School Calendar and Start/End Times

The Calendar and Start/End Times Citizen Advisory Committee was formed to recommend to the Olympia School Board a school schedule and calendar that best supports foundational needs of children. Our the Strategic Plan is supported as many of our desired outcomes can be engaged by adjusting the calendar and bell schedule. The committee has began researching and evaluating what a change in the school schedule and calendar would look like and this document and corresponding presentation is to inform the OSD School Board and the public of our work to date.

The research connecting sleep and school start times is clear. Good sleep hygiene is necessary for all students and when combined with appropriate start times based on biological needs results in healthier students with better academic achievement.

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School Calendar

Changes to our School Calendar will be potentially a long process. As we've researched this, we've found that there are not as many examples in the US as there has been for the Start/End time change. There are, however, many examples from European countries.

Ideally we will need to involve neighboring school districts and will be able to spend more focus on the School Calendar change after proposals for the Start/End times have been completed.

Many reasons have come up as to why the School Calendar should be evaluated:

- Lack of student knowledge retention after a 10-week break.
- The affect the Calendar has on graduation rates.
- Significant breaks right before testing: OSD's winter break comes just before the
 end of the semester, causing a strange hiatus just before finals. It's difficult for
 students to have a long break just before finals.
- Our model is outdated and based on agrarian society and most kids are not needed for harvesting in the summer anymore.
- It is difficult and expensive for parents to find 10 weeks of activity/childcare each summer.
- · Challenges relating to the IB Program
- While testing is in May, OSD students lose about a month of instruction time compared to most areas of the country that start in August. Our students have one less month of course material teaching by the time the testing comes around in May. We have an extra month at the end that is a "lost month" in regard to being prepared for any May tests.

There are many possible ways the School Calendar could be modified to help us overcome some of these challenges and make the entire schooling process easier.

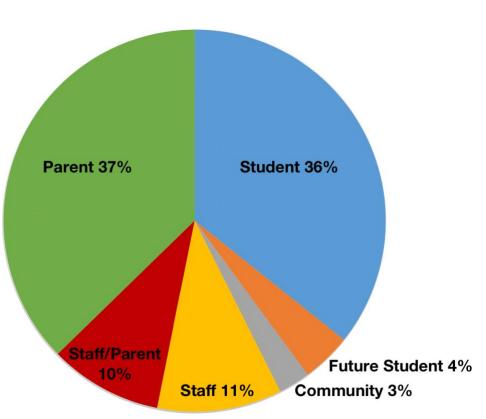
- Start school up to 1 month earlier; get out a month earlier. This would solve two significant issues:
 - 1. the first semester would now end BEFORE the winter break, the next semester would begin after the winter break.
 - 2. All course material teaching time could happen BEFORE the testing in May.
 - 3. Would this result in better scores on finals and testing?
- · X weeks on/x weeks off
 - Example: 8 weeks on and 2 weeks off, 8 weeks on and 2 weeks off, etc.
- Year-round school

There are many more possibilities and figuring==.9 out the best ones for our community will be the next steps for the Citizen Advisory Committee.

An interesting side note: at least one of the Start/End Time survey comments (more information on the survey is below) was focused on the School Calendar:

What should take precedence to this conversation [over the Start/End times discussion] is starting our school year earlier. The current start after Labor Day is a huge disadvantage for AP and IB kids. They receive about one month less instruction than the rest of the nation's pupils before being tested in May. This forces teachers to accelerate the pace of learning in an already rigorous course. The result is that kids who might have opted for AP do not take the class or sign up and then transfer out. We could really make a huge impact by making this slight change to start even 10 to 14 days earlier than we do now. Most likely the union is the biggest hurdle to implementing any time changes & start date changes. Good luck! Thank you for listening.

Community Surveys



— Survey #1

All of the schools in the Olympia School District were represented in this survey and there were 2427 responses.

RESPONDENTS	PERCENTAGES
PARENT/GUARDIAN/FAMILY MEMBER OF CURRENT STUDENT	37%
STUDENT	36%
STAFF	11%
BOTH STAFF AND PARENT/GUARDIAN/FAMILY MEMBER	10%
PARENT/GUARDIAN/FAMILY MEMBER OF FUTURE STUDENT	4%
COMMUNITY MEMBER	3%

86% of the survey respondents agreed that it's important to pursue a change in school start times.

