voice declaring that school start dates should remain a school board level decision. It is not clear how much stakeholders committed to preserving local control would be swayed by the benefits to students from summer employment or the other economic and fiscal effects of establishing a uniform later start date.

Recognizing that a deeper understanding of supporting and opposing positions may benefit Holiday World's legislative efforts, this report includes a survey toolkit that may be used to collect more information from key stakeholders including parents and guardians of school-aged children and Indiana Public School employees, Indiana businesses, individual legislators' constituents, likely voters more broadly, and (particularly with respect to the potential for increasing visitation by offering year-round facilities) Holiday World visitors. We have outlined best practices and recommended survey platforms and questions for each survey.

Per conversations with the Client, our team also developed a survey to collect information on how visitation to the park may be affected with the addition of a hotel and/or indoor waterpark. The data gathered from this survey will allow the Client to understand whether and how current visitors may use a hotel and/or indoor waterpark. This survey will provide valuable market research information to guide future conversations regarding expansion.

Finally, our team identified some key considerations if Holiday World seeks to influence legislation aimed at establishing a uniform later school start date:

- Proposed legislation should identify the 2nd to last Monday in August as the universal start date for Indiana public schools
- Proposed legislation should preserve the 180 instructional day minimum requirement.
- Proposed legislation should provide for a minimum number of professional development days and student-free work days for teachers
- Proposed legislation should address inconsistency in the student instructional day certification date/required end date
- Proposed legislation should include a 5-year implementation moratorium

Economic Impact, Fiscal Impact & Workforce Development Analysis

Research by the Economic Impact and Workforce Development group focused on the effects of a uniform school start date in Indiana on or after three possible dates: (1) the second-to-last Monday in August, (2) the last Monday in August, and (3) post-Labor Day. Three final deliverables result from this research: an economic impact analysis, a fiscal impact analysis, and a workforce development literature review. This last piece examines the scholarly literature on the impact of summer work experience on future employment outcomes.

The Economic Impact Analysis measures the potential direct and indirect economic effects of a uniform later start date on the state, with an additional component of the analysis focusing on utility costs of schools opening later. The Fiscal Impact Analysis measures the potential effects on state and local tax revenues in Indiana. The Workforce Development literature review analyzes academic studies on the effects of high school employment on future employment outcomes.

The group also consulted with stakeholders a to determine how a uniform start date would affect school calendars; researched current Indiana law governing calendars to determine necessary revisions to accommodate a change in start date; and, partnering with the Public Opinion group, researched the utility of partnering with the Advanced Manufacturing and Logistics industry and performed some preliminary work concerning the potential for Holiday World to offer a year-round attraction and facilities. We generated six recommendations for Holiday World to consider as it moves forward with uniform start date legislation.

Summary of Findings

The Economic Impact Analysis confirms our hypothesis that a uniform school start date will yield positive economic effects to Indiana. Under a uniform start date on the second-to-last Monday in August, we estimate that the Indiana Gross Domestic Product will increase by $11.3 million, an additional 249 jobs will be created, and labor income will increase by $6.9 million. However, the results for utility cost savings to schools were insignificant for the 46 counties

examined. If the school start date is moved to the second-to-last Monday in August, the net savings on energy in schools across all 46 counties is $15,041.40.

The Fiscal Impact Analysis is based on findings from the Economic Impact Analysis; specifically, we calculated additional tax revenue based on the additional income figures generated by the Economic Impact Analysis. Our research suggests that a school start date on or after the second-to-last Monday in August will result in an estimated $1,729,876 increase in state and local tax revenues.

These economic and fiscal effects are modest, and are generated essentially by increased out-of-state visitors to Holiday World and other tourist attractions and related businesses, rather than additional in-state visits by Hoosiers (which are offset by less spending in-state at other Indiana businesses). For these reasons, while these positive impacts may contribute to an overall strategy of building support for a uniform later school start date, they are not likely to be strong drivers for change. This is consistent with survey results provided by Holiday World and conversations with the client suggesting that stakeholders are less interested in economic growth from enhanced tourism per se than in increased educational, internship and employment outcomes for students.

In this regard, the literature review on workforce development concludes that youth who work during high school likely experience a 6% increase in post-graduation income. Summer work opportunities for youth also increase soft skills, the probability of future fringe benefits, and the probability of future employment. It appears that there is a need for improved soft skills within the state's advanced manufacturing industry and therefore that industry may be a valuable partner for Holiday World in pursuing a longer summer work timeframe.

After consulting with stakeholders, the group determined that if faced with a uniform start date mandate, schools are more likely to reduce breaks and/or teacher professional development days, rather than extend their calendars into summer. If we assume that schools will still be required to host 180 instructional days, they will reduce breaks to accommodate the late August uniform start date.

Based on the results of our research, we offer the following six recommendations for Holiday World to consider as it develops its legislative strategy on a uniform later school start date:

- Proposed legislation should identify the 2nd to last Monday in August as the universal start date for Indiana public schools, as this date places the least stress on current calendars and corresponds well with most college and university start dates in the state, while obtaining positive economic and fiscal effects
- Proposed legislation should preserve the 180 student instructional day minimum requirement because there appears to be no desire to lengthen the school year (or, as we were informed by Holiday World, to move from instructional days to instructional hours or some other form of measurement)
- Proposed legislation should provide for a minimum number of professional development days and student-free work days for teachers, to help minimize concerns among teachers that starting later will eliminate those days
- Proposed legislation should include a corresponding provision that adjusts the due date for certifying student instructional days, which currently falls on June 15, in case some schools choose to extend their end date to a point in June which makes that certification date difficult to comply with
- Proposed legislation should include a 5-year implementation timeframe to minimize disruption and coordinate with current calendar-setting practices as much as possible
- It may be useful to partner with Advanced Manufacturing and Logistics Industry to advocate for a uniform later start-date as a means for high school students to gain valuable soft skills development

Statement of Problem

School start dates in Indiana are determined by local school boards and not by the Indiana Department of Education. Diversity in school start dates and moving start dates into early August and July may have negative effects on tourist destinations in Indiana, particularly warm-weather

destinations that rely heavily on visitation in July and August. To inform Holiday World, policymakers and others interested in uniform school start date legislation, we researched potential effects of a late-summer uniform start date on the Indiana economy, tax revenues and workforce. We also analyzed how a mandated uniform start date may affect school calendars and related aspects of Indiana law relevant to proposed start date legislation.

Hypotheses

1) A later uniform start date increases summer visitation to Indiana tourist destinations by providing more summer vacation days available for visitation, thus increasing revenue for in-state private sector businesses, job growth, and labor income for Indiana workers.
2) Increased revenues to the private sector will also allow for state and local governments in Indiana to collect additional tax revenue.
3) Coincident to job growth, longer summer breaks will allow more time for students to work and develop soft skills, which leads to increased productivity and improvements in future labor outcomes.
4) A later school start date will lower school utility costs due to decreased use of utilities in the hottest months of the year.

Findings

Economic Impact

The economic impact analysis measures the direct and indirect economic effects of a uniform school start date on the state of Indiana. School calendar standardization results in the lengthening of the summer period during which students in Indiana are out of school, allowing tourist attractions and supporting businesses (restaurants, shops, hotels), whose customers include many families and students and whose workers involve a significant number of high school students, to operate more fully and for longer periods of time during the summer. To help visualize how the summer period will lengthen, Figures 1 and 2 depict 23 randomly selected Indiana school start and end dates with and without a hypothetical uniform school start date. In this case, implementing a uniform school start date post-Labor Day increases the median summer

break length across schools by 14 days, assuming that schools will respond to the policy by a combination of reducing in-year breaks and modestly extending their school-year end dates.

Figure 1 Summer Break Diagram, No Uniform Start Date

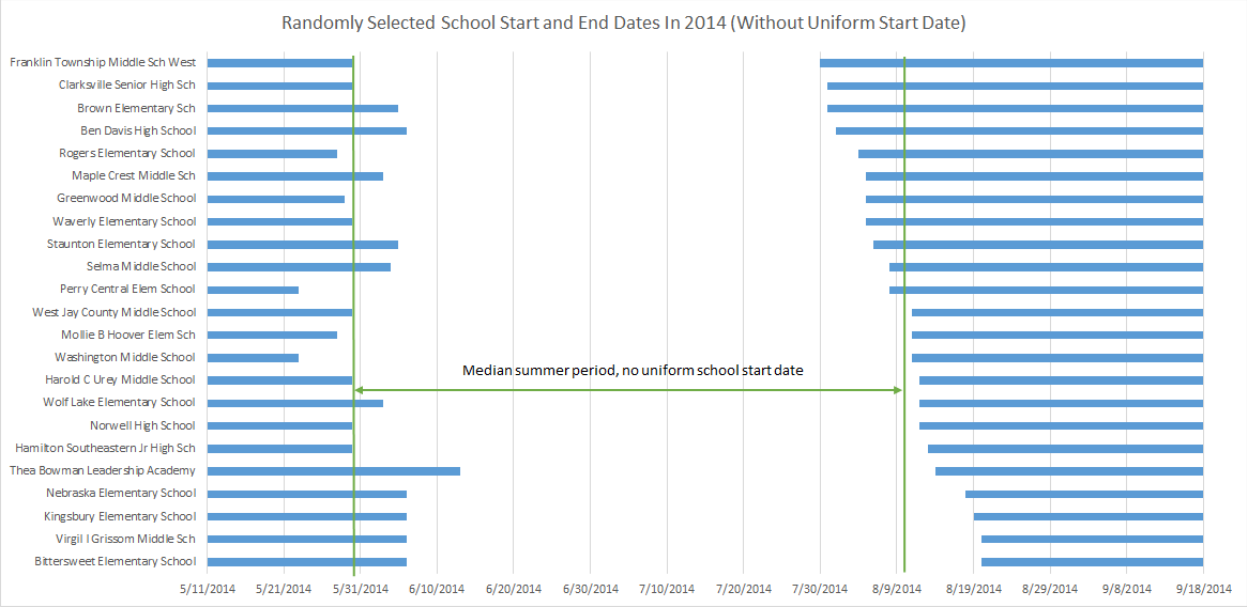
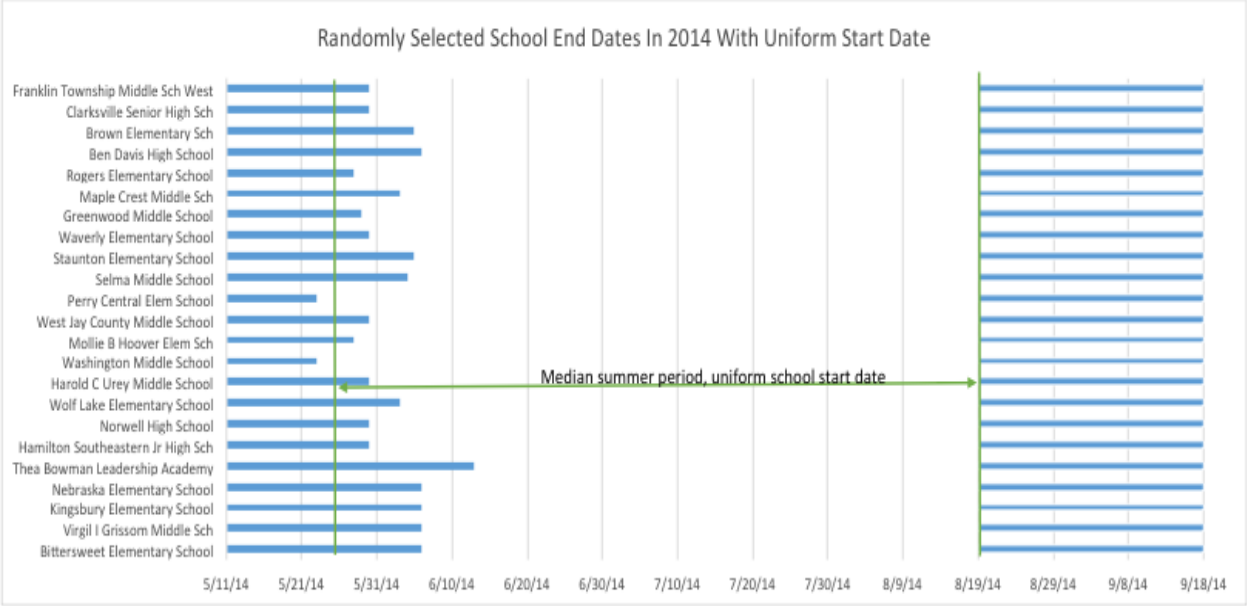


Figure 2 Summer Break Diagram, 2nd to Last Monday in August Uniform Start Date



Establishing a uniform start date eliminates much of the schedule disparity among schools that can limit tourism businesses' summer visitor attendance and labor supply. At the same time, while the extended period of operation of these businesses may cause many Indiana residents to visit tourist sites, every new dollar in-state visitors spend is one dollar less they can spend elsewhere in the state, resulting in no net spending change across the state economy as a whole. Therefore, because our analysis considers statewide economic effects, spending by new or repeat out-of-state visitors will be the primary driver of the economic effects, because in addition to greater spending at warm weather tourist destinations themselves—such as Holiday World, the Indianapolis Zoo, and the Indiana Dunes—out-of-state visitors will make additional in-state food, retail, and lodging purchases. The resulting economic effects include increased income for businesses and workers in Indiana and more jobs. The effects on different businesses in Indiana will differ depending on the school start dates in the states and localities where their-out-of state visitors originate. Visitors from Michigan and Ohio will likely generate most of the economic impact because both states have uniform school start dates in early September. Visits from other states like Illinois, Kentucky, and Tennessee, however, will be limited by their relatively early school start dates.

Linking the policy of a uniform start date to its economic effects necessarily involves many assumptions about how individual and organizational behavior is likely to change in response to the new start date. Ultimately, we aim to estimate a figure that encompasses the change in Indiana's GDP—that is, the value of all goods and services produced in the state in a year—resulting from a uniform start date. Our analysis is premised on the hypothesis that because tourism businesses, particularly amusement parks and arcades, use student labor and draw substantial attendance from students and their families, a uniform school start date later in the year will allow these businesses to operate at fuller capacity for longer periods during the summer.

Although these businesses may have to begin their summer operations later because of later school end dates, good weather in August will likely draw larger crowds than in May. We use Holiday World data to predict how much longer these businesses will remain open and how many more visitors this will attract, realizing that this assumes that the summer visitor and

workforce populations for other amusement parks and arcades in Indiana are similar to those of Holiday World. Of these new visitors, however, we reiterate that only those who come from outside of Indiana will generate an economic effect. This is because new visitors originating in Indiana who consume amusement park services now have less money to consume in other services in the state, yielding little to no true change in the state's GDP. Only spending by out-of-state visitors who otherwise would not have come to Indiana absent the policy will increase GDP. The money they spend on amusement park admissions and other expenses attendant to their visit will end up in the pockets of Indiana business owners and workers, and the total value of all goods and services in Indiana will increase.

Results confirm our hypothesis that a uniform school start date will yield positive economic effects to Indiana. Tables 4, 5, and 6 show the impact of uniform school start dates of the second-to-last Monday in August, last Monday in August, and post-Labor Day, respectively. If the uniform school start date is implemented for the second-to-last Monday in August, we estimate that GDP will increase by $11.3 million, an extra 249 jobs will be created, and labor income will increase by $6.9 million (see Table 4). However, the significantly larger economic benefits in Tables 5 and 6 may be realized if the start date is later (which seems less likely if schools are reluctant to push their end dates back well into June).

Table 4 – Economic Effects, Second-to-Last Monday in August Start Date[1]			
	Employment (Jobs)	**GDP**	**Labor Income**
Direct Effects	189	$6,900,000	$4,300,000
"Ripple" Effects	61	$4,400,000	$2,600,000
Total Effects	**249**	**$11,300,000**	**$6,900,000**
Multiplier	1.3	1.6	1.6

[1] Expected impact scenario, City Average CPI

Table 5 – Economic Effects, Last Monday in August Start Date[2]			
	Employment (Jobs)	**GDP**	**Labor Income**
Direct Effects	320	$11,600,000	$7,400,000
"Ripple" Effects	103	$7,500,000	$4,300,000
Total Effects	**424**	**$19,100,000**	**$11,700,000**
Multiplier	1.3	1.6	1.6

[2] Expected impact scenario, City Average CPI

Table 6 – Economic Effects, Post-Labor Day Start Date[3]			
	Employment (Jobs)	**GDP**	**Labor Income**
Direct Effects	431	$15,600,000	$9,900,000
"Ripple" Effects	139	$10,100,000	$5,800,000
Total Effects	**570**	**$25,700,000**	**$15,700,000**
Multiplier	1.3	1.6	1.6

Due to some uncertainty regarding economic and policy parameter values such as visitor levels and visitor spending, low and high estimates for each of these outcomes are included in the Appendix. For example, we demonstrate how the results change if we vary the number of person-trips by out-of-state visitors to Indiana. This is often referred to as sensitivity analysis.

The tables above present the results separated into direct and "ripple" effects of the spending. Direct effects represent the benefits accruing to Indiana businesses that will immediately receive the spending (e.g. tourist attractions, dining establishments, retailers). "Ripple" effects result from the indirect effect of spending as it moves through the economy (e.g. suppliers to the aforementioned businesses). The multiplier is equal to the total effect divided by the direct effect, and may be understood as the marginal economic benefit that will accrue to Indiana given an extra dollar or job caused by the policy change.

In contrast with economic impact analyses in other states that have estimated the economic effects of uniform school start dates, this study assumes that only new spending from out-of-state visitors will affect GDP, jobs, and labor income. Other studies count all induced spending by in-state and out-of-state visitors as "new", which serves to inflate the resulting estimates. For example, two reports estimate that uniform school start dates in Maryland and South Carolina

[3] Expected impact scenario, City Average CPI

would increase GDP by $74,300,000 and $180,000,000, respectively (Bureau of Revenue Estimates, 2013; Morse, 2002). Another study estimates that a uniform start date policy in Tennessee would increase spending by $189,890,000 (Morse & Church, 2008).

Utility Analysis

Another potential economic benefit identified in studies performed in other states of the impact of a later, uniform school start date, is the savings on school utility costs due to reduced use of air conditioning during the hottest period of the year.

The net effect for 46 counties rejects our hypothesis that there is a significant decrease in utility costs associated with a later uniform start date. Assuming the state average cost of 10 cents per kWh, if the start date moves to the second-to-last Monday in August, the net savings are 150,413.98 kWh, or a $15,041.40 decrease in utility consumption, per year for the 46 counties combined. The average savings spread across all counties and schools is insignificant. A uniform last Monday start date would produce 172,765.87 kWh savings or $17,276.59, and a post-Labor day start day yields no net savings. Lack of savings results from schools replacing fall breaks with school days in which essentially equivalent energy is used, and counties where the average June temperatures are greater than the average August temperatures. By adding school days in the months of May, June, and September/October, the projected kWh usage will increase and therefore offset any cost savings realized by pushing back the start date.

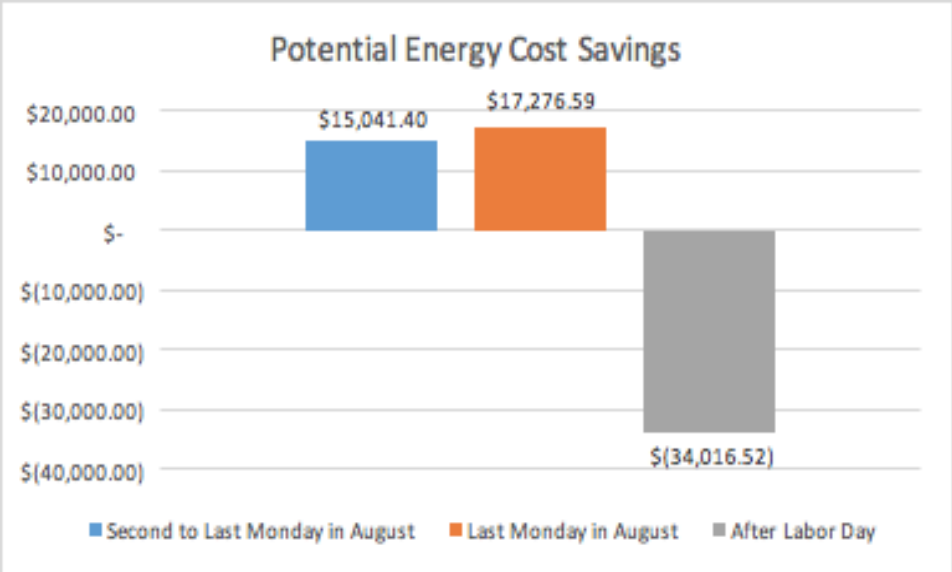


Figure 6-Potential Energy Cost Savings by uniform school start date

The linchpin of this analysis is the number of school days during the summer months (SchoolOpen). Because the data are county-level and schools may have summer sessions, we were reluctant to assume any number of school days lower than half the number of weekdays for each summer month. This means that we assumed that for the months of June and July that summer school was at a baseline of 0.5 (50% of weekdays were school days). If a new start date is implemented, whether and how schools shift their summer session schedule to accommodate that change will affect savings; if the number of school building use days is higher, then the savings will be smaller, and if the number of school building use days is lower, then the savings will be larger. An examination of school-level data for a random sample of schools statewide, which is beyond the scope of the time and resources available to the Capstone Team, would refine this analysis and allow the results to be representative of the energy consumption effects on a school-by-school basis for the State of Indiana.

Fiscal Impact

To supplement the economic impact analysis, the fiscal impact analysis estimates the effects of a uniform school start date on state and local tax revenues in Indiana. Increased revenues to the private sector resulting from increased tourism allows state and local governments to collect additional tax revenue. This in turn allows for tax reductions elsewhere or improvements in the quality of public services.

