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# MORE IMPORTANT THAN CLASS SIZE

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On the front of a handout by our principal, I found these words in bold black print, "MORE IMPORTANT THAN CLASS SIZE." Immediately, I wondered what could possibly be more important than class size. Reading on I found that new research, concerned with the quality of our education system, had just been completed by Martin N. Olson, Executive Secretary of the Associated Public Schools Systems and a research associate with the Institute of Administrative Research (IAR). This one short article started me on a search for a copy of his study.

Since becoming a part of the teaching program, the writer has been interested in the reasons for constant complaints about the quality of education. What are the causes of complaints, such as, my boy isn't ready for college after high school, my child isn't reading as well as he should, what is wrong with his teacher? Olson's research studied the possible reasons for these complaints and ways to remedy them.

## SCOPE OF STUDY

Olson and his researchers studied 11 classroom characteristics in 18,528 public school classrooms across the nation, which are a part of 112 largely suburban school districts in 11 metropolitan regions. There were 9,961 elementary classrooms and 8,567 secondary classrooms. He warns his readers that this was not a random sample, so one is not able to generalize directly to the nation's school systems. He does feel that ". . . given the magnitude of the study, geographical representation from coast to coast, and types of systems from small suburban to large urban, it is likely that the picture of American education which emerges is quite prevalent."<sup>1</sup>

## PROCEDURES OF THE STUDY

Olson's observations were made using Columbia University's "Indicators of Quality," which were developed to assess a school's quality on four criteria: individualization, interpersonal regard, group activity, and creativity. These criteria and eleven internal variables—subject be-

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<sup>1</sup> Martin N. Olson, "Identifying Quality in School Classrooms: Some Problems and Some Answers," *APSS Know How*, XXII, No. 5, (January, 1971), 2.

ing taught, type of classroom teacher, style of educational activity, grade level, number of adults in the classroom, class size, sex of teacher, day of week, half of period, time of day (a.m. or p.m.), and number of non-white students—were observed.

#### ANALYSES OF THE VARIABLES

##### **Subject Being Taught**

The first variable was subject being taught. The results lead one to believe that there must be some internal difference in subjects. These internal differences, causing a uniqueness in the subject, could be in structure of the discipline, attitudes of student and/or teacher towards subject, or in methodology of the subject itself. These findings call for more research in this area, according to Olson.

One point which was especially interesting was that reading rated high in both elementary and secondary schools. This would lead one to believe that there is a high interest in the subject on both the teachers' and the students' part, or an attitude which promotes a liking for the subject.

##### **Style of Educational Activity**

The next factor, style of educational activity, was a teacher variable dependent upon the teacher's preference for a particular style of teaching. Laboratory work, individual work, discussion, pupil report, and demonstration rated very high in the elementary school. The low scoring and great use of question/answer and seat work are points of definite concern. Another significant point is the use of low scoring lecture. One can, however, note that it is employed only two per cent of the time.

The secondary data show that small group, individual work, and laboratory work received the highest scores. Of course, discussion, pupil report, library work, and demonstration rated high. If these techniques were really taught to beginning teachers and put into practice, there would be a chance for secondary classrooms to be much more effective. The sad fact remains, however, that over 31 per cent of our secondary classrooms use the lowest scoring methods: lecture, test, movie, and seat work. This has to have an effect upon the effectiveness of our educational system.

In my teaching, I have seen where using one type of activity will cause more excitement for the subject than another. A good example of this would be a child who is not interested in reading to the whole class from a basal reader, but when allowed to write his own story

with individual help from the teacher becomes very excited about sharing his experiences with others.

**Class Size**

Class size has been a major focal point of teacher and parent complaints for the last few years. This study showed that smaller classes exhibit significantly higher scores than larger classes. The secondary classroom of 15 or less students will equal the effectiveness of an elementary classroom with as many as 25 students. The break-points, i.e., points between class size groups where sharp drops occur in criterion scores, are described as 5, 15, and 25 at the elementary level, and 10 and 16 at the secondary level.

Class size does have a definite bearing on the methods one uses in teaching. When classes are 30 and over, one tends to use the low scoring styles of educational activity. However, given a small number of children, 25 and under, one has a much more open atmosphere and tends to do more individual and small group activities with the children.

This past year, the writer had an ideal situation with nineteen accelerated children. With this class, the low scoring styles: question/answer, seat work, lecture, test, movie and television, were used very little, if at all. In contrast, the high scoring styles: discussion, small group work, library work, individual work, demonstration, and laboratory work, were used extensively. Most subjects were taught in a variety of ways. Reading, for example, was taught by an individualized reading program. The children read many outside books and then would relate to them in discussions about other subjects. Also, an appreciation for different types of stories was taught indirectly to them during a daily story time.