The percentages of respondents who indicated the importance of this change are shown here by role:

- 89% of students
- · 74.6% of staff
- 80% of the dual Staff/parent, family, guardian role
- 93% of parent/family/guardian
- 89% of community
- 91% of parent/family/guardian of a future student

General take aways from the data include:

- The overall results didn't report a negative impact to work, before school obligations, extra curricular or transportation. However, when the students were sorted by schools, students from CHS, JMS, and HES reported a negative impact on family obligations after school.
- The overall results showed no negative impact related to work except for staff with a dual role of parent/family/guardian (see below).
- Respondents with a staff role (N=488) with or without a student reported greater negative impact in all areas compared to other groups. This group represented 20% of the survey.
 - Staff at the secondary level and staff with a dual as a parent/guardian/family member affiliated with the secondary reported the greatest negative impacts.
 - Staff and staff with a dual role of parent/family/guardian that are affiliated with both primary and secondary schools reported a negative impact to work.

- A negative impact to extra curricular activities was indicated by respondents who have a staff role in the district. This was indicated the most by those affiliated with secondary in some manner.
- 94% of student responses were from middle and high school students
- Big take away concern of the negative impact to extra curricular activities

— Data Breakdown

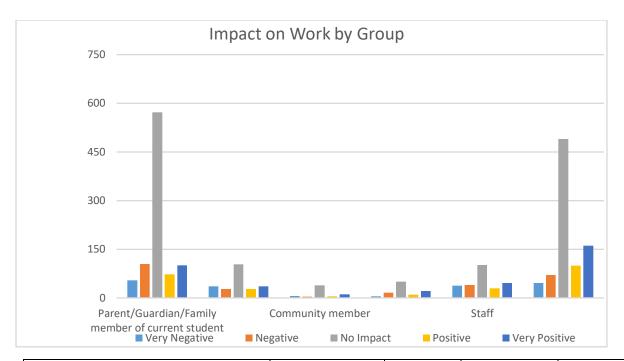
After an initial survey our community, we can see that 86.2 percent of our respondents felt it was either extremely important or somewhat important to pursue a change in middle and high school start times. Another 4.3 percent had no opinion on the issue.

The remaining 9 and a half percent of our community raise issues that will need to be carefully considered prior to such a move. These issues include concerns over childcare, how changing start times affects students in extracurricular activities and those attending New Market Skills Center, whether start times would impact elementary school start times, how this would impact transportation to and from school for students, and potential impacts on local traffic patterns.

Most of our respondents overall reported no change to work, transportation, childcare or extracurricular activities. Recognizing that middle and high school students themselves represent more than a third of the respondents to this survey, we analyzed responses by group as well.

As you can see, the most common response in each group regarding potential impacts to work as 'No Impact' by a significant margin. Nevertheless, approximately 450 respondents (about 19 percent) across each of the 6 measured groups did report a potential negative or very impact to their work.

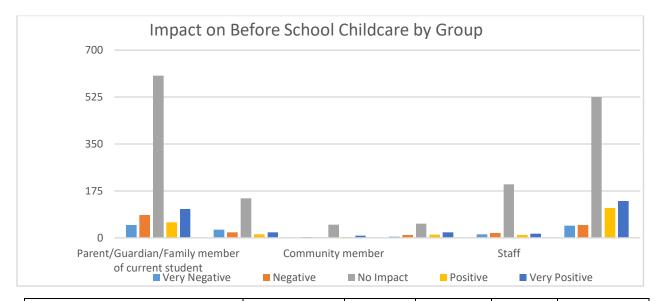
Meanwhile, 620 respondents – representing about 26 percent of respondents reported a positive or very positive impact to their work. The group with the largest of such responses was the student population, whereas the negative and positive responses among parents not employed by the district were fairly similar in proportion.



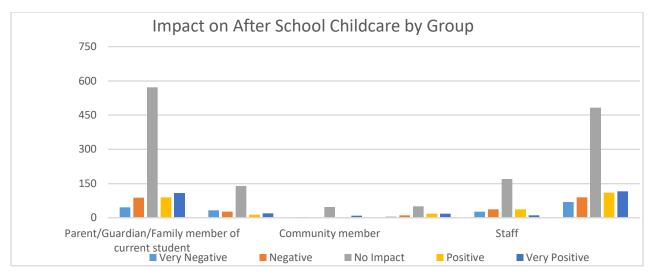
GROUP	VERY NEGATIVE	NEGATIVE	NO IMPACT	POSITIVE	VERY POSITIVE
PARENT/GUARDIAN/FAMILY MEMBER OF CURRENT STUDENT	54	105	572	73	
BOTH STAFF AND PARENT/GUARDIAN/FAMILY MEMBER	36	28	104	28	
COMMUNITY MEMBER	6	4	39	5	
PARENT/GUARDIAN/FAMILY MEMBER OF FUTURE STUDENT	5	16	50	10	
STAFF	38	40	102	30	
STUDENT	46	71	490	99	
TOTALS	185	264	1357	245	

Respondents reported before school childcare generally had little impact. It is important to note that this early survey did not assess which of the respondents had children who currently have children under the age of 12. Additionally, the survey did not indicate whether a change in elementary start times may occur in addition to the change of middle/high school start times. As such, the direct impact on families needing childcare will need to more carefully assessed going forward.