Based on our estimates, state and local governments can expect implementation of a uniform start date to result in increased tax revenue. Assuming the elasticity of tax revenues to GDP, tax revenues in Indiana are expected to increase by $1,729,876 with the state government receiving $1,106,948.00, and local governments receiving $622,928.54.

According to the Indiana Department of Tourism Development, in 2014 the tourism industry in Indiana contributed an economic boost of $8.1 billion and 1.2 billion respectively in state and

local tax revenues. Assuming similar proportions, a later school start date yields an estimated increase of $1,729,876.54 to Indiana state and local governments in 2018. Like the Economic Impact Analysis, the Fiscal Impact Analysis includes the same multipliers developed in the IMPLAN input-output model that we explain in the Methodology section.

In 2014, the State government received 63.99% of tourism industry tax revenues for a total of over $783 million. Major sources of tax revenue for the State government from the tourism industry came from sales taxes, which accounted for 75.03% of tax revenues, and personal income taxes, which accounted for 12.21% of tax revenues. Based on the proportion of tax revenues collected from the tourism industry by the State government, a uniform school start date will lead to an additional estimated $1,106,948 in State tax revenues.

Table 7 shows various sources of estimated tax revenues resulting from a uniform start date on the second to last Monday in August.

Table 7 – Estimated Increases to State Tax Revenue by Source	
Source	**Revenue Estimates**
Corporate Income	$27,122.82
Personal Income	$135,145.73
Social Insurance	$7,130.94
Other Biz	$43,622.85
Excise and Fees	$55,307.22
Rental Car Excise	$8,102.77
Sales Taxes	$830,515.66
Total	**$1,106,948.00**

In 2014, local governments in Indiana collected $449,244,000 in tax revenues from the tourism industry. Property taxes and hotel taxes accounted for 73.88% and 20.16% of these local government tax revenues respectively. Implementation of a uniform school start date results in an additional $622,928.54 from the tourism industry. Table 8 shows local tax revenues by source.

Table 8 – Estimated Increases to Local Tax Revenue by Source	
Source	**Revenue Estimate**
Personal Income	$19,089.53
Hotel Tax	$125,605.15
Admission Tax	$2,042.48
Property Taxes	$460,212.03
Rental Car	$5,545.07
Food and Beverage	$3,641.25
Other, Licenses, Fees	$6,793.03
Total	**$622,928.54**

Workforce Development

The workforce development literature review is a qualitative analysis of academic literature that studies how high school employment affects students later in life. Tourist destinations, such as Holiday World, employ many high school students during the summer months. The workforce development literature review considers the positive effects that a uniform school start date will have on future labor outcomes of high school students who are able to work during the summer.

A Uniform School Start Date Increases Labor Demand

A policy mandating that public schools start either on the second-to-last Monday of August, last Monday of August, or post-Labor Day has the effect of increasing the demand for labor at tourist destinations (and tourism support industries) and increasing the labor supply in terms of hours available for youth summer employment. As demonstrated by the economic impact analysis, a uniform start date would increase attendance and spending within the amusement parks and arcades industry and subsequently result in increased business activity in the food/beverage and accommodations sectors. Increases in attendance and business activity necessitate the hiring of additional labor in the summer season, or keeping existing labor on for longer periods of time, especially in cases where prior staffing levels are generally insufficient. High-school aged youth may fill a substantial percentage of service industry jobs. To contextualize, recent preliminary data[4] published by the Bureau of Labor Statistics show that individuals aged 16 to 19 comprised 4.3% of the total Indiana labor force in 2015, or 140,000 employees.

In terms of labor supply, a uniform start date policy allows tourist destinations to better align their operating seasons with the time that students are not in school. This, in turn, allows students to maximize the number of hours available for work at tourist destinations and tourism supported businesses. The policy may result in clear increases in terms of both labor supplied and demanded, however, the resulting effect on wage rates is ambiguous. The increase or decrease in wage rates would depend on the relative elasticities of supply and demand of labor as well as the extent to which labor supply and labor demand increase in particular industries. The examination of wage impact may be of interest for future research, but is not within the scope of this project.

Youth Employment Has a Positive Effect on Future Labor Outcomes

Research clearly demonstrates the positive effects of youth employment and hours worked while in high school on labor outcomes later in life. Stephenson (1981) finds that among low-income students, post-graduation wage rates were higher for those who worked compared with those who did not work or seek work. Meyer and Wise (1982) similarly find a strong positive relationship between hours and weeks worked while in high school and wage rates for the first

[4] Please see Table 13 in the Appendix

four years after graduation. A study by Ruhm (1995) demonstrates that job-holding in the senior year of high school correlates with increases in future economic attainment as measured by earnings, wages, occupational status, and the receipt of fringe benefits. Another study (Carr, Wright, & Brody, 1996) indicates that, despite potential tradeoffs between educational attainment and employment, hours worked in high school positively correlate with labor force participation, employment, and income 10 years after graduation. A study by Light (1999) refines Ruhm's methodology and demonstrates that high school employment has a positive effect on post-graduation wages for male terminal high school graduates. Lastly, a recent study by Ormiston (2016) finds that improved labor outcomes resulting from high school employment are attributable to increases in general human capital (soft skills), which are learned at a young age by workers at Holiday World. Table 9 presents the summary of primary findings on the effects of high school employment. Please refer to more detailed information on the literature review in the Workforce Development Section in the Appendix.

Table 9 – Summary of Primary Findings of the Effects of High School Employment		
Study	Year	Finding
Ruhm	1995	Compared with seniors who do not hold jobs, working 10 hours per week throughout the academic year is associated with 11 percent greater future earnings, a 5 percent rise in hourly wages, a 7.4 percent increase in the probability of obtaining health insurance, and a 5.5 percent increase in the probability of obtaining employer pension coverage.
		Compared with seniors who do not hold jobs, working 20 hours per week throughout the academic year is associated with 19.3 percent greater future earnings, a 9.1 percent rise in hourly wages, a 12.5 percent increase in the probability of obtaining health insurance, and an 8.6 percent increase in the probability of obtaining employer pension coverage.
Carr, Wright, & Brody	1996	For each additional 100 hours worked in 1978, the odds of being in the labor force in 1991 are raised by a factor of 1.04.
		Hours worked in 1978 are positively correlated with the probability of employment in 1991.
		For every additional hour worked as a teenager in 1979, one could expect to earn $1.87 more in 1990.
Light	1999	Compared with a nonworking counterpart, a student who averages 25 hours per week of work throughout his last two years of high school receives 6 percent more in wages later in life.
		Compared with a nonworking counterpart, a student who averages 11 to 20 hours per week of work throughout his last two years of high school receives 4.6 percent more in wages later in life.
		Compared with a nonworking counterpart, a student who averages 1 to 10 hours per week of work throughout his last two years of high school receives 1.2 percent more in wages later in life.
Ormiston	2016	Increases in adult earnings are attributable to increases in workplace socialization and character building.

Weaknesses in Existing Research: Selection Bias

The majority of studies acknowledge that the primary challenge in assessing labor outcomes of students who work in high school is that students who choose to work may systematically differ from those who choose not to work in both observable and unobservable ways, a problem referred to as selection bias. Many of these studies introduce covariates to account for observable differences such as ethnicity, parents' educational attainment, or cognitive ability. Introducing covariates is the academically accepted way to determine the effects of observable differences. However, unobservable differences, such as ambition or motivation, are controlled for through alternative methods such as a regression discontinuity design or a randomized field experiment.

If not accounted for, effects on future economic attainment may be wrongly attributed to employment or hours worked in high school rather than pre-existing unobserved differences between students. However, ethical concerns limit the ability to use study designs – in particular a randomized field experiment – that would permit some students to work but prohibit others from working. Ruhm (1995), Carr et al. (1996), and Light (1999) are the only to address and attempt to mitigate the issue of selection bias. The two studies (Stephenson, Meyer & Wise) prior to Ruhm's are not considered in detail below because of their failure to address the issue of selection bias.

High School Seniors Who Work Earn More and Are More Likely to Receive Fringe Benefits as an Adult

Ruhm (1995) utilizes data from the National Longitudinal Survey of Youth (NLSY), first conducted in 1979, to determine the effect of hours worked per week by seniors on annual earnings and the receipt of fringe benefits 6 to 9 years after their scheduled date of high school graduation. He purports to be the first researcher to overcome the selection bias shortcoming in prior research.

To mitigate selection bias, Ruhm uses a wide range of supplemental covariates in addition to standard demographic variables: whether the respondent and his or her parents are foreign born; if magazines, newspapers, or library cards were in the home at age 14; whether the respondent considered school boring, unsafe, or was very dissatisfied with it; whether the student had smoked cigarettes or used drugs (marijuana or hashish) by sophomore year of high school;

expected years of education; (log of) family income; and others. Though Ruhm does not articulate his choice of supplemental covariates, they are most likely chosen to tease out the effects of the aforementioned unobserved variables like motivation, and, more importantly, they were the closest proxies that he had available from the survey. Given that selection bias is not eliminated simply by using a wide range of covariates, it should be noted that the estimates he obtains may not be representative of the actual effects of hours worked in high school.

Ruhm presents his main findings as expected differences in future economic attainment between high school seniors who worked 10 hours, 20 hours, or 40 hours a week and those who did not work. He finds that seniors who worked 10 hours a week during senior year earned 11 percent more annually, had a 7.4 percent higher probability of obtaining health insurance, and had a 5.5 percent higher probability of obtaining pension coverage 6 to 9 years after their scheduled graduation date. For those who worked 20 hours a week, he finds 19.3 percent higher annual earnings, a 12.5 percent higher probability of obtaining health insurance, and an 8.6 percent higher probability of obtaining pension coverage 6 to 9 years after scheduled graduation date. Even for students who worked 40 hours a week, he finds similar positive differentials.

Hours Worked in High School Increases Future Income and Probability of Employment

Carr et al. (1996) use data from the 1979 NLSY, in particular the 1979 and 1991 waves, to determine the effect of hours worked by students in 1978 on the outcomes of labor force participation, employment, and family poverty status in 1991. Like Ruhm, they employ a wide range of control variables both for family background and individual education factors, but they also fail to overcome the issue of selection bias in their analysis. As such, their estimates cannot be treated as representative of the actual effects of hours worked by students on future economic attainment. Their analysis does augment Ruhm's, in that they look at the effect of hours worked for the entire calendar year, whereas Ruhm specifically looked at hours worked during the academic year. This literature review will later explore the mechanisms by which student employment improves future labor outcomes to demonstrate that summer employment does not likely differ from academic year employment in its effects.

They find that for each additional 100 hours worked in 1978, the odds of being in the labor force in 1991 increase by a factor of 1.04. Additionally, given that someone was in the labor force, hours worked in 1978 positively correlates with the probability that they were employed in 1991.

Regarding income, they find that each additional hour worked in 1979 results in additional earnings of $1.87 in 1990. However, they find that hours worked in 1978 is not predictive of whether a household had total income below the federal poverty line in 1990.

High School Employment Has a Positive Effect on Adult Wages

Light (1999) also uses 1979 NLSY data but limits her sample to male respondents who were terminal high school graduates, or respondents who had no further education after high school. She claims Ruhm's omission of schooling attainment and post-high school work experience prevents him from being able to separate out the effects on wages of high school employment from the effects of post-secondary schooling and post-graduation work experience. She eliminates these factors by limiting her sample to terminal high school graduates.

Light contends with the issue of selection bias through an instrumental variable and generalized least squares procedure. She claims this procedure mitigates the issue of correlation between high school employment and personal, unobservable characteristics of students. In her model, wages depend on high school work experience, high school achievement, high school quality, ability, market characteristics, post-high school work experience, and family and personal characteristics.

She utilizes various models and allows for both linear and nonlinear effects of high school work on adult wages. She indicates that three of her models are superior in that they include the widest array of covariates, mitigate the issue of selection bias, and measure high school employment in the most comprehensive way. These models converge on an estimate that implies a student who averages 25 hours per week of work throughout his last two years of high school receives 6 percent more in wages later in life than a nonworking counterpart. A student who averages 11 to 20 hours per week earns 4.6 percent more, and a student who averages 1 to 10 hours per week earns 1.2 percent more. An alternative model shows, however, that these wage premiums diminish in the 8^{th} and 9^{th} year following graduation. She concludes that, while Ruhm previously overstated his estimates, high school employment does have a positive effect on adult wages by facilitating the transition from school to work.

Increases in Adult Earnings are Attributable to Increases in General Human Capital (Soft Skills Attainment)

Ormiston (2016) explores the relationship between high school employment and improved adult earnings. Using data from the 1997 NLSY, he finds that there is no correlation between the vocational skills learned in high school employment and adult earnings. In other words, the improvements in future economic attainment demonstrated by prior studies are likely due to increases in general human capital (soft skills), which he describes as workplace socialization and character-building. This also implies that summer employment has effects on future economic attainment similar to academic year employment, as summer employment similarly gives students the opportunity to develop soft skills. However, the skills of time management and task prioritization may be better developed by academic year employment, when students are likely to have more tasks to balance within a more rigid timeframe.

Ormiston determines whether remaining within the same occupational category, between high school employment and adult employment, is associated with higher wages. He finds at age 20, those who remain employed in the same occupational category as their high school job earned nearly the same as those who were employed in a different occupational category. At age 23, he finds no difference in average wages between those who remain in the same occupational category and those were employed in a different category. However, across certain occupational categories (personal service; construction; transportation and material moving; and professional and management), he finds that prior occupational experience positively correlates with wages. Overall, his findings tend to indicate that there is very limited transferability of occupation-specific skills from high school work to adult work, leading him to the conclusion that improved future economic attainment for high school workers is due to improved general human capital (soft skills).

Effect of a Uniform Start Date on School Calendars and Indiana Law

In order to determine how schools are likely to respond to a mandated uniform start date, researchers consulted with a school board member and an administrator at Monroe County Community School Corporation (MCCSC) in Bloomington, IN. Although the School Board does not generate the calendar, it does have final approval of the proposed schedule. Both the school

board member and the administrator at MCCSC are aware of the topics considered during school calendar construction.

Interviewees indicated "tradition" is a key criterion for decision making, saying parents, teachers, and students have an expectation (and preference) that school will end in early June. The MCCSC administrator suggested that schools will be more likely to reduce breaks than extend the school end date. Holiday World's polling indicated a similar notion, noting that, *"A strong majority (68%) of voters say the end date is "about right."* Therefore, in order to accommodate a late-August uniform start date, schools are likely to reduce or eliminate breaks.

To better understand the potential effects of a uniform start date, we reviewed Indianapolis Public School's (IPS) calendar for 2016-2017. Because Indianapolis serves as a vital market for Holiday World and is home to over 29,000 students, we determined that it would be important to examine how they may adjust to a uniform school start date. While we were unable to speak directly with IPS school board members or administrators, we have no reason to believe their considerations would be substantially different from those of MCCSC.

For the upcoming school year, IPS will begin on August 3, 2016 and finish on June 7. This means that IPS students, teachers, staff, and administrators currently have 7 weeks of summer between the end of school calendar 2015-2016 and school calendar 2016-2017. The 2016-2017 calendar contains 180 student days (mandated by law), 37 break days, and 5 professional development/non-student workdays for teachers.

The 37 break days are as follows:

- Fall Break (10 days)
- Thanksgiving Break (3 days)
- Winter Break (10 days)
- Spring Break Flex (5 days)
- Spring Break Mandatory (5 days)
- MLK Day
- Labor Day

- Presidents Day
- Memorial Day

The target date for a uniform start date matters and will likely be a determining factor for how IPS responds. A 2nd to last Monday in August start would require shifting 15 student days from August to other days in the calendar; a last Monday in August start would require shifting 20 days; and a post-labor day start would require shifting 25 student days. Holiday World's polling says, "a solid majority (55%) of voters would prefer a longer summer vacation with traditional breaks over a shorter summer vacation with more breaks (41%). Thus, we assume the shifting of days will be absorbed by the days currently reserved for breaks.

However, it is possible that schools will eliminate professional development days and teacher work days to accommodate the shift. This may anger teachers and move them to protest the bill. Thus, we recommend that proposed legislation should provide for a minimum number of professional development days and student-free work days for teachers

If a 2nd to last Monday in August is selected as a uniform start date, we believe that it would increase IPS's summer from 7 weeks to 10 weeks without lengthening the school year. This would benefit students and the economy in the ways outlined above and offer Hoosier families additional vacation time together. While shortening the required number of instructional days may be considered, it appears from our research and conversations with Holiday World that there is little support for doing so. Accordingly, we recommend that proposed legislation should preserve the 180 instructional day minimum requirement.

The school board member and administrator at MCCSC also indicated that high schools must start before or coincide with the start date of universities in Indiana. This is due to the reliance on universities and community colleges for duel credit classes for students at Indiana high schools. At MCCSC, families saved $759,412.78 in college credits due to the availability of dual credit classes (2010 Referendum Update). An analysis of university start dates in Indiana shows that 1 university starts prior to August 22, 2016, 14 start between Aug 22-26, 4 start between Aug 29-Sept 4, and 1 begins after Labor Day. This indicates that if the policy mandates a uniform start

date after the 2nd to last Monday in August, dual credit class participation by high school students may be in jeopardy. We therefore recommend that proposed legislation should identify the 2nd to last Monday in August as the universal start date for Indiana public schools.

Lastly, there is potential for disruption and confusion if a uniform start date policy passes while a school is operating within a pre-planned calendar. MCCSC sets its calendar on a three-year cycle. If a law passed mandating a start date on the 2nd to last Monday in August, MCCSC would be required to prematurely assemble the calendar committee to determine a new calendar. This may be viewed as an inconvenience not only for MCCSC teachers, parents, staff, and students, but also community partners, companies, and so on that rely on MCCSC teachers, parents, staff, and students. This is likely to generate animosity toward the change, especially among those concerned about preservation of local control. Therefore, we recommend that proposed uniform start date legislation should include a 5-year implementation moratorium.

Any proposed policy change mandating a uniform start date may implicate existing Indiana law. Specifically, IC 20-30-2-3 states:

> "For each school year, a school corporation shall conduct at least one hundred eighty (180) student instructional days. Not later than June 15 of each school year, the superintendent of each school corporation shall certify to the department the number of student instructional days conducted during that school year."

Under IC 20-30-2-3, the 180 student instruction days must be certified to the Indiana Department of Education by June 15. If a uniform start date compels a school to push the end date of their school later into June, they may be unable to certify their completed days on or before the June 15 deadline. If a school misses the certification deadline, they are subject to reductions in tuition support.

Note too that IC 20-18-2-17 states:

> "School year" means the period:
> (1) beginning after June 30 of each year; and (2) ending before July 1 of the following year; except when a different period is specified for a particular purpose.

It seems highly unlikely that a school confronting a later start date would want to hold classes after July 1, however, and so we do not anticipate any modification to this provision in connection with enacting a uniform start date. We do recommend that proposed uniform start date legislation address the student instructional day certification due date.

Utility of Partnering with the Advanced Manufacturing and Logistics Industry

We generated economic and fiscal impact reports under the assumption that a uniform start date would occur on the 2nd to last Monday of August. This date allows schools the flexibility to accommodate a longer summer while simultaneously starting the year before universities and colleges begin in Indiana. While there are benefits to establishing a uniform start date, many legislators have voiced their support for local control of school calendars. In order to counter the argument that schools should retain local control, it may help to frame the problem as a statewide issue that requires a statewide solution. In Indiana, workforce development is a statewide issue.

Cook Inc. serves as one of southwest central Indiana's largest employers. The company manufactures health care devises and other cutting edge products. Over the past year, Cook Inc. has consistently listed 100+ available positions with the company. Many of the open positions only require a high school diploma or GED. To understand why Cook is unable to fill its open positions in a city with a higher unemployment rate (5.8%) than the state average (4.7%), we consulted with Bloomington Economic Development Corporation (BEDC) president Lynn Coyne. Lynn said that the primary reason Cook Inc. is unable to fill its open positions is because many workers lack the soft skills required to work at Cook Inc. It is therefore reasonable to assume that if more students had the opportunity to work in high school, there may be more workers with the necessary soft skills to work at Cook Inc. after graduation.

The State of Indiana and the Lilly Endowment have also identified workforce development as a statewide issue. In 2015, the funded Conexus Indiana, a nonprofit focusing on workforce development issues in the AML industry, to establish the Conexus Interns. The program financed 84 high school students to work at 30 AML companies across Indiana. At the Indiana Economic Development Association annual meeting, AML companies that had employed Conexus Interns

reported that not only did their interns developed an interest in advanced manufacturing, but also they gained soft skills that will be beneficial for future employment.

In light of these findings, the Capstone Team has identified the Advanced Manufacturing and Logistics (AML) industry as a potential partner in establishing a uniform start date. While a partnership between Holiday World and AML may seem unorthodox, both may benefit from a longer summer break.

Data Sources

Data sources and tools for the analysis include the following:

- 10 years of attendance data from Holiday World
- Data regarding the economic effects of tourism and the demographic and spending profile of visitors to Indiana, from reports commissioned by the Indiana Department of Tourism Development
- Historical temperatures in Spencer County
- Monthly school utility costs by county from Duke Energy
- Personal interviews with local school board officials
- The IMPLAN model described more fully below

Methodology

Economic Impact

Utilizing attendance data from Holiday World over the past 10 years, and data regarding the economic effects of tourism as well as the demographic and spending profile of visitors to Indiana from reports commissioned by the Indiana Office of Tourism Development (IOTD), we first predict the change in visitors induced to come to Indiana under a uniform school start date. We translate these results into spending changes by industry and input into the IMPLAN input-output model to forecast changes in GDP, employment, and labor income.

