

School Start Time Study

School Board Work Session – Status Report

Fairbanks North Star Borough
School District

Western Demographics, Inc.

Shannon L. Bingham

November 2019

Agenda – School Start Time Changes

- Situation
- Research on school start times
- Suggested start time scenarios
- Transportation and financial impacts
- Focus group observations so far
- Next Steps
 - Further stakeholder involvement for parents and community via open houses
 - Overview of Open house process
 - Online survey
- Discussion / Questions

Situation – School Start Time Changes

- Western Demographics was hired in July to conduct a Detailed Study and Stakeholder-involvement Process Addressing the Issue
- Many studies show for adolescents/teens:
 - Negative impact of early start time
 - Benefits for later start times
- Many school districts are addressing the start time issue Nationally and considering changes
- The Research is mixed on elementary start times
 - Some studies show academic achievement *not* effected by earlier start times as long as it is after 8:00
 - Some show younger students benefit from later start times
- Circadian rhythm (*How Daylight Effects Body Rhythm*) research for students is limited with little addressing northern latitudes

The Study Will Address a Variety of Questions

- Should high school start before 8:30 or after?
- Should middle school start before 8:30 or after?
- Do elementary students sometimes “burn out” because they wake-up early, but don’t start school until 2.5 or 3 hours later – should they start earlier?
- Are elementary students harmed if they walk to school in the dark a few more weeks during the school year if elementary schools start earlier?
- Do students in Alaska have the same Circadian Rhythm (*How Daylight Effects Body Rhythm*) as those in the Lower 48?

FNSB School District Transportation Changes Will Be Proposed in Order to Facilitate Change Scenarios

- **Combining Middle and High School Students Routes in Fairbanks**
 - Cost effective, already implemented in North Pole
- **Narrowing Transportation Time Window**
 - Cost effective, facilitates timing changes

Research Studies

- **Teens and Sleep**
 - Dr. Kyla L. Wahlstrom, University of Minnesota
- **Sleep and Start Times**
 - Dr. Lisa J. Meltzer, National Jewish Health Hospital Network

Teens & Sleep

LINKING DISCOVERY, PRACTICE, AND POLICY

Later School Start Times

Kyla L. Wahlstrom, Ph.D.

Director — Center for Applied Research and
Educational Improvement

University of Minnesota

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Observed Improvements After Later Start Times (New start times about 1 to 1.5 hours later)