That said, of those polled, respondents reported a negative impact for before school childcare and 437 reported potential negative impacts for after school childcare. 518 respondents reported a positive impact to before school childcare, and 554 respondents reported a positive impact to after school childcare. Again, the section of parents not employed by the school district reports a majority of 'no impact' – with the remaining groups nearly evenly divided once again between positive and negative impacts. It is also important to note on this issue that school staff largely reports no impact, however, this change could impact a small portion of our OSD employees and as their employer we should find out more about what the district can do to help these employees so that we can retain our skilled staff through this transition if we decide to move forward.

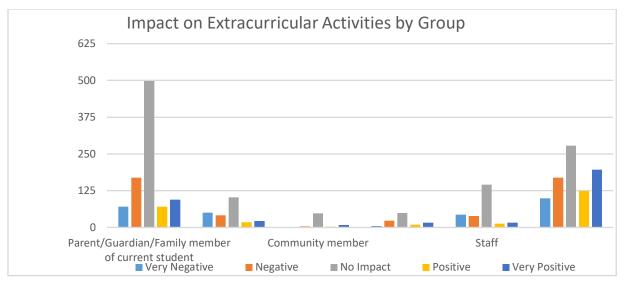


GROUP	VERY NEGATIVE	NEGATIV E	NO IMPACT	POSITIV E	VERY POSITIVE
PARENT/GUARDIAN/FAMILY MEMBER OF CURRENT STUDENT	48	85	605	58	108
BOTH STAFF AND PARENT/GUARDIAN/FAMILY MEMBER	31	21	147	13	20
COMMUNITY MEMBER	3	2	49	3	8
PARENT/GUARDIAN/FAMILY MEMBER OF FUTURE STUDENT	5	11	53	12	21
STAFF	13	18	199	11	15
STUDENT	45	48	525	111	138
TOTALS	145	185	1578	208	310



GROUP	VERY NEGATIVE	NEGATIV E	NO IMPACT	POSITIVE	VERY POSITIVE
PARENT/GUARDIAN/FAMILY MEMBER OF CURRENT STUDENT	46	88	572	89	109
BOTH STAFF AND PARENT/GUARDIAN/FAMILY MEMBER	33	27	139	14	19
COMMUNITY MEMBER	4	1	47	4	9
PARENT/GUARDIAN/FAMILY MEMBER OF FUTURE STUDENT	5	11	50	18	18
STAFF	27	37	170	37	11
STUDENT	69	89	483	110	116
TOTALS	184	253	1461	272	282

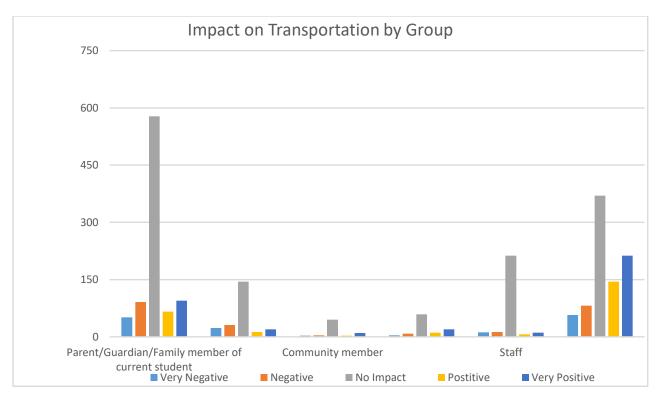
Of all of our questions, the largest number of concerns seemed to focus around impacts to extracurricular activity schedules and the associated impacts extracurricular activities would have on classroom attendance, study and family time should the district move forward with a chance. 715, or nearly 30 percent, of our respondents expressed they believe a start time change would have a negative or very negative impact on extracurricular activities. Far more OSD staff and parents of students, in particular, believe these impacts could be negative. Though overall, the largest response in this category for those groups was still 'no impact'.



