2008

A Study of School Size for West Fargo Public Schools

WFPS

West Fargo, ND 58078

6/1/2008

Contents

Introduction

West Fargo Public School District #6 is the fastest growing school district in North Dakota. The 2007-08 enrollment of the school district is 6,200 students. Since the turn of the millennium, the district has grown by over 1,200 students. Projections for future growth indicate a district wide enrollment of close to 7,200 students by the 2010-2011 school year, growth of 1,000 more students in the next three or four years. Perhaps now, more than ever, our consideration of future facilities requires the development of an educational specification for school size.

Since the opening of West Fargo High School in 1986 we have opened three new schools, Cheney Middle School, the Sheyenne 9th Grade Center, and Aurora Elementary. The latter two schools opened this school year; CMS opened in 2004. A second kindergarten center is slated to open in the fall of 2009. Other new school buildings are on the near horizon, and as the City on the Grow, West Fargo, continues to do just that, building new schools will be a constant for years to come. How many new schools will need to be built is not only a function of growth but a function of school size as well. A district enrollment of 2,000 9-12 students could be accommodated in one 2,000 student member high school, or two 1,000 student member high schools, or 1,500 in a 10-12 school and 500 in a ninth grade center. The building project question in this scenario is how big is too big for a high school? That same question, 'how big is too big' is germane to middle, elementary, and kindergarten schools as well, and the answer shapes our building program well into the future.

In order to answer the question of school size, we undertook a review of the literature, an examination of our current schools and local context, and conducted focus groups and a survey of the patrons of our school district. This document is organized to provide the reader information upon which to understand, if not agree with, the recommendations we make regarding school size for West Fargo Public Schools future building endeavors.

Thanks go to all who contributed to the making of this report, including the many patrons of the school district who completed the online survey and those who participated in one of our focus groups (see Appendix D).

Review of the Literature

The term "small school" has no universal definition, however, there is general agreement in the research base on the topic that an appropriate size for an effective elementary school is 300-400 students, and for a secondary school that size may range from 400-800 students.

A review of the literature on school size reveals disagreement on the effects of smaller schools on student achievement as measured by standardized tests, unless the students are from lower socio-economic status (SES) families, in which case the effects of smaller schools can be significantly positive. The review of the literature reveals general agreement on the effects of school size on other important student and teacher-level outcomes, which are noted here.

- Academic achievement in small schools is as good as or better than in large schools (Howley, 1994)
- Student involvement in risky behaviors - violence, substance abuse, gang membership - is less in small schools
- Student attendance is better in small schools (Fowler, 1995) and student attendance is linked to greater co-curricular participation, academic achievement, and graduation rates (Carruthers, 1993)
- Dropout rates are lower in small schools
- Participation rates in co-curricular activities are higher in small schools (Barker and Gump, 1964)
- Students report greater levels of academic confidence, general self worth, and sense of belonging in smaller schools (Meier, 1996)
- Teacher student and administrator student relationships are better in smaller schools (Johnson, 1990)
- Student discipline infractions are less in small schools
- Teachers' attitudes towards their work is more positive in smaller schools (Lee and Loeb, 2000)

Other notable findings in the research on school size indicate that larger schools with student enrollments over 1,000 are not necessarily more cost effective than smaller schools, nor do they have higher-quality curriculum (Slate and Jones, 2004; Howley, 2005). In some instances, such as with very small remote or rural schools, curricular offerings at the secondary school level can be marginalized.* Parent involvement is typically higher in small schools (Meier, 1996), which may be related to higher achievement in some schools, yet more research is needed to support a clear and strong correlation. There is some concern that some of the research on small schools has used an advocacy research style – i.e., the researchers were looking to support or not support small schools at the outset of their studies – and thus such research carries bias. (Johnston and Pennypacker, 1993; Wiles, 1994)

*The author of this study was a principal of a small rural high school (enrollment in the range of 380 students) in which 100% of the students were eligible for participation in the national school lunch program. In two years' time, we were able to increase AP course offerings from one offered via videotape to eight offered in the school and one via tape and did so with no additional teaching staff.

West Fargo Public School Facilities

In the 2007-08 school year, students in West Fargo are served in one kindergarten center, seven grades 1-5 elementary schools, one grades 6-8 middle school, one 9th grade center, one grades 10-12 high school, and one alternative high school program. Table 1 depicts current enrollment by school and functional capacity.

Table 1

School	2007-2008 Actual Enrollment	2010-2011 Projected Enrollment	Functional Capacity*
West Fargo Kindergarten Center	465	607	500
Total Kindergarten Enrollment	465	607	620**
Aurora Elementary School	440	Enrollment not projected for individual elementary schools	550
Berger Elementary School	429		500
Eastwood Elementary School	478		500
Harwood Elementary School	139		160
Horace Elementary School	185		250
South Elementary School	504		500
Westside Elementary School	366		550
Total Elementary Enrollment	2,544	2,962	
Cheney Middle School	1,403	1,669	1,200
Sheyenne 9th Grade Center	484	509	550
West Fargo High School	1,199	1,373	1,200
Community High School	55	60	60***
Pre-School	47	60	60***
Total Enrollment/Capacity	6,202	7,180	6,580

*We use the term "functional capacity" to describe the number of students the administration believes can be reasonably served at a school. Functional capacity may differ from capacity figures derived from a calculation based an average number of students in each classroom space. Many programs, including services for English Language Learners, Special Education, and Title I serve considerably less children in a classroom than the average for a school.

