The following is an excerpt from *Chapter 2 - Identifying & Resolving Quality of Life Issues* from the Community & Environmental Defense Services (CEDS) book *How to Win Land Development Issues: A Citizens Guide to Preserving & Enhancing Quality of Life in Developing Areas*. You will find this section more helpful if you read the Chapter 2 introductory text. Also, the following is just the text we could fit into the book without making it unduly large. We have a substantially greater amount of information available in our files on this topic. To learn how CEDS can assist you with concerns about this topic visit the CEDS website at: www.ceds.org or contact us at: 1-800-773-4571 or info@ceds.org

SCHOOLS

Well managed growth should preserve the quality of education in a developing area. In some cases *Smart Growth* can even enhance school quality. However, in far too many instances sprawl and other forms of poorly managed growth has become an obstacle to providing our children with a quality education. The obstacle takes the form of school overcrowding or forcing students to change schools. Additionally, *Smart Growth* should ensure that the cost to expand school capacity, to accommodate rising student enrollment, is shared equitably by development interests and current taxpayers.

Several studies have shown a general relationship between class size, school size and student achievement. These studies indicate that there is an optimum class size - at least for kindergarten through third grade - and an optimum school size. However, there is also reason to believe that a quality education can result even if these optimums are not met. Following is a brief review of the scientific evidence concerning class size, school size, and student achievement.

Class Size & Student Achievement

As of the year 2000, class size averaged about 25 students in the United States.[1] A 1997 survey revealed that 83% of teachers and 60% of school principals believed that class size should not exceed 17 students.[2] The National Education Association recommends a class size of 15 students.[3] Several recent studies have shown that student performance improves significantly in smaller classes.[4] Class size reduction appears to be most effective when applied to "low-achieving students from impoverished socioeconomic backgrounds" in kindergarten through

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[1] *Class Size: Can school districts capitalize on the benefits of smaller classes?* ERIC Clearinghouse on Educational Management, available online at: http://eric.uoregon.edu/publications/policy_reports/class_size/intro.html

[2] *Class Size Reduction: Effects and Relative Costs*, by Lawrence Picus, ERIC Clearinghouse on Educational Management, 5207 University of Oregon, Eugene, OR 97403-5207, 800-438-8841. Available online at: http://eric.uoregon.edu/hot_topics/class_size.html

[3] See the National Education Association class size website at: http://www.nea.org/classsize/

[4] Ibid.

third grade (K-3).[5] The benefits of smaller early grade class size lasts at least into 7th and 8th grade.[6] The students from small K-3 classes may be 6- to 13-months ahead of other students in math, reading and science.[7] It is unclear though how small is small enough. In *Small Classes, Big Possibilities*, Professor of Education Charles Achilles argues for a teacher to student ratio of 1:15.[8]

School Size & Student Achievement

In urban and suburban areas high schools may have 2,000 to 3,000 students. There is research though which shows that the optimum size for a middle or high school is 600-900 students and 300-400 for elementary schools, particularly for students from low-income families.[9] In a 1996 paper, *School Size, School Climate and Student Performance*[10], Cotton cited the following attributes as accounting for the superiority of small schools:

- Everyone's participation is needed to populate the school's offices, teams, clubs, etc., so a far smaller percentage of students are overlooked or alienated.
- Adults and students in the school know and care about one another to a greater degree than is possible in large schools.
- Small schools have a higher rate of parent involvement.
- Students and staff generally have a stronger sense of personal efficacy in small schools.
- Students in small schools take more of the responsibility for their own learning; their learning activities are more often individualized, experiential, and relevant to the world outside of school; classes are generally smaller; and scheduling is much more flexible.

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[5] *When does small class size help student achievement?*, ERIC Clearinghouse on Educational Management, 5207 University of Oregon, Eugene, OR 97403-5207, 800-438-8841. Available online at: http://eric.uoregon.edu/publications/policy_reports/class_size/student_achievement.html

[6] *Class Size Reduction: Effects and Relative Costs*, by Lawrence Picus, ERIC Clearinghouse on Educational Management, 5207 University of Oregon, Eugene, OR 97403-5207, 800-438-8841. Available online at: http://eric.uoregon.edu/hot_topics/class_size.html

[7] *Class Size Reduction*, National Education Association, 1201 16th Street, NW, Washington, D.C. 20036, June 2001. Available online at: http://www.nea.org/classsize/

[8] *Small Classes, Big Possibilities*, The School Administrator Web Edition, October 1997. Available online at: http://www.aasa.org/publications/sa/1997_10/achilles.htm

[9] *School Size*, ERIC Digest 113 July 1997, available online at: http://eric.uoregon.edu/publications/digests/digest113.html *School Size, School Climate, and Student Performance*, School Improvement Research Series, Northwest Regional Educational Laboratory, available online at: http://www.nwrel.org/scpd/sirs/10/c020.html

[10] Ibid.