GROUP	VERY NEGATIVE	NEGATI VE	NO IMPACT	POSITIVE	VERY POSITIVE
PARENT/GUARDIAN/FAMILY MEMBER OF CURRENT STUDENT	71	169	498	71	95
BOTH STAFF AND PARENT/GUARDIAN/FAMILY MEMBER	50	41	102	17	22
COMMUNITY MEMBER	2	4	48	3	8
PARENT/GUARDIAN/FAMILY MEMBER OF FUTURE STUDENT	5	23	49	9	16
STAFF	43	39	145	13	16
STUDENT	99	169	278	124	197
TOTALS	270	445	1120	237	354

Lastly, regarding transportation we see each group in our break-down reporting that start time changes would largely have no impact on their daily transportation – with nearly as many students reporting a total positive impact as those who reported no impact.

Again, we do see about 379 respondents (about 15 percent) selecting one of the two negative options, while 614 (or slightly more than 25 percent) indicated positive impacts (heavily influenced by the student vote).



GROUP	VERY NEGATIVE	NEGATIV E	NO IMPACT	POSTITIVE	VERY POSITIVE
PARENT/GUARDIAN/FAMILY MEMBER OF CURRENT STUDENT	51	91	578	66	95
BOTH STAFF AND PARENT/GUARDIAN/FAMILY MEMBER	23	31	145	13	20
COMMUNITY MEMBER	3	4	45	3	10
PARENT/GUARDIAN/FAMILY MEMBER OF FUTURE STUDENT	4	8	59	11	20
STAFF	12	13	213	7	11
STUDENT	57	82	370	145	213
TOTALS	150	229	1410	245	369

—Survey Comments

There were 874 individually written responses. Common themes were concern about the impact to after school activities, especially sports and jobs. Several respondents commented on perceived bias of the survey and noted watching the video helped influence. There were also questions and comments about elementary start times and how elementary was not mentioned in the video or research data. Many people wanted to know if elementary would start earlier and reported not being able to give feedback not knowing if elementary start times would change.

Here is a sampling of the comments, with a supportive, concerned, and suggestion comment given for each Role.

Role: Student

Supportive Comment:

I will function way better and learn way better if I have a later start time. Young children are more able to fall asleep early, while teenagers need the extra sleep, so switching schedules makes sense. It doesn't make sense that I am expected to function at the exact times that I am least productive, but then sleep through times students my age are seen to be most productive

Concern Comment:

If you change the time we start then kids will stay up later knowing they have more time in the morning and will most likely get less sleep. I like that we get out of school early and would hate getting out later because we would have less time from school then sports.

Suggestion Comment:

Late Starts on a single weekday is preferable to shifting the entire schedule. The real world doesn't revolve around students getting out in the afternoon. This hinders work and transportation for many. High School students can handle waking up at the same time most days. I do recognize the benefits of later starts, so it may be appropriate to implement it for one day a week. This has worked in the past with less problems than early release.

Role: Parent/Family/Guardian of Current student

Supportive Comment:

Younger children wake up earlier naturally. Please have them go to school early and allow the growing brains of high schoolers to sleep.

I agree with later start times for MS & HS, but that doesn't mean I want my elementary aged child starting at o-dark thirty as a compromise.

Concern Comment:

Later start times for high school will severely impact students ability to work after school as later start times result in later release times. I am currently my students' transportation to school and later start times will also impact my ability to be to work on time. Also high school student athletes already consistently miss 6th period to allow for sport travel. Later start times will result in students missing additional classroom instruction time. Later start times will also result in team practices, musical group rehearsals and all other extra curricular after school activities starting later. This in turn gives students a later start to initiate and complete homework and as I previously mentioned limiting students ability to hold an after school job. I completely understand that sleep is important however delaying school start times is not the answer.

Suggestion Comment:

What are creative solutions we can brainstorm about the structure of the school day itself? Avanti seems to have achieved that and I would guess there are real ideas out there that could be explored. Thanks for requesting input. I look forward to following this discussion.

Later start time is good and if you don't do the whole week at least go back to late start on Wednesday.

For middle school student parents, this may affect their work schedule. There are no before school programs that I am aware of so I might have to rely on my 6th grade student to be responsible enough to get herself on the bus by herself.

Role: Staff

Supportive Comment:

In education we always talk about teaching methods being research based. It about time we listen to research on start times. Keeping it the same because that is the way we have done it, is just plain stupid. Do what is best for the kids, and for high school it is to give them time to sleep!

Concern Comment:

There is only 4.5% change in academic outcomes. And once a new start time becomes the 'normal' start time, will students just stay up a little later. With social networking there is a temptation to interact a little later.