IMPLAN simulates the Indiana economy by identifying interdependencies among industries, allowing the user to estimate how specified spending changes in certain industries would change total output in the form of GDP, employment, and labor income. The economic impact analysis process is illustrated in Figure 3.

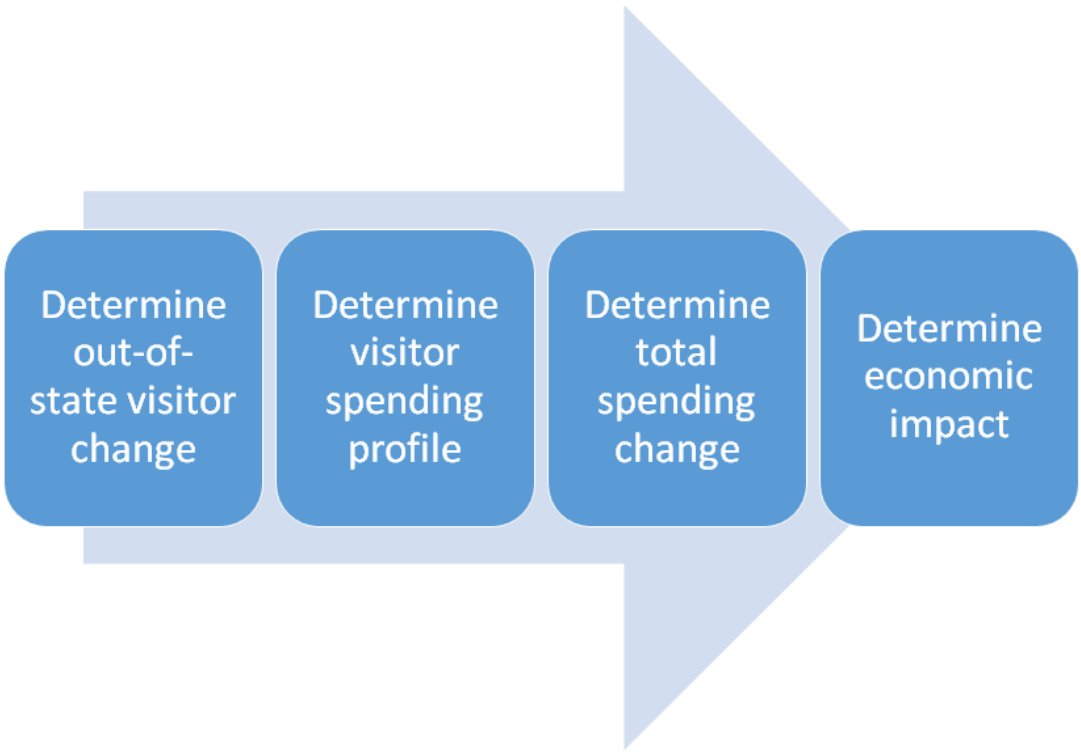


Figure 3 - Economic Impact Analysis Process Overview

To find the change in visitors due to the policy, we first fit the multivariate regression model specified below to daily Holiday World attendance from 2007 to 2009, omitting missing and zero attendance and temperature observations:

$$y_t = \beta_0 + \beta_1 temp_t + \beta_2 Sat_t + \beta_3 Summer_t + \varepsilon_t,$$

where y_t is attendance at Holiday World on day *t*, $temp_t$ is the temperature in Spencer County on day *t*, Sat_t is a dummy variable indicating a Saturday, $Summer_t$ is a dummy variable indicating the date of the observation is within Holiday World's summer season, defined as the period during which daily attendance continuously remains nonzero, and $\varepsilon_t$represents random error.

After fitting this model[5], we estimate the percent change in total visitors with

[5] All variables are statistically significant at the α=.01 level of significance, suggesting that they are appropriately chosen for the purpose of forecasting.

$$\frac{\sum_{t=d}^{n} \hat{y}_t - \sum_{t=d}^{n} y_t}{\sum_{t=0}^{n} y_t},$$

where n is the last day of operations during the year, d is the season end date, and $\hat{y}_t$ is predicted attendance given an extended summer season. For d, we use August 13, which has been the average season end date for years 2013 to 2016. This figure for the years 2007 through 2009 is the predicted percentage change in Holiday World's sales to out-of-state visitors[6], assuming that annual sales perfectly correlate with annual visitor counts.

[6] We use data from 2007 to 2009 because more recent temperature data is not available. Average attendance during these years does not differ significantly from attendance for more recent years.

Our approach in estimating new visitor spending relies on data from a 2006 survey report issued by the Indiana Office of Tourism Development detailing demographic and spending profiles of visitors to Indiana. To estimate new visitors' total spending in Indiana, we create a profile that disaggregates the total trip spending of a typical out-of-state visitor or group of visitors who would be induced to visit an Indiana amusement park as a result of the park staying open more days later in the season due to implementation of a uniform school start date. The visitor trip profile is presented in Table 1.

Table 1 – 2016 Visitor Trip Spending Profile	
Activity	**Spending, 2016**[7]
Shopping	$88.74
Amusement Park/Arcade	$106.05
Zoo/Aquarium	$13.65
Other Attraction	$13.34
Art Museum	$5.17
Lodging	$82.97
Transportation	$61.59
Food	$180.52
Total	$552.03

[7] Adjusted for inflation using City Average CPI for apparel, admissions, shelter, other lodging away from home including hotels and motels, gasoline (all types), and food away from home. Dollar figures do not significantly change when the Midwest CPI is used. We use the City Average CPI because they are more detailed; however, final results using both indices are presented in Appendix A.

To find the change in trips induced by the policy, we apply the following equation, using data from the 2006 report, the 2014 Economic Impact of Tourism in Indiana report written by Rockport Analytics, and previous results:

$$\frac{amusementpercent * ONLpercent * ptrips * visitorchange}{tripsize}.$$

The definitions and sources of these variables are detailed in Table 2.

Table 2 – Variables in Change in Trips Equation

Variable	Definition	Source
$amusementpercen$	Percent of visitors who come to Indiana specifically for an amusement park	IOTD, 2006
$ONLpercent$	Percent of overnight leisure person-stays of out-of-state visitors	IOTD, 2006
$ptrips$	Total overnight person-trips plus estimated out-of-state day person-trips	Rockport, 2014
$visitorchange$	Percent change in Holiday World visitors	Estimated earlier in report
$tripsize$	Average trip size of amusement park visitors	IOTD, 2006

We calculate the average trip size by multiplying the percentage of respondents indicating that they brought one or more of certain types of relatives or friends on their trip to an Indiana amusement park by an estimate of the average number of people within these groups, excluding zero counts. This is detailed in Table 3.

Table 3 – Average Trip Size Calculation		
Individual(s) on Trip	**Average Number in Category**	**Trips with Specified Individual(s)**
Spouse/Significant Other	1.00	64%
Child(ren) 0-12	1.25	44%
Child(ren) 13+	1.25	30%
Grandchild(ren)	1.25	8%
Other Family	1.25	22%
Friends	1.25	22%
Self	1.00	100%
Average Trip Size (column sumproduct)	3.215	

To calculate the sales changes in different industries resulting from increased visits, we multiply the induced increase in trips by inflation-adjusted average trip spending in each category (Table 1).

In addition to the methodological assumptions explained previously, we assume:

- The net spending change among Indiana residents is zero as a result of a uniform school start date, because spending by new in-state visitors to amusement parks is offset by less spending elsewhere in the economy;
- There is no net economic effect of the spending by Indiana residents that is shifted to the Amusement Parks and Arcade industry from other uses;
- Variables not measured in the Holiday World attendance regression (e.g. school start dates in states bordering Indiana[8]) have an insignificant effect on attendance;
- Peripheral economic effects, such as Indiana residents traveling outside of Indiana or increased spending in industries other than those analyzed, are insignificant;
- Business trips are not affected by a uniform school start date; and
- Characteristics of the average out-of-state visitor have not changed since 2006.

Utility Analysis

Another consideration for adopting a uniform school date is the direct effect on school utility spending. The only operating costs that should change are those related to building use. To determine the saved operating costs of schools, we analyzed Duke Energy data over the last 48 months in 46 counties in a Fixed Effects Model (FEM) to control for the differences between counties and years.

To determine the cost savings associated with later start dates we used a multivariate regression highlighted below. Months with missing data are omitted:

$$kWh_t = \beta_0 + \beta_1(Temp_t) + \beta_2(SchoolOpen) + \varepsilon_t$$ [9]

[8] This is a potential limitation to our model due to the relatively early start dates in some bordering states. For school start date distributions in Kentucky and Illinois, see Figures 4 and 5 in the Appendix. The median school start dates in these states are 8/6/2015 and 8/17/2015, respectively. However, schools in Michigan cannot start before Labor Day and schools in Wisconsin cannot start before September 1.

[9] The temperature variable is significant at the α=.05 while the SchoolOpen is only significant at the .1 level. This provides more evidence both on the significance of weather and the insignificance that the number of school days have on energy consumption.

Where kWh_t is the monthly energy consumption for public schools by county in month t, $Temp_t$ is the average temperature for the county in month t, and *SchoolOpen* is the number of school days a school is open in a month divided by the total number of days in a month. We believe energy consumption largely comes from school operation, so this variable will allow us to test the effect that this change has during the summer months. This variable accounts for regular breaks and holidays throughout the school year. We expect that increases in either or both of these variables will increase kilowatt hour (kWh) usage for schools.

For the multivariate regression highlighted above we needed to make the following assumptions:

- Schools' energy consumption in summer months (June, July, and August) is a result of 50% of school days being used (so SchoolOpen variable is 0.5), and
- Breaks during the academic year will be reduced such that schools will finish on or before June 15th.

  We then estimate the kilowatt hour usage for May, June, and August using this equation:

$$\sum_{t=May}^{August}(kWh_t - kWh_{tn})$$

Where kWh_{tn} is the expected kilowatt hours under a new school start and end date, and kWh_t is the baseline value under the current system for each county. Real changes that occur result from the decrease in August days of operation and increase in May and June days of operation, assuming that school calendars have similar breaks within the academic year. For estimating the kilowatt hours' usage in the equation above we assumed that temperature for each month was the 48-month average. If temperature were to increase in August or June, savings would increase or decrease respectively.

Fiscal Impact

Researchers base finding for the Fiscal Analysis on the Economic Impact Analysis, therefore the assumptions to determine fiscal impacts are the same. These assumptions include the change in out-of-state visitors, visitor profiles, and visitors' spending habits. Further assumptions include perfect correlation between the elasticity, or responsiveness, of sales and property taxes to the

anticipated changes in GDP resulting from a uniform school start date. However, this may result in conservative estimates.

Economic Impact and Workforce Development Appendices

Tables 10, 11, and 12 outline how the results of our economic impact analysis change when economic parameters such as out-of-state visitors, trip size, and percent of out-of-state visitors who come to Indiana specifically for amusement parks are varied. The figures in the low impact scenario represent these parameters in somewhat of a worst-case scenario, while the figures in the high impact scenario represent these parameters in somewhat of a best-case scenario. Table 12 provides estimates using the Midwest CPI instead of the City Average CPI.

Table 10 – Economic Effects, Low Impact Scenario[10]			
	Employment (Jobs)	GDP	Labor Income
Direct Effects	173	$6,200,000	$4,000,000
"Ripple" Effects	55	$4,000,000	$2,300,000
Total Effects	**228**	**$10,200,000**	**$6,300,000**

Table 11 – Economic Effects, High Impact Scenario[11]			
	Employment (Jobs)	GDP	Labor Income
Direct Effects	465	$17,000,000	$10,700,000
"Ripple" Effects	151	$10,900,000	$6,300,000
Total Effects	**616**	**$27,900,000**	**$17,000,000**

[10] City Average CPI, Labor Day start date
[11] City Average CPI, Labor Day start date

Table 12 – Economic Effects, Midwest CPI[12]			
	Employment (Jobs)	GDP	Labor Income
Direct Effects	419	$15,000,000	$9,500,000
"Ripple" Effects	133	$9,600,000	$5,600,000
Total Effects	**553**	**$24,600,000**	**$15,100,000**

[12] Expected impact scenario, Labor Day start date

Table 13- Employment Status of the Civilian Noninstitutional Population in Indiana (Preliminary): 2015 Annual Averages (in Thousands) [13]							
Group	Civilian non-institutional population	Civilian labor force					
		Number	Percent of population	Employment		Unemployment	
				Number	Percent of population	Number	Rate
Total	5,132	3,273	63.8	3,116	60.7	156	4.8
Total, 16 to 19 years	353	140	39.6	113	32.1	27	19.2
Total, 20 to 24 years	428	309	72.1	284	66.4	25	8.0
Total, 25 to 34 years	883	725	82.1	689	78.0	36	5.0
Total, 35 to 44 years	804	676	84.0	652	81.0	24	3.5
Total, 45 to 54 years	837	677	80.8	652	77.9	25	3.7
Total, 55 to 64 years	854	565	66.2	551	64.6	14	2.5
Total, 65 years and over	974	182	18.7	176	18.1	6	3.2

[13] See "Employment Status of the Civilian Noninstitutional Population in States by Sex, Race, Hispanic or Latino Ethnicity, and Detailed Age (Preliminary)" at http://www.bls.gov/lau/ptable14full2015.xlsx

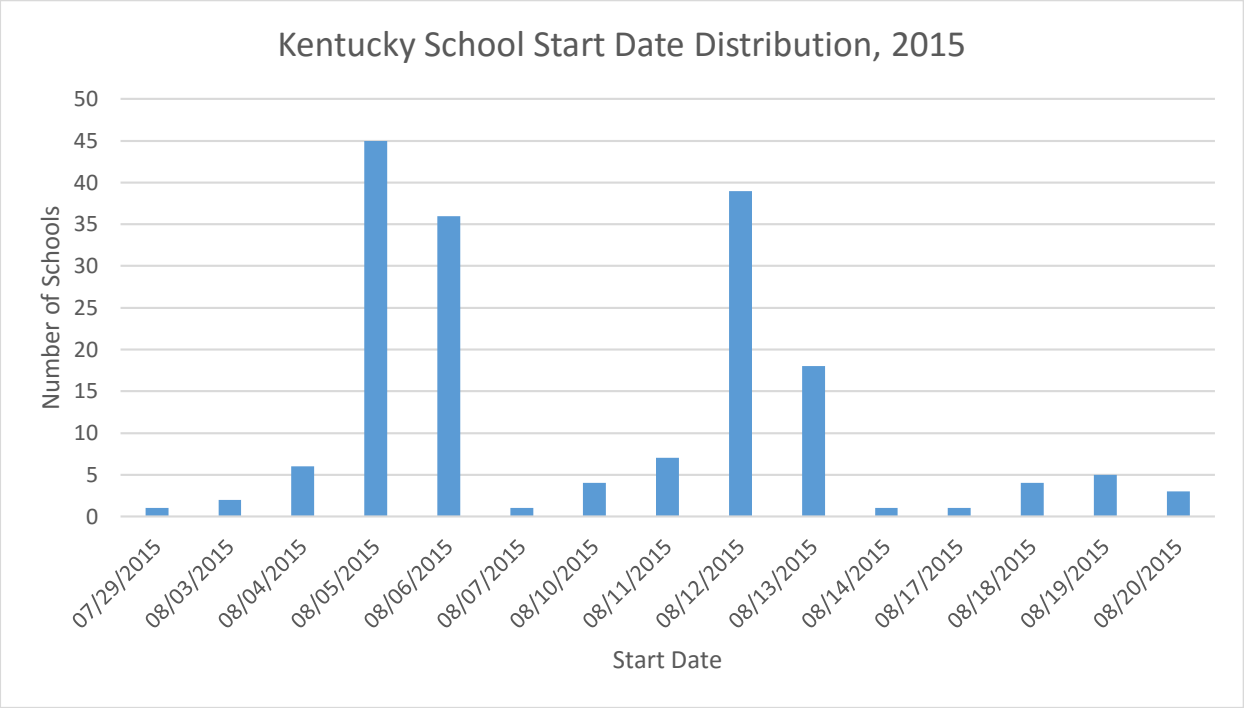


Figure 4 – Kentucky School Start Date Distribution, 2015

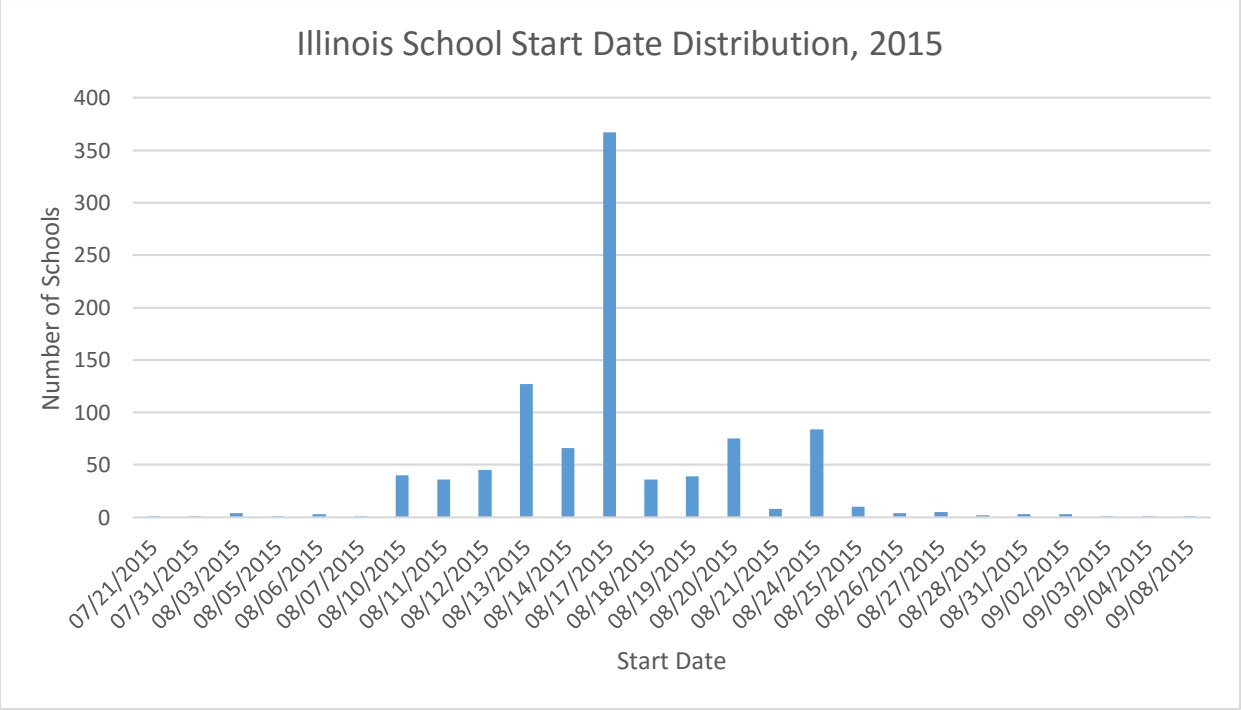


Figure 5 – Illinois School Start Date Distribution, 2015

Educational Attainment

The Capstone Team analyzed the relationship between school district start dates and student academic performance indicators in Indiana and similar states, in order to identify the potential impact on student achievement of a proposed statewide uniform-late school start date.

There is a dearth of existing research on the issue of how timing of school start dates affects student success, and the work the Capstone Team was able to perform was necessarily limited in scope and complexity given time and data constraints. Further studies employing a variety of designs would help provide the evidence that schools and policymakers need to make more informed decisions about when to start their academic years in order to bolster outcomes such as higher test scores, retention and graduation rates, and so on.

Summary of Findings

Results from regression analyses indicate there is no statistical correlation between start date and academic achievement. Specifically, our primary finding is that there exists no apparent or meaningful correlation between a school district's starting date and students' educational achievement in Indiana, Iowa, or Minnesota. When controlling for factors including race, free/reduced lunch, corporation accountability grade, sex, special education, foreign English learners, and year fixed effects, much of the variation in each outcome variable is explained, and the correlation between the starting date drops to zero.

While this finding addresses *correlation* and not *causation*, it supports the conclusion that a school district's decision to start in early, mid, or late August is unlikely to be associated with any measurable effect on important education outcomes such as graduation rate, test scores, and so on.

Research indicates that students retain information better if material is presented more than once over spaced periods of time, and that the longer the interval, the more challenging the knowledge reconstruction process and the greater likelihood of retention. This suggests that students may benefit academically if exams are pushed back to after Winter break as a result of adopting a later school start date, and may not suffer academically if summer break is extended, at least modestly.

Research also indicates that youth summer employment correlates positively with student achievement measures.

These results can help respond to concerns that legislators or stakeholders may raise about later start dates undermining knowledge retention and academic success.

Statement of Problem

Currently in the state of Indiana, school start dates are highly variable, ranging from the last week of July to the second week of September. This inconsistency, along with the tendency toward earlier start dates, may rob students of key opportunities, including more extensive summer employment and other worthwhile summer activities that may offer skills-building and other benefits that support academic success. A uniform late school start date could prove advantageous for Hoosier students due to both the additional employment benefits and to the academic effects of postponing exams until after Winter Break.

Hypotheses

1. Choice of school start date does not negatively correlate with student achievement measures, in Indiana and in other states which already have uniform start dates
2. Changing from the status quo to a uniform late start date in Indiana schools will not negatively correlate with student achievement measures
3. Involvement in summer employment positively correlates with student achievement measures

Findings

Summer vacation is a time for students to pursue interests and opportunities outside of the classroom environment. This can include employment, volunteering, athletics, and other extracurricular activities. Feldman and Matjasko (2005) argue that such activities largely have a positive general correlation with a variety of developmental outcome measures including academic achievement and psychological adjustment. Despite this relationship, school corporations across the state of Indiana are opting to begin their school year earlier and earlier, even pushing into July. In Indiana, which features unpredictable weather early in the summer, this shift can have the effect of shortening the amount of time students have to pursue many weather-dependent summertime activities.