- Grouping and instructional strategies associated with higher student performance are more often implemented in small schools—team teaching, integrated curriculum, multi-age grouping (especially for elementary children), cooperative learning, and performance assessments.

Of course small school size alone does not guarantee good student performance; it is but one of many factors. And there is also research to show that in some situations it may be possible to overcome the negative effects of large schools.[11]

There is another major benefit of keeping school size small - ***health***. Recent research has shown that our children are becoming obese at an alarming rate due to a combination of reduced exercise and poor diet.[12] One way of countering this trend is to encourage our children to walk more. Keeping schools small and oriented towards a community increases the likelihood that students can walk to school. In fact this is one of the *Smart Growth* principles advocated by the Smart Growth Network.[13]

Frequent School Changes & Student Achievement

As the pace of residential development accelerates the local Board of Education may begin redrawing school service area boundaries shifting current students may be shifted to schools with excess capacity. I have heard reports of students living in the same house from kindergarten through fifth grade yet they attended three different elementary schools during the six-year period. A 1996 study showed that 40% of school changes were due solely to a family changing their residence while 42% were attributable solely to changes made by the school.[14]

Several researchers have looked at the effect of frequent school changes. One study showed that 41% of third-graders who changed schools frequently were low-achievers compared to 26% of third-graders who never changed school.[15] Another study showed that 23% of children who changed schools frequently repeated a grade versus 12% of students who never changed schools, or did so infrequently.[16] However, if students only change schools once during their elementary years, then the negative effects will likely be modest and of short duration, particularly for more

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[11] *Reducing the negative effects of large schools*, National Clearinghouse for Educational Facilities, available online at: http://www.edfacilities.org/pubs/size.pdf

[12] See *Study links community sprawl to fat; Density: Smart Growth group finds that people who don't live in compact cities are heavier than those who do* available at: http://www.sgli.org/news8.29.03.html

[13] See *Getting to Smart Growth: 100 Policies for Implementation* available from the Smart Growth Network at: http://www.smartgrowth.org/pdf/gettosg.pdf

[14] *Patterns of Urban Student Mobility And Local School Reform*, Center for Research on the Education of Students Placed At Risk, available online at: http://www.csos.jhu.edu/crespar/techReports/Report5.pdf

[15] *Highly Mobile Students Often Are Low Achievers*, School Reform News, available online at: http://www.heartland.org/archives/education/jan02/mobility.htm

[16] *Student Mobility: Helping Children Cope With a Moving Experience*, Education World, available online at: http://www.education-world.com/a_curr/curr134.shtml

affluent students.[17] But growth should be managed to prevent children from being forced to change schools even once.

Portable Classrooms

In a 1996 survey, 42% of the teachers interviewed said their ability to teach in a portable classroom was worse when compared to the main school building.[18] These structures are used to provide additional space at overcrowded schools. They usually begin as temporary structures, but all too frequently become permanent. If a school is experiencing a short-term increase in enrollment then portable classrooms make sense, particularly when compared to the cost of building a new school. But they do not make sense if the increase is more long lasting, particularly if they will cause enrollment to exceed the ranges recommended above for optimum school size.

Adequate Public Facility Ordinances

Some local governments have enacted an Adequate Public Facility Ordinance (APFO) which prohibits the issuance of additional building permits when the affected schools are at capacity or soon will be. Actual trigger points range from 100% to 150% of capacity, which is usually based on 25-30 students per classroom. APFOs may also limit growth when other services are near capacity, such as roads, water, sewer, and emergency services. For an example of an APFO guidance document visit http://www.mdp.state.md.us/info/download/Mmg14.PDF

Impact Fees

It cost taxpayers an average of about $10,000 to provide the school services necessitated by each new home. Impact fees are used to shift the burden for this added expense to the developer, who then, of course, passes the cost on to the home buyer. For example, Prince George's County, MD charges developers $7,000 for each new suburban home and $12,000 per rural home. This about covers the cost of expanding schools to accommodate the new students added by each home. For further information on this topic, see the discussion of *Impact Fees* under the Property Tax heading earlier in this chapter.

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[17] *Student Stability Vs. Mobility*, School Administrator, available online at: http://www.aasa.org/publications/sa/2001_08/fowler-finn.htm

[18] *Teacher safety in portable classrooms*, BCTF Research Report, available online at: http://www.bctf.bc.ca/ResearchReports/97wlc01/