Minneapolis

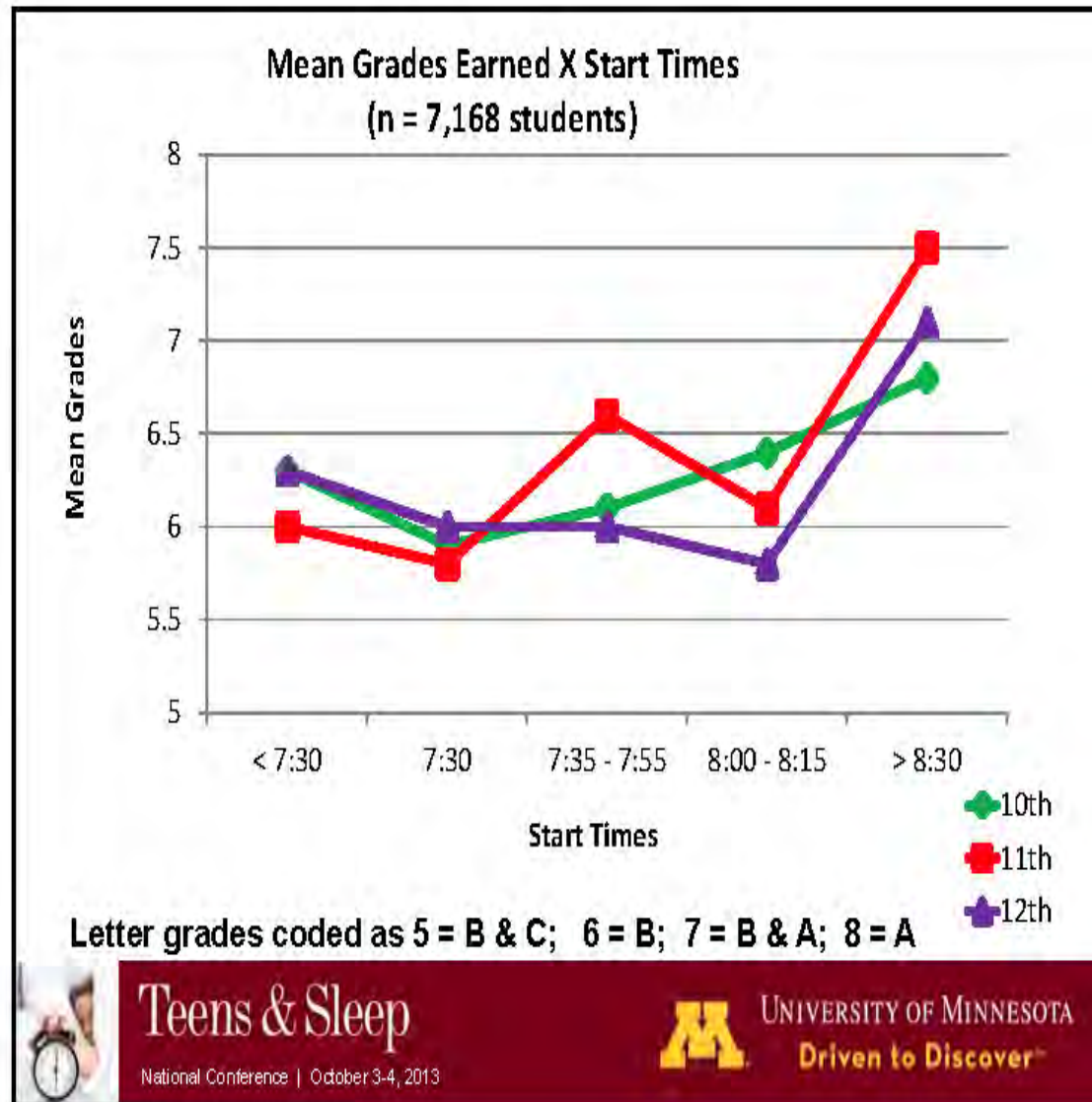
- Attendance rates*
- Graduation rates*
- Grade Point Averages

Edina

- Less depression among students*
- Lower rates of students seeking help for emotional problems & somatic physical complaints
- 92% of parents indicate students “easier to live with”

*Statistically Significant

Grade Improvements for Students Relative to Their School Start Time





Teens & Sleep

National Conference | October 3-4, 2013



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Other Studies Show Wellness Improves

- As high school start time moves later the higher the percentage of students who sleep at least 8 hours
- Students receiving at least 8 hours sleep are less likely to:
 - Smoke, use alcohol, use marijuana, be sexually active, report symptoms of depression*, fall asleep in class*, do dangerous things without thinking*



Studies Show Academic Performance and Behavior Improves

- 1st and/or 3rd period GPA improves in core courses*
- Positive increases in state math scores (for two districts)*
- Positive increases in ACT scores (for two of four districts studied)*
- Improved attendance rates for 11th and 12th grades*
- Decrease in tardy reports for 9th to 12th grades*

*Statistically Significant

Sleep and Start Times

Lisa J. Meltzer, Ph.D., CBSM

Associate Professor of Pediatrics

National Jewish Health

Division of Behavioral Health, Department of Pediatrics



Deficient Sleep in Teenagers

- Mood and affect changes
- Behavior problems
 - Non-compliance
 - Aggression
 - Hyperactivity
 - Poor impulse control
- Risk taking behaviors and increased accidents

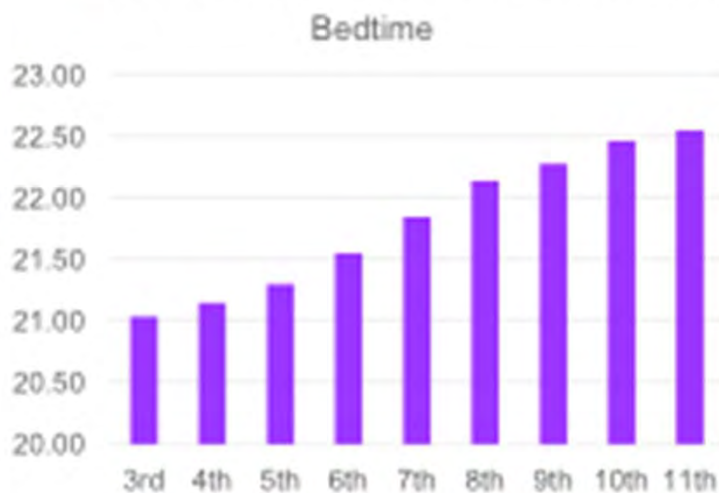
Beebe (2011); Gruber et al. (2012); Owens et al. (2014)