Using a quasi-experimental model, the researchers utilized Ordinary Least Squares (OLS) regression to compare the student achievement outcome measures of school corporations to determine if there is any correlation with the start date. While the research faced several limitations (described more fully below), it showed that, when controlling for appropriate factors, school start date does not have an effect on student achievement measures. Accordingly, starting earlier does not result in increased achievement and starting later does not hamper student achievement.

During scope development, the research team discussed several issues related to changes in school start dates, including especially how school districts in Indiana may alter their calendars if required to adopt a late, uniform school start date. Indiana law requires each school to hold at least 180 instructional days for students in kindergarten through 12th grade (IC 20-18-2-17). This law prohibits districts from simply cutting the total length of their school year, which some districts might otherwise be inclined to do if a uniform late school start date law were passed. As noted elsewhere in this report, the Capstone Team considers it likely that schools districts would shorten breaks within their calendars and convert them to instructional days, and possibly extend their end date in a limited way.

If this were to occur, some schools that start closer to the middle of the summer may be inclined to push their first semester exams to after winter break. As detailed in the literature review below, several studies examine how this could affect student performance. While there is no consensus on the topic, many researchers claim that tests given after winter break are a better measure of knowledge retention, while tests given before winter break tend to measure short-term memorization capacity, which is less useful. Despite research demonstrating that spaced learning is positively related to student test scores, some continue to favor "massed learning" (studying and testing close in time) and argue that students may score worse if winter break separates their learning and subsequent testing. Persuading them to the contrary may be difficult.

Other school timing matters could surface if a mandatory school start date bill is proposed. The optimum length of school days, school years, and summer vacations are all being heavily debated among stakeholders currently. Expert conclusions on these issues are mixed, but many believe that the date a school year begins is not the most important school time topic to explore. Although Holiday World has indicated that to date, legislators are not interested in exploring a

move from number of instructional days to instructional hours, for example, such issues could emerge in future and derail the passing of a uniform, late school start date law in Indiana.

Methodology

Study Design

Our quasi-experimental research design assesses the relationship between dependent variables – academic performance indicators of K12 public school students such as graduation rate, ACT scores, state test scores, and so on – and a vector of independent variables (Price, 2016).

For each school district, researchers sought demographic variables to increase the power of subsequent regressions. Some variables include ethnicity, gender, grade, free and reduced lunch, limited English proficiency, and special education.

Researchers also sought to retrieve data on dependent, or outcome, variables. Because states define, calculate, and assess student performance in vastly different manners, researchers collected information on as many outcome variables as rationally fit within the context of the analysis. Similar variables across states, such as graduation rates, ACT scores, and attendance rates are included in our comparative analysis.

Researchers retrieved data from Indiana, Iowa and Minnesota and start dates for Indiana school districts from the 2007-2008 school year through the 2014-2015 school year. We selected Minnesota and Iowa because they have already implemented uniform start dates and are broadly comparable to Indiana in terms of demographics, geography, economy and culture. Unfortunately, state education departments in Minnesota and Iowa do not track historical district start dates.

Data cleaning occurred throughout the collection period, and often simultaneously with data collection. The researchers downloaded datasets from department of education websites as Excel documents. We used Excel, STATA, or both to manipulate the data into a format compatible with STATA specifications. The authors imported all Excel data into STATA before beginning analysis.

Strategy and Measurement

Researchers ran four sets of regression analyses on datasets for Indiana, Iowa, Minnesota, and on Indiana/Iowa jointly. Ordinary Least Squares (OLS) regression for each dataset tested for correlations between a later starting date and a list of educational outcome variables.

Regressions varied slightly depending on the state. For example, a variable in the Indiana data calculated how many days a particular school district's starting date deviated from a designated middle date (in this case August 15th). A district starting on August 21st would for example have a value of "6" for this variable, while a district starting on August 9th would have a value of "-6". The Minnesota dataset did not include individual district starting dates, so a different approach was taken. Minnesota enforced a universal starting date beginning in the 2006-2007 school year, so a dummy variable indicated whether the observation was before or after the enforcement of this law.

Tables 1 through *4* below contain the results for each regression. The columns in the tables show the coefficient estimates for each variable included in the regression, while the rows reflect the outcome variables tested.

Table 1 shows regression results for the Indiana school districts. The most important figures in this table are given on the first row, showing the correlation coefficient for differences in starting date. One can clearly observe that each outcome variable has either zero, or a value statistically indistinguishable from zero, with the sole exception of ACT scores, which have a negligible correlation.

Table 1: Indiana School Districts

	(1) Math ISTEP+ (2009 – 2010)	(2) ELA STEP+ (2009 – 2010)	(3) Math & ELA ISTEP+ (2009 – 2010)	(4) Percent Taking AP Exam (2010 – 2011)	(5) Percent Passing AP Exam (2010 – 2011)	(6) ACT Score (2009 – 2011)	(7) SAT Reading Score (2010 – 2012)	(8) Graduation Rate (2014 – 2015)
Starting Date	-0.001**	0.000	-0.000	-0.001	-0.001	0.042*	-0.830	-0.000
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.017)	(0.449)	(0.001)
Black	-0.104***	-0.087***	-0.105***	0.026	0.061**	-4.998***	-142.056***	-0.134*
	(0.013)	(0.011)	(0.011)	(0.017)	(0.022)	(0.727)	(22.830)	(0.066)
Hispanic	-0.005	-0.029	-0.013	0.050**	0.093***	-3.803***	-109.897***	0.073
	(0.016)	(0.015)	(0.015)	(0.018)	(0.022)	(0.920)	(22.158)	(0.078)
Native American	-0.786	-0.127	-0.079	-0.003	-0.018	0.738	-66.936	-0.908
	(0.654)	(0.564)	(0.648)	(0.014)	(0.016)	(2.738)	(68.799)	(0.893)
Asian	0.263**	0.263***	0.398***	0.038**	0.074***	37.225***	1297.841***	0.452**
	(0.083)	(0.066)	(0.082)	(0.014)	(0.013)	(2.907)	(116.335)	(0.158)
Pacific Islander	-1.995	-1.222	0.323					
	(3.192)	(2.440)	(2.909)					
Multiracial	-0.049	0.050	0.045	0.044	0.050*	0.863	133.526	0.225
	(0.054)	(0.044)	(0.049)	(0.023)	(0.022)	(3.966)	(87.867)	(0.309)
White				0.426***	0.265**			
				(0.127)	(0.085)			
Free/Reduced	-0.283***	-0.302***	-0.357***	0.506***	0.070			-0.048
Lunch	(0.014)	(0.012)	(0.015)	(0.101)	(0.079)			(0.056)
'A' Grade	0.070***	0.029	0.074***	0.029	-0.028	0.864***	18.278	-0.091*
	(0.018)	(0.017)	(0.018)	(0.025)	(0.040)	(0.154)	(22.239)	(0.036)
'B' Grade	0.059***	0.018	0.056**	0.021	-0.047	0.807***	11.219	-0.096**
	(0.017)	(0.016)	(0.018)	(0.025)	(0.039)	(0.187)	(22.232)	(0.037)
'C' Grade	0.045**	0.003	0.036*	0.005	-0.085*	0.225	-9.442	-0.108**
	(0.017)	(0.016)	(0.017)	(0.026)	(0.039)	(0.333)	(22.392)	(0.039)
'D' Grade	0.026	-0.013	0.016	-0.004	-0.091*	-0.049	-7.023	-0.155***
	(0.017)	(0.016)	(0.017)	(0.025)	(0.039)	(0.244)	(22.536)	(0.043)
'F' Grade	-0.004	-0.025	-0.008	-0.001	-0.094*	-0.973**	-37.680	-0.039
	(0.018)	(0.016)	(0.017)	(0.027)	(0.040)	(0.372)	(24.281)	(0.054)
Female	0.052	0.075*	0.059					
	(0.036)	(0.032)	(0.035)					
Constant	0.839***	0.821***	0.772***	0.097***	0.079	22.151***	986.466***	1.254***
	(0.018)	(0.017)	(0.018)	(0.026)	(0.041)	(0.164)	(22.454)	(0.108)
N	2419	2419	2419	557	473	576	733	617
r2	0.837	0.838	0.866	0.796	0.622	0.643	0.641	0.223
r2_a	0.835	0.837	0.865	0.791	0.611	0.635	0.635	0.202

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2 contains similar results to those found in *Table 1*. No outcome variable is correlated with deviations in starting date.

Table 2: Iowa School Districts

	(1) Graduation Rate (2011 – 2014)	(2) Reading APY (2009 – 2015)	(3) Math APY (2009 – 2015)
Starting Date	0.000	-0.001**	-0.001*
	(0.000)	(0.000)	(0.000)
Female	0.022		
	(0.031)		
Talented & Gifted	0.007	0.049**	0.045*
	(0.023)	(0.018)	(0.018)
Native American	-0.426***	-0.405***	-0.370***
	(0.092)	(0.045)	(0.056)
Hispanic	-0.094***	-0.120***	-0.111***
	(0.027)	(0.017)	(0.018)
Black	-0.268***	-0.228***	-0.239***
	(0.060)	(0.033)	(0.038)
Pacific Islander	-0.773	-0.654**	-0.665***
	(0.703)	(0.207)	(0.173)
Asian	-0.148	0.487***	0.292**
	(0.232)	(0.079)	(0.094)
Multiracial	-0.601***	-0.253*	-0.354***
	(0.168)	(0.099)	(0.096)
2010	-	0.090***	0.076***
		(0.017)	(0.017)
2011	0.073**	0.113***	0.089***
	(0.025)	(0.016)	(0.017)
2012	-0.010	-0.049***	-0.029***
	(0.005)	(0.005)	(0.005)
2013		-0.038***	-0.023***
	Omitted	(0.004)	(0.005)
2014	0.013*	-0.001	-0.006
	(0.006)	(0.005)	(0.006)
Free/Reduced Lunch	-0.181***	-0.331***	-0.349***
	(0.024)	(0.012)	(0.013)
ISS & OSS	0.000	-0.001	-0.001
(incidences per 100)	(0.002)	(0.002)	(0.002)
LEP		-0.000	0.077*
		(0.037)	(0.033)
Constant	0.998***	0.923***	0.964***
	(0.019)	(0.005)	(0.006)
N	941	1835	1835
r2	0.651	0.808	0.784
r2_a	0.646	0.806	0.782

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3 shows a positive correlation in graduation rate with the implementation of a universal start date. This figure should be interpreted very carefully, as it is not a causal estimate, and is almost certainly subject to omitted variable bias, meaning there are likely to be other factors not included in the regression that may affect these results. That is to say, there may possibly be a positive relationship between graduation rates and the universal start date, but the figure of 10.71 (i.e. a 10% increase) appears severely overestimated.

Table 3: Minnesota School Districts

	(1) Graduation Rate (2004 – 2015)
Post-Universal Starting Date	10.711*** (1.329)
Native American	-31.582*** (9.062)
Asian/Pacific Islander	25.219*** (4.488)
Hispanic	-32.676*** (7.023)
Black	-42.093*** (5.654)
2007	-11.129*** (1.419)
2008	-9.930*** (1.328)
2009	-9.155*** (1.464)
2010	-6.584*** (1.450)
2013	-1.328 (1.434)
2015	1.526 (1.452)
Free/Reduced Lunch	-20.587*** (5.908)
Special Education	-92.965*** (12.627)
LEP	1.458 (12.254)
Female	-8.618 (6.954)
Constant	102.764*** (3.147)
N	1302
r2	0.694
r2_a	0.691

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4 contains similar results to those found in *Table 1*. No outcome variable is statistically correlated with deviations in starting date.

Table 4: Indiana & Iowa School Districts

	(1) Math ISTEP+ & AYP (2009 – 2015)	(2) Reading ISTEP+ & AYP (2009 – 2015)	(3) Graduation Rate (2014)
Starting Date	-0.000	0.000*	0.001
	(0.000)	(0.000)	(0.001)
Black	-0.115***	-0.085***	-0.138**
	(0.013)	(0.010)	(0.047)
Native American	-0.282***	-0.177***	-0.415***
	(0.044)	(0.037)	(0.047)
Asian	0.192*	0.184**	-0.151
	(0.095)	(0.069)	(0.151)
Indiana	0.022***	0.055***	0.008
	(0.005)	(0.004)	(0.011)
Free/Reduced Lunch	-0.343***	-0.369***	-0.195***
	(0.012)	(0.010)	(0.021)
2010	0.066***	0.058***	
	(0.005)	(0.004)	
2011	0.082***	0.078***	
	(0.005)	(0.004)	
2012	0.080***	0.070***	
	(0.006)	(0.004)	
2013	0.095***	0.076***	
	(0.006)	(0.004)	
2014	0.102***	0.096***	
	(0.006)	(0.005)	
2015	-0.046***	0.007	
	(0.008)	(0.006)	
Constant	0.871***	0.831***	0.984***
	(0.007)	(0.005)	(0.008)
N	4308	4308	1873
r2	0.705	0.752	0.346
r2_a	0.704	0.752	0.344

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Study Limitations

The scope and impact of our findings are constrained by several limitations.

- Our study only seeks to analyze data from Indiana, Iowa, and Minnesota. The results and conclusions from this study should not be generalized to any of the 47 other states. Each state may have observable or unobservable factors that could affect student attainment outcome measures differently than the states examined in this report (Murnane & Willett, 2011).
- The experimental technique of random assignment of participants to treatment conditions is considered the gold standard of research design (Nelson, 2015c). However, in this study we relied on data that do not reflect random assignment of study participants, as public school students and their parents can either select their school or attend a school close to where they live; neither are random. Study participants choosing where to attend school creates selection bias and is a significant threat to internal validity in our study (Nelson, 2015b).
- The non-random assignment of public school students limits the ability to determine causality. In other words, and as noted above, we cannot claim that the presence or absence of a policy mandating a uniform, late school start date *causes* the outcomes detailed in this paper. We can only indicate whether or not a uniform late start date correlates with student achievement measures.
- None of the states in our study made historical district start dates publicly available on their websites. We made public data requests to the Departments of Education in Indiana, Iowa, and Minnesota; however, only Indiana and Iowa keep district start dates on record (K. Olsen, personal communication, March 21, 2016). Without start date information for Minnesota, we cannot compare its outcomes to Indiana's because we cannot know what dates Minnesota schools *actually* began classes. This confines our analysis to an Intent-to-Treat (ITT) estimate between Indiana and Minnesota, which is simply how much the *adoption* of a uniform, late state start date policy affects student performance variables. ITT does not take into account the actual compliance rate of districts following the policy (Nelson, 2015a). Hence, its application is less useful than if actual start dates were available for Minnesota.

- Although researchers have sufficient data to explain an adequate amount of the variation between districts within states, some variables are not publicly available for each state in every year. For example, only trend data is available for dropout and suspension rates for Iowa; Indiana only has dropout statistics for the 2014 and 2015 academic years. Those variables may not tie closely to academic achievement and district start dates, but if available, may increase the statistical power of the regressions by explaining a greater percentage of the variation in our outcome estimates (McClelland, 2000).
- States offer different disaggregation levels of variables. For example, Minnesota's public school districts aggregate enrollment by ethnic makeup and grade, whereas Indiana and Iowa report enrollment by grade and ethnicity separately. To appropriately compare the states, we assess enrollment at the highest level of aggregation: separately by grade and ethnicity across years. However, this necessarily lowers the precision of our measurements. Reduced precision can lead to the introduction of bias into the model. In this case, that bias affects the external validity, or generalizability, of our study (Nelson, 2015b). For instance, most of our outcome variables, such as standardized test scores, are not disaggregated by ethnicity. Without that information, researchers can only interpret how school start dates affect districts holistically. If states report graduation rates by ethnicity and grade, then researchers may better understand how school start dates affect the test scores of, say, 3rd grade Hispanic students in Iowa.
- Ideally, outcome variables should be directly comparable across states; however, in this case each state in this study has its own standardized tests, which are subject to different development, content, specifications, administration, etc. (University of Iowa, n.d.). Therefore, standardized test scores from Indiana cannot be compared to their counterparts in other states.

Given the several limitations above, our analysis should serve as a starting point for future researchers employing a more precise research design and complete body of data. Ideally, a study of the impact of start dates on student achievement measures would collect data at the lowest level of disaggregation possible (e.g. enrollment by school, by grade, by gender, by ethnicity, etc.) to identify the effects start date may have on specific demographic groups with regards to outcomes of interest (e.g. minority graduation rates). We were unable to obtain these types of granular data in the relatively brief amount of time available during the spring semester

to conduct this study, especially given the limitations on publicly available data and the time involved in obtaining data through public records requests. Future studies can address these constraints and minimize threats to internal and external validity, thereby adding credibility to the results and bolstering their significance for and influence with legislators and other stakeholders.

Data Sources

We used education data for Indiana ("Find," 2016) and other comparable states with a uniform start date in the late summer. We selected Iowa ("Education Statistics," 2015), Michigan ("MI School Data," 2016), and Minnesota ("Data Reports, 2015) as comparison states due to similarities in geography, demographics, economy, and culture.

We collected disaggregated data by district and divided into further sub-components. We easily obtained data for Indiana, Iowa, and Minnesota. Michigan's school data portal did not house similarly disaggregated data and due to time constraints, we eliminated Michigan as a comparison state.

Educational Attainment Literature Reviews

Effect of Summer Employment

A large body of research examines the effects of adolescent work (age 14-24) on students. Researchers have explored the influence of adolescent employment on students' lifelong wealth accumulation, non-cognitive benefits, and academic performance. Generally, the results show that the actual effect of working varies according to the working hours and job types (Quirk, 2008; Desimone, 2006; Sabia, 2008). Some studies, however, have offered contradictory findings (McNeal, 1995; Singh, 1998; Desimone, 2006).

The results for summer employment are more consistent, and the positive effects of summer employment on future income are discussed earlier in this report. With respect to non-cognitive benefits and academic performance, it is useful to examine research conducted on New York City's Summer Youth Employment Program (SYEP), a summer employment program administered by NYC's Department of Youth and Community Development. All NYC youth between 14-24 years-old are eligible to apply through community-based organizations. The program allocates participants to "entry-level jobs in the non-profit, private and public sectors.

Placements with summer camps and day care centers are most common. Participants work up to 25 hours per week for 7 weeks and earn the New York State minimum wage (Leos-Urbel & Wiswall, 2015).” As a flagship summer employment program, SYEP provides data for research that studies the effects of summer employment. Walker and Vilella-Velez (1992) find “improved reading and mathematics test scores for academically behind 14 and 15-year-olds from poor urban families who participated in the SYEP program.” Leos-Urbel tested the influence of summer jobs using the SYEP project, and shows that SYEP increased school attendance in the following school year and had positive effects on some student academic outcomes; these effects, however, are heterogeneous. They also found that if a student participated in the program for more than one year, the influence was larger.

Researchers also study the advantages students gain from employment experience. The work of Philips & Sandstrom and Greenberger & Steingerg explain that the skills, knowledge and abilities learned from employment experience put students in better positions in future competition in the job markets (Philips & Sandstrom, 1990; Greenberger & Steinberg, 1986). In addition, Heckman’s research shows that:

> Non-cognitive skills and motivation are important determinants of success and these improve more and at later ages than basic cognitive skills. Methods to evaluate education interventions ignore these non-cognitive skills and therefore substantially understate the benefits of early intervention programmes and mentoring and teenage motivation programmes. At current levels of investment, American society under-invests in the very young and over-invests in mature adults with low skills. (Heckman, 2000)

These studies support the conclusion that employment experience helps adolescents gain non-cognitive skills and therefore has positive effects on students’ long-term development.

The final outcome measure focuses on how adolescent employment influences student academic performance. The theoretical explanation for the effect of adolescent employment on academic achievement is ambiguous, especially for school-year employment. On the one hand, researchers expect working would result in reduced study and leisure time and increased weariness, which would impede the efficiency of study. On the other hand, working could also help the students to build good work habits, allow them more monetary freedom to invest in their study, and may enhance their future financial position, which could motivate them to study hard. The results when testing the actual effects of employment are inconsistent. As Desimone (2006) describes,

some studies, such as Steinberg et al (1982), show that first-time workers have lower GPA's due to spending less time on homework. Desimone also discusses studies showing positive impacts of work on academic achievement, including D'Amico (1984), who finds students working fewer than 20 hours see class rank improvements and lower dropout rates, and no relationship between working more than 20 hours and academic performance measures. The Schill et al study supports this finding by showing that students who work 20 hours or fewer had higher GPAs than those who do not work or who work more than 20 hours per week.

Effect of a Late Start Date

Achieving better academic performance is generally a priority for educators and policy makers. A late-Summer school start date may positively correlate with student academic achievement. Having a late school start date may push final exams after Winter Break, and taking exams after a break may be beneficial for students. This phenomenon is called spacing effect. According to Gilden (n.d.), "spacing effect occurs when breaks interrupt learning episodes, rather than being presented more or less continuously." Spaced learning occurs when learning sessions span several time periods instead of being continuous, and is proven to have a profound effect on learners (Son & Simon, 2012).

Although research shows its advantages, spacing effect faces several challenges. Researchers question if spacing effect applies to people of all ages (Toppino & DiGeorge, 1984). Furthermore, optimal length of the spacing period is under debate. One possibility states that if the spacing interval is too long, there may be no spacing effect following the interval (Dempster, 1989). Despite these issues, spacing effect still remains a remarkable finding in the field. Because initial learning is superficial, research demonstrates that students recall information and material two to three times better if study sessions are spaced in time rather than massed together. When presented with the same material several times, the brain attempts to reconstruct the initial learning environment. The longer the delay between each learning episode, the more difficult and elaborate the reconstruction process is, and thus the material that is being relearned is more strongly remembered (Kapler, Cepeda & Weston, 2012).

