NANAIMO SCHOOL ADMINISTRATORS ASSOCIATION
OPTIMAL SCHOOL SIZE PAPER
2007

PREAMBLE

The release of the Facilities Renewal Report generated discussion among administrative officers about the optimal size of schools. A committee was struck to review current research on this topic.

The findings of the committee have not been written in the traditional research paper format. Instead salient points from the research have been abstracted and organized into a more informal and user-friendly presentation.

DEFINITION OF OPTIMAL SCHOOL SIZE

Optimal school size is relative. It is not a direct causal factor affecting schools quality. It is indirectly related to academic outcomes through its relationship to a variety of other variables.

VARIABLES THAT AFFECT OPTIMAL SCHOOL SIZE

Socio-economic status of neighbourhood

Level of poverty

Extremes of size (schools too small or too large are dysfunctional)

Funding formulas in school district

Size of school district

Geography of school district

Condition and age of school buildings

Organization of schools by grade levels

Human and material resources available to school district

Needs of local school communities

OPTIMAL SCHOOL SIZES

Based on a review of current research literature, the following school sizes have been identified as "optimal".

Elementary school: 300-500 students
Middle School: 400-500 students
Secondary School: 800-1200 students

OBSERVATIONS

Size is the chief structural feature of an organization.

Schools that are too small cost more per student. Schools smaller than 500 start to require more than 125 sq ft per student. Schools smaller than 325 students require 130 sq ft per student. Schools of less than 250 students require 140 sq ft per student. Schools of 200 or fewer students require more than 150 sq ft per student.

Schools that are too small or too large can be expensive and dysfunctional.

Maximizing facility and making schools true community centres avoids costly duplication of facilities and construction, and allows underused schools to be used many more hours per day and year. It has the potential to allow each user to have more and better equipped facilities. It can result in increased awareness, interest and willingness to fund schools because many more citizens will be visiting and using the buildings for their own self interest.

In elementary schools, socio-economic status has a greater impact on student achievement than school size.

In elementary schools, student poverty is the most significant factor in predicting student academic results.

In elementary schools, economically disadvantaged students perform better academically in optimally-sized schools.

In all grades, optimally-sized schools counteracted poverty's power to lower student achievement by at least 25%.

ADVANTAGES OF OPTIMALLY SIZED SCHOOLS: ELEMENTARY

Strong sense of community can be developed

Fosters positive relationship between the school and parents. More parental involvement and support. Wider range of parent representation of community diversity. Greater potential for fund raising.

Greater perception that the school is a safe place to be

Positive relationships between teachers and students

Fewer behavioural problems. Increased attendance.

Broader student base for student socialization

More opportunities for involvement in extra-curricular activities and volunteer activities

Adequate ratio of support and professional staff to enable curriculum delivery.(The ideal is full time staff rather than part time or itinerant.)

Teachers are more likely to be able to teach in area of interest

Fewer itinerant teachers

Greater flexibility in class size and class composition

Possibility of fewer multi-grade classes

Adequate ratio of support and professional staff to integrate and assist at-risk students. (The ideal is full-time staff rather than part time or itinerant.)

Administrative and organizational efficiencies

When funding is based on a per pupil formula, budgets will be adequate

Maximum utilization of facilities

Funds spent more efficiently on maintenance and capital projects

Increased opportunity for a variety of leadership models/styles

Adequate resources to meet needs

ADVANTAGES OF OPTIMALLY SIZED SCHOOLS SECONDARY

Many of the advantages for Elementary Schools can also apply to Secondary Schools plus:

- **Higher graduation rate**
- **Enhanced course offerings for all students**
- **Ability to offer depth and breadth of courses**
- **More elective choices available to students**
- **Wider variety of program pathways leading to graduation**
- **Greater opportunities to meet graduation criteria**
- **More support for a variety of career program**
- **More specialized programming and support to at-risk students**
- **Scheduling of courses is more efficient**
- **Higher student satisfaction**
- **Large enough number of students in each grade to facilitate choice in friendships**
- **Greater opportunities for student involvement in student clubs, athletics, fine arts and other volunteer activities**
- **Athletic opportunities are varied and different levels of participation can be achieved**
- **Lower drop out rates**
- **Less crime and violence**
- **Fewer incidents of drug/alcohol tobacco use**
- **More potential for students to be taught by highly specialized teachers**
- **Teachers are more likely to be able to teach in their area of specialization**

TRENDS TO CONSIDER

British Columbia

Government funding tied to capacity, efficiency and student enrolment

Government insistence on accountability

Legislated parental involvement

North America

More school choice and equity

Consolidation of small schools to form larger schools vs the small school movement

Reduced class size

Virtual education: technological support of program delivery

Changing mission of schools

Reconfiguration of classrooms

Schools available for learning 24/7

Paper disappearing---more digital learning

Grade spans changing

Special education going main stream

Early childhood programs more prevalent

Home schooling

Schools as centres of the community

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