**Kindergarten students will be served in two kindergarten centers beginning with the 2009-2010 school year. Full day kindergarten is being implemented in school year 2008-09 and effectively doubles the classroom space needed to serve the students.

***Community High School and the Pre-School program are housed at the Lodoen Center. Both programs have enrollment caps of 60 students. These two programs are not included in the total functional capacity above.

Findings from School Size Study Focus Groups

In the spring of 2008, a series of focus groups met to discuss school size. Each of the eight meetings was comprised of individuals nominated by school administrators as representative of a wide range of constituents of the community that is served by West Fargo Public Schools (see Appendix A). Nominated individuals were contacted by phone and by a letter of invitation (See Appendix B). Meetings were scheduled to accommodate the participants' schedules, typically in the evening of the work week or a weekend morning (See Appendix C for the meeting schedule and D for the names of the participants).

Several common themes emerged from the focus groups, each of which is described below.

Elementary School

Most of the discussion about our elementary schools, in which total enrollment ranged from 140 to 510 students at the time of the meetings, focused more on class size than school size. Participants who spoke to the issue of class size preferred classes of 20 or fewer students in the primary grades and 25 or fewer in the intermediate grades. There was some concern that our larger elementary schools grow no larger. Westside Elementary School, when it exceeded 600 students, was used as an example of an elementary school that some believed was too large to allow for all students to be well known by the staff and for some aspects of school safety. Several participants had experiences as either teachers or parents of students in elementary schools of 800 or more students and none of those participants could recommend that size for an elementary school.

Middle School

Much discussion focused on the size of the current middle school. In general, focus groups participants found the school to be too large. Most were complimentary about the pod or team structure as they believe that it gives our middle grades students the opportunity to experience a small school setting within the larger school. Yet the concerns were that during passing time, lunch, physical education, and other settings outside of the core instructional time, the school could be overwhelming to students due to the total enrollment, which was 1,400 students at the time of the focus group meetings. Further, that due to the size of the school, some students could become "lost," i.e., not known by teachers or other staff; some students might not be able to form a stable peer group; after-school activity opportunities in some cases could not accommodate the number of students who wanted to participate; school safety could be compromised; parent teacher conferences were over-crowded; and some faculty did not know other faculty within their own school.

High School

Some of the same concerns about the middle school emerged in discussions about the high school – that students could become lost, faculty did not know each other, that opportunities for participation in extra-curricular activities, especially athletics, precluded many students from even trying out as they

believed they would not "be good enough" to make a team, and that school safety could be compromised. When this discussion turned to the possibility of a second high school, most felt that these issues could be ameliorated by adding another high school. However, exactly what configuration a second high school should take was the topic of interesting debate and points to the need for further discussion on this singular topic.

Summary

Many focus group participants shared that their education had occurred in small schools and that they valued small schools for their children for many reasons – a sense of community and being known, school safety, opportunities for after-school activities, high levels of student achievement, and parent involvement were frequently cited. Some believed that larger schools allowed for a greater range of course offerings and found that to be a benefit of larger schools. When asked about acceptable size of schools, much like the online survey results reported next, most felt elementary schools in the range of 300-500 students, middle schools in the range of 600-1,000 students, and high schools in the 1,000 student range were acceptable. A few participants who had attended high schools with 2,000 or more students felt such schools could be successful, particularly if the school-within-a-school structure was in place.

There was occasional mention of the impact on tax bills that would come with additional school buildings. Most participants who spoke to this issue felt that additional schools in West Fargo were inevitable, but that if the district would build schools with economies in mind, that they would be willing to pay for them as a critical public service.

Findings from School Size Online Survey

In March 2008, the community was invited to participate in this study by providing input on the topic of school size. That input was gathered by a survey placed on our district website (See Appendix E for survey). The existence of the survey was communicated to the public through school newsletters, the district website, news articles, and through links on other websites, including the West Fargo Parks, Chamber of Commerce. The survey results reported below have been rounded up or down to the closest one-half percent. For complete survey results, see Appendix F.

In all, 752 respondents completed the survey, which was available from March 2008 through May 2008. Fifty-one and one-half percent of the respondents were current employees of the district, the remaining came from community members who represented parents of current and former students (48% and 7% respectively), current and former students (4.5% and 10%), and those with no relationship to the district (3.5%). Fifty-six and one-half percent of respondents reported their residence as West Fargo, 9% as Fargo within the WFPS boundaries, 4% Harwood, 7% Horace, 1.5% Reiles Acres, 14% Fargo, and 8.5% other.

When asked to identify the top two factors affected by school size, respondents consistently chose student achievement and school safety by wide margins over teacher job satisfaction, parent involvement, student opportunities for participation in activities and athletics, and student opportunities for participation in a wide range of coursework.

Of those responding to the question on a reasonable size for elementary schools, 52% selected a range of 300-400 students and 37.5% selected a range of 400-500 students. At the middle school level, 30% responded they would prefer a school in the range of 1,200-1,500 students and 38.5% for a school in the range of 900-1,200 students. And of those responding to the question on a reasonable size for high schools, 65% selected a range of 900-1,200.

When asked “to what extent did tax concerns influence your decision,” 4.5 % responded “to a great extent,” 19% responded “to a moderate extent,” 29% responded “to a minimal extent,” and 48% responded “not at all.”