Researchers have determined the spacing effect to be effective and practical in many studies. In an experiment conducted by Bloom and Shuell, researchers asked two groups of high school students to remember French vocabulary words through a 30-minute instruction session. One

group of high school students received the instruction all at once, while the other group of students received three sets of instruction for a length of 10 minutes each spanning three days. The two groups of students took two tests, one immediately after the initial learning and the other four days after the learning. The two groups performed identically on the test immediately after the instruction. However, when asked to take the test again four days later, the second group performed 35% better than the first group (Bloom & Shuell, 1981). Another experiment shows the long-term impact of spacing effect. Researchers conducted a five-year language study in 1993, and in this experiment students would experience breaks as long as two months during learning sessions. They found that long-term learning was best when the learning sessions were widely spaced (Bahrick et al., 1993).

Despite researchers proving the validity of spacing effect, spaced learning remains the least preferred learning method. In general, people predominantly prefer massed practice because it leads to immediate outcomes and requires less effort. They are less likely to pay attention to the actual learning benefits that are generated by spaced learning. And, because massed learning does not require learners to come back to the material after a period of time, it creates illusions for learners that they spend less time on studying if they choose massed study (Son & Simon, 2012).

Educational Attainment Appendix

Key Terms

Statistical Bias – The difference between the outcome estimate's actual true value and the value determined in the experiment (Stark, 2014).

Independent Variable – Variables in this category help explain the changes in the values of the dependent variable (Stark, 2014).

Dependent Variable – A variable that is an objective measure of interest in an experiment. It is explained by the variation in the independent variables (Stark, 2014).

Random Assignment – someone other than the participants chooses the study's groupings (treatment or control) randomly (Nelson, 2015c)

Outcome Estimates – Best guesses for the true value of the population in an experiment (Stark, 2014).

Uniform, Late School Start Date – A statewide policy that mandates public schools starting on or after August 15th each academic year

Treatment-on-the-Treated (TOT) – The effect of receiving, or taking up, the treatment (Nelson, 2015a). TOT refers to states that have uniform, late school start date policies from which the researchers obtained actual district start dates.

Intent-to-Treat (ITT) – The effect of being assigned to the treatment (Nelson, 2015a). ITT refers to states that have uniform, late school start date policies from which the researchers did not obtain actual district start dates.

Treatment – What is being studied in an experiment (Stark, 2014). In this study, the treatment is a statewide, uniform late school start date policy.

Robust – statistical results that are similar across a variety of techniques and specifications

Public Support

This report aims to identify key stakeholders and gauge the strength of their support for and against a statewide uniform start date. This section also provides toolkits with survey questions and best practices regarding survey delivery for different stakeholder groups.

Stakeholder Analysis

Introduction

The purpose of this analysis is to identify groups interested in the potential uniform school start date policy and to understand better the practical needs, ideological leaning, and political influence of the various interested groups. We examine likely allies and major opposing forces among the diverse stakeholders discussed below, and identify strategic opportunities and potential threats to getting a uniform school start date adopted and implemented.

Who are the stakeholders with respect to a uniform late-summer school start date in Indiana?

The concept of 'stakeholders' is multifaceted. The academic literature defines a stakeholder as:

Any individual or group (organized or unorganized) who has an interest in a particular issue or system. That interest can be financial, moral, legal, personal, community-based, direct or indirect. Stakeholders can be government agencies, industry, non-government organizations (NGOs) and individuals. Stakeholders can operate at any level: from global or international down to the household level. Stakeholders can affect (determine) decisions or actions and some are affected by decision or actions (positively or negatively). Stakeholders may be involved in an issue at varying levels of activity: some are highly active, while others are totally passive. Stakeholders also have varying degrees of influence in decision-making around a particular issue. Stakeholders can also include those who choose not to declare their 'stake', but who still have a 'right to know' if their interests may be affected.

(Commonwealth of Australia (2006) as developed from the work of Grimble & Wellard (1997), Petts and Leach (2000) and Aslin & Brown (Aslin and Brown 2002)).

In relation to a uniform late-summer school start date, we define *direct stakeholders* as those who must change their schedule based on the school calendar. These include students, families with school aged children, teachers, and public school administrators. Alternatively, *indirect*

stakeholders are those serving direct stakeholders who may have an economic or other interest in changing their schedule or operating practices alongside school start dates, yet the modification is not mandatory. The current list of indirect stakeholders divides stakeholders into broad categories based on organizational mission, which often relates to an entity's ideology concerning the proposed policy:

- local economy and workforce development
- public education
- governance
- recreational & cultural extracurricular groups

Methodology

The list of direct and indirect stakeholders derives from conversations with the Client, reports of parties involved in U.S. states that attempted or passed similar legislation, and any Indiana-based member of a local tourism alliance (for example, industry partners of the Indiana Tourism Association).

We categorize these stakeholders according to political influence and stated interest in the policy. We define political influence by level of activity in state lobbying efforts and/or the ability to convene Indiana residents to support perceived general, collective rights. We determined stakeholder interest in the school start date issue through informational interviews conducted by phone or e-mail.

We conducted stakeholder interviews between March and April 2016.

Interviews included the following line of questioning:

1. What is the stakeholders' awareness of the discussion concerning a potential statewide uniform school start date?
   If none, information on House Bill 1363 was shared.
2. What are the stakeholder's positions on the proposed change in start date? Its specific points of interest?
3. Would the stakeholder be willing to advocate in support of this position (or just hope the policy decision goes their way)?

4. What does the stakeholder see as possible advantages or disadvantages of the proposed change?
5. Would this stakeholder be open to form alliances to promote its position?
   If so, what can they offer an alliance? (For example, workers? Data? Survey solicitation from members/constituents? Financing? Lobbying efforts?)

To gather these data we spoke with a variety of organizational representatives, such as: Director of State Government Relations, Director of School Programs and Early Childhood Education, Commissioner, Executive Director, Executive Vice President, Director of Communications and Staff Attorney. To determine the correct contact person we commonly called the organization's main information line and requested the staff person best positioned to speak on legislative affairs. The Client gave other contacts directly as did SPEA faculty with connections to particular stakeholders.

Findings

Stakeholders identify with at least one of six ideological themes, which shape their position in this discussion:

1) *Educational attainment in the classroom*. Advocates for measures centered on educational attainment are most concerned with the correlation between the length of school breaks and student retention of course material.

2) *Extracurricular education*. Supplementary programs and educational sites (such as museums or parks) are often amenable to varied school calendars because they offer themselves as year-round resources for families as well as school groups.

3) *Economic development*. Tourism advocates in the state of Indiana suggest that a standardized summer vacation which extends at least into late-August will increase visitation at warm weather attractions and their partners (such as hotels) in a manner that will significantly increase private and public revenues.

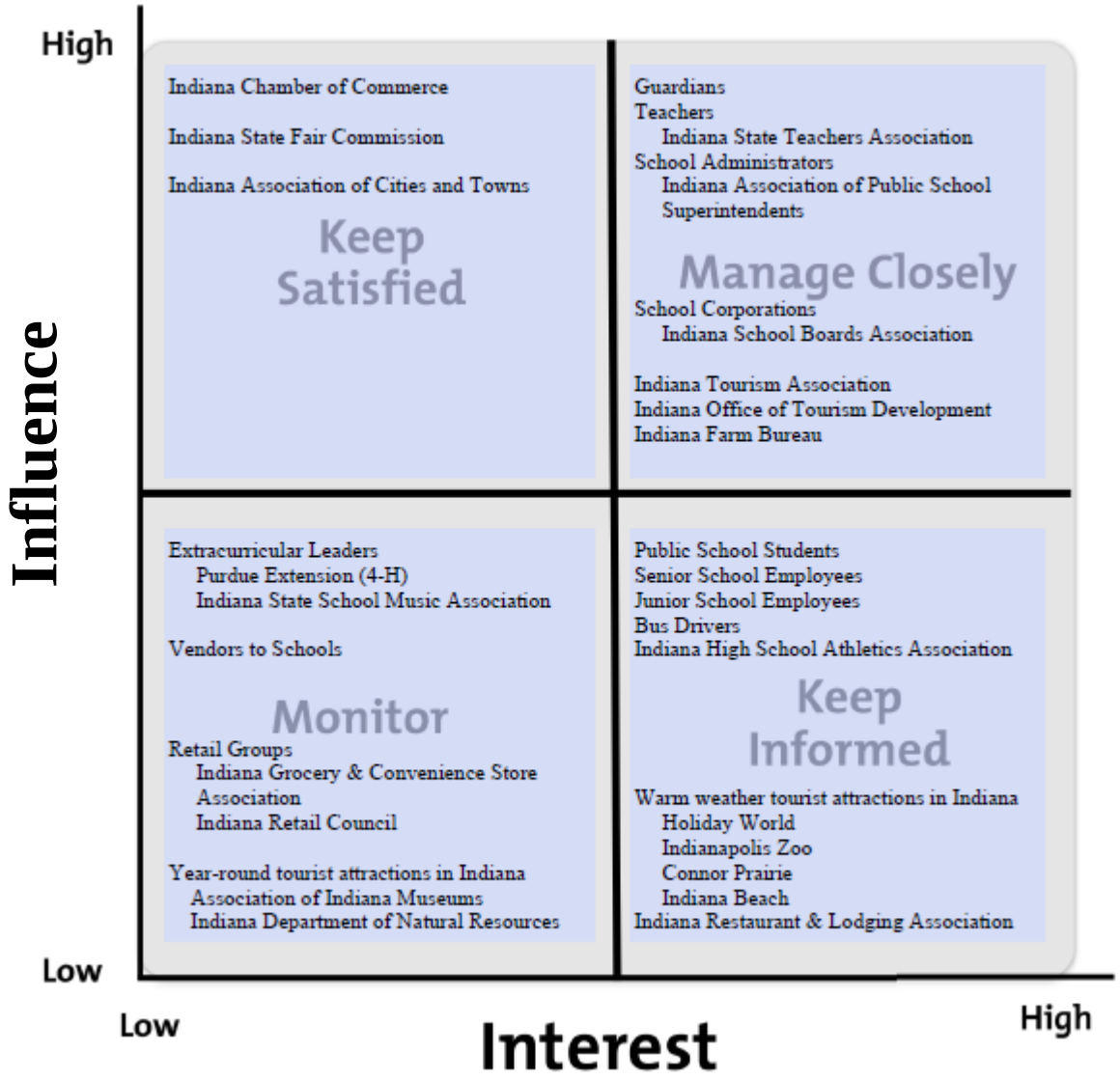
4) *Public fiscal responsibility*. Concern for minimizing relative costs of utility fees in public schools alongside maximizing tax revenues and bureaucratic efficiency.

5) *Workforce development*. Standardizing summer vacation increases summer job stability and therefore offers more opportunity for students to gain valuable skills.

6) *Regional government control*. Supporters of local control seek to keep school start date decisions at the school board level to ensure consideration of unique community needs.

The following page provides an influence/interest grid that represents the stakeholder analysis in visual form. Key stakeholders to manage closely – those with the greatest level of interest in the issue and political influence – appear in the upper right-hand corner, whereas names in the lower left-hand corner are groups more interested in monitoring the progression of any policy for personal information than advocacy. Between these two extremes lie the group to keep satisfied due to high levels of activity at the General Assembly creating opportunity for opposition and the group with high interest to keep informed that is not yet at a point of advocating for a particular outcome.

Influence/Interest Grid: Confirmed Indiana Stakeholders for School Start Date Policy



No additional, active allies emerged from stakeholder discussions. However, the majority of stakeholders claim that they do not take a position on the issue. Strategic relationship building and information sharing might build support among some powerful individuals among stakeholders the Client has not yet collaborated with, such as educational extracurricular sites from museums to organizers of student athletics, though organizations as a whole may remain neutral. We encourage the Client to continue much of this discussion with individual constituents and community level associations to help them match their ideological stance with the research-

informed impact for their communities. Likewise, with more awareness at the base level, educational and recreational associations representing Indiana residents may solidify their position on this potential policy.

Conclusions and Recommendations

The stakeholder review shows that without legislation proposed the majority of stakeholders would remain neutral to the suggestion for a standardized public school start date in Indiana. Those most engaged with the issue come from the tourism industry and the educational sphere. The Indiana Office of Tourism Development and Indiana Tourism Association have potential to be the strongest allies. Additionally, businesses and attractions that serve as recreational destinations generally support a late summer start date unless they share service hours with educational markets (such as school field trips). Meanwhile, educational sources oppose the measure most commonly based on grounds of support for local control over school calendar preparation. Indiana's larger union for public school teachers, Indiana State Teachers Association, is a prominent voice declaring that school start dates should remain a school board level decision.

While this analysis takes into account the positions and opinions of major associations in the state, the voice of key individual stakeholders, such as students, parents and guardians, and school employees will also be required for a comprehensive analysis. It will be important to capture these opinions on a regional and situational level for broad understanding of individual opinions. We recommend first focusing this research in regions where the Client draws the most visitors, including the Indianapolis and Evansville areas. Accordingly, situations such as age level of the respondent, years working in/for the school, and type of employment in the school district will be noteworthy. By simultaneously unrolling the materials in Task 3.2 (Stakeholder Strategy Document), it should be feasible for the Client to collect this additional data by the end of Summer 2016 and analyze the results in Fall 2016.

Results of Individual Stakeholder Informational Interviews

The analysis results from successful informational interviews and follows this standardized format:

Name:

Direct or Indirect Stakeholder:

Indirect subcategory:

Interest:

Influence:

Position on the policy:

Ideology:

Unique facts:

Stakeholder groupings align with positions on the influence/interest grid.

High Interest and High Influence

Name: Indiana State Teachers Association

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Education

Interest: High

Influence: High

Position on the policy: Oppose

Ideology: School start dates should remain a local school board decision.

Name: Indiana Association of Public School Superintendents

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Education

Interest: High

Influence: High

Position on the policy: Oppose

Ideology: It is up to local school districts and school boards to determine what is in the best interest of their community and their students.

Name: Indiana School Boards Association (ISBA)

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Education

Interest: High

Influence: High

Position on the policy: Oppose

Ideology: Local control is best

Unique facts: ISBA recognizes the practical difficulty of pulling counties with at least three general types of calendars into one.

- Year round (9 weeks on, 2 weeks off)
- Balanced calendar (hybrid but close to year round)

- Traditional (Labor Day to Memorial Day)

In addition, ISBA perceives a disadvantage to late summer start date in that with 180 instructional days there are no decent breaks between Labor Day and Memorial Day.

Moreover, ISBA believes that there is better educational retention with shorter breaks.

Name: Indiana Farm Bureau

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Economic Development

Interest: High

Influence: High

Position on the policy: Oppose

Ideology: Policy positions on K-12 education support local control including start date, length of day, determination of excused absence, etc.

Unique facts: Expressed willingness to advocate consistent with those principles.

Name: Indiana Office of Tourism Development

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Economic Development

Interest: High

Influence: High

Position on the policy: Support

Ideology: A later uniform school start date would extend summer vacation into August, which is one of Indiana's peak tourism months. They believe the revenue for the state treasury would increase with this legislation because of increased vacation time and tourism opportunities in August.

Unique facts: They have not made an official public announcement regarding their stance on this issue because they believe it has recently not been a priority of Indiana legislatures.

Name: Indiana Tourism Association

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Economic Development

Interest: High

Influence: High

Position on the policy: Support

Ideology: Tourism related economic development.

Low Interest and High Influence

Name: Indiana State Fair Commission

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Economic Development and Workforce Development

Interest: Low

Influence: High

Position on the policy: Neutral

Ideology: No opinion either way

Unique facts: They do not have a stance regarding the current legislation. Their policy is not to become involved in legislation that does not directly affect them. Though they see how a later uniform school start date could have a positive impact on their programming, they receive a significant amount of funding from the state and claim that legislators have shown no interest in bringing up this issue again. Because of this, they do not see much chance that this legislation would be enacted.

Name: Indiana Chamber of Commerce

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Economic Development and Workforce Development

Interest: Low

Influence: High

Position on the policy: Neutral

Ideology:

Unique facts: We reviewed uniform start date policies in three Midwestern states – Iowa, Michigan, and Minnesota – similar to Indiana in culture, revenue sources, and weather, and considered the position of each state's Chamber of Commerce given the high level of political influence of such entities. Similar to Indiana's Chamber, Iowa and Minnesota Chambers of Commerce did not declare a position on uniform school start date policy proposals. Michigan's Chamber was active to support measures to protect standardized school start dates as recently as 2015. More detail follows.

- Iowa

Enacted in 2015, the Iowa statute (Senate File 227, p. 2, Sec. 2., Section 279.10, Subsections 1 and 2, Code 2015) mandates that schools not start before August 23. Recent amendments repealed automatic granting of waivers for schools wishing to start before this date.

It is the practice of the Iowa Chamber of Commerce not to declare a position regarding proposed legislation. This is because the Chamber will often have member organizations on both sides of a debate; therefore, it prefers to remain neutral. However, local chambers of commerce often support post-Labor Day school start dates because of potential revenue for the tourism industry.

Name: Indiana Chamber of Commerce

Unique facts continued:

- Michigan

Under a law passed in 2006, Michigan requires schools to start after Labor Day. The Michigan Chamber of Commerce supported this legislation. They also opposed MI House Bill 4396 (proposed in 2015) that would give local school districts the authority to begin their school year on any date in the summer, because of the negative impact it would have on Michigan's travel and tourism industry at the end of the summer.

- Minnesota

Minnesota statute 120A.40, enacted in 1985, makes it mandatory for schools to start after Labor Day. However, there are exemptions that allow schools to start before Labor Day. For the 2015-16 school year, 50 school districts utilized these exemptions, upsetting many local chambers and tourism industry members.
The Minnesota Chamber of Commerce has members on both sides of the debate over school start dates, and therefore the Chamber is thoughtfully neutral in that debate. However, local chambers of commerce often support post-Labor Day school start dates because of potential revenue for the tourism industry.

Name: Indiana Association of Cities and Towns

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Related to Public Office

Interest: Low

Influence: High

Position on the policy: Neutral

Ideology: No platform position on the issue as it has not come up in legislative committee discussions

Unique facts: Recognizes potential concerns from mayors and other elected officials depending on whether and how the school start date affects a community locally -- i.e. the need to have high school workers available as employees in a tourist town, etc. – but, no members have raised concerns to date.

High Interest and Low Influence

Name: Conner Prairie

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Informal Education and Economic Development

Interest: High

Influence: Low

Position on the policy: Policy is not to take a formal position on legislation

Ideology: Extracurricular education and economic impact

Unique facts: Sees a variety of advantages and disadvantage of the proposed legislation.

Advantages:

- Increases the number of summer camp weeks available to them, potentially increasing camp revenue. (On the other hand, finding college-age camp counselors who could work that late in the summer would be a challenge.)
- Increases the number of weeks they might get significant numbers of families here on weekdays.

Disadvantages:

- Further decreases the already-limited number of weeks they can serve school groups during the open season. A universal September start date would force schools who come in August/September to either move their field trip to later in the fall or to the spring when the schedule already gets very full. Alternatively, they might choose to cancel the field trip all together.
- There has been concern about summer learning loss for students who do not have access to rich learning activities over the summer. For school districts that have adopted a calendar that gets them back to school at the end of July or beginning of August, this proposed schedule would add a month of being out of school.

Name: Indianapolis Zoo

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Informal Education and Economic Development

Interest: High

Influence: Low

Position on the policy: No established position

Ideology: Do not feel qualified to comment on the overall educational effectiveness on the balanced school year as opposed to the more traditional school year

Unique facts: It clearly has an impact on zoo business. While it shortens the traditional summer vacation and can present challenges to families trying to plan vacations and outings, it presents opportunities to expand visitation on what they call the "shoulder seasons" which would be Fall, December Break and Spring Break.

Name: The Children's Museum of Indianapolis

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Informal Education and Economic Development

Interest: High

Influence: Low

Position on the policy: Oppose

> **Ideology:** It would affect when the Museum can begin offering school visit registrations each year. The Museum wants every school to have optimum opportunities to take advantage of the rich, hands-on, standards-relevant experiences it can provide for the students of Indiana.

Name: Indiana High School Athletics Association (IHSAA)

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Culture and Recreational Extracurricular Activities

Interest: High

Influence: Low

Position on the policy: Neutral

> **Ideology:**

Unique facts: IHSAA member schools have maintained various starting dates of school for decades. In the past, many member schools started as late as the final week of August. The most obvious advantage to a standardized starting date is the consistent opportunity member schools would have for practices and preparations for contests during the fall season as well as the conclusions of the spring sports seasons.

Low Interest and Low Influence

Name: Purdue Extension (4-H)

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Culture and Recreational Extracurricular Activities

Interest: Low

Influence: Low

Position on the policy: No position on this proposed policy

> **Ideology:** 4-H programs occur year round so school start dates do not affect programming. School start dates impact families rather than organizations.

Unique facts: Most familiar with this conversation as it works closely with the Indiana State Fair Commission and Indiana State Fair Board. There is a perception that current school start dates prohibit youth participation in the Indiana State Fair.

However, Purdue Extension staff in each of its counties plans their programs accordingly because they are familiar with their respective school calendar/start date.

Meanwhile, many individuals perceive 4-H programs to be "summer only" programs and the program is, therefore, mentioned many times during discussions about proposals such as this.

Name: Indiana Grocery & Convenience Store Association

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Economic Development

Interest: Low

Influence: Low

Position on the policy: Not an issue on its radar

> **Ideology:** Do not see how it would have any bearing on shopping habits or at home food consumption.