If we change to later start times for high school, then sports games and practices will be later resulting in later nights. Students with after school jobs would be affected as well, as they would not be able to start the job as early

Suggestion Comment:

Will all elementary start times be aligned? All middle? Staff development gets very tricky with the staggered start times. It would be great to have the same start times at the different levels so we can do district training.

Role: Both Staff and Parent/Family/Guardian of Current student Role

Supportive Comment:

While these changes could possibly negatively impact our family schedule (pickup/dropoff with work start/end times), I recognize the broader positive impact it could have and appreciate it. Also, as a district employee, I know the district would be understanding of potential scheduling conflicts that could arise from such a change.

I vividly remember the challenge that early start times presented to me when I was in high school - leading to fatigue and higher caffeine consumption.

Concern Comment:

My concern with a later start for middle and high school is all of the after school activities would get pushed back as well and the overall day would be going so late. Elementary school students dont have as many activities right after school. My children do just fine with the start times, they go to bed at a decent hour.

Suggestion Comment:

As a high school teacher there is a marked negative impact on performance in my first period class typically (late arrivals, inability to focus, lake of energy, low engagement/ participation). As a parent of elementary school children, they spend 2 full hours at Y Care before school even starts for them and then at the end of the day are dragging. I believe there is a potential positive impact for both groups. I would like to see the district work with the South Sound Y however to help support a potential impact to their services and provide guidance re: childhood development and needs of students at different time of day. There will also need to be consideration given to the impact hs sports schedules and a later schedule will have. Those athletes who will miss significant classroom time to travel for sports events may need extra academic support so teachers are not expected to reteach material and students don't fall behind. That being said, the benefits of better sleep and healthier teenagers outweigh any of those concerns.

Role: Parent/Family/Guardian of Future student

Supportive Comment:

Generally supportive, given the research. Concerned about what it might mean for elementary school start and end times given the practical concerns surrounding before and after school care.

Concern Comment:

I believe by changing the start times to 8:30 maybe be beneficial now but what happens when you go to college and you have morning classes that start at 7:00 am. Or if you have a job that starts at 7:30 am. Are you going to be late to college or to work? I would rather have students learn to get up a little earlier now so in the future they learn how to hold a job and succeed in college. By starting at a later time and ending later means that sports or afternoon activities now go later into the evening which means not getting home until 11:00 pm to finish homework. That would be my concern.

Suggestion Comment:

Another option, that could be hard to implement, is having every 1st period class be PE related, or involving some kind of active movement or activity, such as shop, or art.

Role: Community

Supportive Comment:

The research on benefits of changing to a later start time for instruction are from the 1990's out of Brown University and we are way behind the times in implementing this change. Tweens and Adolescents score higher, have better social relationships and do not fall asleep in class. Make this reasoned, well supported by research decision to change start time to later for the sake of the children - not parents' work schedules. Add in more effective before and after school programs for those parents who need it.

Concern Comment:

The videos seems like propaganda designed to elicit a certain pre-determined response. Question 2 just further exacerbates the truth that this is not an impartial survey. Perhaps the district should hire an impartial consultant to design a proper survey if they truly want to know the wishes of the community. If the school board has already decided these changes (as I suspect they have), why put up this charade that the community's opinions might actually matter?

Suggestion Comment:

Having gone through this in 2 prior districts, the biggest gripes were poor implementation by transportation...not accounting for regular commute traffic flow in planning and thus causing either multiple student tardies in mornings...hs.., or kids getting home very late...hs and elem.. Further, that routes were set up so that in too many cases the sleep gains for hs were cancelled out by having to catch the bus far too early. And of course increased issues in the parent drop off zones at all levels. Also, kids..littles..left to get to bus without supervision due to parent work schedules. SOME of this works itself out, however planning ahead will save a LOT of grief for everyone.

—Survey #2

As planned, the first survey pointed out particular areas of concern with changes to the school start and end times. It was also an initial outreach as many people had not heard of the brain research associated with adolescent sleep time and delayed start times. The goal of the second survey, however, will be to tease out specifics. We have seen certain concerns and challenges repetitively brought to attention and we need to take those and get more specific information, such as "it's only after school care that's a real problem" or "even minor changes in homework time has a significant impact on students with jobs or extra-curricular activities." This granular data can help us best choose solutions that work with our particular community.

Importantly, several issues came up as a result of our first survey that we will need to resolve before we send out the second survey.

- Was a paper and/or translated copy made available?
- It's unknown if some of the respondents put schools they previously were affiliated with (like their kid's previous school) many students put in multiple schools. In the future perhaps request what school you or your student is currently enrolled in.