Appendix A: Focus Group Nomination Form

Thursday, January 17, 2008

School_____

School Size Focus Group

In order to plan for future facility needs, we want to engage in dialogue with community members to understand their perspectives on what they believe to be **appropriate and effective school sizes in terms of total school enrollment for elementary, middle, and high schools.**

To this end, please brainstorm at least 12 members of your school community – support staff, teachers, parents, volunteers, business partners, etc. – you think would be able and willing to participate as a member of a focus group to discuss school sizes, K-12, for one 90- minute meeting. The group members would be scheduled to gather one early evening or on a weekend morning. Please provide the requested information about your selections and return this document to Heather by February 15. She will contact the group members for invitation and participation details.

Name	Title -- Teacher, Parent, etc.	Address or Phone Number
1		
2		
3		
4		
5		
6		
7		
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9		
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11		
12		
13		
14		
15		
16		

Appendix B: Focus Group Letter of Invitation

West Fargo Public School District

District Office – 207 West Main – West Fargo ND 58078

Duane Hanson……..Board President
Angela Korsmo……Board Vice President
Troy Aswege……..Board Director
Susan Bailey……..Board Director
Thomas Gentzkow……Board Director
Nancy Kruse……..Board Director
Karen Nitzkorski……..Board Director

Office of the Superintendent

Dr. Dana Diesel Wallace……Superintendent
Louise Dardis……..Assistant Superintendent
Marian Bell……..Special Education Director
Pete Diemert……..Building & Grounds Director
Brad Redmond……..Transportation Director
Gerald Hagen……..Technology Director
Holly Budzinski…….Knowledge Management Director
Robin Hill……..Human Resources Director
Mark Lemer……..Business Manager
Jan Sliper……..Food Service Director

March 1, 2008

Dear Sir/Madam:

You have been nominated by (name of WFPS administrator) to participate in a study being undertaken by the school district to identify appropriate and effective school sizes for future school buildings constructed to serve our growing student population. Should you be able to participate, the input you provide through your focus group will be a vital contribution to our study and to that end, the recommendations of my staff to the school board on school building sizes.

Our need to continue to build is an ongoing short and long-term concern. We anticipate the need for additional middle school space in the next two to three years and for additional high school space in that same time frame or shortly thereafter. From the beginning planning stages to the opening of a new school is a two year process, so time and your input, are of the essence!

The focus group meeting you participate in should include eight to fifteen community members and last approximately 90 minutes. A compilation of the input we receive through a series of focus groups we will hold this spring will be a part of our larger study, due to be completed early this summer. That study will be available to you in hard copy and to the community via our website.

I do hope you will be able to participate. You will receive a telephone call from us within a week as a follow-up and to work with you to find a date and time that is available in your schedule. Thank you in advance for your consideration.

Sincerely,

Dana Diesel Wallace, Ed.D.

Superintendent

Appendix C: Focus Group Meeting Schedule

Each of the eight focus groups was held at The Leidal Education Center, 207 West Main Avenue, West Fargo, ND 58078.

Group 1	Tuesday, March 11 at 6:30 p.m.
Group 2	Thursday, March 13 at 6:30 p.m.
Group 3	Saturday, March 15 at 10:00 a.m.
Group 4	Thursday, March 20 at 6:30 p.m.
Group 5	Saturday, March 22 at 10:00 a.m.
Group 6	Wednesday, March 26 at 6:30 p.m.
Group 7	Wednesday, April 2 at 6:30 p.m.
Group 8	Saturday, April 5 at 10:00 a.m.

Appendix D: Focus Group Participants

The following individuals participated in one of the seven focus groups conducted between data and date. At the time of the study all of the participants resided within the boundaries of West Fargo Public Schools.

Name	Relationship to District
Karen Bush	Parent
Ken Follman	Business owner
Sandra Hannahs	Director of West Fargo Library
Wanda Hettwer	Parent
Peter Hettwer	Parent
Nicole Weisz	Teacher
Gail Bollinger	Parent
Bruce Bollinger	Parent
Tom Clark	Parent
Teresa Enderson	Parent & PTA member
Bill Lopez	Parent
Amy Galde	Parent
Duane Hanson	WFPS Board member
Bruce Johnson	Retired principal
Kaye Kiefer	Parent
Nicole Manson	Teacher
Jan Sliper	Food Service Director
Suzanne Berzonsky	Parent
John Clark	Parent
Sandy Foss	Parent
Marvin Leidal	Retired WFPS superintendent
Rich Mattern	West Fargo mayor
Amy Sahli	Parent
Louise Dardis	WFPS Assistant Superintendent
Troy Aswege	WFPS Board member
Mary Anderson	Teacher
Chris Barton	Executive Director of West Fargo Chamber
Larry Weil	City of West Fargo Planner
Mark Wentz	Community member
Nancy Wentz	Teacher
Bonnie Lund	Parent
Karen Nitzkorski	WFPS Board member
Beth Ustanko	Teacher
Holly Budzinski	WFPS Director of Knowledge Management
Jessica Brown	Teacher
Kathy Hoovestol	Administrative assistant
Kristie Knott	Teacher
Angie Ose	Parent
Shawn Roehrich	Teacher

Heather Sand	Parent
Peggy Simonson	Parent
Patti Stedman	Parent
Toni Stith	Parent
Deb Uetz	Paraprofessional
DeAnne Warner	Parent
Todd Warner	Parent
Dave Birrenkott	Parent
Stacy Birrenkott	Parent
Sue Cwikla	Pioneer newspaper reporter
Kaye Fischer	Teacher
Connie Jenson	Teacher
Doug Jenson	Parent
Deb Pieper	Paraprofessional
Dave Pistorius	Parent
Glenda Pistorius	Parent
Patty Preston	Parent
Bob Syverson	Disabilities Advocate
Kelly Watson	Teacher
Dean Krogen	Parent
Dana Diesel Wallace	WFPS Superintendent

Appendix E: School Size Online Survey

The purpose of this survey is to gather input from our community about school size for elementary school, middle school, and high school. The data generated from the survey will be used as a part of a larger study to determine total student enrollment maximums for West Fargo Public Schools future building programs. We thank you for taking the time to take this survey.