Name: Indiana Casino Association

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Economic Development

Interest: Low

Influence: Low

Position on the policy: Not an issue on its radar

Ideology: Do not perceive a connection between family travel and gaming tourism.

Name: Indiana Department of Natural Resources

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Recreational Extracurricular Activities

Interest: Low

Influence: Low

Position on the policy: The Indiana DNR has no opinion or stance regarding legislation on school start date at this time.

Ideology: N/A

Name: Association of Indiana Museums (AIM)

Direct or Indirect Stakeholder: Indirect

Indirect subcategory: Informal Education and Economic Development

Interest: Low

Influence: Low

Position on the policy: AIM has no stance on the measure.

Ideology: Indiana needs to do what is in the best interest of the students. Museums are a resource tools schools can use, regardless of the start date.

Survey Strategy

The following pages contain a toolkit to conduct additional surveys with target audiences and acquire data relevant to the discussion of a uniform school start date. These surveys respond directly to requests from the Client or emerged from conversations with the Client that identifies additional survey tools to help meet the data needs.

This strategy document contains best practices for survey implementation and recommendations for survey platforms. It includes 6 surveys with instructions on how to successfully administer each survey, an introduction and instructions, skip logic where necessary, and recommended page breaks. This document also includes mock survey designs for 2 surveys (Holiday World In-Park Survey and Constituent Survey) to be administered as handouts or mailings. All other surveys for other surveys are designed for online delivery. The Client may use this document to solicit data and opinions from key stakeholder groups.

The 6 survey toolkits included in this document are:

1. Constituent Survey for Legislators
2. Holiday World In-Park Visitor Survey
3. Indiana Business Survey
4. Indiana Public School Employee Survey
5. Likely Voters Survey
6. Parent & Guardian Survey

Best Practices for Survey Implementation

Due to time constraints, the research team was not able to perform question tests recommended by survey professionals. The client should consider testing the surveys by one or more of the following methods prior to delivery to target audience. The questionnaires were developed with guidance from the Center for Survey Research (CSR), but the limited timeframe did not permit CSR to review all questions.

1. Expert Panel: Subject matter and survey experts may help uncover potential issues with the wording of the questions or recommend changes to the survey design (e.g., reordering questions) to improve the ease of completion for respondents.
2. Focus Group: The results of a focus group discussion can help ensure that all topics relevant to target audiences are included in the survey.
3. Cognitive Interview: A cognitive interview is a one-on-one interview where the researcher reads each survey question to the respondent and the researcher records the response and reaction. The cognitive interview helps to uncover comprehension and recall issues in the survey.
4. Pilot Test: A pilot test is a small scale test of the survey implemented exactly according to the main study's procedures. Online surveys being pilot tested should be fully loaded into Qualtrics survey software with all relevant skip logic and survey programming. The pilot should include several debriefing questions at the end to allow respondents to share information about their experience. The pilot may help uncover technical issues with the questionnaire design. It can also highlight questions that many respondents skipped, the average time to complete, and other data patterns that can be helpful for revisions.

Online Survey Platform

We recommend using Qualtrics as the online survey platform for the web surveys included in this toolkit. There is a free version of Qualtrics allowing for skip logic and other necessary formatting, but note that Qualtrics limits the amount of live surveys at a given time. The free version allows for 2 active surveys at a time and limits the number of respondents to 250 per survey.

Qualtrics offers a paid upgrade including all necessary functionality and unlimited amount of active surveys and responses. This basic package costs ~$5,000 annually. There are other add-ons available for purchase which may increase costs.

Survey Consultations

We are aware that the Client has used Public Opinion Strategies for survey work on school start date issues. To the extent that the Client is interested in additional options, the Center for Survey Research (CSR) at Indiana University provided expert support to the Capstone team, and partners with clients throughout each step of the survey design and implementation processes for

both quantitative and qualitative research designs. The CSR staff has expert methodologists and can help with research design, instrument design, final analysis, sampling, data processing, and testing.

Constituent Survey Toolkit

Background

After discussions with the Client regarding interested legislators, our team sought feedback from all IN state legislators regarding communication methods they employ to give and receive feedback from constituents. Research suggests Indiana legislators use multiple methods including mailings and e-newsletters, town halls or other community meetings to gather constituents'' feedback. Also, legislators often send surveys prior to a legislative session to gather information on how constituents view policy issues scheduled for debate. Likewise, our team studied similar surveys delivered in other states. Therefore, we developed a short survey for legislators to add to their newsletters or mailings sent to their entire constituency.

Purpose

This survey's purpose is for Indiana legislators to gather opinions from their constituents on a uniform school start date in Indiana. The survey will help legislators understand the views of constituents regarding school start dates and help them represent constituent concerns. The brief questionnaire provides legislators a quick snapshot of the views within their district. Each legislator should use the questionnaire as part of their typical communication methods to their constituents. It is designed for a mailing or newsletter, but administering it as a phone or web survey is also appropriate.

Target Audience

Likely Voters

How to Get a Representative Sample

Legislators should survey a representative sample to ensure robust results, though a representative sample may be difficult because the survey is designed as a newsletter or flyer and may be sent to all households in a district. Legislators should strive for high response rates to combat bias introduced through respondent self-selection. To ensure a representative sample, legislators can solicit guidance from the CSR to develop a representative sample from demographic data of their constituency.

How to Use

Share this survey with Indiana State Representatives and Senators to include in their current messaging to constituents to solicit feedback on this proposed policy change. This is a preliminary survey to constituents, which leaves the opportunity for legislators to expand on it. The Client should develop a plan to collect aggregated responses after a designated period.

Recommendations for a Newsletter or Mail Version

This survey design is intended for inclusion in a newsletter, mailing, and/or flyer as a return postage paid section. This toolkit includes a mock design that legislators may use, or they may choose to design their own according to current brand standards. After delivering the survey, reminders on social media accounts may remind followers to return the survey. Following are samples of suggested social media messaging.

Social Media Promotion Messaging Templates for a Newsletter or Mail Version

- Sample Twitter Initial Reminder (140 characters max): I want to know what you think about the school calendar in our community. Return the survey in my mailing and have your voice heard! Thanks!

- Sample Twitter Follow-Up Reminder (140 characters max): Now is the time to tell me how you feel about the school calendar! Don't forget to share your thoughts by returning the survey in my mailing.

- Sample Facebook Initial Reminder: Check your mailboxes! You have received a (Newsletter/Mailing) and I need your help! Take a few minutes to answer a few questions about our school calendar. Have your voice heard! Please complete this survey and drop it in a mailbox. If you have any questions, please contact me at (ENTER CONTACT INFORMATION). Thank you!

- Sample Facebook Follow-Up Reminder: How do you feel about the school calendar in your district? Let me know by returning the survey included in my recent mailing. With only 5 minutes of your time, you can have your voice heard!

Recommendations for a Newsletter or Mail Version with an Online Option

Some legislators use online surveys to gather public opinion. This survey can be loaded into Qualtrics and links to them shared in the newsletter or mailings. Combining both mail and web versions of this survey may result in higher response rates.

The following are samples of follow-up social media messaging for combined written and online survey delivery:

Social Media Promotion Messaging Templates for a Newsletter or Mail Version with Online Option

- Sample Twitter Initial Reminder (140 characters max): (INSERT LINK) Click the link to let me know what you think about the school calendar in our community. Thanks!

- Sample Twitter Follow-Up Reminder (140 characters max): Have you let me know how you feel about the school calendar? Click the link to have your voice heard!

  Sample Facebook Initial Reminder: Check your mailboxes! I sent out a (Newsletter/Mailing) to your address about the school calendar and I need your help! We included a few questions to help us understand your thoughts on the school calendar. Complete this survey by clicking this link: (INSERT LINK). Or, complete the survey and drop it in a mailbox. If you have any questions, please contact me at (ENTER CONTACT INFORMATION). Thank you!

- Sample Facebook Follow-Up Reminder: How do you feel about the school calendar in your district? Let us know by returning the survey included in our recent mailing. You can also take the survey online by clicking this link: (INSERT LINK). It will only take about 5 minutes to help me understand what you want for the school calendar. If you have any questions, please contact me at (ENTER CONTACT INFORMATION). Thank you!

Recommendations for a Telephone Delivery

If delivered to constituents as a phone survey, legislators may recruit staff or volunteers or may utilize a surveying group like Public Opinion Strategies or the Center for Survey Research at Indiana University. Completing phone surveys is time intensive, but may result in higher response rates and a more representative sample.

Sample Survey Questions and Format

Thank you for taking our survey! I want to know how you feel about the local school calendar. Any information you provide will remain confidential and will only be used and reported in the aggregate. Please feel free to contact my office with questions about this survey or if you have additional thoughts to share. (ENTER CONTACT INFORMATION). This survey should take about 5 minutes to complete.

1. What is your zip code?

    * open ended *

2. What role in the public school system in Indiana best applies to you?

    Community Member

    Parent/Guardian

    IndianaPublic School Employee (teacher, staff, etc.)

    Student

    Other, please specify:

3. How satisfied are you with the dates your school year starts and ends?

    Very satisfied

    Somewhat satisfied

    Neither satisfied or unsatisfied

    Somewhat unsatisfied

    Very unsatisfied

4. If it were possible, would you support a uniform school start date for all Indiana public schools?

Strongly support

Somewhat support

Neither support nor oppose

Somewhat oppose

Strongly oppose

5. If Indiana did have a single, uniform public school start date, would you prefer it to be …?

In July

The first two weeks of August

The third week of August

The fourth week of August

After Labor Day

Don't know

Other, please specify:

6. Would you attend a meeting within your voting district to learn more about this topic?

Yes

No

Not sure

Holiday World In-Park Survey Toolkit

Survey Background

As requested by the Client, this survey was developed to fill a need expressed by the Client to understand how visitation might be affected with the addition of a hotel and/or indoor waterpark. It was developed by researching similar surveys used at similar parks.

Purpose

This survey's purpose is to understand effects on visitation if the park built an indoor waterpark and/or hotel on site. The data gathered from this survey will allow the Client to understand how current visitors view a hotel and/or indoor waterpark. It will provide valuable, preliminary market research information to guide future conversations regarding this expansion.

Target Audience

Holiday World visitors over the age of 18.

How to Get a Representative Sample

A representative sample is important to ensure robust results. However, because this survey should be administered throughout the park, it is difficult to ensure a representative sample because it cannot be predetermined. Therefore, the Client should strive for high response rates to decrease this potential self-selection bias. We recommend collecting responses throughout the entire summer and providing and incentive to ensure higher response rates.

Incentive

Researchers recommend using an incentive to increase participation. For example, on a monthly basis the Client could conduct a random drawing of survey respondents and give the winner 2 free passes to the park. This sample questionnaire includes this incentive.

How to Use

There are three possible mechanisms for survey delivery:

1) Survey may be printed and made available to (and collected from) visitors at locations throughout the park

2) Client may distribute printed copies to visitors upon ticket purchase
3) Survey may be available via Qualtrics and shared with visitors throughout the park via QR code. Qualtrics creates surveys that are mobile device-friendly and visitors could complete the web version via smart phone

Whatever mechanism the Client chooses, employees will alert visitors of the survey and incentive upon entry to the park. A mock version of this survey is included within.

Sample Survey Questions and Format

Thank you for taking our survey! We are asking visitors whether adding year-round indoor activities at Holiday World would affect how often you come or how long you stay. . Any data you provide will be kept confidential and used only for internal planning purposes. The data will only be used and reported in the aggregate. This survey should take about 8 minutes to complete.

At the end of the survey, you can enter your email address to be entered into a monthly drawing to WIN 2 FREE TICKETS to Holiday World.

1. How often do you visit Holiday World?

First visit
Every few years
Once a year
2 – 5 times a year
More than 5 times a year
Other _____

2. How long do you plan to stay in Holiday World today?

Short stop (under 2 hours)
Half day (2 – 4 hours)
All day (4 – 8 hours)
Overnight (how many nights? ____)

3. If you are staying overnight, enter the number of nights you are spending in each of the following:

___ Hotel
___ Motel
___ Private Home
___ Bed & Breakfast
___ Campground
___ Other _____

4. What was the main purpose of your visit to Holiday World today? Please select all that apply.

Vacation/Recreation

Business

Visit with friends and family

Just passing through (please list your destination _____)

Special event (please tell us which one _____)

Other _____

5. When you were planning your trip, was the visit to Holiday World …

The main destination on this trip

One of several destinations on this trip

Not a planned destination on this trip

** PAGE BREAK**

This next section will ask about the effect year-round indoor attractions at Holiday World would have on your visitation to the park.

6. How likely are you to stay overnight and spend more than 1 day at Holiday World if there were a hotel on-site?

Very likely

Somewhat likely

Neither likely nor unlikely

Somewhat unlikely

Very unlikely

7. How likely are you to visit Holiday World in the **non-summer months** if there were an indoor waterpark open-year round?

Very likely

Somewhat likely

Neither likely nor unlikely

Somewhat unlikely

Very unlikely

8. How many nights are you likely to spend at Holiday World in the **non-summer months** if there were an indoor waterpark and hotel on-site that were open year round?

0

1

2

3

4

5+

Don't Know

** PAGE BREAK**

This next section will gather demographic information. Please keep in mind that all the information you provide will be kept confidential and used for internal planning purposes only.

9. What is your gender?

Male

Female

I'd rather not say

10. Where do you live?

City _____

State _____

11. Which age group do you belong to?

18 – 24

25 – 34

35 – 44

45 – 54

55 – 64

65 or older

12. What best describes your travel group?

Traveling alone

Young Adult couple with no children (18 years and older)

Young family (with children under 6)

Mid-life family (with children 6 – 17 years)

Mature couple, no children at home

With friends and/or relatives

School/university/sporting group

13. Including yourself, how many people are in your travel group?

Adults _____ Children (under 18 years old) _____

17. If you would like to be included in the monthly drawing to win 2 free tickets to Holiday World, please enter your e-mail address. We will only use your email address to notify you if you win the tickets. We will destroy the information if you do not win.

_____

Indiana Business Survey Toolkit

Survey Background

This survey results from a discussion between the Client and the Workforce Development research team. Specifically, after some research, the team [and the Client?] sees value in collecting information from businesses on hiring practices, which may bolster the argument that a longer summer break offers students internship and valuable work opportunities and that strengthens economic development outcomes statewide. The February poll conducted by Public Opinion Strategies determined that respondents supported a uniform school start date if it created more job or internship opportunities for students. The results from this business survey could strengthen that argument and appeal to likely voters.

Purpose

This survey's purpose is to gather information on the hiring practices of Indiana businesses and employment of high-school aged workers (ages 14 – 18). It seeks to understand how Indiana businesses might react to a change in the length of the summer. For example, if the summer break lengthens, would Indiana businesses hire more high-school aged workers and/or keep existing high-school aged workers employed for that longer time period? Gathering this data might help the Client persuade legislators to support a uniform start date if it will create more job and internship opportunities for students.

Target Audience

The target audience for this survey is Indiana businesses of all sizes and industries.

How to Get a Representative Sample

The Client should survey a representative sample to ensure robust results. The Client may purchase a representative sample of businesses in Indiana through Dun & Bradstreet (http://www.dnb.com/) or in collaboration with a survey organization like Public Opinion Strategies or the Center for Survey Research at Indiana University.

How to Use

There are two possible mechanisms for survey delivery:

1) Administer as a web survey via Qualtrics. Formatting includes introduction paragraphs, instructions, skip logic, and suggested page breaks. It can be loaded into Qualtrics and shared with the representative sample.
2) Administer as a phone survey. Its short length makes a phone survey viable and allows businesses throughout the state to be included. The Client could recruit volunteers or employees to complete the phone calls or could utilize a surveying group like Public Opinion Strategies or the Center for Survey Research at Indiana University.

Sample Survey Questions and Format

Thank you for taking our survey! We are gathering information on Indiana businesses and employment practices regarding teenage workers. All of the information you provide will be kept confidential and will only be used and reported in the aggregate. This survey should take about 5 minutes to complete. Thank you for your participation!

** PAGE BREAK**

1. In what zip code is the main location of your business?

open ended

2. If you have multiple locations, please enter the zip codes of all of your locations.

open ended

4. How many workers do you currently employ?

open ended

** PAGE BREAK**

This next section will include questions about your current hiring practices for high-school aged employees.

5. Do you employ workers between the ages of 14 and 18 during the summer?

Yes

No

Other ____

** PAGE BREAK **

6. IF YES TO Q5 - About what percentage of your staff during the summer consists of workers aged 14-18?

____ %

7. IF YES TO Q5 – Do you have an employee development program during the summer for your workers aged 14-18? For example: a mentoring program or professional development classes.

Yes

No

Not Sure

8. IF YES TO Q5 – Would you be willing to hire more workers aged 14-18 during the summer if the summer break were longer, for example, if break lasted 10 weeks instead of 8 weeks?

Yes

No

Not Sure

9. IF NO TO Q5 – Why do you not employ workers aged 14-18? Please check all that apply.

My business does not need more employees.

My business does not like to hire temporary workers that can only work during the summer.

It is too difficult to train new workers and have them be productive in a few weeks.

We do not have work for workers aged 14-18 because of the nature of our business.

Other _____

10. IF NO TO Q5 - Would you be willing to hire workers aged 14-18 during the summer if the summer break were longer, for example, if break lasted 10 weeks instead of 8 weeks ?

Yes

No

Not Sure

11. If you have anything else you'd like to tell us about your employment of workers aged 14-18, please let us know.

* open ended *

** PAGE BREAK **

12. Which age group do you belong to?

18 – 24

25 – 34

35 – 44

45 – 54

55 – 64

65 or older

13. What is your gender?

Male

Female

I'd rather not say

Indiana Public School Employee Survey Toolkit

Background

This survey results from research conducted in the stakeholder analysis. Indiana public school employees are influential and interested in any policy change that may affect yearly schedules. This survey utilizes many of the questions from the February 2016 survey of likely voters conducted by Public Opinion Strategies at the behest of the Client and adds some further questions relevant to the target audience. Many of the questions are directly from the February 2016 survey to allow for data comparisons by the Client.

Purpose

The purpose of this survey is to gather opinions of a uniform school start date from Indiana public school employees. It seeks to understand how they spend their time during summer break and other breaks throughout the school year, and gathers information on the strength of supporting and opposing arguments for a uniform later school start date.

By gathering information on how school employees use breaks, it can help strengthen arguments regarding the scheduling of breaks throughout the school year. For example, if school employees spend most of their school year breaks in ways they do not find very productive or valuable, it might help support the argument that a longer summer break is more useful for school employees to work a second job or complete continuing education courses.

Gathering this data will allow the Client to have informed discussions with legislators about the importance of breaks for public school employees. The data can inform interested parties on how useful public school employees find breaks currently and opportunities to make breaks more valuable. As an invested stakeholder group with power, it is important for the Client to gather these data.

Target Audience

Indiana public school employees. It should include Indiana public school employees with varying demographics from all regions within the state.

How to Get a Representative Sample

The Client should survey a representative sample to ensure robust results. Indiana public school districts or a survey consultant like Public Opinion Strategies or the Center for Survey Research at Indiana University may help with selecting a representative sample.

How to Use

There are two possible mechanisms for survey delivery:

1) Administer as a web survey via Qualtrics. Formatting includes introduction paragraphs, instructions, skip logic, and suggested page breaks. It can be loaded into Qualtrics and shared with the representative sample.
2) Administer as a phone survey. Its short length makes a phone survey viable and allows schools throughout the state to be included. The Client could recruit volunteers or employees to complete the phone calls or could utilize a surveying group like Public Opinion Strategies or the Center for Survey Research at Indiana University.

Sample Survey Questions and Format

Thank you for taking our survey! We are gathering opinions of school employees on the academic calendar in their school district. This survey will also ask about how you spend your breaks while school is not in session. All of the data you provide will be kept confidential and will only be used and reported in the aggregate. This survey should take about 10 – 12 minutes to complete.

** PAGE BREAK**

1. What school district do you work in?

    * A drop box listing all school districts in Indiana can be manually added in Qualtrics and will help in case employees cannot recall the name of their school district. Add a "Don't Know" selection *

2. What is your role in your school district?

    Teacher

    Administrator

Administrative Staff

Custodial

Counselor

Resource Officer

Other _____

3. How many years have you been employed in that role at your current school?

____ Years

4. How many years have you worked in your current public school district?

____ Years

** PAGE BREAK **

These next questions will focus on how you spend your summer break when school is not in session. When answering these questions, please think about a typical summer.

5. During the summer break, do you work another job outside of your job in the school district?

Yes

No

It depends on the year

** PAGE BREAK**

6. IF YES TO Q5 – How many hours a week do you work that outside job in the summer?

1 – 15

16 – 25

26 – 40

40 +

7. IF NO TO Q5 – How likely would you be to pursue additional summer employment if summer break lasted longer, for example, 10 weeks instead of 8 weeks?

Very likely

Somewhat likely

Not likely or unlikely

Somewhat unlikely

Very unlikely

** PAGE BREAK**

8. During the summer break, do you take continuing education or professional development courses?

Yes

No

It depends on the year

** PAGE BREAK**

9. IF YES TO Q8 – How many hours a week do you spend in continuing education or professional development courses in the summer?

1 – 15

16 – 25

26 – 40

40 +

10. IF NO TO Q8– How likely would you be to pursue continuing education or professional development courses if summer break lasted longer, for example, 10 weeks instead of 8 weeks?