**Type of Teacher**

Olson made some interesting discoveries about the type of teachers. Substitutes were found to rate the lowest and to assume a role in the classroom more akin to that of a baby sitter than a professionally trained teacher. Olson suggests using paraprofessionals to help students pursue their own interests and using the auditoriums to show films and/or special performances.

This expresses the writer's opinion after serving in both roles: a substitute teacher and a classroom teacher having a substitute. In my experience as a substitute, my attitude was much different than most, probably because of my educational training. Most substitutes the

writer talked with felt they needed to do little and came only to baby sit. In my role as a teacher, when substitutes came for me, it was discovered that no matter how detailed my lesson plans were, they did nothing unless they themselves had been a teacher.

**The Number of Adults**

The number of adults in the classroom does not seem to make a great difference. Usually when more than one adult is in the classroom, only one becomes the primary actor. Therefore, one might say that unless there is a definite set of role expectations for the participants in a multiple adult classroom, the adults interfere with one another and cancel out the positive signs by lowering the overall scores.

**Day of Week**

Those blue Mondays may be reality according to this research. Monday was the lowest scoring day. Tuesday, Wednesday, and Thursday were about equal. In contrast to all the other scores, Friday scored the highest. What happens on Friday that does not on the rest of the week? Researchers discovered that on Friday the atmosphere was very different—free and relaxed. This type of atmosphere creates a more positive behavioral relationship between students and teachers.

Olson suggests that perhaps teachers should look more closely at their methods, attitudes, and behaviors on Friday and integrate these into the rest of the week. The open classroom concept, as described by Herbert Kohl in his book, *The Open Classroom*, tries to bring these unique concepts into the rest of the teaching and learning week. The relaxed atmosphere in an open classroom is similar to the atmosphere in structured classrooms on Friday.

**Grade Level**

When the results of all observations were divided according to grade level, the elementary rated much higher than the secondary. Apparently, the teaching-learning behavior taking place in the lower grades is more effective. Olson feels that maturational and developmental stages of individual students or the increased emphasis on “academic” subject matter to prepare the student for college could account for the secondary’s low scores. The dynamic interaction and positive interchange between student and teacher are potentially possible in any classroom with the right styles of activity.

**Remaining Variables**

Sex of teacher, time of day, and number of non-whites in the classroom were found to have little, if any, effect upon the learning of students.

## ANALYSES OF VARIABLE COMBINATIONS

When the elementary subjects were studied by style of activity and class size, seven subjects—reading, language arts, mathematics, social studies, science, art, and music—were separated out to show the relationships of certain styles of teaching and class sizes. With this varied group of subjects, one factor was very evident: the smaller the class the higher the score. Art scored the highest of any subject. This was probably due to the interaction of the teacher and the students. Music scored very low. Mathematics, social studies and science scores took significant dips as class size became larger. Small group work scored the highest in all areas.

Reading scored much above the overall scores for the elementary in most class sizes and types. Olson makes an interesting observation about reading:

In fact, it can be said of reading that it seems to show the most “solid” performance of all subjects, i.e., nothing that high, but nothing that low. This may be accounted for by the general pervasiveness of reading in the elementary classroom—the surgent and resurgent interest in using varied approaches to meeting the needs of all children. Indications of this are the frequencies of small group work and individual work, greater than for any other subjects.<sup>2</sup>

The most effective styles of teaching, even with huge classes, include laboratory work, class discussion, and pupil report. Olson at this point states that “one would be safe in saying that the quality and type of teaching style is far more important than class size.”<sup>3</sup>

The effect of small class size at the secondary level was not as evident. Small group work again came to the front as a good style of teaching, especially in English and mathematics. The saddest situation was in history, where lecture, test, movie, and seat work were over-used and small group work, which scored high, was limited in use. A change in teaching styles is necessary to raise the quality of these low rating classes.

Analyzing each activity by class size, the results indicate that the small class has a large bearing upon the success of the style of activity. Thus, there are implications to merit changing class size to adjust to

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<sup>2</sup> *Ibid.*, 7.

<sup>3</sup> *Ibid.*, 8.

the style of activity. Olson makes an observation about the least effective style of teaching, lecture:

In a time when secondary schools are experiencing such a high degree of student alienation and disaffection it seems entirely unreasonable to perpetuate a teaching style seemingly so antithetical to free interchange, dialogue, and interaction between students and teachers. As measured by Indicators of Quality, such behavioral signs are not in evidence, or were negatively occurring for the lecture style.<sup>4</sup>

#### SUMMARY

In summarizing, Olson established the following seven factors in their order of significance: the style of educational activity, subject taught, class size, grade level, type of teacher, number of adults, and day of the week. He found the greatest single overall predictor was style of educational activity. The activities which were found best are group work, individual work, discussion, laboratory work, and pupil report. Lecture, question/answer, seat work, tests, and movies were the least effective styles of activity. Any school wishing to improve their performance should increase the frequency or skill with which their teachers use the better styles of activity.

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<sup>4</sup> *Ibid.*, 10.