Demographic section:

Age

- o 18 years and under
- o 19-24
- o 25-34
- o 35-44
- o 45-54
- o 55-64
- o 65 and over

Relationship to WFPS

- o Current student
- o Former student
- o Current employee
- o Former employee
- o Current parent of WFPS student
- o Former parent of WFPS student
- o None of the above

Current Occupation

- o Managerial and Professional
- o Technical, Sales, Administrative Support
- o Service
- o Farm, Forestry, Fishing
- o All others
- o Retired

Highest Level of Education

- o Some high school
- o High school graduate
- o Some college coursework
- o 2 year degree

- 4 year degree
- Graduate degree
- Other

Rent/Own Residence

- Own residence
- Rent residence

Location of Residence

- West Fargo
- Fargo (within WFPS boundary)
- Harwood
- Horace
- Reiles Acres
- Fargo
- Other

Duration of Residency within WFPS Boundaries

- 0-5 years
- 6-10 years
- 11-15 years
- 15-20 years
- 21 or more years

As you answer the following questions, please keep in mind the current context of WFPS as a growing school district with the need for additional classrooms in the near future, and with current school sizes as stated in the questions. Some of the questions ask you to respond to your perception of "reasonable" school sizes for the schools we build next. In using this term, we ask you to consider that some of our current school sizes may not be what you consider to be the "right size" – either they are too big or too small – but they are what we have. For instance, our current middle school was built to comfortably serve 1,100-1,200 students. It may be you think that is too many or too few students for a middle school, but we will have one at least that size! So, we ask you concentrate on the size of schools in our *future* building program.

1) The size of a school affects (Mark all that apply)
    - School safety
    - Student achievement
    - Teacher job satisfaction
    - Parent involvement with the school
    - Student opportunities for participation in after school activities/athletics
    - Student opportunities for participation in a wide range of coursework

- None of the above

2) WFPS has seven elementary schools, grades 1-5, in the range 150-550 students and will need additional elementary schools in the future. Horace and Harwood Elementary School, each serving fewer than 200 students, were originally built to serve rural communities and were not a part of WFPS. Enrollment capacity for our in-town schools is greater than 300 students. What do you think is a reasonable size for our future elementary schools, grades 1-5? (Choose only one)
   - 300-400 students
   - 400-500 students
   - 500-600 students
   - 600-700 students
   - Over 700 students
   - No preference

3) WFPS has one middle school, grades 6-8, in the range 1,500 students, and will need an additional middle school in the future. What do you think is a reasonable size for our future middle school, grades 6-8? (Choose only one)
   - 1,500 students or more
   - 1,200-1,500 students
   - 900-1,200 students
   - 600-900 students
   - Less than 600 students
   - No preference

4) WFPS has one high school, grades 10-12, with an enrollment in the range of 1,200 students. Our ninth grade center has an enrollment in the range of 500 students, so our current high school enrollment is in the range of 1,700 students. As enrollment continues to grow, we will need additional high school classrooms. If we were to expand the ninth grade center into a second high school, grades 9-12, what do you think would be a reasonable size for our high schools?
   - 1,200 students or more (Choose only one)
   - 900-1,200 students
   - 600-900 students
   - No preference

5) For question number two regarding elementary school size, if you chose a school size (did not choose “No preference”), what were the top two reasons?
   - School safety
   - Student achievement
   - Teacher job satisfaction
   - Parent involvement with the school

- Student opportunities for participation in after school activities/athletics
- Student opportunities for participation in a wide range of coursework

6) For question number three regarding middle school size, if you chose a school size (did not choose "No preference"), what were the top two reasons?
   - School safety
   - Student achievement
   - Teacher job satisfaction
   - Parent involvement with the school
   - Student opportunities for participation in after school activities/athletics
   - Student opportunities for participation in a wide range of coursework

7) For question number four regarding high school size, if you chose a school size (did not choose "No preference"), what were the top two reasons?
   - School safety
   - Student achievement
   - Teacher job satisfaction
   - Parent involvement with the school
   - Student opportunities for participation in after school activities/athletics
   - Student opportunities for participation in a wide range of coursework

8) Some believe that building schools larger than smaller is a way to keep taxes lower, as it is the taxpayer who ultimately funds costs of most school building projects. To what extent did this influence your choices about school size in this survey?
   - To a great extent
   - To a moderate extent
   - To a minimal extent
   - Not at all

Appendix F: Complete Online Survey Results

Age		
Answer Options	**%**	**#**
18 years & under	4.2%	32
19 – 24	2.5%	19
25 – 34	24.7%	187
35 – 44	37.7%	286
45 – 54	22.6%	171
55 – 64	7.7%	58
65 & over	.7%	5

Relationship to WFPS		
Answer Options	**%**	**#**
Current Student	4.5%	34
Former Student	10%	76
Current Employee	51.3%	389
Former Employee	.5%	4
Parent of current WFPS student	48%	364
Parent of former WFPS student	6.9%	52
None of the above	3.6%	27

Current Occupation		
Answer Options	**%**	**#**
Managerial & Professional	55.7%	422
Technical, Sales, Administrative Support	14.4%	109
Service	8.4%	64
Farm, Forestry, Fishing	.7%	5
All others	21.4%	162
Retired	1.1%	8