Very likely

Somewhat likely

Not likely or unlikely

Somewhat unlikely

Very unlikely

** PAGE BREAK**

11. During summer break, what percentage of your waking time do you spend doing each activity below?

___ Working a job outside of my job in the school district

___ Participating in continuing education courses or other professional development opportunities

___ Leisure activities like vacationing, reading, watching TV, etc.

12. When do you typically take a vacation? Please select all that apply.

During the summer

Other school breaks

While school is in session

I don't usually take vacations

Don't know

PAGE BREAK

Next, we want to learn more about your opinion on the academic calendar for your school. When answering these questions, please think about the academic calendar for the school that currently employs you.

13. How satisfied are you with the dates your school year starts and ends?

Very satisfied

Somewhat satisfied

Neither satisfied or unsatisfied

Somewhat unsatisfied

Very unsatisfied

14. Do you think your school's START date is …?

Too early

Just right

Too late

15. Do you think your school's END date is …?

Too early

Just right

Too late

16. Which ONE of the following would you prefer? (RANDOMIZE ANSWERS in Qualtrics, except "Don't Know")

A longer summer vacation with traditional holiday breaks during the school year

A shorter summer vacation with more breaks during the school year

Don't know

17. Each Indiana public school district sets its own school start date. Would you favor or oppose creating a uniform school START date for all Indiana public schools?

Strongly favor

Somewhat favor

Don't know

Somewhat oppose

Strongly oppose

18. Let's assume for a moment, Indiana had a single, uniform school start date. Would you prefer school to start:

In July

The first 2 weeks of August

The 3rd week of August

The 4th week of August

After Labor Day

Other _____

Don’t Know

** PAGE BREAK **

These next questions will help us understand how convincing you find the arguments opposing and supporting a uniform school start date in Indiana

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** PAGE BREAK **

The following are some statements that you might hear from people who support the proposal for a late-summer uniform school start date. Please rate how convincing you find each statement as a reason to favor this proposal.

19. It will make it easier for teachers to pursue professional development opportunities during the summer.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don’t know

20. It will make it easier for students to get internships and summer jobs that will prepare them for future employment.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don’t know

21. It will align the school calendar with college and university calendars and make it easier for high school students to take dual credit classes at local community colleges.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don't know

22. It will strengthen Indiana's tourism industry, leading to more jobs and tax revenue without raising tax rates.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don't know

** PAGE BREAK **

The following questions are some statements that you might hear from people who oppose the proposal for a late-summer uniform school start date. Please rate how convincing you find each statement as a reason to oppose this proposal.

23. A later school start date will allow less time for teachers to prepare students for the ISTEP exams.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don't know

24. Local school districts know what is best for their students and community and should have control over selecting the dates for the academic calendar.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don't know

25. A longer summer break makes it hard for students to retain information from year to year and would negatively affect their academic success.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don't know

26. A longer summer break would negatively affect students who receive free lunches during the school year.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don't know

** PAGE BREAK**

27. One proposal would require all Indiana public school districts to begin the school year no earlier than the fourth (4^{th}) week in August.

Now that you have heard from both sides, would you support or oppose a proposal to require all Indiana public school districts to begin the school year no earlier than the fourth (4^{th}) week in August?

Strongly favor

Somewhat favor

Don't know

Somewhat oppose

Strongly oppose

** PAGE BREAK **

This next section will gather demographic information. Please keep in mind that all the information you provide will be kept confidential.

28. How old are you?

18 – 21

22 – 31

32 – 41

42 – 51

52 – 61

62 – 71

72 +

29. What is your zip code?

30. What is your gender?

Male

Female

I'd rather not say.

31. What is your race and ethnicity? Check all that apply.

White

Black or African American

Hispanic or Latino

American Indian or Alaskan Native

Asian

Native Hawaiian or Pacific Islander

I'd rather not say.

Other

32. In politics today, do you consider yourself to be … (RANDOMIZE ANSWERS in Qualtrics, except "Or something else?")

Republican

Democrat

Or something else?

Likely Voters Survey Toolkit

Survey Background

This survey is an expanded version of the Client's February 2016, survey. Upon review of the initial survey, researchers determined it would be useful to expand this survey to include a section on opposing arguments. This survey includes questions about policy opposition and will allow for more nuanced results. Researchers copied many initial survey questions verbatim to ensure reliable data comparison.

Purpose

This survey's purpose is to gather opinions on a uniform school start date from likely voters throughout Indiana. It seeks to understand how convincing or unconvincing likely voters view supporting and opposing arguments about the proposed change in school start date.

The results from this survey may help legislators gauge support from likely voters for the proposed change and may also help identify for legislators and other stakeholders the arguments that are most convincing to likely voters and most valuable to include in messaging and legislative debates.

Target Audience

The target audience for this survey is demographically varied and comprises likely voters from all regions within the state.

How to Get a Representative Sample

The Client should survey a representative sample to ensure robust results. The Client may develop a representative sample in collaboration with Public Opinion Strategies or the Center for Survey Research at Indiana University.

How to Use

The initial survey in February 2016 was conducted by phone survey; therefore a follow up survey by phone is most appropriate.

1) The Client could recruit volunteers or employees to complete the phone calls or could utilize a surveying group like Public Opinion Strategies or the Center for Survey Research at Indiana University.

Sample Survey Questions and Format

Thank you for taking our survey! We are asking Indiana residents how they feel about the academic calendar in their school district. This survey will also ask how you feel about a uniform public school start date throughout Indiana. All of the data you provide will be kept confidential and will only be used and reported in the aggregate. This survey should take about 10 minutes to complete.

** PAGE BREAK**

1. What public school district do you live in?

    * A drop box listing all school districts in Indiana can be manually added in Qualtrics and will help in case respondents cannot recall the name of their school district. *Add a "Don't Know" selection*

2. How satisfied are you with your local school district's academic calendar (the dates your school year starts and ends)?

    Very satisfied
    Somewhat satisfied
    Neither satisfied or unsatisfied
    Somewhat unsatisfied
    Very unsatisfied

3. Do you think the school START date in your public school is …?

    Too early
    Just right
    Too late

4. Do you think the school END date in your public school is …?

Too early

Just right

Too late

5. Thinking more about the school calendar, which ONE of the following would you prefer? (RANDOMIZE ANSWERS in Qualtrics except "Don't Know")

A longer summer vacation with traditional holiday breaks during the school year

A shorter summer vacation with more breaks during the school year

Don't know

6. Each Indiana public school district sets its own school start date. Would you favor or oppose creating a uniform school START date for all Indiana public schools?

Strongly favor

Somewhat favor

Don't know

Somewhat oppose

Strongly oppose

** PAGE BREAK**

7. One proposal would require all Indiana public school districts to begin the school year no earlier than the fourth (4^{th}) week in August. Supporters say it will expand job training and pre-college program opportunities for students. Opponents say local districts know best the schedule that works for their students and communities.

Now that you have heard from both sides, would you support or oppose a proposal to require all Indiana public school districts to begin the school year no earlier than the fourth (4^{th}) week in August?

Strongly support

Somewhat support

Don’t know

Somewhat oppose

Strongly oppose

** PAGE BREAK **

The following questions are some statements that you might hear from people who support the proposal for a late-summer uniform school start date. Please rate how convincing you find each statement as a reason to favor it.

8. It will make it easier for teachers to pursue additional training or advanced degrees during the summer.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don’t know

9. It will make it easier for students to get internships and summer jobs that will prepare them for future employment.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don’t know

10. It will align the school calendar with the college calendar and make it easier for high school students to take dual credit classes at local community colleges.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don’t know

11. It will strengthen Indiana’s tourism industry – leading to more jobs and tax revenue without raising taxes.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don’t know

** PAGE BREAK **

The following questions are some statements that you might hear from people who oppose the proposal for a late-summer uniform school start date. Please rate how convincing you find each statement as a reason to oppose it.

12. A later school start date will allow less time for teachers to prepare students for the ISTEP exams.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don’t know

13. Local school districts know what is best for their students and community and should have control over selecting the dates for the academic calendar.

Very convincing

Somewhat convincing

Not too convincing

Not at all convincing

Don’t know

14. A longer summer break makes it hard for students to retain information from year to year and would negatively impact their academic success.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

15. A longer summer break would negatively affect students who receive free lunches during the school year.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

** PAGE BREAK **

16. Now that you heard some more information, would you support or propose a proposal to require all Indiana public school districts to begin the school year no earlier than the fourth (4^{th}) week in August?

Strongly support
Somewhat support
Don't know
Somewhat oppose
Strongly oppose

** PAGE BREAK **

This next section will gather demographic information. Please keep in mind that all the information you provide will be kept confidential.

17. In what year were you born?

18. What is your zip code?

19. What is your gender?

Male

Female

I'd rather not say.

20. What is your race and ethnicity? Check all that apply.

White

Black or African American

Hispanic or Latino

American Indian or Alaskan Native

Asian

Native Hawaiian or Pacific Islander

I'd rather not say.

Other

21. In politics today, do you consider yourself to be … (RANDOMIZE ANSWERS in Qualtrics, except "Or something else?")

Republican,

Democrat,

Or something else?

22. Do you have children under the age of 22 living in your household?

Yes

No

Don't know

23. Please tell us which best describes your children – select all that apply. My children are …

Not yet in kindergarten

Kindergarten through 6th grades

7th through 8th grades

9th through 12th grades

Graduated high school and IN college or university

Graduated or left high school and NOT attending college or university

None of these

24. Do your children attend a public school, charter school, or a private or religiously-affiliated school? When do you typically take a vacation? Please select all that apply.

During the summer

Other school breaks

While school is in session

I don't usually take vacations

Don't know

Parent/Guardian Survey Toolkit

Survey Background

This survey results from a review of the Client's initial February 2016 survey. That survey had a target audience of likely voters and the research team determined it would be useful to the Client to include the most invested stakeholders – likely voters who have children in the public school system. Researchers copied many initial survey questions verbatim to ensure reliable data comparison, but further expanded it by including a section on opposing arguments. The initial survey only focused on how convincing supporting arguments for the policy change were, but the inclusion of opposing arguments provides valuable data.

Purpose

This survey's purpose is to gather opinions about a uniform start date from parents and guardians of children currently enrolled in Indiana public schools. It seeks to understand how children spend their time during breaks throughout the school year. It gathers information on how convincing or unconvincing parents and guardians view supporting and opposing arguments about a uniform statewide school start date. Gathering this data should help the Client and other interested parties frame their approach to this policy discussion. It will identify which arguments this invested and powerful stakeholder group find most and least convincing regarding this policy change. Understanding this will allow the Client, legislators, and other interested parties to frame the argument and appeal to the needs of this group.

The results from this survey may help identify the level of support legislators may expect from this key stakeholder group and identify those arguments that are most likely to persuade this constituency toward a uniform school start date. Information gathered on how students use breaks may help strengthen arguments that lengthening summer break and reducing in-year breaks will result in a net positive impact on students educationally and developmentally.

Target Audience

Demographically varied parents and guardians of children currently enrolled in Indiana public schools from all regions within the state.

How to Get a Representative Sample

The Client should survey a representative sample to ensure robust results. The Client may purchase a representative sample online via GFK Knowledge Panel (http://join.knpanel.com/) or an alternative panel service or by partnering with a survey organization like Public Opinion Strategies or the Center for Survey Research at Indiana University.

How to Use

There are two possible mechanisms for survey delivery:

1) Administer as a web survey via Qualtrics. Formatting includes introduction paragraphs, instructions, skip logic, and suggested page breaks. It can be loaded into Qualtrics and shared with the representative sample.
2) Administer as a phone survey. Its short length makes a phone survey viable and allows respondents throughout the state to be included. The Client could recruit volunteers or employees to complete the phone calls or could utilize a surveying group like Public Opinion Strategies or the Center for Survey Research at Indiana University.

Sample Survey Questions and Format

Thank you for taking our survey! We are asking parents and guardians of children in the Indiana public school system, how they feel about their school district's academic calendar. We also ask how your children spend summer breaks and breaks within the school year. All of the data you provide will be kept confidential and will only be used and reported in the aggregate. This survey should take about 10 – 12 minutes to complete.

** PAGE BREAK**

1. What school district do your children attend?

    * A drop box listing all school districts in Indiana can be manually added in Qualtrics and will help in case parents cannot recall the name of their school district. Add a "Don't Know" selection

    Other _____

7. What percentage of **summer break** do your kids spend on … (please add up to 100%)?

    ____ Extracurricular activities (camps, clubs, employment, etc.)

    ____ Leisure activities (watching TV, hanging out with friends, etc.)

    ____ Other

    ____ Don't know

8. What percentage of **breaks during the school year**, do your kids spend on … (please add up to 100%)?

    ____ Extracurricular activities (camps, clubs, employment, etc.)

    ____ Leisure activities (watching TV, hanging out with friends, etc.)

    ____ Other

    ____ Don't know

** PAGE BREAK**

Now, we want to understand your opinion on the school calendar in your school district.

9. How satisfied are you with your school district's academic calendar (the dates your school year starts and ends)?

Very satisfied
Somewhat satisfied
Neither satisfied or unsatisfied
Somewhat unsatisfied
Very unsatisfied

10. Do you think the school START date in your public school is …?

Too early
Just right
Too late

11. Do you think the school END date in your public school is …?

Too early
Just right
Too late

12. Thinking more about the school calendar, which ONE of the following would you prefer? (RANDOMIZE ANSWERS in Qualtrics, except "Don't Know")

A longer summer vacation with traditional holiday breaks during the school year.
A shorter summer vacation with more breaks during the school year.
Don't know

13. When a local school district sets its academic calendar, which ONE of the following is closer to your view? (RANDOMIZE ANSWERS in Qualtrics, except "Don't Know")

It is more important to ensure high school end-of-semester exams occur before the winter break to help students retain what they learned.

It is more important to ensure students have easy access to non-school educational, job training, or internship programs that can prepare them for college or the workforce.

Don't know

14. Each Indiana public school district sets its own school start date. Would you favor or oppose creating a uniform school START date for all Indiana public schools?

Strongly favor

Somewhat favor

Don't know

Somewhat oppose

Strongly oppose

15. Let's assume for a moment, Indiana had a single, uniform school start date. Would you prefer the school start to be:

In July

The first 2 weeks of August

The 3rd week of August

The 4th week of August

After Labor Day

Other _____

Don't Know

** PAGE BREAK **

These next questions will help us understand how convincing the arguments opposing and supporting a uniform school start date in Indiana are to you.

** PAGE BREAK **

The following questions are some statements that you might hear from people who support the proposal for a late-summer uniform school start date. Please rate how convincing you find each statement as a reason to favor it.

16. It will make it easier for teachers to pursue additional training or advanced degrees during the summer.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

17. It will make it easier for students to get internships and summer jobs that will prepare them for future employment.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

18. It will align the school calendar with the college calendar and make it easier for high school students to take dual credit classes at local community colleges.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

19. It will strengthen Indiana's tourism industry – leading to more jobs and tax revenue without raising taxes.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

** PAGE BREAK **

The following questions are some statements that you might hear from people who oppose the proposal for a late-summer uniform school start date. Please rate how convincing you find each statement as a reason to oppose it.

20. A later school start date will allow less time for teachers to prepare students for the ISTEP exams.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

21. Local school districts know what is best for their students and community and should have control over selecting the dates for the academic calendar.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

22. A longer summer break makes it hard for students to retain information from year to year and would negatively impact their academic success.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

23. A longer summer break would negatively affect students who receive free lunches during the school year.

Very convincing
Somewhat convincing
Not too convincing
Not at all convincing
Don't know

** PAGE BREAK **

24. One proposal would require all Indiana public school districts to begin the school year no earlier than the fourth (4^{th}) week in August.

Now that you have heard from both sides, would you support or oppose a proposal to require all Indiana public school districts to begin the school year no earlier than the fourth (4^{th}) week in August?

Strongly support
Somewhat support
Don't know
Somewhat oppose
Strongly oppose

** PAGE BREAK **

This next section will gather demographic information. Please keep in mind that all the information you provide will be kept confidential and will only be used and reported in the aggregate.

25. How old are you?

18 – 21
22 – 31

32 – 41

42 – 51

52 – 61

62 – 71

72 +

26. What is your zip code?

27. What is your gender?

Male

Female

I'd rather not say.

28. What is your race and ethnicity? Check all that apply.

White

Black or African American

Hispanic or Latino

American Indian or Alaskan Native

Asian

Native Hawaiian or Pacific Islander

I'd rather not say.

Other

29. Are you, or is anyone in your household, a teacher or an employee of a public school?

Yes – I am

Yes – Family Member

No

Don't know

30. In politics today, do you consider yourself to be … (RANDOMIZE ANSWERS in Qualtrics, except "Or something else?")

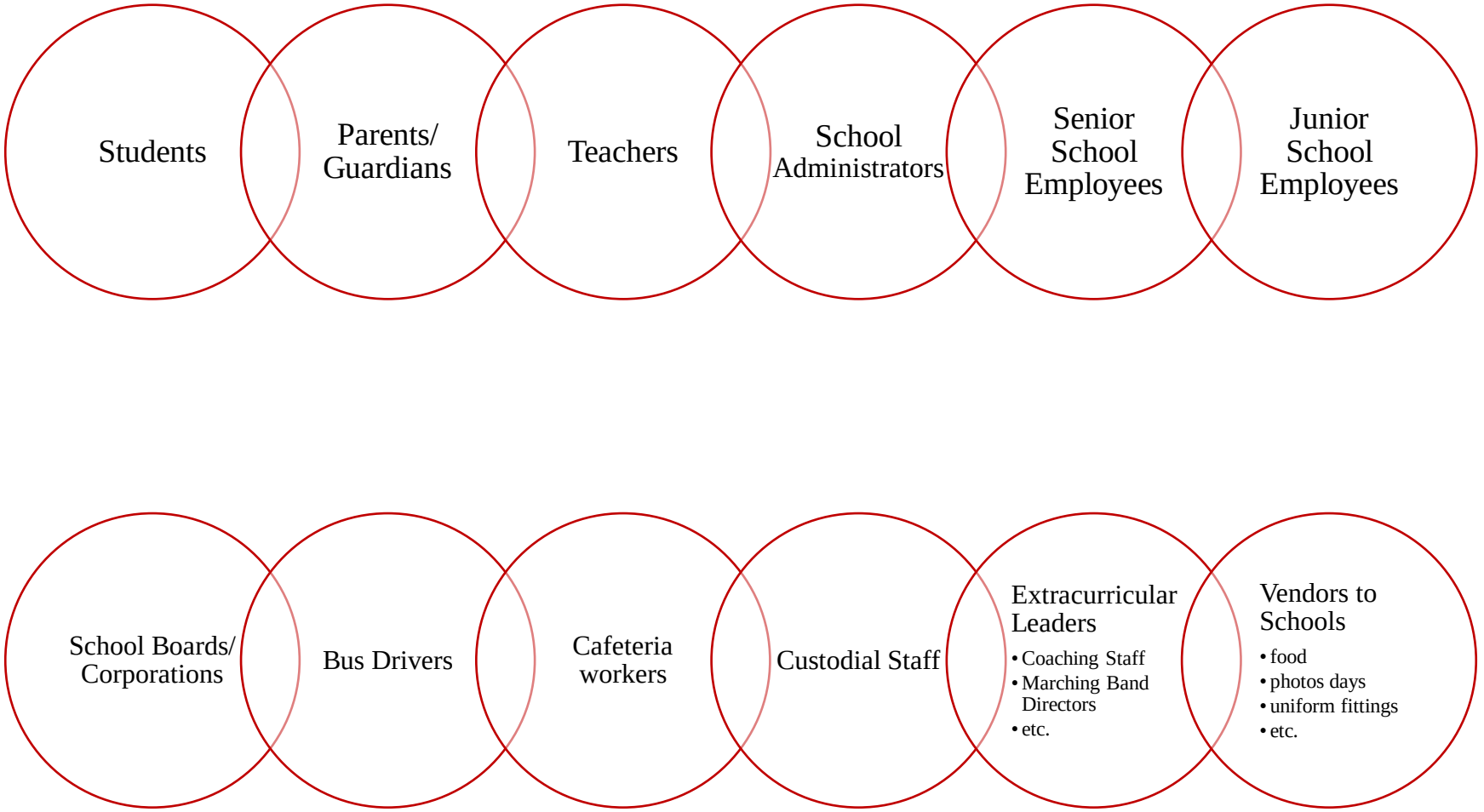
Republican,

Democrat,

Or something else

Appendix

List of direct stakeholders



List of indirect stakeholders

Associations of Local Economy & Workforce Development

- Indiana Chamber of Commerce
- Indiana Tourism Association
- Indiana Tourism Council
- Indiana State Fair Commission
- Indiana State Festivals Association
- Indiana Farm Bureau
- Purdue Extension Agents
- Indiana Beach Marina Association
- Campground Resorts
- RV Indiana Council
- Indiana Campground and RV Association
- Indiana Restaurant & Lodging Association
- Restaurant and Hospitality Association of Indiana
- Indiana Bed and Breakfast Association
- Indiana Casino Association
- Indiana Grocery & Convenience Store Association
- Association of Indiana Convention and Visitors Bureaus
- Indiana Marine Trade Association
- Indiana Retailers Council
- Indiana Association of Realtors
- National Federation of Independent Business
- Advanced Manufacturing and Logistics Industry
- Indiana Labor Unions

Individual Entities in Local Economy & Workforce Development

- Tourism Industry
  - summer camps/day camps
  - private transportation services
  - gas stations
  - restaurants
  - hotels
  - realtors
  - The Indianapolis Children's Museum
  - Indiana Beach Amusement Resort
  - Holiday World and Splashin' Safari
- Warm weather attractions
  - Zoos (Indianapolis, Mesker, Ft. Wayne)
  - Conner Prairie Interactive History Park
  - Indianapolis Motor Speedway
  - outdoor pools and waterparks
  - outdoor miniature golf and paint ball outlets
  - ice cream / popcorn / cotton candy / fair food vendors
- retail stores
  - school supplies
  - back to school clothes
- utility companies serving schools
- child care providers
- Theaters
- Indiana Manufacturers
  - Cook Medical
  - Eli Lilley and Company
- regional residents

List of contacted stakeholders organized by position on standardized school start date

Education

- Indiana School Boards Association
- Indiana Association of Public School Superintendents
- Indiana State Teachers Association
- School Corporations
- test preparation services
- tutoring services
- universities
- technical schools
- charter schools
- private schools

  home school coalitions
- higher education leaders and instructors
- Indiana Non-Public Education Association
- Indiana Association of School Principals
- Indiana Association of School Nurses
- Indiana Association of School Psychologists
- Indiana Association of School Social Workers
- Indiana Association of School Business Officials
- Coalition for a Traditional School Year

Governance

- Indiana Office of Tourism Development
- Indiana Department of Education
- Indiana Department of Revenue
- Municipal governments
- School Corporations
- Indiana Utility Regulatory Commission
- Indiana Office of Energy Development
- Indiana Education Employment Relations Board
- Indiana Association of Cities and Towns

Recreation and Culture

- religious organizations that host events around traditional holidays (Christian, Catholic, Jewish, Muslim, etc.)
- Save Indiana Summers
- student extracurricular activity sector
  - sports
    - Indiana High School Athletics Association
  - music
    - Indiana State School Music Association
  - 4-H
    - Purdue Extension
  - Indiana FFA
  - arts
- summer camps

  summer academic enrichment providers

  civic associations
- Association of Indiana Museums

Stakeholders Categorized by Position

Support	Neutral/Does not take a position	Oppose
Indiana Restaurant & Lodging Association	Indiana Chamber of Commerce	Indiana Association of Public School Superintendents'
Indiana Manufactures Association	Indiana State Fair Commission	Indiana School Boards Association
Indiana Tourism Association	Purdue Extension (4-H)	Indiana State Teachers Association
Indiana Office of Tourism Development	Indiana Association of Cities and Towns	Indiana Farm Bureau
International Association of Amusement Parks and Attractions	Indiana Grocery & Convenience Store Association	Proponents of Balanced Calendar
Coalition for a Traditional School Year	Conner Prairie	
Save Indiana Summers	Indianapolis Zoo	
	Indiana Department of Natural Resources	
	Indiana High School Athletics Association	
	Association of Indiana Museums	
	Indiana Casino Association	

Unknown		
RV Indiana Council	Indiana State School Music Association	Sports Indiana
Indiana Beach	Bed & Breakfast Association of Indiana	Marina Association
Indianapolis Motor Speedway	Indiana Campground Owners' Association	Indiana Repertory Theatre

Thank you for taking this survey. We are asking visitors whether adding year-round indoor activities at Holiday World would affect how often you come or how long you stay.