Weekday Sleep Driven by Wake Time (which is driven by school start times)

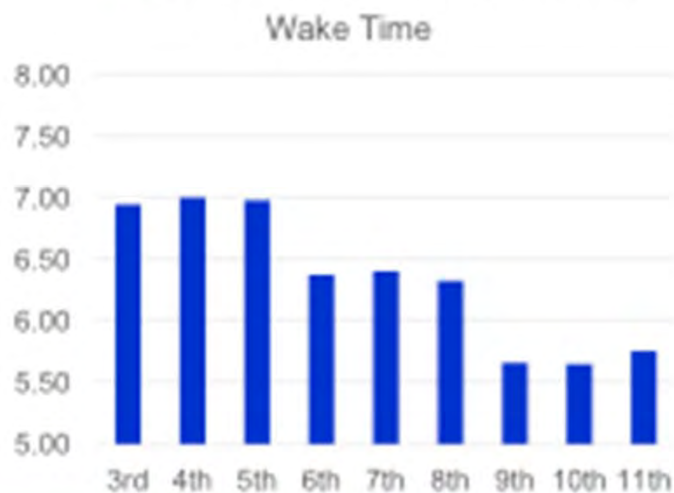
- Bedtimes increase steadily with increasing grade

■ ES → MS: 40 m, MS → HS: 34 m



- Wake times consistent across school level

■ ES: 6:58, MS: 6:33, HS: 5:41



School Start Time Options That May Be Considered

Current Order - Fairbanks	Current Order – North Pole	Scenario 1 – Change Start Order, Combine MS, HS, Push Back 15 minutes	Scenario 2 – Change Order, Combine MS, HS, Push Back 15 minutes	Scenario 3 – Change Start Order, Narrow Start Window to 1 Hour 15 Minutes	Scenario 4 – Change Start Order, Narrow Start Window to 1 Hour
HS	HS	HS – 8:00	ES – 8:00	ES – 8:00	ES – 8:00
ES / K8	MS	MS – 8:15	MS – 9:15	HS or MS – 9:00	MS – 8:45
MS	ES	ES – 9:30	HS – 9:30	MS or HS - 9:15	HS – 9:00

Some Elementary Schools May Be Bundled with Later Groups

Potential Issues:

- Extra-curricular activities, athletics and student jobs
- Childcare and supervision of younger siblings
- Walking in the daylight vs. dark
- The current schedule in Fairbanks starts middle school students last, some change scenarios result in an earlier start

Transportation / Financial Implications

- Scenario #1 – Status Quo Order, Combined MS/HS Riders (Fairbanks) – Shorter 1.5hr Window
 - One and one half hour time window between starts
 - High School start time would be 8:00 AM, Middle School would be 8:15 AM, and Elementary Schools would start at 9:30 AM
 - Potential Cost Savings **\$539,523**
- Scenario #2 – Change in Start Order, Combined MS/HS, 1.5hr Window
 - Elementary would take the 8:00 AM slot, with Middle and High Schools starting at 9:15 AM and 9:30 AM respectively - *Some Elementary Schools May Be Bundled with Later Groups*
 - Potential Cost Savings **\$539,523**
- Scenario #3 – Change in Start Order, Combined MS/HS, 1.25hr Window
 - One hour and fifteen minute time window between starts
 - Elementary would take the 8:00 AM slot, with Middle and High Schools starting at 9:00 AM and 9:15 AM respectively - High school and Middle School could be reversed, so long as they stay offset by 15 minutes - *Some Elementary Schools May Be Bundled with Later Groups*
 - Potential Cost Savings – **\$360,887**
- Scenario #4 - Change in Start Order, Combined MS/HS, 1hr Window
 - One hour time window between starts
 - Potential Additional Cost - **\$733,922**

