Mr. Howe. I certainly haven't got it on the tip of my tongue. I believe we might arrive at some such estimate and we will endeavor to do so, if it would be helpful.

Mr. Quie. Could you get within 100,000 of it?

Mr. Howe. I suppose one way to think about it would be that some 70 percent of our population lives in metropolitan areas. That is an approximately correct figure.

Of the population living in our metropolitan areas—well, I would really rather figure something out for you that makes sense rather than try to do it off the cuff here. My arithmetic is not terribly good.

(Mr. Howe submitted the following:)

It is impossible to estimate the number of teachers that would be necessary to assure that all teachers of the disadvantaged are properly trained and qualified for such a task. The number of variables and qualitative determinations involved makes even an "educated guess" impossible.

Follow-up on some of the teacher shortages reported last fall with personnel officers of the involved school districts indicates a general feeling that the teacher supply is still critical. The major area of need is general elementary education; other areas are special education, mathematics, science, industrial arts, and vocational education.

Teachers have been recruited from among housewives, retired teachers, college graduates without professional training in education, and, in some instances, from among college students without degrees.

Salary schedules have been increased, and further increases are anticipated.

Special training programs have been instituted.

Special programs have been looked to for prospective teachers.

Some shortages still exist, and some new programs have therefore not been initiated.

Philadelphia, Pennsylvania was reported in the Philadelphia Inquirer on August 14, 1966 as having a probable shortage of 1,000 teachers. Reports in the Washington Post on September 1 indicated they would fill approximately 1100 vacancies with substitutes.

In February 1967, Robert Perz, Assistant Superintendent reported they are still using 1100 to 1200 substitutes or about 101/2% of the teaching staff. About half of these have met full certification but have not yet passed the local competitive examination. The others are persons with college degrees but without the required professional courses, persons teaching outside their field, and some are part-time teachers who do not desire full employment. With a constantly expanding number of teachers and with a higher rate of turnover among the younger teachers, the school district must run to stand still in the area of teacher employment. They have instituted a recruiting drive to attract those qualified persons wanting only part-time employment and the new college graduates both in and out of the field of education.

New York City was reported in the New York World Journal Tribune on September 15, 1966 as still being short about 500 teachers in spite of the special

training given 1,900 to 2,000 potential teachers last summer.

In February 1967, Dr. Theodore H. Lang, Deputy Superintendent of Personnel, reported that, although the city is in better shape than last fall there is still a problem in acquiring all the needed teachers. They have set up pools of extra teachers within the districts to fill vacancies as they occur. In this manner teachers can be appointed at an earlier date, even without knowledge of a specific vacancy, and can be held in reserve while serving as substitutes. tronic data processing has been used for the assignment of teachers. have instituted an internship program, employed substitutes on a part time basis, given substitutes credit on the salary schedule for teaching outside New York City, and permitted teachers on maternity leave to teach on a daily basis. A program of conferences and followup has been instituted for teachers resigning to help keep down the turnover. Beginning teachers are given reasonable assignments, after school clinics, and are furnished local manuals to help them. They are using the Teacher Corps, Peace Corps returnees, internship programs with local colleges, and other programs available. Operation Reclaim was instituted to help displaced southern teachers fit into the New York system and Operation