Highest Level of Education		
Answer Options	**%**	**#**
Some high school	1.8%	14
High school graduate	5.7%	43
Some college coursework	11.2%	85
2 year degree	10.4%	79
4 year degree	35.9%	272
Graduate degree	32.1%	243
Other	2.9%	22

Rent or Own Residence		
Answer Options	**%**	**#**
Rent Residence	12.8%	97
Own Residence	87.2%	661

Location of Residence		
Answer Options	**%**	**#**
West Fargo	56.5%	428
Fargo (within WFPS boundaries)	8.8%	67
Harwood	4%	30
Horace	7%	53
Reiles Acres	1.3%	10
Fargo	14.1%	107
Other	8.3%	63

Duration of Residency within WFPS Boundaries		
Answer Options	**%**	**#**
0 – 5 years	36%	273
6 – 10 years	16.5%	125
11 – 15 years	12.7%	96
15 – 20 years	9.5%	72
21 or more years	17.4%	132
N/A – Do not live within WFPS boundaries	7.9%	60

The size of a school affects:		
Answer Options	**%**	**#**
School safety	83.6%	508
Student achievement	82.2%	500
Teacher job satisfaction	62%	377
Parent involvement with the school	49.2%	299
Student opportunities for participation in activities/athletics	75.8%	461
Student opportunities for participation in a wide range of coursework	65.5%	398
None of the above	1.2%	7

What do you think is a reasonable size for our future elementary schools, grades 1-5?		
Answer Options	**%**	**#**
300 – 400 students	51.8%	315
400 – 500 students	37.5%	228
500 – 600 students	7.1%	43
600 – 700 students	1%	6
Over 700 students	1.5%	9
No preference	1.2%	7

What do you think is a reasonable size for our future middle school, grades 6-8?		
Answer Options	**%**	**#**
1,500 students or more	5.1%	31
1,200 – 1,500 students	29.9%	182
900 – 1,200 students	38.5%	234
600 – 900 students	22.7%	138
Less than 600 students	3%	18
No preference	.8%	5

What do you think would be a reasonable size for our high schools?		
Answer Options	**%**	**#**
1,200 students or more	16.9%	103
900 – 1,200 students	65%	395
600 – 900 students	17.1%	104
No preference	1%	6

Regarding elementary school size, if you chose a school size, what were the top two reasons?		
Answer Options	**%**	**#**
School safety	58.1%	353
Student achievement	84.2%	512
Teacher job satisfaction	16.8%	102
Parent involvement with the school	12.5%	76
Student opportunities for participation in activities/athletics	11.7%	71
Student opportunities for participation in a wide range of coursework	16.8%	102

Regarding middle school size, if you chose a school size, what were the top two reasons?		
Answer Options	**%**	**#**
School safety	57.4%	349
Student achievement	80.9%	492
Teacher job satisfaction	13.7%	83
Parent involvement with the school	5.3%	32
Student opportunities for participation in activities/athletics	21.9%	133
Student opportunities for participation in a wide range of coursework	20.9%	127

Regarding high school size, if you chose a school size, what were the top two reasons?		
Answer Options	**%**	**#**
School safety	55.4%	337
Student achievement	76.2%	463
Teacher job satisfaction	12.5%	76
Parent involvement with the school	3.9%	24
Student opportunities for participation in activities/athletics	25%	152
Student opportunities for participation in a wide range of coursework	27%	164

To what extent did tax concerns influence your decision?		
Answer Options	**%**	**#**
To a great extent	4.4%	27
To a moderate extent	18.9%	115
To a minimal extent	28.9%	176
Not at all	47.7%	290

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Annotated Bibliography

We provide the reader-researcher with this annotated bibliography from the Bill and Melinda Gates Foundation.

Allen, L. with Almeida, C. & Steinberg, A. (2001, August). Wall to wall: Implementing small learning communities in five Boston high schools. LAB Working Paper No. 3. Providence, RI: Northeast and Islands Regional Educational Laboratory a program of The Education Alliance at Brown University. Available: http://www.lab.brown.edu/public/pubs/LABWorkPaper/Wall2Wall.pdf
This paper looks at the experiences of five large, impersonal high schools in Boston as they restructure into smaller learning communities. Three years into a district-wide reform effort, the schools provide insight into the opportunities, tensions and challenges faced by large urban high schools as they undertake whole school reform. The authors discuss key findings from the five schools and their implications for reform in other school districts.

Ancess, J. (1997). Urban dreamcatchers: Launching and leading new small schools. The National Center for Restructuring Education, Schools, and Teaching (NCREST). Teachers College, Columbia University. Available: http://www.tc.columbia.edu/~ncrest/dreamcatchers.htm
This report offers strategies on how to launch and lead a new small school. Ancess describes five components critical to the success of a new small school: vision, organizational structure and perseverance to implement the vision, a committed constituency of staff, students, and parents, a sophisticated understanding of the local education bureaucracy, and financial resources. The report also includes a planning guide for launching a new small school.

Bill & Melinda Gates Foundation. (2003). Making the case for small schools. Available: http://www.gatesfoundation.org/NR/Downloads/ed/evaluation/BMG911SmallSchoolsBrochure.pdf
This foundation brochure provides information about the current state of high schools and highlights key research on the benefit of small schools for all students.

Boss, S. (2000, Winter). Big lessons on a small scale. Northwest Education Magazine, 6 (2). Available: http://www.nwrel.org/nwedu/winter_00/1.html
Among educators and policymakers there is a growing respect for learning that takes place within small schools. This article, featured in a Northwest Education Magazine issue centered on smaller learning communities, considers definitions and examples of smallness, costs associated with downsizing and offers a list of recommended online resources for obtaining additional information on the issue.