- Many comments were made about elementary start times and that the survey did not
 make it clear if they would also change. Comments indicated that respondent
 impacts might change if elementary started earlier. Data may have been impacted by
 this.
- There were some obvious errors with respondents (comments made by a likely student but identified as a staff or parent/guardian/family). Individuals completing the survey multiple times (exact comments were repeated) there were several duplicates based upon comments alone.
- · Griffin was not on the school list (several comments mentioned that it was left off).
- "Please find a way to make this survey more accessible on the OSD app, and for access on smart phones. Question #3 is impossible to answer, as you cannot see/answer the question fully."

As part of our plans for the next/second survey, we will need to make an effort to be intentional in reaching out to parts of our community that may have been unaware of or unable to complete the survey. Considerations include a paper version, getting appropriate translation, contact with community groups, e.g. CIELO, finding ways to engage with disadvantaged community members, e.g. those involved in extreme poverty, etc.

The timing of the second survey is to be determined.

School Start/End Times

This Fall the committee will present the Olympia School Board with a proposal regarding a change in the school start/end times. If adopted, the bell schedule change could be implemented during the 2020/2021 school year.

We are feeling very positive with that we are moving in the right direction as the significant majority of the community has indicated that changing start/end times for adolescents is important.

—Impact of Later Start Times for Adolescents

It is widely understood that have delayed school start times during adolescence increases academic performance and fosters brain development. Adolescents should get between 8.5 and 9.5 hours of sleep per night. Their circadian rhythms have shifted so that they typically aren't able to sleep as early as they were able to as younger children. Bell times that are earlier for children and later for adolescents align would align school hours with the times that students are biologically best able to learn (within two hours of waking).

More than 38 studies have been conducted to examine the effects of delaying school start times. Here are some of the benefits that have been found when start times are delayed:

- More sleep and less sleepiness were reported by students
- Improved GPAs, standardized test scores, and reading comprehension
- Significant decrease in tardiness and absences
- Fewer symptoms of depression were reported
- Better ability to control impulses
- Decreased teenage traffic accidents

Adolescents who do not get enough sleep are likely to

- · Be overweight.
- Not engage in daily physical activity.
- Suffer from symptoms of depression.

- Engage in unhealthy risk behaviors such as drinking, smoking tobacco, and using illicit drugs.
- Perform poorly in school.

The American Academy of Pediatrics issued a recommendation in 2014 that middle and high schools start at 8:30am or later. Across the country many school districts have taken this step.

In the 2016-2017 school year, Seattle Public Schools shifted start times from 7:50am to 8:45am and became the largest school district in the nation to implement the AAP's start time recommendation. Research conducted at the University of Washington found that after this change students slept an average of 34 additional minutes each night and their grades went up an average of 4.5%. Another study showed that "weekend oversleeping, which is a measure of inadequate sleep, was reduced" in both the middle school and high school populations.

Thirty-four minutes of extra sleep each night is a huge impact to see from a single intervention.

— Horacio de la Iglesia, a University of Washington researcher and professor of biology and senior author of Sleepmore in Seattle.

Studies evaluating delay of school start/end times for secondary school students (Middle and High School) have been underway since the 1990s. School start times through the mid-20th-century were typically around 9am and then start times began to gradually shift earlier.

In the past 100 years, sleep has shortened by about 1 hour in children. Our study demonstrates a lengthening in the median daily sleep duration from 6 hours and 50 min to 7 hours and 24 min, restoring the historical sleep values present several decades before evenings within brightly lit environments and with access to light-emitting screens were common among teenagers.

Delaying high school start times brings students closer to reaching the recommended sleep amount and reverses the century-long trend in gradual sleep loss.

— Sleepmore in Seattle: Later school start times are associated with more sleep and better performance in high school students.

There is not a single piece of research showing academic gains with our current bell schedule which has later start times for younger children and earlier start times for adolescents.

The National Education Association supports school schedules that follow research-based recommendations regarding the sleep patterns of age groups. The Washington State Parent Teachers Associations and the Seattle Educators Association have issued position statements or resolutions supporting later school start times. A move to later start times is also consistent with the Healthy People 2020 Objective to increase the proportion of students in grades 9 to 12 who get sufficient sleep.

—Impact on Socio-Economically Disadvantaged Students

Early school start times disproportionately hurt economically disadvantaged students. Having early school start times negatively affects performance among such students by an amount equivalent to having a highly ineffective teacher. Multiple studies have shown the positive impact of delayed start times for disadvantaged students. Disadvantaged students were nearly twice as likely to reduce their absences and tardies with a change to later start times, even for teens in high school. It is known that regular and timely school attendance is beneficial for learning and therefore delaying school start times could directly impact the learning gap between low and high socioeconomic students.

