

THE FUNCTIONS OF CLASS SIZE PER- CEIVED BY CHINESE RURAL SCHOOL TEACHERS

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Abstract

A random survey with open-ended questions was conducted on a sample of Chinese rural teachers (N = 55). The study investigated on issues related to functions and benefits of small classes to both teachers and students. Findings indicated that the Chinese rural teachers perceived class size as a beneficial factor, not directly related to student achievement. They believed that small classes in schools facilitate classroom management, more individualized help from teachers, teaching effectiveness, a better learning atmosphere, more student-teacher interactions, and reduced teachers' workloads. They also believed in teachers creating and encouraging competition and peer help among students, which they regarded as important for students in large classes to learn better. Some cultural differences were also found.

The search for the best educational environment, particularly for small size classes, has been an important educational issue for educators, administrators, parents, and government officials. Parents and educators believe that small class size leads to more effective teaching and improves student achievements (Achilles, 1997; Costello, 1992; Johnston, 1989). Bracey (1995) observed that test scores rise when districts use money to reduce class size and hire experienced teachers. While most students prefer small classes, teachers believe that quality teaching is also possible in large classes (Litke, 1995).

Research literature provides some evidence on the benefits of small size class. Nelson and Drake (1997) reported that small size classes in rural schools provided an ideal environment for teacher-student interaction. Teachers in British elementary schools were found to have interacted more with students when they worked in smaller classes (Hargreaves, Galton, & Pell, 1997). In the special education field, smaller classes provided better environments for learning at the elementary level (McCrea, 1996).

In a study to determine the effect of small class size on reading achievement of first-grade students, 88 students were instructed either in a small class (N = 17) or a large class (N = 27). Results indicated that students in small classes made greater gains compared to those in large classes (Costello, 1992). In math learning, high school and college students in small classes were found to have performed better in long-term retention (Urion & Davidson, 1992). Similarly, Boozer and Rouse (1995) reported that smaller classes at the eighth grade

led to larger test score gains from 8th to 10th grade, and that differences in class size could explain approximately 15% of the black-white difference in educational achievement.

A large-scale, four-year longitudinal and experimental research project on class size (Project Student Teacher Achievement Ratio—STAR) was conducted in Tennessee. In 1985, approximately 7,000 kindergarten students were randomly assigned to either small classes (N = 15) or regular-sized classes (N = 24) with a full-time aide. It was found that the small classes had the highest student test outcomes; however, small class intervention did not remedy already-defined test-score deficits after students had experienced regular classes (Achilles, 1993). With the same STAR project, small classes beginning in primary grades seemed to prevent later school problems; however, late application of small class treatment appeared to have limited value (Achilles, Nye, Zaharias, Fulton, & Cain, 1994, 1996). Other related studies showed that small class students from Project STAR scored significantly higher than regular-sized class students on all achievement measures (Folger & Breda, 1989; Nye et al., 1992).

A follow-up study on fourth graders from Project STAR showed significant small class carry-over effects on every achievement measure and significant participation differences in small class students (Finn, Fulton, Zaharias, & Nye, 1989). With respect to lasting effect, Achilles, Nye, Zaharias, and Fulton (1993) reported that students who were in STAR small classes at least in grade three were statistically and educationally ahead of other STAR students. Based on a reanalysis of STAR test data, Bingham (1994) noted that small size class appeared to make a bigger difference for minority students than for Caucasian students in primary years.

The literature provides mixed findings on the effect/impact of class size. In what aspects small classes help teachers and students remains to be further investigated. This study was designed to investigate: (a) What kind of factor is class size? (b) What are the benefits for having small classes in schools? (c) What should teachers and students in large classes do to teach and learn effectively? The purpose of the study was to obtain data on how Chinese school teachers perceive these issues.

Method

A random survey was conducted in a southern Chinese rural school district (a county system with 132 schools and 41,200 students). It is regarded as a rural school district because over 90% of the county population are in agricultural business. All the schools in the district are located either in small towns or villages.

Generally, in this district, according to local educational administrators, a class with 50 or more students was considered *large*, a class with 30 or fewer was considered a *small* class. The *average* class size of the schools was a class with 48 students. However, classes in elementary schools were relatively larger than those in secondary schools.

Participants

The participating teachers were full-time teachers in the school district. They had five or more years of teaching experience. The teachers of the district were not different from teachers in other rural areas of the country, according to an official of the school district.

Design and Procedure

From the school directory of the school district, the first of every four schools was selected for the sample. Five schools (three elementary and two secondary schools) were sampled for the project. All these schools were ordinary schools, not different from other schools in the district, according to the school district official.