Transportation / Labor Implications

- Scenario #1 – Status Quo Order, Combined MS/HS Riders (Fairbanks) – Shorter 1.5hr Window
 - Potential Annual Reduction in Hours Per Driver - 25.5
- Scenario #2 – Change in Start Order, Combined MS/HS, 1.5hr Window
 - Potential Annual Reduction in Hours Per Driver - 25.5
- Scenario #3 – Change in Start Order, Combined MS/HS, 1.25hr Window
 - Potential Annual Reduction in Hours Per Driver – 130
- Scenario #4 - Change in Start Order, Combined MS/HS, 1hr Window
 - Potential Annual Decrease in Hours Per Driver - 278

Focus Group Observations So Far

- Process is on-going and continues
- 227 Participants so far
 - 139 Staff
 - 84 Students
 - 4 Parents
- Majority agree with research and relevance to FBNSB School District
- Support is mixed, more response needed
- Some concern about sleep habits and device usage
- Some concern about after school activities, sports and jobs
- Student concern about time for activities, sports, jobs and homework

Potential Extracurricular Impacts of Later Release

- Some sports and activities may be impacted by later end times.

Sport	Fall Program End
Football	30-Nov
Tennis	Mid Oct
Soccer	End Oct
Hockey	Limited Effect - Indoors
Track	Spring
Cross country	End Oct
Baseball	Spring - End of Oct
Golf	No Transport
Softball	Mid - Late Oct
Lacrosse	Mid Oct
Band	Friday / Saturday
Field Hockey	Mid Oct

- Other sports may be impacted but are held indoors (such as volleyball).
- Non-sports activities may also be impacted by later end times.

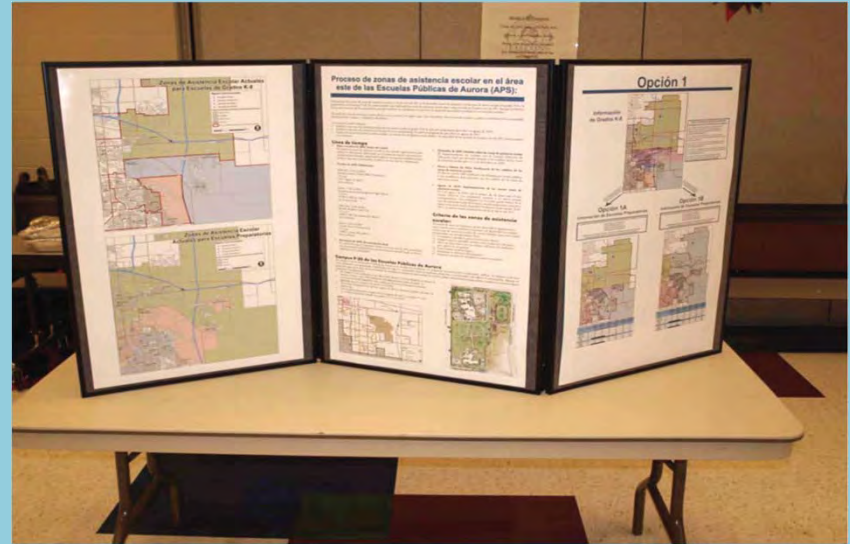
Next Steps

- Further stakeholder involvement for parents and community via open houses and an online survey
 - Overview of Open house process
 - Online survey
- The Board of Education will consider all input and research and make a decision addressing potential changes in the coming months

Overview of Open House Process

- 1.5 – 2-hour meeting time *window* (parents attend at their convenience)
- Information displayed on portable kiosks
- Parents receive one-on-one interpretation of information scenarios by facilitators
- Parents complete a survey before leaving documenting their feedback and scenario reaction / preference

Open House Process



- View material
- Ask questions
- Share perspectives
 - Fill out survey
- Arrive at your own convenience

Online Survey

- Agree with research?
- Is the research relevant to FBNSB SD?
- Concerned about student sleep habits?
- Concerned about student device usage?
- Would a start time help?
- Impact on activities or sports?
- Impact on student jobs?
- Demographics – students in school, level
- Role – parent, teacher, student, other

Discussion / Questions