—Logistics and Challenges

The majority of our team efforts have been focused on getting community feedback, dealing with logistics, identifying challenges, and learning how to solve them or how other communities have solved them.

- The Community was invited to participate via the formation of the Citizen Advisory Committee as well as participation in the first survey. The one completed survey has been used to both communicate current trends toward later start times and brain research as well as to gather community feedback. (See below for a more detailed look into community challenges.)
- The cost driving this change will be determined by the bussing schedule and therefore the OSD Transportation department was the first group we met with. We also met with Food Services (see below for in-detail information relating to these OSD departments).
- The school Principals have been made aware of the conversation about school start/end time changes. All staff have been able to communicate their views via our survey, although there has been concerns mentioned that many people did not know about the survey at all, even with it being on the staff login screens.
- The Boys & Girls Club have provided their feedback in regard to the impact of delayed start/end times to their childcare offerings. They mentioned that delaying start times in general will be beneficial to the community as there would be fewer afternoon hours when teens (especially middle schoolers) would be left unsupervised. In response to the idea of a start/end time change, location and logistics are the main factors they can't use a middle school for after school care if the middle school is still in session, for example, and would possibly need to find alternate locations to host students depending on which schools' start/end times changed. The importance of the population served is noted and critical we don't want to lose the Boys & Girls Club. Once we have the the Start/End time implementation timeframe, they will be able to move forward with their decisions. A transportation concern is both having bussing to the Program as well as having the location also be convenient for pick up by parents.
- Y-care feedback indicated that employee shifts would change which could make recruitment more difficult (some morning shifts may only be 30 minutes). Any contracts/long-term agreements in place would need to be handled.
- Athletics and other extra curricular activities. Discussions relating to any changes to game schedules and field sharing will need to begin in earnest. Delayed start/end times will have an impact on seat time, especially at the end of the day. Home games

would still potentially start at the same time (4pm) such that sports students would now need to leave school early for a "Home" game since they need time to change and warm up. It is unclear if other extracurricular activities would have the same impact on student seat time as there are typically more games in a sports season than equivalent events for other extra curricular activities. Practices and group meetings would shift later in the day, or perhaps move earlier before school. Communication with the Athletic Directors is beginning now although due to it being the end of the year, AD availability will be limited.

- Griffin and McCleary school districts have been invited to attend the Citizen Advisory Committee meetings but have been unable to attend as of yet. As they are unable to have a direct impact on our decisions but are impacted by them, we look forward to hearing their input soon.
- Delayed start times New Market. The Tumwater School District controls the start times of New Market and has provided current start times and FTE information for our review as we move forward with our discussions. The concern is that our delayed start times would force our students to miss the start of class at New Market. We'll need to figure out what to do about that and will coordinate with Tumwater SD.

—Community Challenges

In addition to the concerns about cost and sports/extra curricular schedules, other common concerns given by community members around the country when presented with a proposal to move school start times include impacts on student jobs, time for homework, little children going to school in the dark, daycare arrangements, and preparing teenagers for the 'real world.'

The amount of time that students would have available for after school jobs may be impacted, which could be problematic for families that rely on adolescent income. Studies have found that employers indicated that they didn't foresee any negative impacts on student jobs because their need for student staff did not occur until 4:00pm or later. Transportation to employment would be less, and time before employment that had previously been available (such as for homework or other family obligations) could be eliminated.

Less time in the afternoon for homework could impact all students, not just those with jobs. Although the upside to delayed start times is that the brain is more efficient when well rested and surveys show that fewer middle and high school students reported feeling too sleepy to do their homework once they had a delayed start time the actual amount of available after-school time is decreased. Impacts on homework time might be most felt most by those students with an already full daily schedule, such as for work or with extra curricular activities.

The daylight situation in the winter is not optimal and downright dark for several weeks. It's possible a change in Washington's Daylight Saving clock structure would help alleviate these struggles. If we put the shortest travel times in the earliest start times grouping, we can minimize travel in the dark. Middle and high school students, who travel farther than elementary students and are most likely to be without supervision, will greatly reduce or eliminate mornings when they travel in the dark. However, that doesn't specifically take into account our youngest students and safety is not to be taken lightly. It should be noted that some students are on busses for much longer than others such as special education students and students who are covered by the Mckinney Vento Act.