A survey package (with an anonymous questionnaire and an introduction letter explaining the purpose of the study) was stuffed in an unsealed envelope. A big manila envelope stuffed with 20 such packages was delivered by a project assistant to each of the five school

principals. In a separate letter, the principals were requested to distribute the survey packages to his/her teachers with five or more years of teaching experience. In total, 100 surveys were sent out this way. Approximately 50% of the teachers in each school were surveyed. In addition, the participating teachers were requested in the introduction letter to return the answered questionnaire in a sealed envelope to their principal. The project assistant went to the principals and collected the data two weeks thereafter.

Instrument

A survey questionnaire was developed based on the research questions. Basically, the questions were open-ended. The questions were designed to collect the perceptions of the Chinese rural teachers on class size related issues (see Appendix).

Term Definition

Class size in this study referred to the actual number of students in any natural classroom in the rural schools of the district selected for the study.

Results

Of the 100 surveys sent out, 55 were returned. The return rate was 55%. The following is a summary of the findings.

In response to Question 1, the majority of these teachers considered a class with 45 to 50 students a small class and a class with 50 or more students a large class. In terms of what size of class they preferred to teach, 54 of the 55 teachers responded with "small class." One responded, "It does not matter to me."

The findings listed in Table 1 provide information on only the five factors identified by the highest percentage of teachers in their responses to each question. The number of factors they actually identified to each question exceeded five factors.

Discussion

The findings showed that there seems to be a cultural difference in what size of class is considered "large or small," American educators having a different standard. Nevertheless, it appears that most Chinese rural teachers prefer to teach smaller classes.

The main benefits of teaching smaller classes identified by the Chinese rural teachers were: small classes are easier to manage, easier for teachers to provide individualized help to students; they facilitate teaching effectiveness, and mean less work for teachers, and so forth. Even though no direct causal relationship between class size and student achievement was identified by the teachers, these seemed to be sufficient reasons for any teacher to prefer teaching small classes. After all, small classes benefit the teaching and learning process and teachers' work-fare, which warrants support from all educators.

Societal/home influence, school, and classroom learning atmosphere were identified as important factors to learning outcomes by the Chinese rural educators. In other words, they regarded these outside (outside of school) influences and learning atmosphere as important factors that are related to student achievement. On this issue, they agreed with American educators. Perhaps they ranked these factors more important than we do.

As the data indicated, the Chinese rural teachers tend to encourage competition among students and create competitive class activities, which they believe facilitate better student achievement. In the meantime, they also believe that peer help is also an important factor for students' success in large classes. American educators seem to be shy from promoting competition among students, while encouraging peer help among students. This cultural difference

warrants us to rethink our beliefs on competition among students and conduct research on this issue.

Table 1
Chinese Rural Teachers' Responses on Class Size Related Issues (N = 55)

Questions	Factors Identified by Highest Percentage of Teachers*	% Responded
2	Student quality (intelligence, motivation, etc.)	62
	Teacher quality (knowledge, dedication, hard-working, teaching quality)	56
	Student effort	36
	Learning environment (social influence, school & classroom learning atmosphere)	31
	Teacher's attitude toward students	20
3	Big class being a negative factor/small class being a beneficial factor	87
	Class size being an unrelated factor	7
	Small class having positive and negative factors	4
	Preferring a class size of 30 students	2
4	Facilitates classroom management	49
	Facilitates appropriate/individualized help	49
	Facilitates teaching effectiveness/less work	29
	Helps to produce better student achievement	9
	Helps teachers to get to know students better	7
5	Facilitates a better learning atmosphere	24
	Generates fewer disciplinary problems	16
	Facilitates more student-teacher interactions	15
	Facilitates more teacher-guided practice	11
	Facilitates better instructional outcome	7
6	Being more motivated	29
	More peer help	18
	Working harder/making more effort	15
	Obeying discipline/rules	15
	Being more competitive	9
7	Better guidance work by teachers	31
	Enforce discipline	20
	Carefully prepare and deliver instructions	15
	Better classroom management	13
	Organize various competitive activities	11
8	A positive learning atmosphere	25
	Strong competitive spirit among students	13
	Technology use in education	9
	Establish strict rules	9
	Positive home influence	7

* Factors identified by smaller percentage of teachers not included.

Conclusion

The findings of the study indicated that the Chinese rural teachers did not see a necessary link between class size and student achievement. However, they believed that small classes facilitate classroom management, more student-teacher interactions, more individualized help from the teachers, and reduce teachers' workloads. The Chinese rural teachers also believed that competition among students promoted learning for students in large classes.

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