Clinchy, E. (Ed.). (2000). Creating new schools: how small schools are changing American education. New York: Teachers College Press, Columbia University.
In this book, scholars and experts explore some of the major reform issues confronting the American system of public education today. Considerable attention is given to the creation of small, decentralized schools in New York City and Boston. In addition to outlining the seven attributes of successful school systems, the authors provide sources of further information, networking, and technical assistance.

Cotton, K. (1996, December). Affective and social benefits of small-scale schooling. ERIC Digest, Clearinghouse on Rural Education and Small Schools. EDO-RC-96-5. Available:

http://www.ericfacility.net/databases/ERIC_Digests/ed401088.html
This digest outlines characteristics of the body of research on school size, including research on: feelings and attitudes, social behavior, "why smaller is better", school size and educational equity, and school-within-a-school plans. The author concludes that research in the affective and social spheres affirms the superiority of small-scale schooling.

Cotton, K. (2001, December). New small learning communities: Findings from recent literature. Portland, OR: Northwest Regional Educational Laboratory. Available:
http://www.nwrel.org/scpd/sirs/nslc.pdf
Cotton provides a comprehensive overview of the recent research on small schools and small learning communities. Particular attention is paid to studies completed in the past
five years.

Darling-Hammond, L. with Alexander, M., & Prince, D. (2002). Redesigning schools: What matters and what works - 10 features of good small schools. School Redesign Network at Stanford University. Available: http://www.schoolredesign.com/srn/binary/SchoolsBook.pdf
This publication details ten school reform lessons that help create effective smaller learning communities: safe environments where exciting and rigorous academic work occurs in an equitable context—a setting where all groups of students succeed academically, graduate at high levels, and go on to college and productive work. Each section is accompanied by one or more profiles of successful small schools that are putting these features into practice and creating powerful learning opportunities for their students.

Darling-Hammond, L., Ancess, J., & Wichterle Ort, S. (2002, Fall). Reinventing high school: Outcomes of the Coalition Campus Schools Project. American Educational Research Journal, 39(3). pp. 639-73. Available:
http://www.schoolredesign.com/srn/binary/SchoolsBook.pdf
The Coalition Campus Schools Project (CCSP) was launched in New York City in the early 1990s as part of a broader city initiative to create small, new model schools. This seven-year study of the CCSP found that the new schools that were created to replace a failing comprehensive high school produced, as a group, better attendance, lower incident rates, better performance on reading and writing assessments, higher graduation rates, and higher college-going rates than the previous school, despite serving a more educationally disadvantaged population of students. This report details the school design features that appeared to contribute to these successful outcomes.

Funk, P.E., Bailey, J. (1999, September). Small schools, big results: Nebraska high school completion and postsecondary enrollment rates by size of school district. Walthill, NE: Center for Rural Affairs. Available:
http://www.cfra.org/pdf/Small%20Schools-.PDF
This report aims to reframe the school size debate by showing that by two important measures of student outcome—high school completion and postsecondary enrollment rates—smaller schools in Nebraska generally perform better than larger ones. The so-called "inefficiencies" of small schools are greatly reduced when calculated on the basis of cost per graduate, and virtually disappear when the social costs of non-graduates and the positive societal impact of college-educated citizens are considered.

Gregory, T. (1992). Small is too big: Achieving a critical anti-mass in the high school. In, Source book on school and district size, cost, and quality. (pp.1-31). Minneapolis, MN: Minnesota University, Hubert H. Humphrey Institute of Public Affairs: Oak Book, IL: North Central Regional Laboratory. Available:

http://www.gatesfoundation.org/NR/downloads/ed/evaluation/smallistobig.pdf
Gregory presents his theory of critical anti-mass: creating a high school so small that only an individualized program makes sense in it, a school so small that control is not a central issue and every person has a say in how the school is run.

Gregory, T. (2000, December). School reform and the no-man's-land of high school size. Seattle, WA: Center on Reinventing Public Education. Available:
http://www.smallschoolsproject.org/articles/download/gregory.pdf
This report describes four recent forces that have influenced the small schools movement—the information age, the emergence of an adolescent culture, the students' rights movement, and society's changing view of organizations. Gregory describes the different small school reform models that have emerged, the ideal size for each model, and the implications for reform efforts.

Gregory, T. (2001). Breaking up large high schools: Five common (and understandable) errors of execution. ERIC Digest. ERIC Clearinghouse on Rural Education and Small Schools.
Available: http://www.ericfacility.net/databases/ERIC_Digests/ed459049.html
This digest reviews recent research on breaking up large, impersonal high schools and discusses five common errors made in downsizing attempts: errors of autonomy, size, continuity, time, and control. The author also recommends several technical assistance resources to help reformers avoid the errors described.

Howley, C., Strange, M. & Bickel, R. (2000, December). Research about school size and school performance in impoverished communities. ERIC Digest. ERIC Clearinghouse on Rural Education and Small Schools. EDO-RC-00-10. Available:
http://www.ericfacility.net/ericdigests/ed448968.html
This Digest reviews the results of a series of studies, collectively known as the "Matthew Project," that examined the relationship between school size, student socioeconomic status, and student achievement. The authors describe the aim of the Matthew Project studies and summarize Project findings. The authors conclude the discussion with a section on implications.