Any data you provide will be kept confidential and used only for internal planning problems. The data will only be used and reported in the aggregate. This should should take about 8 minutes to complete.

At the end of the survey, you can enter your email address to be entered into a monthly drawing to

WIN 2 FREE TICKETS!

1. How often do you visit Holiday World?
   - First visit
   - Every few years
   - Once a year
   - 2 – 5 times a year
   - More than 5 times a year
   - Other _____

2. How long do you plan to stay in Holiday World today?
   - Short stop (under 2 hours)
   - Half day (2 – 4 hours)
   - All day (4 – 8 hours)
   - Overnight (how many nights? ____)

3. If you are staying overnight, enter the number of nights you are spending in each of the following:
   - ___ Hotel
   - ___ Motel
   - ___ Private Home
   - ___ Bed & Breakfast
   - ___ Campground
   - ___ Other _____

4. What was the main purpose of your visit to Holiday World today? Please select all that apply.
   - Vacation/Recreation
   - Business
   - Visit with friends and family
   - Just passing through (please list your destination _____)
   - Special event (please tell us which one _____)
   - Other _____

5. When you were planning your trip, was the visit to Holiday World ...
   - The main destination on this trip
   - One of several destinations on this trip
   - Not a planned destination on this trip

This next section will ask about the effect year-round indoor attractions at Holiday World would have on your visitation to the park.

6. How likely are you to stay overnight and spend more than 1 day at Holiday World if there were a hotel on-site?

- Very likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Very unlikely

7. How likely are you to visit Holiday World in the **non-summer months** if there were an indoor waterpark open-year round on-site?

- Very likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Very unlikely

8. How many nights are you likely to spend at Holiday World in the **non-summer months** if there were an indoor waterpark and hotel on-site that were open year round?

- 0
- 1
- 2
- 3
- 4
- 5+
- Don't Know

This next section will gather demographic information. Please keep in mind that all the information you provide will be kept confidential and used for internal planning purposes only.

9. What is your gender?

- Male
- Female
- I'd rather not say

10. Where do you live?

- City _____
- State _____

11. Which age group do you belong to?

18 – 24
25 – 34
35 – 44
45 – 54
55 – 64
65 or older

12. What best describes your travel group?

Traveling alone
Young Adult couple with no children (18 years and older)
Young family (with children under 6)
Mid-life family (with children 6 – 17 years)
Mature couple, no children at home
With friends and/or relatives
School/university/sporting group

13. Including yourself, how many people are in your travel group?

Adults _____ Children (under 18 years old) _____

14. If you would like to be included in the monthly drawing to **win 2 free tickets** to Holiday World, please enter your e-mail address. We will only use your email address to notify you if you win the tickets. We will destroy this information if you do not win. _____

How do you feel about the school calendar?

1. What is your zip code? _____

2. What role in the public school system best applies to you?
   - Parent or Guardian of Indiana Public School student
   - Indiana Public School Employee (teacher, staff, etc.)
   - Student of Indiana Public School
   - Community Member
   - Other, please specify: _____

3. How satisfied are you with your local school district's academic calendar (the dates your school year starts and ends)?
   - Very satisfied
   - Somewhat satisfied
   - Neither satisfied or unsatisfied
   - Somewhat unsatisfied
   - Very unsatisfied

4. If it were possible, would you support a uniform school start date for all Indiana public schools?
   - Strongly support
   - Somewhat support
   - Neither support nor oppose
   - Somewhat oppose
   - Strongly oppose

5. If Indiana did have a single, uniform public school start date, would you prefer it to be ...?
   - In July
   - The first two weeks of August
   - The 3rd week of August
   - The 4th week of August
   - After Labor Day
   - Don't Know
   - Other, please specify: _____

6. Would you attend a meeting within your voting district to learn more about this topic?
   - Yes
   - No
   - Not Sure

Please return this survey to my office.
If you have any questions, please contact me at 123-456-7890

LEGISLATIVE BRIEF

UNIFORM SCHOOL START DATE

THE ISSUE

Currently Indiana law sets a 180 instructional-day minimum for K-12 school calendars but lets districts choose when to begin their school year. Some schools have started as early as July, shrinking opportunities for students to gain valuable work skills through summer employment. Early start dates also harm the Hoosier tourism economy, reducing business and labor income and state and local tax revenues.

KEY FINDINGS

Researchers at Indiana University's School of Public and Environmental Affairs estimate that **students who work during high school are estimated to earn 6% more annually** than those who do not. Students who work during high school **increase "soft skills,"** the probability of future fringe benefits, **and the probability of future employment**.

Moreover, moving to a uniform, second-to-last-Monday in August school start date would boost tourism-related economic activity and yield:

- **An $11.3M increase in GDP**
- **A $6.9M increase in labor income**
- **249 new jobs**
- **A $1.73M increase in state and local tax revenues**

CONCLUSION

Moving to a uniform school start date in the latter half of August will give Hoosier students more opportunities to work during high school and gain the skills, including vital "soft skills," that strengthen their chances for future employment and increase their earnings. A later start date will also boost the state's tourism economy, GDP, and state and local tax revenue.

COOK INC.

Over the past year, Cook Inc. has consistently listed 100+ available positions with the company. Many of the open positions only require a high school diploma or GED, yet Cook has been unable to fill them because many workers lack the "soft skills" (showing up on time and regularly, professionalism, etc.) that early work experience – including summer work experience – provides. Adjusting school start dates will help students gain these vital skills through summer work and improve their competitiveness and earnings potential after graduation.

In 2015, the State of Indiana and the Lilly Endowment co-funded 84 high school internships in advanced manufacturing and logistics created by Conexus Indiana. The AML companies reported their interns developed an interest in advanced manufacturing and gained soft skills valuable to future employment.

LEGISLATIVE BRIEF

UNIFORM SCHOOL START DATE

THE ISSUE

Currently Indiana law sets a 180 instructional-day minimum for K-12 school calendars but lets districts choose when to begin their school year. Some schools have started as early as July, leading to renewed debates over whether too-early start dates deprive students of valuable summer work and extracurricular experiences. While a recent bill (H.B. 1363) calling for a uniform post-Labor Day start date did not make it out of committee, recent survey research suggests that a majority of Hoosiers favor a uniform start date in late August.

KEY FINDINGS

Public Opinion Strategies conducted a phone survey of **500 likely voters in Indiana** from **February 2-4, 2016**, producing results with a margin of error of ±4.38%. Key findings include:

- **63% of respondents were in favor of creating a uniform school start date for all Indiana public schools**. Each region of the state (Central, East, Northwest, and South) favored this proposal by at least **61%**. This includes **60% of those with children in their households**.
- **At least 63% of Hoosiers from each region are in favor of starting the school year no earlier than the 4th week in August.**
- **41% felt the best way to improve public education in Indiana was to increase job-training and internship opportunities or create education partnerships with local colleges and businesses.**

CONCLUSION

Survey data suggest that Hoosiers favor creating a uniform school start date that would begin in late August, and prioritize students receiving more job training/internship hours and more opportunities for college credits. Passing uniform start date legislation would serve these interests and benefit Hoosier children and families.

LOCAL CONTROL?

In 2015-2016, over half of the schools in Indiana already began school after August 15. Those who oppose making such a date uniform often cite the need to retain local control over school calendars. Yet local control for its own sake – as opposed to an earlier start date warranted by specific local conditions – should not outweigh the benefits to students from summer employment and extracurricular activities.

65% of survey respondents are less than fully satisfied, or unsatisfied, by their local school district's academic calendar

LEGISLATIVE BRIEF

UNIFORM SCHOOL START DATE

THE ISSUE

Currently Indiana law sets a 180 instructional-day minimum for K-12 school calendars but lets districts choose when to begin their school year. Some schools have started as early as July, without evidence that earlier start dates boost learning. In fact, a later school start date may benefit students more educationally, by aiding summer employment which can boost academic achievement.

KEY FINDINGS

An initial study conducted by researchers at Indiana University's School of Public and Environmental Affairs with data from Indiana, Iowa and Minnesota, finds that:

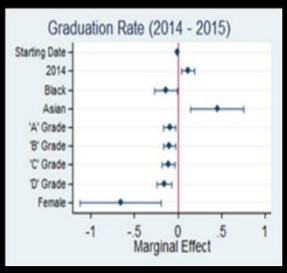
- **Schools that start earlier do not perform better than later-starting schools** on student achievement measures including ISTEP and ACT scores, SATs, AP exams, and graduation rates.*
- **A later school start date may correlate positively with student achievement**:
    - Summer employment correlates with higher attendance and achievement and provides students with valuable "soft skills" needed for employment success
    - "Spaced learning," where instruction is interrupted by breaks (e.g. holding exams after Winter Break) aids long-term retention of information; in an earlier study, high school students performed 35% better on an exam with spaced learning.

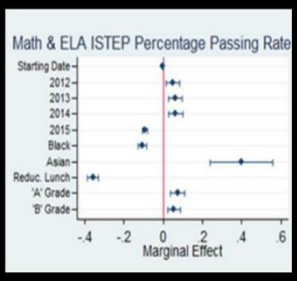
*Based on aggregated data; further research is needed to determine whether start date affects demographic groups differently regarding various achievement measures

CONCLUSION

Earlier school start dates do not appear to benefit student achievement, while moving to a uniform later start date may help students academically. Students gain valuable skills and habits through summer employment and may retain information better when learning is spaced, e.g. if a later start date results in exams being scheduled after Winter Break.

START DATE LESS RELEVANT TO ACHIEVEMENT THAN OTHER FACTORS

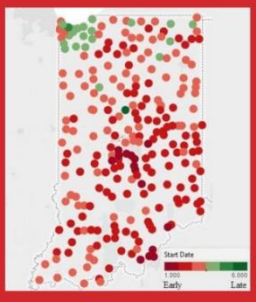




(Years [2012, 2013 etc.] show *correlation of "year fixed* effects,"or a variety of events in a given year, with achievement)

IN School Start Dates

(August 15 midpoint)



References

Bureau of Revenue Estimates. (2013). Economic Impact of a Post Labor Day Start Date for Maryland Public Schools. Comptroller of Maryland.

Carr, R. V., Wright, J. D., & Brody, C. J. (1996). Effects of High School Work Experience a Decade Later: Evidence from the National Longitudinal Survey. *Sociology of Education*, (1). 66.

D. K. Shifflet & Associates, Ltd. (2007). *Indiana 2006 Visitor Profile Public Version.* Indiana Office of Tourism Development.

Light, A. (1999). High School Employment, High School Curriculum, and Post-School Wages. *Economics of Education Review*, 18(3), 291-309.

Meyer, R. H., & Wise D.A. (1982). High School Preparation and Early Labor Force Experience. NBER Chapters, 277.

Morse, Stephen C. (2002). South Carolina Early School Start Dates and the South Carolina Travel and Tourism Industries: An Analysis of Economic & Tax Revenue Impacts. South Carolina Department of Education.

Morse, Stephen C., & Church, Chad. (2008). Post Labor Day School Start Dates in Tennessee: An Analysis of the Economic and Tax Revenue Impacts on the Tennessee Travel and Tourism Industry. The University of Tennessee.

Ormiston, R. (2016). Does High School Employment Develop Marketable Skills? *Journal of Labor Research*, (1), 53.

Rockport Analytics (2014). *2014 Economic Impact of Tourism in Indiana: Methodology, Metrics and Evaluation*. Indiana Office of Tourism Development.

Ruhm, C. (1995). The Extent and Consequences of High School Employment. *Journal of Labor Research*, 16(3), 293-303.

Stephenson Jr., S. P. (1981). In-School Labour Force Status and Post-School Wage Rates of Young Men. *Applied Economics*, 13(3), 279.

Bacolod, M. V., & Hotz, J. (2006). Cohort changes in the transition from school to work: Evidence from three NLS surveys. *Economics of Education Review*, 25, 351–373.

Bahrick, H., Bahrick, L., Bahrick, A. & Bahrick P. (1993). Maintenance of foreign language vocabulary and the spacing effect. Psychological Science, 4, 316-321.

Bloom, K., & Shuell, T. (1981). Effects of massed and distributed practice on the learning and retention of second-language vocabulary. Journal of Educational Research, 74, 245-248.

Carpenter, S.K., Cepeda, N.J., Rohrer, D., Kang, H.K, & Pashler, H. (2012). Using spacing to enhance diverse forms of learning: Review of recent research and implications for instructions. Educational Psychology Review, 24, 369-378

Coleman, J. (1994). Social capital, human capital, and investment in youth. In A. Peterson, & J. Mortimer (Eds.), *Youth unemployment and society* (pp. 34–50). Cambridge: Cambridge University Press.

D'Amico, R. (1984). Does employment during high school impair academic progress? Sociology of Education, 3, 152–164.

Dail, T., Christina, R. (2004). Distribution of practice and metacognition in learning and long-term retention of a discrete motor task. Research Quarterly for Exercise & Sport, 75, 148-155.

Data Reports and Analytics. (2015). Minnesota Department of Education. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/Data.jsp

Delaney, P. F., Verkoeijen, P. P. J. L., & Spirgel, A. (2010). Spacing and testing effects: A deeply critical, lengthy, and at times discursive review of the literature. In B. H. Ross (Ed.), Psychology of learning and motivation: Advances in research and theory (63–147). New York, NY: Elsevier.

Dempster, F. N. (1989). Spacing effects and their implications for theory and practice. Educational Psychology Review, 1, 309–330.

Department of Psychology, UCLA. (n.d.) Applying Cognitive Psychology to Enhance Educational Practice. Retrieved from http://bjorklab.psych.ucla.edu/research.html#idd

Desimone, J. (2006). Academic Performance and Part-Time Employment among High School Seniors. Topics in Economic Analysis & Policy, 6(1). doi:10.2202/1538-0653.1466

Ebbinghaus, H. (1913). Memory: A contribution to experimental psychology. New York, NY: Teachers College, Columbia University.

Education Statistics. (2015). Iowa Department of Education. Retrieved from https://www.educateiowa.gov/education-statistics

Feldman, A. F., & Matjasko, J. L.. (2005). The Role of School-Based Extracurricular Activities in Adolescent Development: A Comprehensive Review and Future Directions. *Review of Educational Research*, *75*(2), 159–210.

Find School and Corporation Data Reports. (2016). Indiana Department of Education. Retrieved from http://www.doe.in.gov/accountability/find-school-and-corporation-data-reports

Frequently Asked Questions About Instructional Days and Time Requirements. (2007). Indiana

Department of Education. Retrieved from http://www.leb.k12.in.us/pdf/district/InstructionalTimeRequirements.pdf

Gilden, D. (n.d.). The Impact of Taking Breaks on Learning and Memory.

Greenberger, E., & Steinberg, L. (1986). *When teenagers work: The psychological and social costs of adolescent employment*. New York: Basic Books.

Heckman, J. (2000). Policies to foster human capital. Research in Economics, 54, 3–56.

Hintzman, D. L. (1976). Repetition and memory. In G. H. Bower (Ed.), The psychology of learning and motivation (Vol. 10). New York, NY: Academic.

ITBS Research Guide (n.d.). The University of Iowa College of Education. Retrieved from http://itp.education.uiowa.edu/ia/documents/ITBS-Research-Guide.pdf

Jost, A. (1897). Die Assoziationsfestigkeit in ihrer Abha ngigkeit von der Verteilung der Wiederholungen [The strength of associations in their dependence on the distribution of repetitions]. Zeitschrift fur Psychologie und Physiologie der Sinnesorgane, 16, 436–472.

Kapler, I.V., Cepeda, N.J., & Weston, T. (2012). Spacing, testing, and feedback: Helping students overcome forgetting. CEA. Retrieved from http://www.cea-ace.ca/education-canada/article/spacing-testing-and-feedback-helping-students-overcome-forgetting

McClelland, G.H. (2000). Increasing statistical power without increasing sample size. *American Psychologist*, 55(8), 963-964. Retrieved from http://dx.doi.org/10.1037/0003-066X.55.8.963

McNeal Jr., Ralph B. (1995). Extracurricular Activities and High School Dropouts, Sociology of Education, 68(1), January 1995, 62–81.

MI School Data. (2016). Michigan Department of Education. Retrieved from https://www.mischooldata.org/DistrictSchoolProfiles/ReportCard/EducationDashboard.aspx

Murnane, R.J., & Willett, B.J. (2011). *Methods Matter*. New York: Oxford University Press.

Nelson, A.A. (2015a). *ITT, TOT, & Quasi-Experiments* [Powerpoint slides]. Retrieved from Canvas.

Nelson, A.A. (2015b). *Program Evaluation and Impact Theory* [Powerpoint slides]. Retrieved from Canvas.

Nelson, A.A. (2015c). *Random Assignment and Experimentation* [Powerpoint slides]. Retrieved from Canvas.

Painter, M. A. (2010). Get a job and keep it! High school employment and adult wealth accumulation. *Research in Social Stratification and Mobility*, 28(2), 233-249.

Phillips, S., & Sandstrom, K. (1990). Parental attitudes toward youth work. *Youth and Society*, 22, 160–183.

Price, P.C. (2016). *Research Methods in Psychology: Core Concepts and Skills*. Retrieved from http://catalog.flatworldknowledge.com/bookhub/18?e=price_1.0-ch07_s01

Quirk, Kimberly J., Timothy Z. Keith and Jeffrey T. Quirk. (2001). Employment During High School and Student Achievement: Longitudinal Analysis of National Data, Journal of Educational Research, September/October 2001, 95(1), 4–10.

Ruch, T. C. (1928). Factors influencing the relative economy of massed and distributed practice in learning. Psychological Review, 35, 19–45.

Sabia, J. J. (2009). School-year employment and academic performance of young adolescents. Economics of Education Review, 28(2), 268-276.

Schwartz, A. E., Leos-Urbel, J., & Wiswall, M. (2015). Making Summer Matter: The Impact of Youth Employment on Academic Performance.

Singh, Kusum. (1998). Part-time Employment in High School and Its Effect on Academic Achievement, Journal of Educational Research, 91(3), January/February 1998, 131–139.

Son, K. L., & Simon, D. A. (2012). Distributed learning: Data, Metacognition, and educational implications. Educational Psychology Review, 24, 379-399.

Steinberg, L. D., Greenberger, E., & Garduque, L. (1982). Effects of working on adolescent development. Development Psychology, 18, 383–39

Toppino, T. C., & DiGeorge, W. (1984). The spacing effect in free recall emerges with development. Memory & Cognition, 12, 118–122.

Toppino, T. C., Fearnow-Kenney, M. D., Kiepert, M. H., & Teremula, A. C. (2009b). The spacing effect in intentional and incidental free recall by children and adults: Limits on the automaticity hypothesis. Memory & Cognition, 37, 316–325.

Walker, G., and Vilella-Velez, F. (1992). Anatomy of a demonstration: The Summer Training and Education Program (STEP) from pilot through replication and postprogram impacts. Philadelphia, PA: Public/Private Ventures.

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