A frequently mentioned cause for concern is adjustments needed to handle childcare arrangements. In families in which teens handle aftercare for elementary school students, the gap in afternoon childcare would need to be addressed. This could correspond to an equivalent elimination of childcare needs during morning care. If elementary students didn't have to spend as much time in before school care it would make it easier to capture their peak learning time (two hours after waking) and could limit (or eliminate) stressful double transitions to/from day care.

Although childcare requirements vary depending on each family's needs, the length of the school day remains unchanged. If parents work eight hour days (or more), their children will need childcare at some point during that time since the school day is only about 6.5 hours long. Some elementary students currently have both before and after school care. Depending on the child's school schedule and family availability, before school care may no longer be needed.

A concern among some parents is that by adjusting wake-up times, we are doing a disservice to students as they will then be unprepared for regular working hours. It needs to be noted

that the adolescent brain does not stay in its delayed circadian rhythm for long. Adolescence is the transition from childhood to adulthood. As adolescents mature they will naturally grow into the adult need for less sleep as well as gain the ability to get up earlier more easily. The significant brain developed growth years of adolescence are important and need to be protected with good sleep hygiene.

"Adolescence is one of the most dynamic events of human growth and development, second only to infancy in terms of the rate of developmental changes that can occur within the brain."

— Mariam Arain, et al. (2013) *Maturation of the adolescent brain*

On a related note, it seems logical that by allowing later start times, a teenager would simply stay up that much later and there would be no sleep gain at all. However, the data shows that not to be the case; A delay of 55 minutes in Seattle's school start times resulted in an increase of 34 minutes of sleep. A study of Cherry Creek School District students in Colorado showed that middle school students increased their sleep by 31 minutes and high school students increased their sleep by 48 minutes (with delayed school start times of 50 minutes and 70 minutes, respectively).

"[There is a] misperception that teenagers are lazy, they want to sleep in and if you let them wake up later by delaying school start time you'll make them more lazy. The fact is, that we didn't find that."

— Horacio de la Iglesia, a University of Washington researcher and professor of biology and senior author of *Sleepmore in Seattle*.

The research connecting sleep and school start times is clear. Good sleep hygiene is necessary for all students and when combined with appropriate start times based on biological needs results in healthier students with better academic achievement.

—Transportation

We knew as a committee that changing start times for schools would have a significant impact to transportation so it was imperative that early on in this process we partner with Transportation. Transportation was very pleased to have been asked for their input so early in the process.

We have had two meetings with transportation to have a better understanding of their processes, logistics, concerns, and next steps. In both of these meetings transportation did explain that with the following two changes there would potentially be no cost impact and even a possible cost savings.

The first thing that was discussed was flipping of the bus routes, in a new order of elementary, middle, and high schools using the same or similar times that are currently used. Right now it is high, middle, and elementary. By doing this we would not need additional bus.

The second was to have the two middles schools on the East side have the same start time as the West side middle schools.

Possible window of start time that have been discussed in the meeting are:

- Elementary schools 7:30 to 8:20 am
- · Middle schools approx. 9:05 am
- High schools approx. 9:20 am

There were some points that transportation did bring up that we didn't know.

- Mckinney Vento Act and that we do transport a fair amount of students in and out of our district
- The need to work with Mcleary School District as we do pick up High school students at elementary school in Mcleary

- Impact to New Market in Tumwater
- Lincoln has early release on Fridays rest of school district has early release on Wednesdays
- 'Brain Train' bus would have to be re-evaluated because with having high school out
 of school last there would be some down time for a driver waiting for homework
 club to be done

We did have a conversation with transportation about changing to a two tier process of elementary, middle, & high school all starting between 8-9 am. This would have an impact to transportations budget such as need for more buses, more drivers, larger garage, and more mechanics/support staff to support drivers. This would also have an impact on retaining drivers because this would lower their hours.

The next step with transportation will include a full schedule rework so we can start looking at more specific time frames like when elementary, middle, and high schools pick ups and drop offs would be.

—Food Services

We wanted to touch base with Food Services to ensure we reaching out to get feedback and an understanding of how this change would affect different aspects of the schools and staff.

Paul Flock, from the Food Services department, indicated possible impacts and concerns of changing start/end times.

- It does not appear that there would be any cost impact to food services.
- No additional labor is projected.
- It might increase participation on the elementary level for breakfast and might decrease participation of breakfast at the middle/high schools.
- Food services can be very flexible.

 It's possible traffic and more congestion at the elementary schools will be an issue, since more parents drop off kids and food services would be delivering food at that time.

Questions and Comments from Board

Thank you for your time.

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