Howley, C. & Bickel, R. (2002; 2000). School size, poverty, and student achievement. Washington, D.C.: The Rural School and Community Trust. Available:
http://www.ruraledu.org/docs/sapss/sapss.html
Research findings from a four-state study demonstrate that smaller learning communities can mitigate the damaging effects of poverty on student achievement. State and national result summaries are available at this website.

Irmsher, K. (1997). School size. ERIC Digest. ERIC Clearinghouse on Rural Education and Small Schools. EDO-EA-97-5. Available:
http://eric.uoregon.edu/publications/digests/digest113.html
This digest summarizes recent research on school size, refuting the theory that larger schools have produced greater academic success at lower costs. The research indicates that large schools do not work for minority andlow-income students, tend to hinder attendance and student performance, and may have greater operating and per-pupil costs than small schools. School size experts recommend a school enrollment of between 300 to 900 students and that the school-within-a-school model is a crucial first step toward restructuring.

Klonsky, M. (2002, December). Small schools and teacher professional development. ERIC Digest. ERIC Clearinghouse on Rural Education and Small Schools. EDO-RC-02-6. Available: http://www.ael.org/eric/digests/edorc02-6.pdf
This digest reviews some of the recent research on professional development issues in smaller learning communities. Topics covered include: (1) what works and what doesn't work in professional development; (2) learning from each other; (3) faculty-directed professional development; (4) professional development to meet particular community needs; and (5) prevention of burnout, conflict, and obstacles to collaboration. The authors conclude that small schools can provide an environment conducive to new and improved forms and models of professional development.

Lawrence, B.K. (2002). Lowering the overhead by raising the roof ... and other Rural Trust strategies to reduce the costs of your small school. Washington, D.C.: The Rural School and Community Trust. Available:
http://ruraledu.org/rpm/rpm405d.htm
This report contains 13 strategies to help communities reduce the costs of maintaining, building, and renovating small schools. Advice for getting started includes understanding the resistance to small schools, examining existing state policy, questioning the "schools within a school" approach, and planning ahead. The report concludes with a list of resources for further information on the specific strategies.

Lawrence, B.K., Bingler, S., Diamond, B.M., Hill, B., Hoffman, J.L., Howley, C.B., Mitchell, S., Rudolph, D., Washor, E. (2002). Dollars & sense: the cost effectiveness of small schools. Cincinnati, OH: KnowledgeWorks Foundation. Available:
http://www.kwfdn.org/ProgramAreas/Facilities/dollars_sense.pdf
Dollars & Sense is a summary of the information currently available on the cost effectiveness of small schools. The report answers two fundamental questions: can small schools be built cost effectively and has anyone done so? Using data drawn from 489 schools submitted to design competitions in 1990-2001, the authors conclude that small schools can be built cost effectively and that many districts are doing so.

McAndrews, T. & Anderson, W. (2002, January). Schools within schools. ERIC Digest 154. Clearinghouse on Educational Management. ED-99-C0-0011. Available:
http://eric.uoregon.edu/publications/digests/digest154.html
This digest discusses the benefits, drawbacks, varieties, and sources of funding for schools within schools. Designers of schools within schools seek the advantages of both large and small schools by placing students into small learning communities while using the resources of the larger existing facilities. The authors conclude that developing a school within a school requires careful planning by participants.

Mitchell, S. (2000, Summer). Jack and the giant school. The New Rules, 2 (1). Available:
http://www.newrules.org/journal/nrsum00schools.htm
"Jack and the Giant School" summarizes American school size trends—from small learning communities in the early and mid part of the past century, to the Post World War II shift towards large, comprehensive schools, to rising support for the small schools movement today.

Nathan, J. & Febey, K. (2001). Smaller, safer, saner, successful schools. Washington D.C.: National Clearinghouse for Educational Facilities and Minneapolis, MN: The Center For School Change, Humphrey Institute of The University Of Minnesota. Available:
http://www.edfacilities.org/pubs/saneschools.pdf
This report presents brief case studies of 22 public school buildings that provide small school environments in shared spaces. The schools represent urban, suburban, and rural communities in 12 states and include both district-run and charter public schools. The case study analysis reveals that on average, smaller schools can provide a safer place for students, a more positive, challenging environment, higher achievement, higher graduation rates, fewer discipline problems, and much greater satisfaction for families, students, and teachers. The analysis also reveals that schools that share facilities with other organizations can offer broader learning opportunities for students, high quality services to students and their families, higher student achievement, better graduation rates, and a way to stretch and make more efficient use of tax dollars.

Raywid, M.A. (1996). Downsizing schools in big cities. ERIC Digest. ERIC Clearinghouse on Urban Education. EDO-UD-96-1. Available:
http://www.ericfacility.net/ericdigests/ed393958.html
Raywid reviews the current trend towards downsizing urban schools, noting the ample evidence that small schools benefit the entire school community: teachers, students and parents. This digest is an aid to educators attempting to determine whether and why to pursue downsizing. Small school models, philosophies and future prospects are addressed.

Raywid, M. A. (1996). Taking stock: The movement to create mini- schools, schools-within-schools, and separate small schools. Urban Diversity Series No 108. New York: ERIC Clearinghouse on Urban Education, Teachers College, Columbia University. (ERIC Document Reproduction Service No. ED 396 045). Available:
http://eric-web.tc.columbia.edu/mono/UDS108.pdf
This study is derived from an extensive review of the literature and documentation, evaluation, and policy studies of schools-within-schools and small schools. Raywid discusses different downsizing efforts, the reasons for which small schools are being established, and the types of subschools that are being launched (houses, mini-schools, schools-within-schools). Downsizing efforts in three cities, New York, Philadelphia and Chicago are highlighted. Raywid concludes that downsizing can increase student participation, reduce dropouts, improve achievement, and enhance teacher efficacy.

Raywid, M.A. (1997, December; 1998, January). Small schools: A reform that works. Educational Leadership, 55 (4), 34-39. Available:
http://www.ascd.org/publications/ed_lead/199712/raywid.html
Numerous case studies provide reliable evidence that small schools lead to improved student achievement. In addition to the effects of small schools on student achievement, large-scale research suggests that small schools are less violent and that bonds created in small schools are likely to influence students' personal habits, aspirations and post-high-school behavior. Small school success is attributed to the following factors: the more human scale of such schools, more committed teachers, coherent mission, and relative autonomy.

Raywid, M.A. (1999, January). Current literature on small schools. ERIC Digest. ERIC Clearinghouse on Rural Education and Small Schools. EDO-RC-98-8. Available:

http://www.ericfacility.net/ericdigests/ed425049.html
This digest begins with an overview of the large-scale quantitative studies on the productiveness and effectiveness of small schools. It then covers new directions in small schools research, including associated policy issues, individual success and failures, and essential elements and other implementation considerations. School reform literature that interweaves school size with other reform issues is also addressed.

Raywid, M.A. & Schmerler, G. (2003). Not so easy going: The policy environments of small urban schools and schools-within-schools. Charleston, WV: ERIC Clearinghouse on Rural Education & Small Schools.
The authors discuss the difficulty of remaking large urban schools into small schools by providing several case examples of school restructuring from four cities and nine single-unit- or multi-school campuses. This book examines often hostile environments in which many small schools and schools-within-schools must operate, focusing on political difficulties that urban small schools and schools-within-schools encounter with state and district regulations and bureaucracies.

Roellke, C. (1996). Curriculum adequacy and quality in high schools enrolling fewer than 400 pupils (9-12). ERIC Digest. ERIC Clearinghouse on Rural Education and Small Schools. EDO-RC-96-7. Available:
http://www.ericfacility.net/databases/ERIC_Digests/ed401090.html
A challenge facing small high schools is their ability to support a broad and diverse curriculum. This digest presents evidence illustrating that many small high schools maintain curricula and programs comparable in quality to those offered at larger schools. Three components of attaining curriculum adequacy through high school restructuring are identified: a common academic curriculum, high academic standards and authentic instruction.

The Small Schools Project. (2003, Spring). Planning resources for teachers in small high schools. Seattle, WA: The Small Schools Project at the Center for Reinventing Public Education, University of Washington. Available:
http://www.smallschoolsproject.org/articles/planning.html
The Small Schools Project plans to publish a series of collections of promising curricular resources and pedagogical practices that promote powerful teaching and learning in small high schools. Resources include practical tools, school profiles, sample classroom activities, and critical readings on selected topics. This project aims to help high schools move their focus from designing small schools to re-thinking teaching and learning practices.

Steinberg, A. & Allen, L. (2002). From large to small: Strategies for personalizing the high school. A joint publication of Jobs for the Future, Carnegie Corporation of New York, and the Northeast and Islands Regional Educational Laboratory at Brown University. Available:
http://www.jff.org/jff/PDFDocuments/Largetosmall.pdf
In this publication, Jobs for the Future presents profiles of schools and districts involved in converting large high schools into smaller, more focused and personalized learning communities. The report presents concrete practices and routines that can help guide teachers and school leaders seeking to implement a small schools strategy.

Toch, T. (2003). High schools on a human scale: How small schools can transform American education. Boston: Beacon Press.
The large comprehensive high school developed nearly a century ago as an economical means of providing a range of curriculum tracks that educated only the best and the brightest to high levels. These large high schools have become obsolete. Today's society requires that all students be educated

for college, work and effective citizenship. The author presents case studies of four very different schools that have rejected the trappings of the traditional large comprehensive high school to become smaller, more personal places of learning.

U.S. Department of Education, Office of Elementary and Secondary Education and Office of Vocational and Adult Education. (2001, November). An overview of smaller learning communities in high schools. Washington, D.C.: Author. Available: http://www.ed.gov/offices/OVAE/HS/SLCP/slchighschools_research_09_01.doc
"This background paper is designed to help policymakers and school leaders use the new Smaller Learning Communities program to implement small school strategies in large high schools and within school districts. The paper describes the federal initiative, highlights small school structures and strategies that may be implemented with grant funds, reviews the context of the growing consensus around smaller schools, and summarizes the research that undergirds the new grant program" (U.S. Department of Education, 2001).

Wasley, P., Fine, M., Gladden, M., Holland, N.E., King, S.P., Mosak, E., & Powell, L.C. 2000, June 20). Small schools: Great strides: A study of new small schools in Chicago. New York: Bank Street College of Education. Available: http://www.bankstreet.edu/gems/publications/smallschools.pdf
Report findings are based on a two-year study of 150 small schools established in Chicago between 1990 and 1997. Researchers discovered that students in these small schools exhibited increased academic achievement, decreased dropout rates and lower levels of violence.

Winokur, M. (2001, June). Policy brief: Relationship between high school size and educational outcomes. Colorado State University: Research and Development Center for the Advancement of Student Learning. Available: http://www.colostate.edu/depts/r-dcenter/BOE%20SWAS%20policy%20brief.pdf
This policy brief provides a review of the literature on small school research, with an emphasis on recent studies and meta-analyses (1990-present) regarding school size and school-within-a-school (SWAS) models.